State of Conservation Report

Sites of Japan's Meiji Industrial Revolution:
Iron and Steel, Shipbuilding, and Coal Mining (Japan) (ID: 1484)

CABINET SECRETARIAT
JAPAN

Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding, and Coal Mining (Japan) (ID: 1484)

The Government of Japan created this State of Conservation Report to provide responses regarding progress for Recommendations a) through h) in the Decision: 39 COM 8B.14 adopted by the World Heritage Committee at its 39th session in 2015. The executive summary regarding the responses to each Recommendation is as follows:

Recommendation a)

The Cabinet Secretariat prepared Conservation Work Programme for Hashima Coal Mine under the cooperation with Nagasaki City.

Recommendation b)

The Cabinet Secretariat prepared Conservation Work Programmes and Implementation Programmes for each component part under the cooperation with the owners and local governments.

Recommendation c)

The number of visitors at each component part is under investigation for three years. Based on the results, a visitor management strategy is planned to be formulated and the possibility or need for determining visitor threshold levels is also planned to be examined in FY 2019.

Recommendation d)

A checklist was produced and monitored to determine whether the governance framework properly functions. Meetings are regular and working well and the mutual communication and cooperation setup is functioning thoroughly through monitoring annual reports and other means, so the governance framework is operating appropriately.

Recommendation e)

Monitoring charts have been produced to systematically monitor the elements of component part and the landscape of buffer zone. Annual observations in monitoring charts will be incorporated into annual reports for confirmation by the Local Conservation Councils.

Recommendation f)

Based on the assessment of current state on capacity building of human resources in each Area and component part, policies and techniques that are common to the overall property have been created, including items for training and project to be implemented.

Recommendation g)

The Cabinet Secretariat developed the Interpretation Strategy, based on a full Interpretation Audit by independent international experts, as well as specific advice by the President of the ICOMOS International Scientific Committee on Interpretation and Presentation on the interpretation of the "full history" of each site.

Recommendation h)

Based on paragraph 172 of the Operational Guidelines, information was compiled regarding the contents and progress of a number of development plans and new development plans for public facilities listed in this Recommendation.

State of Conservation Report
Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding, and Coal Mining (Japan) (ID: 1484)

1. Background to Creation of this Report

The Government of Japan created this State of Conservation Report (hereinafter referred to as "Report") to provide responses regarding progress for Recommendations a) through h) in the Decision: 39 COM 8B.14 adopted by the World Heritage Committee the 39th session in 2015.

The Report was drafted through discussions among all Local Conservation Councils (hereinafter referred to as "Council or Councils"), and finalized at the meeing of each Council between September 20th and October 6th, 2017. The Council in each Area comprise the national and local governments, owners and other related parties, and the draft of the Report was prepared based on the "*Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas, General Principles and Strategic Framework for Conservation and Management*[1] " (hereinafter referred to as "Strategic Framework"), which the Cabinet Secretariat established during the nomination process of the "Sites of Japan's Meiji Industrial Revolution" for inscription on the World Heritage List.

The National Committee of Conservation and Management for the "Sites of Japan's Meiji Industrial Revolution" (hereinafter refered to as "National Committee") approved the Report on October 20th, 2017. The National Committee is composed of the Cabinet Secretariat, the Agency for Cultural Affairs, Ministries supervising the industry related to the working properties, those in charge of the conservation measures for the working properties, and relevant local governments in order to communicate and to discuss matters with each other under the Strategic Framework.

The Cabinet Secretariat also heard the opinions from domestic and international members of the Industrial Heritage Expert Committee including Working Properties (hereinafter referred to as "Expert Committee"), established in line with the Strategic Framework, and appropriately reflected the feedback in the Report.

The Cabinet Secretariat thus amply communicated with stakeholders for component parts (working properties and non-working properties) and built a solid consensus with them in the process of preparing the Report.

2. Report Configurations

The report comprises (1) Main Documents and (2) Appendices.

(1) Main Documents

Documents of eight answers to Recommendations a) through h)

(2) Appendices

Reference information for eight answers in (1)

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[1] Please refer to the "Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas, General Principles and Strategic Framework for Conservation and Management", attached to the Nomination Document (see http://whc.unesco.org/uploads/nominations/1484 pp. XXX-XXX).

3. Handling of Recommendation h)

Of the eight Recommendations, the Main Documents and Appendices for responding to Recommendation h) presents approaches for five development projects potentially affecting the Outstanding Universal Value of the property, and will be submitted to the World Heritage Committee pursuant to paragraph 172 of the Operational Guidelines for the Implementation of the World Cultural and Natural Heritage Convention (hereinafter referred to as "Operational Guidelines").

If any development project beyond these five instances could be detrimental to the Outstanding Universal Value of the property at component parts or their buffer zones, the Government of Japan will submit an appropriate State of Conservation Report to the World Heritage Committee based on paragraph 172 of the Operational Guidelines.

4. Public Access to the Report

This Report is available to the public.

5. Recommendations in the Decision adopted by the World Heritage Committee

The World Heritage Committee adopted at its 39th session the Decision: 39 COM 8B.14 including eight Recommendations a) through h), as follows:

39 COM 8B.14 The World Heritage Committee（1 to 3 omitted）

4. Recommends that the State Party give consideration to the following;

a) Developing as a priority a detailed conservation work programme for Hashima Island;

b) Developing a prioritised conservation work programme an implementation programme for the property and its component sites and;

c) Defining acceptable visitor threshold levels at each component part to mitigate any potential adverse impacts, commencing with those most likely to be at risk;

d) Monitoring the effectiveness of the new partnership-based framework for the conservation and management of the property and its component sites on an annual basis;

e) Monitoring the implementation of the conservation and management plans, the issues discussed and the decisions made by the Local Conservation Councils on an annual basis;

f) Establishing and implementing an ongoing training programme for all staff and stakeholders responsible for the day-to-day management of each component part to build capacity and ensure a consistent approach to the nominated property's ongoing conservation, management and increasing of understanding;

g) Preparing an interpretive strategy for the presentation of the nominated property, which gives particular emphasis to the way each of the parts contributes to Outstanding Universal Value and reflects one or more of the phases of industrialisation; and also allows an understanding of the full history of each site*;

(*Note: The World Heritage Committee takes note of the statement made by Japan, as regards the interpretive strategy that allows an understanding of the full history of each site as referred to in paragraph 4.g), which is contained in the Summary Record of the session.）

h) Submitting road construction projects at Shuseikan and Mietsu Naval Dock, all development projects for a new anchorage facility at Miike Port, and proposals for the upgrade or development of visitor facilities to the World Heritage Committee for examination, in accordance with paragraph 172 of the Operational Guidelines;

5. Requests the State Party to submit a report outlining progress with the above to the World Heritage Centre, by 1 December 2017, for examination by the World Heritage Committee at its 42nd session in 2018;

6. Also recommends that the State Party consider inviting ICOMOS to offer advice on the implementation of the above recommendations.

6. Summary of the Report

Below are the summary of responses to each of the eight Recommendations. For details, please refer to (1) Main Documents and (2) Appendices.

Recommendation a)

Based on the standardized format of the "Conservation, Restoration, Presentation and Public Utilization Plan" (hereinafter referred to as "Plan") that the Cabinet Secretariat created, Nagasaki City formulated the Plan for Hashima Coal Mine (Area 6 Nagasaki/Component part 6-7). Under the cooperation with Nagasaki City, the Cabinet Secretariat extracted mainly the parts related to conservation and restoration works from the Plan, and abstracted them as the Conservation Work Programme (hereinafter referred to as "Programme"). The standard form of the Plan is attached as **Appendix a)-1**. The Programme is attached as **Appendix a)-2**. Based on the Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee, and the ICOMOS Evaluation Report (WHC-15/39.COM/INF.8B), the Programme expresses the vision, policy and methods for conservation and restoration of Hashima Coal Mine placing the emphasis on constituent elements contributing to the Outstanding Universal Value.

Recommendation b)

For component parts other than Hashima Coal Mine, based on the Plan drawn up by the owners and related local governments of component parts, the Cabinet Secretariat extracted mainly the parts related to conservation and restoration works from the Plans, and abstracted them as the Conservation Work Programms and Implementation Programmes" (hereinafter referred to as "Programmes") for each component part, under the cooperation with the owners and local governments. Programmes are attached as Appendices b)-1 through b)-16. These Programmes considered the meanings of each component part in light of the Outstanding Universal Value, and the specific location, nature, current state and other affairs of each component part, and aimed at conservation and restoration, focusing on assured conservation of constituent elements within the component parts, as well as resolving issues within or outside the component parts. Prioritized project implementation schedule is shown in each of the Programmes.

Recommendation c)

From FY 2016, current numbers of visitors to each component part has been investigated. Based on the results of the investigation, a visitor management strategy is planned to be formulated in FY 2018. Paralleling a survey on the current state, a target visitor management approach that would be common to each component part is presented. Related information is prepared on the number of visitors to each component part, the current state and issues with visitor management, and improvement policies and techniques, which is attached as **Appendix c)-2-1** to **Appandix c)-1-19**. When determining a visitor management strategy in FY 2018, the possibility or need for determining visitor threshold levels is planned to be investigated.

Recommendation d)

A checklist was produced and monitored to determine whether the governance framework determined in the Strategic Framework comprising (1) a Local Conservation Council, (2) an area specific Working

Group, and (3) the National Committee of Conservation and Management properly functions and whether measures properly incorporate the opinions of members of the Expert Committee, so that the results could be reflected in an annual report. The checklist is in **Appendix d)-1**, the form of the annual report is in **Appendix e)-3**, and the past resords of schedule and agenda of the meetings are in Appendices d)-2 through to d)-4. At this juncture, meetings are regular and working well and the mutual communication and cooperation setup is functioning thoroughly through monitoring annual reports and other means, so the governance framework is operating appropriately.

Recommendation e)

Monitoring charts matching the nature of each component part have been produced to systematically monitor the elements of component part and the landscape of buffer zone. It was decided to record the results of annual observations in monitoring charts, incorporating this information in annual reports. Annual reports will be filed and confirmed annually by the Councils, deciding on measures as needed. These results will be compiled to be basic data for periodic reports that are supposed to be submitted to the UNESCO World Heritage Centre every six year in principle.

The monitoring chart and the annual report form for Area 2 Kagoshima, for example, is attached as **Appendix e)-2** and **Appendix e)-3** respectively.

Recommendation f)

Human resources have been classified in four types of personnels, with the definition of the required capabilities for each. At the same time, policies and techniques of capacity building for human resources that are common to the overall property have been created, including training items for each type of personnel and project items to be implemented. Current state on capacity building of human resources as well as related issues in each Area and component part have also been assessed. Future directions are presented as **Appendices f)-1** through **f)-8**.

In FY 2017, the National Congress of Industrial Heritage has carried out the project for capacity building such as publishing a textbook for personnel training and running workshops for tour guides of each component part. In addition, the World Heritage Council for the “Sites of Japan’s Meiji Industrial Revolution,” which is established for the purpose of promoting conservation, restoration and interpretation of each component part as well as the World Heritage property as a whole by working with related local governments each other. The current state, challenges and future direction are attached as **Appendix f)-9**.

Recommendation g)

In preparing the Interpretation Strategy, the Cabinet Secretariat conducted a full Interpretation Audit, involving specially commissioned independent international experts at two principal levels: WHS-wide, and at component parts/sites. It also specially invited the President of the ICOMOS International Scientific Committee on Interpretation and Presentation to provide specific advice on the interpretation of the “full history” of each site. Based on these efforts, and the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites (ENAME Charter), the Cabinet Secretariat developed the Interpretation Strategy. The Interpretation Strategy is attached in **Appendix g)-1**.

Recommendation h)

Based on paragraph 172 of the Operational Guidelines, information was compiled regarding the contents and progress of a number of development plans and new development plans for public facilities listed in Recommendation h). In this Report, State of Conservation Reports on three projects submitted to the UNESCO World Heritage Centre on November 30th, 2015, for Shuseikan (Area 2 Kagoshima/, Component part 2-1), Mietsu Naval Dock (Area 5 Saga/Component part 5-1), and Nirayama Reverberatory Furnaces (Area 3 Nirayama/Component part 3-1), are reproduced as Appendices h)-1, h)-2-1, and h)-3-1, respectively, and a State of Conservation Report for one project relating to upgrade or development of visitor facilities mentioned in the ICOMOS Evaluation Report (WHC-15/39.COM/INF.8B) (Hagi Castle Town (Area 1 Hagi/Component part 1-4)), is attached as **Appendix h)-4**. Furthermore, the State of Conservation Report on conservation works proposed for The Imperial Steel Works, Japan (Area 8 Yawata, Component part 8-1) and Onga River Pumping Station (Component part 8-2), is attached as **Appendix h)-5**.

7. Other conservation issues identified by the State Party which may have an impact on the property's Outstanding Universal Value

Same as the answer for Recommendation h). There is no other issue related to conservation.

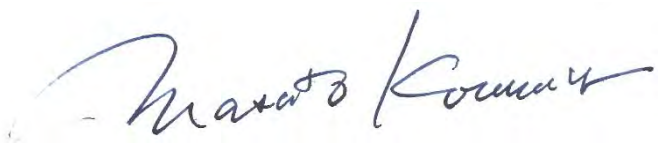
8. In conformity with paragraph 172 of the Operational Guidelines, description of any potential major restorations and/or new construction(s) intended within the component parts and the buffer zones, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

Same as the answer for Recommendation h).

9. Public access to the State of Conservation Report

It is available to the public.

10. Signature of the Authority



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I. Main Document

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Recommendation a)

Developing as a priority a detailed conservation work programme for Hashima Island

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B, pp 98-99) noted the following points as the premise of the Recommendation a) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- ICOMOS considers that the plan for the Hashima Coal Mine needs to be more detailed. The state of conservation of this site is poor and requires urgent conservation work on a large scale.
- The conservation management plan provides general policies to prevent further deterioration of the attributes related to the Meiji era.
- There is currently not a prioritised program of works based on its overall state of conservation, nor a time frame for works to commence.
- Immediate action is required particularly for the revetment to retain not only the wall but also the whole island. It was confirmed to ICOMOS that ¥200M/year will be made available over the next five financial years to undertake works.

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation a).

The Nagasaki City drew up a "Conservation, Restoration, Presentation and Public Utilization Plan of Hashima Coal Mine" based on the standard form provided by the Cabinet Secretariat of the Government of Japan (**Appendix a)-1**). The Cabinet Secretariat compiled "Conservation Work Programme" (hereinafter referred to as a "Programme") in cooperation with Nagasaki City, by extracting the sections for conservation work included in the above Plan. Programme is attached to this State of Conservation Report as **Appendix a)-2**, which notes basic approaches, policies and methods for conservation, and an implementation schedule for detailed conservation measures for the Hashima Coal Mine.

3. Composition of the Programme

The Programme was established under the following composition in general.

1) List of the constituent elements of Hashima Coal Mine that contribute to the Outstanding Universal Value of the World Heritage property, and the basic approach to the conservation work.
2) Conservation policies for the Hashima Coal Mine based on the above basic approach.
3) Practical measures consisting of four points; i) survey and study, ii) conservation and restoration, iii) presentation of coal industrial system and iv) arrangement and improvement of surrounding landscape.
4) Phased implementation schedule based on the order of priorities.

4. Overview of the Programme

The Programme was drawn up with an emphasis on conservation of the constituent elements that contribute to the Outstanding Universal Value of the World Heritage property, based on the points noted in the World Heritage Committee Decision 39COM8B.14 and ICOMOS Evaluation Report WHC-

15/39.COM/INF.8B.

The Programme is attached as **Appendix a)-2**, an overview of which is given below.

(1) Basic approach to conservation

Nagasaki City made a holistic decision on conservation work from the following three perspectives, setting an order of priorities for each element and selecting the following physical improvement methods.

(i) **Conservation maintenance of Hashima Island:** The functions of the seawall revetment and retaining walls will be properly maintained to protect the topography of the island, which provides the foundation for the preservation of structures and remains on the island.

(ii) **Stable maintenance of the remains:** Remains contributing to the Outstanding Universal Value as a world heritage property and remains embodying essential value as an historical site will be properly maintained.

(iii) **Maintenance of appearance:** Efforts will be made to maintain the distinctive battleship-like silhouette as seen from out at sea, as well as the ambience of ruins in the foreground where deterioration and damage has progressed.

Sub-points (i) to (iii) can be reformulated as follows from the perspective of maintaining and preserving constituent elements that contribute to the Outstanding Universal Value of the property:

1) Areas that have deteriorated or become unstable will be restored in order to maintain in a stable condition the constituent element contributing to the Outstanding Universal Value as the World Heritage component part (remains of revetment in the seawall and retaining wall, and production facility from the Meiji era).

2) Elements embodying the essential value of National Historic Site other than those constituent elements contributing to the Outstanding Universal Value as the World Heritage component part (concrete-built production facility remains) and the elements closely related to the essential value of National Historic Site (remains of accommodation facilities) will be restored in order to sustain evidence of the distinctive battleship-shaped silhouette of the island, the history of the advance and decline of the coal industry, and the actual state of the mining community.

3) A comprehensive assessment will be made, priorities set, and restoration undertaken in phases from the perspectives of the degree of deterioration of constituent elements, whether or not there are applicable preservation technologies, the degree of contribution to the Outstanding Universal Value as the World Heritage component part, the extent of the impact on other elements and visitor safety, and the necessary expenditure.

4) The reinforced concrete remains in the Hashima Coal Mine include some which would be difficult to maintain as structures given the extent of deterioration and damage. While the concentration of these will need to be gradually reduced over the long term, utmost efforts will be made to maintain the battleship-like silhouette as seen from the surrounding waters.

(2) Policies and methods

The policies and methods could be summarized in view of the following four items; i) survey and study, ii) conservation and restoration, iii) presentation of industrial system and iv) arrangement and

improvement of surrounding landscape.

1) Survey and study

To reaffirm and further deepen the state of the Hashima Coal Mine in terms of the Outstanding Universal Value of the “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining” (hereinafter referred to as “Sites of Japan’s Meiji Industrial Revolution”), various surveys will be undertaken. These include surveys of the remains (including an excavation survey), a historical document survey to identify the industrial (coal mining) system, a landscape survey of the World Heritage component part and surrounds, and a survey to ascertain the visitor situation and visitor impact on the component part.

Particularly when restoring the constituent elements that are thought to have been part of production facilities during the Meiji period, such as the pithead and winding shaft, surveys of the underground archaeological remains will be undertaken to the possible extent.

Structures made of reinforced concrete, stone, and brick, etc., will be subjected to material analyses and strength tests to ascertain scientifically the extent of structural deterioration. Before restoring structures, measurement, structural, and ground surveys will be undertaken for facilities so that survey and restoration work can be undertaken safely, as well as identifying the safety performance of said structures.

Monitoring will be conducted once a year using monitoring charts to ascertain the state of the component part and the buffer zone. The Nagasaki City will present monitoring results in an annual report for confirmation and agreement at the Nagasaki Area Conservation Council and reflect the Council’s evaluation in conservation, restoration, presentation and public utilization work.

2) Conservation and restoration of structures and remains

Physical improvement methods will be instituted for the elements of the Hashima Coal Mine—the remains of revetments in the seawall and retaining wall, production facilities, and accommodation facilities—in order of priority in three phases over 30 years.

The order of priority of work for each element will be determined holistically, with factors including the degree of deterioration, applicable preservation and restoration technologies, the degree of contribution to the Outstanding Universal Value as the World Heritage component part, the impact on other structures and on visitor safety, and the necessary expenditure.

Restoration work for revetments in the seawall will prioritize maintenance of the element as it contributes to the Outstanding Universal Value, beginning with those areas where large-scale deformation could occur that would impair seawall functions. The surrounding revetment will then be reinforced in order to maintain seawall functions.

However, in order to restore the revetment remains in a harsh environment, further consideration is required, from the technical point of view of the seawall strength aspect. Discussion will be continued in a working group composed of technical and specialized framework.

The retaining wall does not appear to have any particular areas of damage at present, so work will be addressed with a view to the state of conservation and restoration work across Hashima Island as a whole. The priority will be on maintaining the constituent elements contributing to the Outstanding

Universal Value of the World Heritage component part, with major restoration work beginning with the most seriously deteriorated areas of the wall.

In restoring production facilities, the priority will be on maintaining the constituent elements contributing to the Outstanding Universal Value of the World Heritage component part, with restoration beginning with the most seriously deteriorated areas. The various structures illustrating the flow of the coal production system will be next on the restoration list.

As the old accommodation facilities contribute significantly to the unique appearance of Hashima Island, restoration will be approached with priority on those buildings for which building methods have been established and preservation is most feasible.

3) Presentation of the coal mining system

Facilities for presenting and illustrating the coal mining system will be established in three zones (see below): (a) the seawall revetment remains zone; (b) the production facility remains zone; and (c) the accommodation facility remains zone.

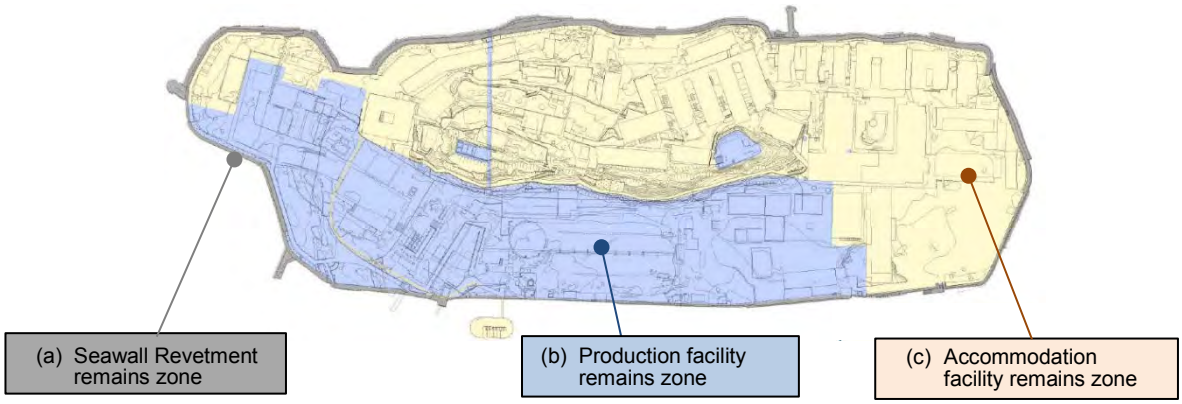


Figure. 1 Zoning of Hashima Coal Mine

(a) Seawall revetment remains zone

This is the zone comprising the seawall revetment remains around the island. Restoration will basically focus on preservation of the revetment remains, and no facilities will be set up for public utilization.

(b) Production facility remains zone

This is the zone comprising the remains of facilities related to coal production. Only viewing routes will be opened to the public, with the necessary facilities established for surveys, research, and public utilization.

- Install new viewing routes of the minimum possible scale
- Install a plaque commemorating World Heritage inscription in the viewing square and install small-scale ICT devices

(c) Accommodation facility remains zone

This is the zone comprising the remains of facilities related to the daily lives of employees and mine staff. The necessary facilities will be set up for the work for survey and research, conservation and restoration, and presentation of the component part.

- Install a management access route

4) Arrangement and improvement of landscape (external appearance)

The aim will be to depict the establishment and development of the coal industry which began from the Meiji period and preserve features unique to the island, namely (1) the current relict industrial landscape in which production facilities remain, (2) the distinctive battleship-shaped silhouette created by the seawall revetment, production and accommodation facilities, and (3) the appearance of damaged and deteriorated ruins. As a rule, the vertical seawall which makes a substantial contribution to the long-distance view of the Hashima Coal Mine will be maintained.

At this point in time, there is no plan to establish new structures on the nearby coast that comprises the buffer zone of the component part. The buffer zone will continue to be protected pursuant to the Coast Act, the Port and Harbor Act, and the Nagasaki City Maritime Administration Ordinance.

(3) Implementation schedule

The City has set out a 30-year implementation schedule beginning in 2018.

This comprises three 10-year phases, and will be reviewed every 10 years based on the state of progress, financial state, and the results of research on conservation and restoration techniques, etc. The City envisages a budget of around ¥10.8 billion across the 30 years of the implementation schedule, with the necessary funds to be drawn from subsidies, and effective use of the Hashima (Battleship Island) Development Fund set up in 2015. This includes the "¥200 million/year to be made available over the next five financial years [i.e., a total of one billion yen] to undertake works" noted in the ICOMOS Report WHC-15/39.COM/INF.8B.

5. Priority projects already underway at the Hashima Coal Mine

Since the Hashima Coal Mine closed in 1974, no conservation and restoration work has been undertaken for preservation purposes except for disaster reconstruction work along the seawall revetment and the construction of a viewing route for visitors landing on the island. As a result, the remains have continued to deteriorate. The following facilities in particular have a high risk of collapse, which would have a substantial impact in terms of the preservation of remains. To deal with this situation, emergency measures have been undertaken on a priority basis since 2014.

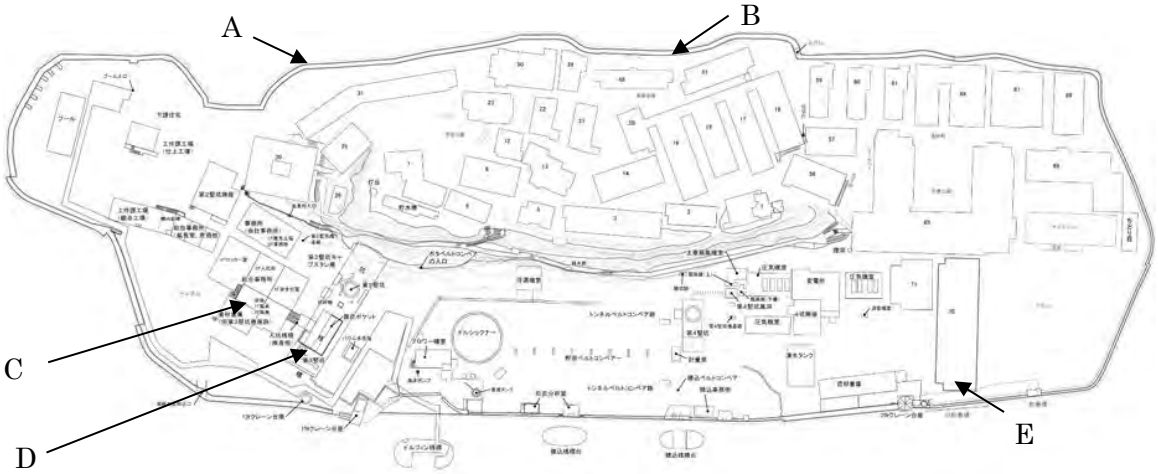


Figure. 2 Location of emergency measures A-E undertaken during the preparatory period

(1) Seawall revetment remains

Restoration area	State	Measures taken
A:Seawall revetment on western side of Building No. 31	・The rear of the remains of seawall revetment had been scoured out and caved in substantially. ・Unaddressed, the caved-in area was highly likely to widen, destabilizing the structure of the seawall revetment, and causing collapse.	・The western sea opening was blocked with concrete in FY 2014 (completed in Nov. 2014). ・The sunken area was filled with concrete in FY 2015 (completed in Sept. 2015).
B:Seawall revetment on western side of Building No. 51	・The rear of the seawall revetment was scoured out by the July 2014 typhoon, caving in substantially. ・Unaddressed, the caved-in area was highly likely to widen, destabilizing the remains of seawall revetment and Building No. 51, and causing them to collapse.	・The western sea opening was blocked with concrete in FY 2014 (completed in Nov. 2014). ・The sunken area was filled with concrete in FY 2015 (completed in Sept. 2015).

(2) Production facility remains

Restoration area	State	Measures taken
C:No. 3 winding shaft remains	・Only one wall remained standing, rendering the structure unstable. ・Cracks and missing bricks were apparent across the wall, with the collapse of the arch crown highly likely to lead to the collapse of bricks in the crown and the section above the crown.	・Bricks were added in FY 2015 to replace those missing in the arch crown (completed March 2016). ・Reinforcing was undertaken in FY 2016 (initial response; completed March 2017). ・Reinforcing will be undertaken from FY 2017, following an excavation survey, structural survey, basic and implementation projects, and discussion at the expert committees, etc. (secondary response, structural stabilization).
D:Pithead pier (physical examination site)	・The truss-style steel frame that supported the stair passage had corroded away, leaving only the concrete structure. ・The whole structure had bent, with the steel fulcrum showing marked deterioration. ・The whole structure was highly likely to collapse at once.	・Reinforcing was undertaken in FY 2016 (initial response; completed in March 2017). ・Reinforcing will be undertaken from FY 2017, following an excavation survey, structural survey, basic and implementation projects, and discussion at the expert committees, etc. (secondary response, structural stabilization).

(3) Accommodation facility remains

Restoration area	State	Measures taken
E:Lower part of Building No. 70 (Building of Hashima Elementary and Junior High School)	・When the 1991 typhoon caused the seawall revetment to break, scouring created a major cavity in the basement of the building nearby. ・The concrete pile foundations of the building were exposed, with several piles also lost. ・The building has lost support from the pile foundations and has become unstable. If the building collapses, this is highly likely to impact on the remains of seawall revetment nearby.	・In FY 2016, an implementation project was drawn up and discussion conducted at the expert committees, etc. ・Scoured areas will be filled over FY 2017 and FY 2018.

6. Reference materials

Appendix a)-1 Standard form for the "Conservation, Restoration, Presentation and Public Utilization Plan" which could be a source when creating a "Conservation Work Programme" pursuant to Recommendations a) and b)) for each component part

Appendix a)-2 "Conservation work programme for Hashima Coal Mine (Area6 Nagasaki/ Component part 6-7)"

Recommendation b)

Develop a prioritised conservation work programme for the property and its component parts and an implementation programme.

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B pp 98-99) noted the following points as the premise of Recommendation b) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- The condition of some of the component parts may need to be reassessed, including Glover House and Office, Miyanohara Pit, Manda Pit and the Repair Shop.
- There is currently not a prioritised program of works based on its overall state of conservation, nor a time frame for works to commence.

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation b).

- The owners of the component parts or the relevant municipal authorities established the "Conservation, Restoration, Presentation and Public Utilization Plan" for each of the component parts, based on the standard form (**Appendix a)-1**) provided by the Cabinet Secretariat of the Government of Japan. The Cabinet Secretariat made efforts to ensure the coherence of each Plan in terms of the whole property's component parts. Moreover, the Cabinet Secretariat compiled the "Conservation Work Programme and Implementation Programme" of each of the component parts pursuant to Recommendation b) (hereinafter referred to as a "Programme"), in cooperation with the owners of the component parts or the relevant municipal authorities, by extracting the sections for conservation work included in the above Plan. Programmes for each of the component parts have been attached to this report as **Appendices b)-1-16**.
- From the perspective of the whole property, rather than assigning an order of priorities to the conservation work to be undertaken for each component part, the Government of Japan, local governments, and other relevant institutions have sought to achieve balanced progress across all component parts with consideration also to budget measures for each fiscal year, etc.
- Programmes for each component part were created based on its status in terms of the Outstanding Universal Value, as well as their particular geographical location, characters, and current state, with the aim of resolving issues within and outside the component part and achieving the conservation and restoration of those constituent elements within the component part contributing to the Outstanding Universal Value as the main point.
- Each Programme lays out a prioritised implementation schedule.
- Those works for each component part which are already underway on a priority basis are attached as **Appendix b)-17**.

3. Composition of the Programmes

The Programmes were established under the following composition in general.

1) List of the constituent elements of each component part that contribute to the Outstanding Universal Value of the World Heritage property, and the basic approach to the conservation work.
2) Conservation policies for each component part based on the above basic approach.
3) Practical measures consisting of four points; i) survey and study, ii) conservation and restoration, iii) presentation of industrial system and iv) arrangement and improvement of surrounding landscape.
4) Phased implementation schedule based on the order of priorities.

4. Overview of the Programmes

The Programmes for each component part have been drawn up with an emphasis on conservation of the constituent elements that contribute to the Outstanding Universal Value of the World Heritage property, based on the items noted in the World Heritage Committee Decision 39COM8B.14 and ICOMOS Evaluation Report WHC-15/39.COM/INF.8B.

Property contains both working and non-working component parts. Particularly, four working component parts owned by Mitsubishi Heavy Industries exist in Area 6 Nagasaki. These working component parts, consisting of No.3 Dry Dock, Giant Cantilever Crane, Former Patten Shop and Senshokaku Guest House, have been in continuous operation by Mitsubishi since first built, and they remain in use, although one component part has changed in use – the Former Pattern Shop which is now a museum.

At present, all component parts are in a good state of conservation, and no major conservation works are anticipated. Accordingly, the component parts will continue to be maintained by the company in accordance with the standard operational maintenance planning and implementation program which has been in existence for many years. This planning and implementation has achieved good results to date, and will continue to care for the component parts into the future.

The Programmes are attached as **Appendices b)-1-16**, an overview of which is noted below.

(1) Hagi Reverberatory Furnace (Area 1 Hagi/Component Part 1-1)

The Hagi Reverberatory Furnace stands as a symbol of the early industrialization process of trial and error, when late Edo period Japan and the Hagi (Chōshū) Clan were seeking to respond to the rapid pace of industrialization. It illustrates the challenge phase of trial and error in the field of iron and steel manufacturing.

Hagi City will not undertake any immediate large-scale restoration work with dismantling members on the upper brick section of the furnace, but rather engage in the minimum necessary intervention, primarily mounting replacement bricks in places that have deteriorated particularly badly and supplementing this with other methods where necessary. The City will also engage in long-term monitoring of the furnace through ongoing displacement surveys and fixed-point observations, as well as studying building methods and materials in order to accumulate new knowledge and skills for the next stage of restoration.

Hagi City will establish viewing points along observation routes within the component part that enable visitors to see the furnace in its entirety, as well as ensuring lines of movement that enable them

to approach the furnace and view its silhouette from multiple directions. Vegetation will be trimmed so that the furnace can also be seen from the surrounding area. The City will create a viewing point around the furnace so that visitors can look out over the Ebisugahana Shipyard, a neighboring component part.

(2) Ebisugahana Shipyard (Area 1 Hagi/Component Part 1-2)

The Ebisugahana Shipyard is the remains of a shipyard where Western-style wooden sailing-style warships were built by the Hagi (Chōshū) Clan with Western shipbuilding technologies from two different countries in order to reinforce the military power of the Hagi Clan, which was concerned about maritime defense. The shipyard illustrates the challenge phase of trial and error in the fields of iron and steel manufacturing and ship-building.

The stone breakwater will be subjected to ongoing observation using monitoring charts to check for changes or deterioration in the stonework. Conservation and restoration work to date will be confirmed and additional repairs, conservation and restoration work will be undertaken where necessary.

Based on the results of excavation surveys, Hagi City will install planar markers showing the location and scale of underground archeological remains on the ground surface immediately above protective earth layer, and will also provide information along the observation routes based on the mutual connections between the various remains to enable visitors to understand the shipbuilding system.

The appearance of the Ebisu-sha Shrine, which existed before the shipyard opened and which has maintained its form since the shipyard closed, will be maintained, and improved where necessary, along with the hillside and forests spreading out behind it and also the attractive fishing ports and villages that fringe the Obataura Inlet.

(3) Ohitayama Tatara Iron Works (Area 1 Hagi/Component Part 1-3)

The Ohitayama Tatara Iron Works is the archaeological remains of an ironworks that utilized the ancient Japanese tatara ironworking technique to supply the iron for making the necessary nails and anchors, etc., for building Western-style wooden sailing warships to reinforce the military power of the Hagi (Chōshū) Clan, which was concerned about maritime defense. It illustrates the challenge phase of trial and error in the fields of iron and steel manufacturing and ship-building.

Hagi City will maintain the archaeological site in a sustainable condition. Where exposed remains such as stone walls have deteriorated, the causes of that deterioration will be identified and maintenance and reinforcement work undertaken using methods that minimize the impact on the remains.

At the same time, the city will build paths and other instruments that enable the ironmaking process to be envisioned to help visitors gain a full understanding. The connections between the site and the Ebisugahana Shipyard where the Western-style warships were built will also be actively highlighted.

Landowners and managers will appropriately manage the surrounding forests that were the source of the fuel coal for the ironworks, as well as the river which provided the water necessary for scouring iron sand. In relation to forests in particular, Hagi City and forest owners and/or managers will recreate over the long term the forestscape that existed when the ironworks was operating.

(4) Hagi Castle Town (Area 1 Hagi/Component Part 1-4)

Hagi Castle Town comprises the remains of Hagi Castle, the residential district of former upper-class samurai, and the residential district of former merchant/craftsman. It illustrates the state of an entire

local community during Hagi's challenge phase of trial and error in the fields of iron and steel manufacturing and ship-building.

Hagi City will carry out restoration work to maintain historic buildings, etc., and underground archaeological remains in a stable condition and maintain the attractive landscape of the castle remains and Hagi Castle Town. For the castle remains, to maintain the stability of the stone walls, which convey the ambience of the original castle, any areas where there is swelling or loosening will be restored using primarily traditional methods. The outer moat and earthen wall at the eastern edge of the Castle Town has already been completely restored, so in general only the necessary spot restorations will be made to maintain the moat and earthen wall in its current state. Traditional buildings in the residential districts of old upper-class samurai and of merchant/craftsman will generally be restored to maintain them in a stable condition in their current state, with areas that were clearly added at a later time converted and restored to traditional materials.

Multiple tour routes will be set up to enable visitors to understand the history and functions of the three areas making up Hagi Castle Town, with road signage and explanatory boards installed to convey information to visitors.

(5) Shokasonjuku Academy (Area 1 Hagi/Component Part 1-5)

Shokasonjuku Academy is a place of education that fostered many individuals who played an active role in Japan's modernization and industrialization from late Edo into the early years of Meiji period. It is a component part that illustrates the Hagi's challenge phase of trial and error in the fields of iron and steel manufacturing and ship-building.

As the owner, Shoin Shrine (a religious corporation) will maintain the Yoshida Shoin residence and the school building in a good and stable condition, and strengthen any areas that become unstable. Based on regular monitoring by Hagi City, Shoin Shrine will also make repairs at the appropriate time. The hedge surrounding the compound will be replanted based on the historical drawings, etc., restoring the scope and the atmosphere of the original grounds. The routes used by shrine worshippers and site visitors will also be separated to prevent crowding within the shrine compound and mitigate visitor pressure.

(6) Shuseikan (Area 2 Kagoshima/Component Part 2-1)

Shuseikan is the remains of the factory complex the Satsuma Clan built for the Shuseikan Project, which was launched as a means of encouraging new industry and making Japan a strong and wealthy nation in the face of the threat posed by the Western powers. It illustrates the challenge phase of trial and error in the field of iron and steel manufacturing up to the phase in which Western science and technology was introduced in the field of shipbuilding.

While no areas of the above-ground remains or the underground archaeological remains of the reverberatory furnace and spinning mill, etc. appear to be in urgent need of treatment, the owners (Kagoshima City and Shimadzu, Ltd.) will engage in regular monitoring and, in the case that deterioration or damage is identified, conduct excavation surveys and restoration work.

The owner will create an observation route that enables visitors to visualize the industrial systems of the time, including cannon manufacturing, shipbuilding, and textile manufacturing, setting up information and guidance boards along the way and also installing planar markers on the surface ground

of protective earthen layer to display the location, scale and structure of the underground archeological remains.

The division of the respective guidance functions of Shoko Shuseikan (Former Shuseikan Machinery Factory) and the Former Foreign Engineer's Residence will be clarified, and Shimadzu, Ltd. will build a new guidance facility in a location convenient for visitors to present an overview of the Sites of Japan's Meiji Industrial Revolution and the Shuseikan Enterprise as a whole.

(7) Terayama Charcoal Kiln (Area 2 Kagoshima/Component Part 2-2)

The Terayama Charcoal Kiln is the remains of a large kiln built for the mass production of white charcoal as the fuel needed for the Shuseikan Project. It illustrates the challenge phase of trial and error in the field of iron and steel manufacturing.

Kagoshima City will conducted a displacement measurement survey of the kiln's masonry, engaging in restoration to maintain the masonry in a stable condition. The deciduous broad-leaved trees around the kiln remains, as well as the stream running down the western side which supplied the charcoal cooling water, are both indispensable elements in understanding the white charcoal production system. The City will therefore manage and maintain these elements as appropriate and undertake excavation surveys, restoration and environmental improvement where necessary.

To enable visitors to understand the role of the kiln in the white charcoal production and utilization system from the various coal production processes (gathering raw materials, firing the kiln, extracting and cooling the charcoal) to transportation to Shuseikan, as well as the use of white charcoal in the reverberatory furnace, etc., the city will install explanation boards for the kiln remains, as well as planar markers indicating the location, scale, and structure of the underground archeological remains of related facilities on the surface ground. The City will also improve the paths leading to the kiln remains where necessary in order to maintain a safe visitor environment.

(8) Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/Component Part 2-3)

Sekiyoshi Sluice Gate of Yoshino Leat is a water channel intake modified to supply water driving a waterwheel as a source of power for the Shuseikan Project including operation of blast furnace. It illustrates the challenge phase of trial and error in the field of iron and steel manufacturing up to the phase in which Western science and technology was introduced in the field of shipbuilding.

The current intake was modified in the Taisho Era (1912-1926), but the water channel is used even today for agricultural irrigation water and is deeply involved in the lives and livelihoods of people of the local community. In consideration of these factors, Kagoshima City will work with the relevant administrative organizations to maintain the shape of the intake as modified in the Taisho Era, while also arranging and improving the exterior of concrete structures and other aspects added in the Showa Era (1926-1989) and later to the extent that the channel's use for agricultural irrigation water is not impaired.

Kagoshima City will take steps to explain the mechanism for water intake from the river and the historical process of changes and developments from establishment as a sluice gate to extension, improvement, and modification of the sluice gate, while also reflecting the results of future surveys. Tour routes, etc., will also be improved to ensure a safe viewing environment for visitors.

(9) Nirayama Reverberatory Furnaces (Area 3 Nirayama/Component Part 3-1)

The Nirayama Reverberatory Furnaces are the remains of a cannon manufacturing plant, the centerpiece of which was a smelting furnace, which operated in the late Edo period. It illustrates the challenge phase of trial and error in the field of iron and steel manufacturing.

Izunokuni City will approach restoration with a view to the process of historical changes and developments of the site, which, while centered on the operational period, began with construction research in the late 19th century and has extended through the shutdown of operations and subsequent conservation up to the present. The City will therefore maintain the structure, including a steel truss on the wall exterior that was installed during later restoration work to ensure seismic integrity. In that process, the City will study restoration methods that accord top priority to preserving bricks as they were at the time of construction, reflecting these results in the restoration.

Izunokuni City will install planar markers of the location and scale of the underground archaeological remains and explanation boards in order to provide information of industrial systems related to cannon manufacturing, whereby the furnaces and related underground facilities were integrated with the river area that supplied power, based on the process of historical changes and developments of the site. Vegetation will be cut down and the environs enhanced so that visitors can easily see the design and structure of the furnaces.

(10) Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/Component Part 4-1)

The Hashino Iron Mining and Smelting Site comprises three constituent elements; Smelting Site, Transportation Site used to transport iron ore, and Iron Mining Site, that illustrate Hashino's status as the birthplace of the modern iron and steel industry in Japan.

Kamaishi City will restore any areas where stonework in the foundation walls and the furnace has loosened, swollen, or fallen out, aiming to maintain and reinforce the conservation environment in a stable condition. And City will immediately undertake restoration of the areas that were largely impacted by the typhoon in August, 2017.

Also, Kamaishi City will install explanation boards to communicate the way in which the various remains functioned together to form an early modern mining, transportation, and iron manufacturing system. The forest manager will also strive to return the surrounding forests, which provided the charcoal, to the forestscape that existed when the site was operating so that visitors can experience the atmosphere of early modern iron manufacturing.

(11) Mietsu Naval Dock (Area 5 Saga/Component Part 5-1)

The Mietsu Naval Dock is an archaeological site where the Saga Clan acquired Western shipbuilding technology from the late Edo period into early Meiji, improving and disseminating that technology and training personnel. It illustrates the challenge phase of trial and error in the field of ship-building.

Saga City will engage in monitoring to ascertain the current state of the component part and the buffer zone. The city will maintain underground archaeological remains buried safely underground in that state, and maintain the current state of the exposed structures above ground and the topography of the inlet, which has remained in virtually the same form since the days when the dock was in operation, removing or transferring facilities which obstruct the view and improving their appearance.

The City will also avoid exposing underground archaeological remains to view, instead providing in-situ exhibits above the remains teamed with those installed in public utilization facilities nearby. While visitors may not be able to see the underground archaeological remains, the City will provide exhibitions and explanations that enable them to visualize the naval dock site and the activities there and comprehensively understand the whole picture, including the historical background and flow.

(12) Kosuge Slip Dock (Area 6 Nagasaki/Component Part 6-1)

The Kosuge Slip Dock is a site illustrating the fusion of traditional Japanese shipbuilding and ship repair technologies with Western industrial technologies to achieve Western European industrialization in an extremely brief period of time.

As the starting point of Japan's shipbuilding industry, Nagasaki City and Mitsubishi Heavy Industries' Nagasaki Shipyard and Machinery Works will maintain the remains from the dock's operational days in the Meiji period with a focus on those remains contributing to the Outstanding Universal Value. At the same time, reflecting the process of historical changes and developments of the dock remains, restoration work will be conducted in line with the particular characters of each remains and their historical changes through to the present, including those remains of 1937-53, when the site continued to function as a boat factory. Restoration work will begin with those areas where marked deterioration has occurred.

Explanation and information boards and guides will be installed to help visitors understand the state of the Kosuge Slip Dock in terms of Outstanding Universal Value, and the role of the various constituent elements as they observe the actual part, including the winch shed, winch, slip dock rails and stone breakwater that were all part of the winching mechanism.

(13) Takashima Coal Mine (Area 6 Nagasaki/Component Part 6-7)

The Takashima Coal Mine was the first mine in Japan to adopt modern coal mining methods, and along with the Hashima Coal Mine (Area 6 Nagasaki/Component Part 6-7) that carried on those mining technologies, it played an important role as the birthplace of the modern coal industry, fueling coal-powered steamships and other modes of transport, iron making, and steel making.

As most of the remains other than the pit remains have yet to be examined, Nagasaki City will conduct excavation surveys, etc. alongside day-to-day maintenance including minor repairs in order to improve the pit remains and the surrounding environment. Underground archaeological remains will be preserved in-situ underground, with their location and size marked above the ground surface.

Conceptualizing the Takashima Coal Mine and the Hashima Coal Mine which carried on Takashima's mining technologies as a singular set of resources for experiencing the history of the coal mining industry, Nagasaki City will install explanation boards to provide information in ways that shed light on the facilities' functions and their relation to each other to help visitors to understand the coal mining system from the perspective of the process of historical changes and developments of the site from the early Meiji period when Western techniques were introduced, through the termination of mining operations to the years following its shutdown.

(14) Glover House and Office (Area 6 Nagasaki/Component 6-8)

Glover House and Office; the residence and office of trader Thomas Glover, was built on a hill

overlooking the Nagasaki shipyard, and is the oldest western-style wooden building in Japan today. It vividly conveys to modern times the role that Glover played in the industrial revolution of the Meiji period.

Nagasaki City will improve the current state of the building, which is showing signs of deterioration, and then restore it to the design and form of the Meiji period in line with the way that Glover House and Office was originally used. Vegetation will be trimmed back to allow a good view of facilities illustrating the location of stonework and cliffs, etc. around the residence to recreate an appearance reminiscent of the time when Glover lived in the residence.

The explanation boards will be installed so that visitors can compare the current appearance against old photographs, conveying information that focuses on the value of Glover House and Office in terms of architectural history as well as the relationship between Glover and the Sites of Japan's Meiji Industrial Revolution.

(15) Miike Coal Mine (Area 7 Miike/Component Part 7-1)

Coal was a key commodity for Meiji Japan's industrialization as a fuel for ship and cokes for iron and steel and one that Japan possessed in abundance. Miike Coal Mine was the second to be developed with modern Western technology, after the Takashima Coal Mine in Nagasaki Prefecture, where steam power was first introduced.

The development of a mass distribution system required railways and a suitable port critical for the export of large volumes of coal.

It is thus one of the component parts of the property demonstrating the time when the base of Japanese coal industry was established.

Omuta City and Arao City will preserve evidence focused on the period when the foundations of the coal industry were established, as well as that illustrating the totality of the Miike Coal Mine, which embraced multiple functions and technologies even after the end of the 19th century as the mine responded to changes in industrial activities and the social situation. In addition to day-to-day maintenance and management, this will include regular monitoring of the state of conservation of the component parts and restoration work to reinforce and stabilize the materials and structures of buildings and remains.

In this area, Omuta City and Arao City will install explanation and information boards conveying to local residents and visitors the historical features of the site from two perspectives; (i) the process of historical changes and developments from the period when the foundations of the coal industry were established to the time when the mine closed, and (ii) the spatial spread of mining industrial landscape including company housing and other remains, with a focus on the remains of shafts and railway, and port as elements of the modernized coal mining and transportation system.

(16) Miike Port (Area 7 Miike/Component Part 7-1)

Mitsui conglomerate tried to link the pits to the port for the efficient mass distribution of coals and developed Miike Port in Ariake Sea near the mines, to allow large vessels to moor at the port and mechanically upload large amount of coal by coal loader on wharf. The Ariake sea is famous for its shallow and marshy tidal flats with 5.5 m tidal range. It was a major civil engineering challenge to build

the coal port that Miike needed. A pair of control breakwaters/groin flanks a long, narrow navigation channel. The port's unique design created a shape that was dubbed "the hummingbird". The water level of the inner floating basin is controlled by a pair of Lock gates and a set of Sluice gate. It illustrates the Meiji Japan's engineering skills that enabled the successful industrialization of the country by the early twentieth century. Miike port is still working as an Industrial Port.

Fukuoka Prefecture (the Port Authority), Omuta City, and the Miike Port Logistics Corporation developed the Miike Port conservation work program in fiscal years 2016-2017 in close collaboration with the State Party including the Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, and the Cabinet Secretariat.

The major conservation issue with Miike Port is the conservation of the north groin. Conservation Work Program of Miike Port has been developed to address its problems, and it is being implemented. The work started in 2009 and is still continuing. Other anticipated works are ongoing minor repairs and maintenance. This Conservation Work Program is based on the concept of the Miike Port Plan, but is fully informed by the Conservation Management Plan submitted to UNESCO, and heritage advice from Japan and abroad, based on proper heritage assessment in achieving the protection of World Heritage values.

(17) Misumi West Port (Area 7 Miike/Component Part 7-2)

In response to the increased coal output from Miike Coal Mine, Misumi West Port was completed in 1887 to the design of Dutch engineer A. Rouwenhorst Mulder as a port where large ships could dock. It illustrates the phase of introduction of Western technologies in the field of port construction.

Uki City will maintain the design and form of the piers, drainage channels, the traditional town divisions, and wells, etc., and the topography of the hinterland, which are the constituent elements contributing to the Outstanding Universal Value of the World Heritage property, as well as conserve the surrounding landscape by restricting development, etc., so as to protect and communicate the appearance of the port back when it was constructed.

Uki City will install explanation and information boards so that visitors and local residences can experience the role that Misumi West Port played in the advance of the coal industry in the Meiji period as they walk around the town, understanding the history of Misumi West Port inclusive of topography illustrating the background to the port's construction in this location, drainage channels and other elements of the water utilization system which are still in use today, and other facilities that formerly fulfilled juridical, administrative and navy functions, as well as the scale of the town that was built through reclaiming land.

(18) The Imperial Steel Works, Japan (Area 8 Yawata/Component Part 8-1)/Onga River Pumping Station (Area 8 Yawata/Component Part 8-2)

The Imperial Steel Works, Japan's first fully integrated iron and steel mill, comprises the three constituent elements of the First Head Office, Repair Shop, and Former Forge Shop. The group of these elements and the Onga River Pumping Station retain the original appearance and is still in operation today. It illustrates the establishment of the foundations of the iron and steel industries in the process of Japan's modernization.

The interior of the First Head Office will be restored to the original design. The two shops and the pumping station will be repaired and seismically strengthened and their exteriors restored to the extent possible without impacting on the Outstanding Universal Value of the World Heritage property, while also maintaining the original materials to the greatest possible extent.

The content of the above plan is noted in the State of Conservation Report submitted to the UNESCO World Heritage Center on September 28th, 2017 pursuant to Paragraph 172 of the "Operational Guidelines for the Implementation of the World Heritage Convention", attached as **Appendix h)-5**.

5. Prioritised projects currently underway

Conservation measures and other priority projects currently underway in relation to the 23 component parts are noted in **Appendix b)-17**.

6. Reference materials

Please refer to **Appendix a)-1** for the standard form for establishing the "Conservation, Restoration, Presentation and Public Utilization Plan" for each of the component parts, as a source of the Programmes for each Component Part.

Appendix b)-1 Conservation work programme and implementation programme for Hagi Reverberatory Furnace (Area 1 Hagi/Component part 1-1)

Appendix b)-2 Conservation work programme and implementation programme for Ebisugahana Shipyard (Area 1 Hagi/Component part 1-2)

Appendix b)-3 Conservation work programme and implementation programme for Ohitayama Tatara Iron Works (Area 1 Hagi/Component part 1-3)

Appendix b)-4 Conservation work programme and implementation programme for Hagi Castle Town (Area 1 Hagi/Component part 1-4)

Appendix b)-5 Conservation work programme and implementation programme for Shokasonjuku Academy (Area 1 Hagi/Component part 1-5)

Appendix b)-6 Conservation work programme and implementation programme for Shuseikan Complex (Area 2 Kagoshima/Component part 2-1)

Appendix b)-7 Conservation work programme and implementation programme for Terayama Charcoal Kiln (Area 2 Kagoshima/Component part 2-2)

Appendix b)-8 Conservation work programme and implementation programme for Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/Component part 2-3)

Appendix b)-9 Conservation work programme and implementation programme for Terayama Charcoal Kiln (Area 2 Kagoshima/Component part 3-1)

Appendix b)-10 Conservation work programme and implementation programme for Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/Component part 4-1)

Appendix b)-11 Conservation work programme and implementation programme for Mietsu Naval Dock (Area 5 Saga/Component part 5-1)

Appendix b)-12 Conservation work programme and implementation programme for Kosuge Slip Dock (Area 6 Nagasaki/Component part 6-1)

Appendix b)-13 Conservation work programme and implementation programme for Takashima Coal Mine (Area 6 Nagasaki/Component part 6-6)

Appendix b)-14 Conservation work programme and implementation programme for Glover House and Office (Area 6 Nagasaki/Component part 6-8)

Appendix b)-15-1 Conservation work programme and implementation programme for Miike Coal Mine (Area 7 Miike/Component part 7-1)

Appendix b)-15-2 Conservation work programme and implementation programme for Miike Port (Area 7 Miike/Component part 7-1)

Appendix b)-16 Conservation work programme and implementation programme for Misumi West Port (Area 7 Miike/Component part 7-2)

Appendix b)-17 Conservation measures currently being implemented on a priority basis at component parts

Recommendation c)

Define acceptable visitor threshold levels at each component site to mitigate any potential adverse impacts, commencing with those most likely to be at risk.

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B p 97) noted the following points as the premise of Recommendation c) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- The number of visitors at component sites is likely to increase based on the trend for previously inscribed properties in Japan. The level of increase will vary at each component due to their geographical location, ease of access and the number of hours they are open for public access. Monitoring measures will be put in place to record the level of visitation if the nominated property is inscribed.
- ICOMOS considers that a strategy needs to be developed to assess and determine the acceptable carrying capacity at each component site to ensure that there are no adverse impacts on the fabric particularly at such sites as the Shokasonjuku Academy (Area 1/Component Part 1-1) and Glover House and Office (Area 6/Component 6-8).

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation c).

Surveys will be conducted of current visitor numbers with the aim of reducing the adverse impact that increasing visitor numbers could have on the component parts, with a visitor management strategy created based on the results. The possibility/necessity of setting visitor threshold levels will also be carefully examined, factoring in the scale, nature, and location of each of the component parts.

The specific procedure will be as follows:

1) Surveys of current visitor numbers preliminarily started in the latter term of FY 2015, and will practically continue for three years in FY 2016-2018 to ascertain the current state of and trends in visitor numbers at each of the component parts.
2) In parallel with these surveys, a common visitor management vision for all component parts ("common visitor management vision") will be identified as a future target.
3) The current state of visitor management and issues faced at each of the component parts will be ascertained and policies and methods for improving that situation indicated, ensuring consistency with the common visitor management vision.
4) The results of the survey of current visitor numbers will be analyzed in FY 2019, and a visitor management strategy based on the common visitor management vision drawn up in parallel to the survey will be created as the process for realizing that vision.
5) The possibility/necessity of setting visitor threshold levels will also be carefully examined for each of the component parts.

3. Outline of srveys assessing the current state of visitor numbers for each component part (interim report)

Surveys of current visitor numbers at each of the component parts were preliminarily launched in the latter term of FY 2015, and will be practically conducted in the next three years until FY 2018. Survey results from FY 2015-17 are outlined below. Further details can be found in **Appendix c)-1**.

(1) Outline of surveys assessing the current state of visitor numbers

In FY 2016, two types of surveys—quantitative surveys for all component parts and qualitative surveys of three selected component parts ahead of other component parts were undertaken.

In FY 2017, quantitative and qualitative surveys are being undertaken for all component parts, as well as visitor satisfaction surveys.

1) Outline of quantitative surveys

These surveys ascertained the daily number of visitors to each of the component parts and fluctuations in this. Where any impact meriting special note was observed at a component part, this was recorded.

Assessment of visitor numbers was conducted at each of the component parts using the appropriate method for that part given its particular scale, nature, and location, as well as personnel arrangements for visitor management.

2) Outline of qualitative surveys

The impact of daily fluctuations in visitor numbers on the component part, as well as on the safety, security, and comfort of visitors, was observed and recorded for three of the component parts that receive the most visitors—Glover House and Office (Area 6 Nagasaki/Component Part 6-8), Former Shuseikan Machinery Factory (a part of Area 2 Kagoshima/Component Part 2-1), and Sengan-en Garden (a part of Area 2 Kagoshima/Component Part 2-1) —ahead of the same survey at other component parts. The amount of time which visitors spent at the component parts was also ascertained.

In FY 2017, qualitative surveys will be undertaken of all component parts and the results analyzed in order to identify indicators for management promoting visitor understanding of the component part and boosting visitor satisfaction. These indicators will be used together with the results of the visitor satisfaction surveys that were undertaken in parallel to the qualitative surveys to set target levels.

3) Outline of visitor satisfaction surveys

The degree of visitor satisfaction, issues, and prospects were ascertained by collecting questionnaires from visitors to the various component parts. These surveys were launched in May 2017, with questionnaires collected primarily during Golden Week in May and the summer vacation in August when visitor numbers are greatest.

(2) Survey results (interim report)

1) Results of quantitative surveys

It was discovered that daily visitor numbers to the component parts fluctuate significantly over weekdays, weekends, and vacation periods, as well as according to whether or not an event is being held.

The maximum scale of daily visitor numbers excluding event days was from around 100 to 6,000 per day (**Figure 1**, **Table 1**). No impact on the component parts of special note was reported.

A comparison of visitor numbers at the various component parts suggested that focusing on cases where visitor numbers are at least 2,000 per day was appropriate in terms of making a detailed analysis

of the impact on the component part and on the safety, security, and comfort of visitors. This finding was consequently used in the design of qualitative and visitor satisfaction surveys (survey frequency and the design of sample numbers) in FY 2017.

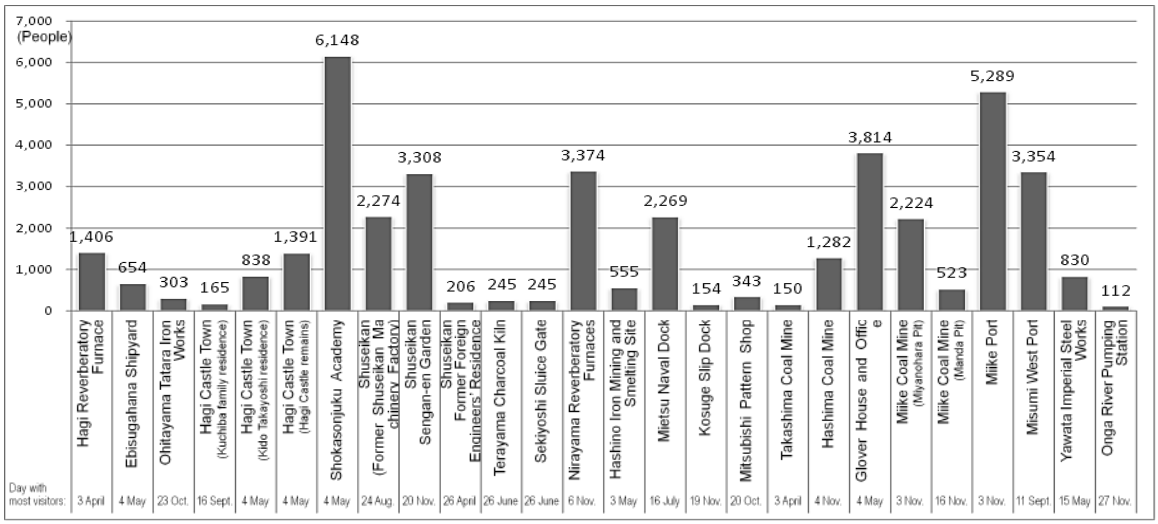


Figure 1: Maximum scale of daily visitor numbers outside event days

Component Part		Max no. of visitors (people/day)	No. of days with >2,000 visitors/day
Kagoshima	Shuseikan (Former Shuseikan Machinery Factory)	2,274	5
Nagasaki	Glover House and Office	3,814	33
Hagi	Shokasonjuku Academy	6,148	41
Kagoshima	Shuseikan (Sengan-en Garden)	3,308	20
Nirayama	Nirayama Reverberatory Furnaces	3,374	27
Saga	Mietsu Naval Dock	2,269	1
Miike	Miike Coal Mine (Miyanohara Pit)	2,224	1
Miike	Miike Coal Mine (Manda Pit)	9,000	1(event day)
Miike	Miike Port	5,289	1
Miike	Misumi West Port	3,354	22
Yawata	Onga River Pumping Station	2,000	1 (event day)

Table 1: Component Parts receiving 2,000 or more visitors/day and the number of such days

2) Results of qualitative surveys

- Impact of fluctuation in daily visitor numbers on the Component Part and visitor safety, security, and comfort

At Glover House and Office (Area 6 Nagasaki/Component Part 6-8), visitor pile-ups around the entrance were observed as a possible factor affecting the component part and visitor safety, security, and comfort. The same situation was not observed at Former Shuseikan Machinery Factory (a part of Area 2 Kagoshima/Component Part 2-1) or Sengan-en Garden (a part of Area 2 Kagoshima/Component Part 2-1).

At Glover House and Office, crowding occurs at particular times on days that attract many visitors because crowding around the entrance prevents people from entering the grounds; people stumble; people can't find the particular exhibit they were looking for; and because people gather where there is

a roof to shelter from the rain. These factors are thought to be impacting on visitor comfort and satisfaction. Situations like these are occurring in cases where travel groups such as students on school excursions are concentrated in one area.

No situations that could affect the component part and visitor safety, security, and comfort were found at Former Shuseikan Machinery Factory or Sengan-en Garden even on days with high visitor numbers.

These advance surveys confirmed that at the component parts where visitors enter buildings, crowding occurs where travel groups, etc., large enough to prevent smooth visitor movement are concentrated in entrance areas, etc. This could be prevented by changing visitor flows and managing the number of travel groups/visitors visiting the component part at the same time.

- Time spent by visitors at the component part

To increase understanding of the component part, the longer visitors spend at the component part the better. However, in cases where there are many daily visitors, people may not have sufficient time to experience the component part and the interpretation thereof.

At Glover House and Office, people tend to spend less time within the component part on days with numerous visitors. In the case of Former Shuseikan Machinery Factory, it was crowding on days with large visitor numbers that reduced the amount of time visitors spent at the component part.

Unlike Glover House and Office and Former Shuseikan Machinery Factory, where visitors spend time inside the buildings, Sengan-en Garden is a part of the component part that requires a lot of time to wander around its gardens and large open spaces, so no correlation emerged between fluctuations in visitor numbers and the time spent at the component part. Seasons were in fact found to have more impact on how long visitors stayed (more time in seasons when it is comfortable to be outside).

From the above results, survey frequency and sample numbers were determined according to whether or not visitors spend time inside the buildings at the component part, with qualitative surveys and visitor satisfaction surveys slated for FY 2017.

3) Results of visitor satisfaction surveys (results of questionnaires collected as at September 8, 2017)

- Time spent by visitors at the component part and their degree of satisfaction

Looking at visitor satisfaction by the amount of time spent at the component part, the ratio of visitors spending at least 15 minutes at the component part who said that they were “extremely satisfied” was high, particularly when visitors spent two hours or more.

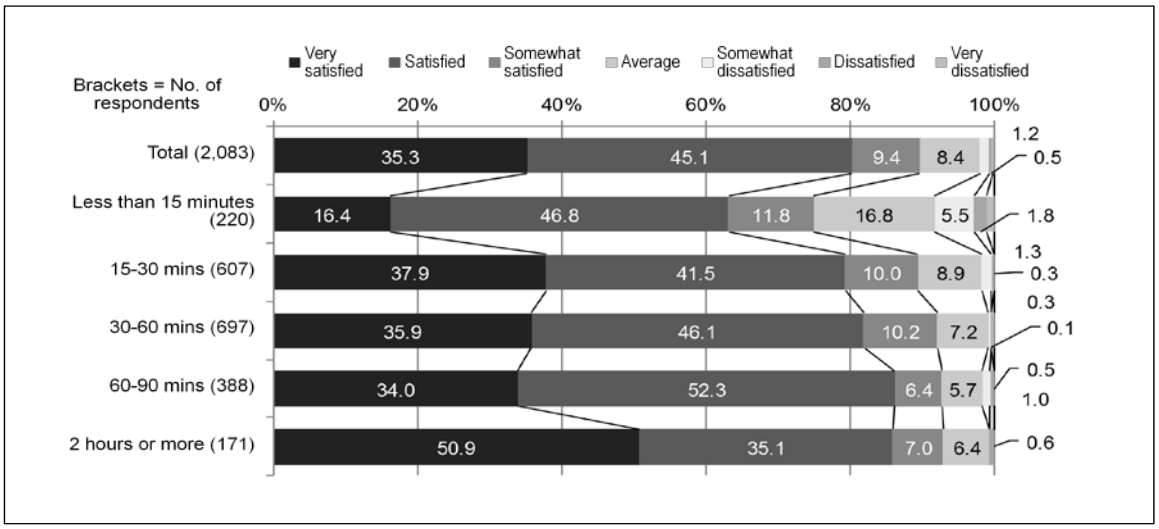


Figure 2: Relationship between amount of time spent at the component part and satisfaction with the component part

- Quality and quantity of interpretation and visitor satisfaction

Just under half (47%) of visitors used a guide of some nature (tour guide 18%, local guide 27%, audio guide 2%). Satisfaction levels were high: 53% of respondents said they were "very satisfied" with their guide and 38% said they were "satisfied" (**Figure 3**).

Looking at satisfaction with the component part by satisfaction with the guide, visitors who were "very satisfied" with their guide also had a high ratio of "very satisfied" responses in relation to the component part (**Figure 4**).

A high ratio of visitors said that information from their guide or from the Sites of Japan's Meiji Industrial Revolution guide app was the means by which they understood why the property of Sites of Japan's Meiji Industrial Revolution is inscribed on the World Heritage List, and why the component part they were visiting consists of the World Heritage property **(Figures 5** and **Figure 6**).

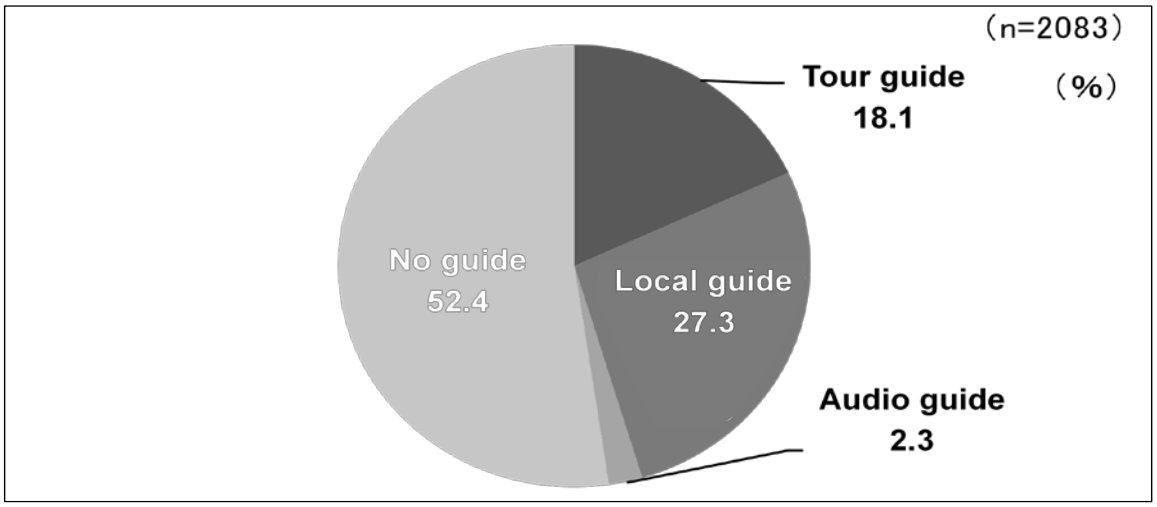


Figure 3: Whether or not a guide was used at the component part
(The "n" value at the top left represents the total number of responses)

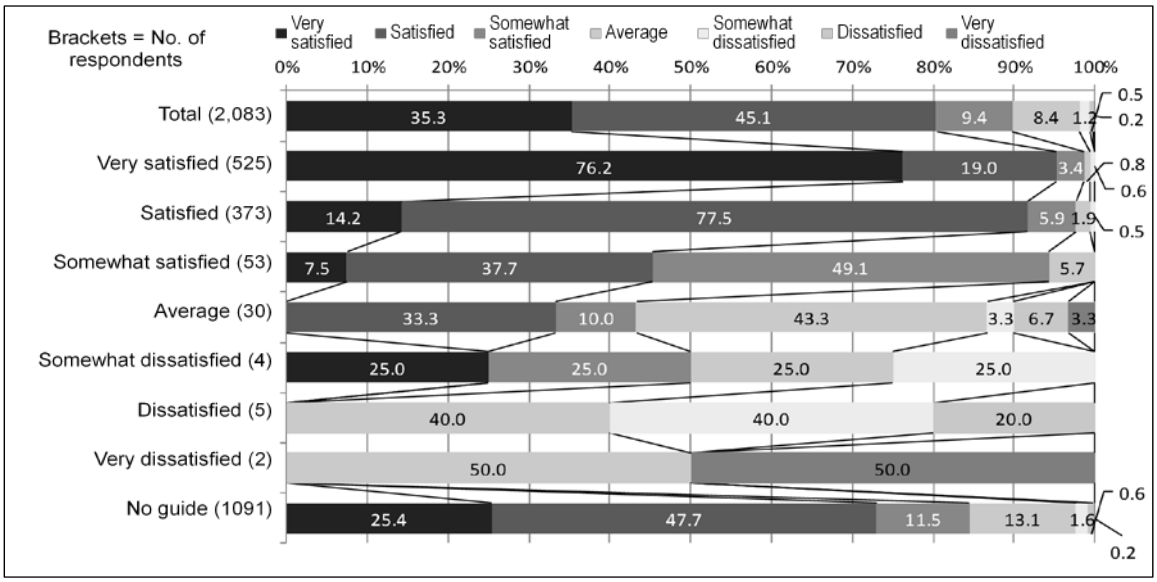


Figure 4: Relationship between satisfaction with guide and satisfaction with the component part

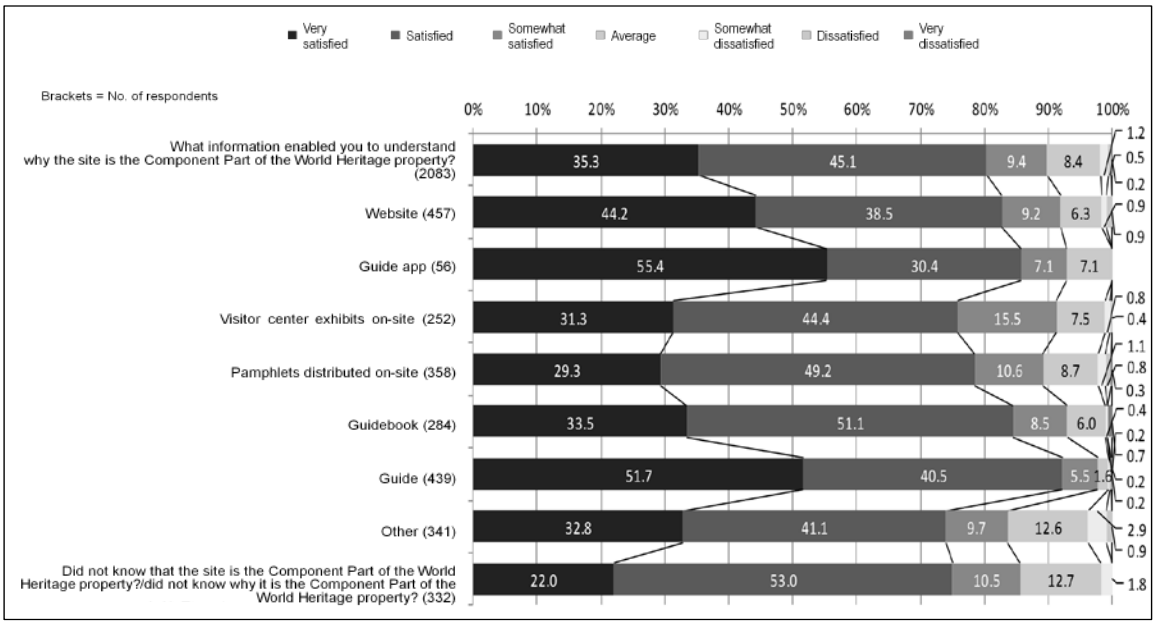


Figure 5: Means of understanding why the property of Sites of Japan's Meiji Industrial Revolution is inscribed on the World Heritage List

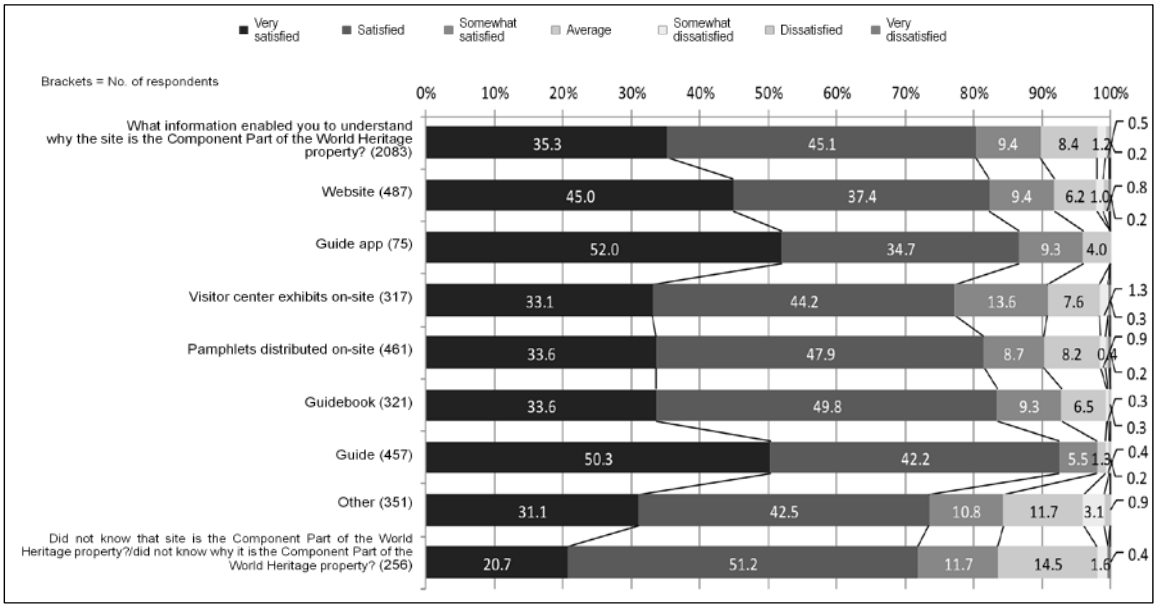


Figure 6: Means of understanding why the component part visited is world heritage

● Food, beverage, shopping, and other service opportunities, and degree of satisfaction

Inconvenient access (22%) was the most frequently noted component part issue, followed by "nowhere to eat" (9%), "not enough toilets and other convenience facilities" (9%), "no appealing souvenirs" (7%), and "boring/lacking in entertainment value" (6%) (**Figure 7**).

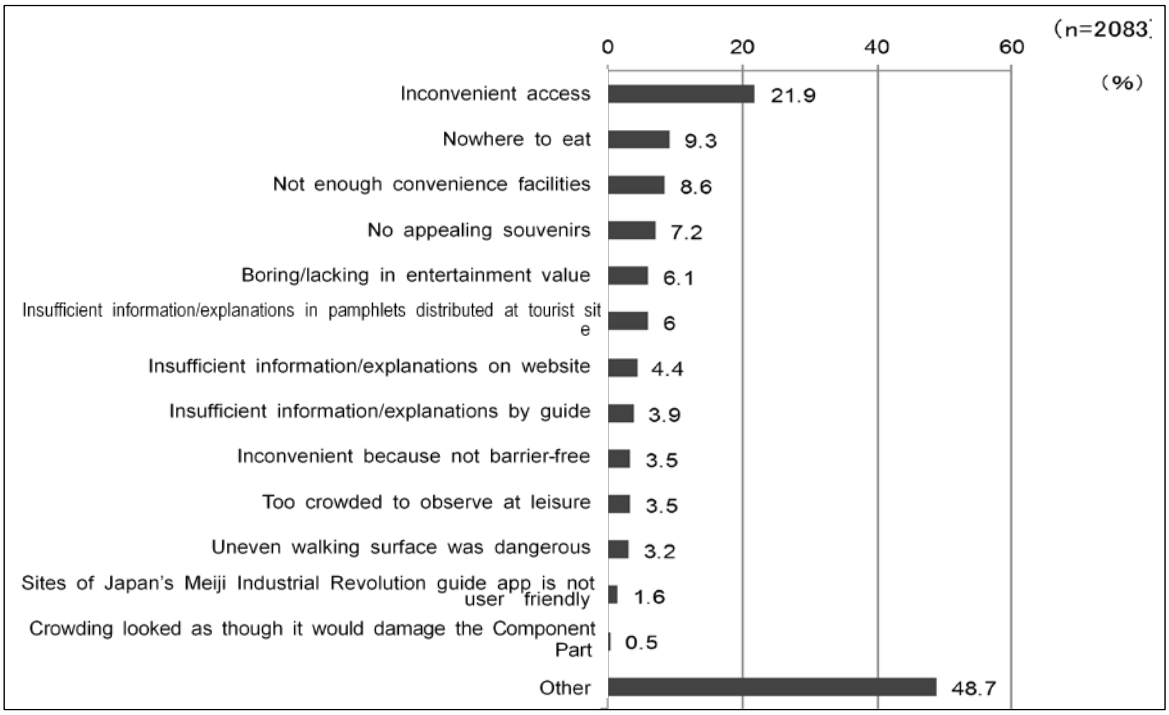


Figure 7: Component part problems and visitor requests

● Thinking on setting target levels

The importance of time spent by visitors at each of the component parts was also touched upon in "Results of qualitative surveys" above, but from the results of visitor satisfaction surveys, it was clear that visitors spending two hours or more at a component part tend to understand the value of the component part and be satisfied by their experience.

It also emerged that explanations from guides play a key role in promoting visitor understanding. The degree of satisfaction that visitors felt in relation to a component part changed according to whether or not they had a high-quality guide with whom they were "very satisfied." While based on a small sample, the Sites of Japan's Meiji Industrial Revolution guide app is also helping to boost visitor satisfaction.

On the other hand, facility, equipment and operational aspects such as convenience of access, restaurant and café facilities, and toilets are presenting problems in a relatively high ratio of cases. Arranging facilities and equipment that provide visitors with a comfortable experience will therefore also be an important aspect in ensuring that visitors spend a sufficient amount of time at the component part and understand its contribution to the Outstanding Universal Value.

From the above, it was clear that time spent, the quality of guides, and facility, equipment, and operational aspects each have a major impact in terms of achieving high levels of visitor understanding and satisfaction, and that these could serve as target standard management indicators.

4. Visitor management vision (targets)

(1) Scope of visitor management

The scope of visitor management will focus primarily on visitors (C), as well as the component part (A) and the surrounding environment (B). Component part (A) will be monitored to check whether visitors (C) are having a physical impact on (A), with any risk of this to be forestalled. (A) and (B) will be checked for the appropriate provision of information and services to encourage visitor (C) understanding and boost visitor (C) satisfaction (**Figure 8**).

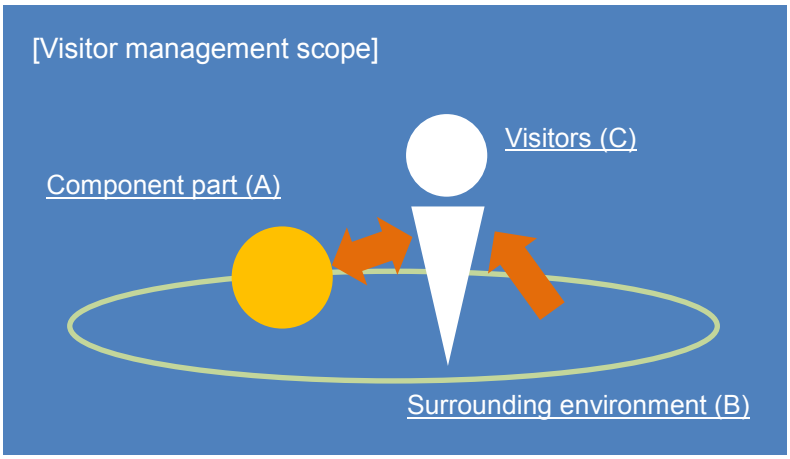


Figure 8: Scope of visitor management

(2) Visitor management vision (targets)

The visitor management vision envisages a state whereby (i) the component part (A) which is subject to visitor management and (ii) the component Part (A)/surrounding environment (B) supplement the following two states, thereby providing visitors (C) with safety, comfort, security, and a sense of satisfaction, as well as the motivation to visit again.

(i) Component Part (A)

State whereby visitor congestion at the component part is alleviated and behavior which could cause damage is monitored and prevented so as to avoid visitors having a physical impact such as damage or wear to the land or to materials, etc.

(ii) Component Part (A)/surrounding environment (B)

State whereby the necessary facilities, equipment, and operational arrangements are secured so that visitors can spend their time at the component part comfortably, safely, and with peace of mind, and also have the opportunity to increase their understanding through the information they receive about the Sites of Japan's Meiji Industrial Revolution as a whole as well as the particular component part, thereby feeling a sense of satisfaction and motivation to visit again.

5. Current state of and issues in visitor management at the various component parts and basic policies and methods for improvement

The current states of and issues in visitor management at the various component parts and basic policies and methods for improvement are noted in the tables attached as **Appendices from c)-2-1 to c)-2-17**.

Each of these tables has been compiled based on the relevant items in the visitor management section

of the "Conservation, Restoration, Presentation and Public Utilization Plan"[1] that have been created for each component part by the owner or manager as well as the relevant municipal authorities as the source of Conservation Work Programmes and Implementation Programmes pursuant to Recommendations a) and b).

6. Creation of visitor management strategy

(1) Visitor management strategy structure

A visitor management strategy will be created in FY 2019 to realize the visitor management vision (targets) noted in 4-(2). The structure indicated in **Figure 2** and **Table 1** below will serve as the basis for creating the strategy.

(2) Management indicators

Based on the visitor management vision for each of (i) component Part (A) and (ii) the component part (A)/surrounding environment (B), target items will be identified and management indicators set for each of these (**Table 2**). The targets will be set on the basis not only of the results of the quantitative and qualitative surveys (time surveys and behavior observation surveys) conducted in FY 2016-18, but also the results of customer satisfaction surveys conducted in FY 2017-18.

The visitor management vision (targets) will be compared with the management indicators in order to lay out phased target levels, with the determination of whether or not the visitor management vision (targets) has been achieved at the various stages to be made according to whether or not these standards have been achieved (**Figure 9**).

Whether or not the visitor management visions and targets for both (i) component part (A) and (ii) the component part (A)/surrounding environment (B), and whether or not visitors (C) consequently feel safe, comfortable, satisfied with their experience, and motivated to visit again will be determined through visitor satisfaction surveys.

(3) Development of visitor management measures

The implementation state and results of the measures to avoid negative impacts by visitors below will be confirmed, and if they were not realized, new measures will be developed and implemented.

a) Installing fences and surveillance equipment, etc.

b) Operating a surveillance regime

c) Establishing facilities and securing flow lines to ensure visitor safety and security

d) Providing appropriate information to convey value to visitors (including the use of guides)

e) Securing time for experiencing the component part

To boost visitor satisfaction, measures will also be needed to increase the quality and quantity of interpretation and enhance food, beverage, and other services at the component part (A) and the surrounding environment (B).

[1] While the current state of and issues in visitor management at the various component parts and basic policies and methods for improvement are noted in the "Conservation, Restoration, Presentation and Public Utilization Plans" created for each component part by the owner or manager of the Component Part as well as the relevant municipal authorities as the source of the Conservation Work Programmes and Implementation Programmes pursuant to Recommendations a) and b), they are not included in the Conservation Work Programme and Implementation Programmes (Appendices a)-2 and from b)-1 to b)-16 pursuant to Recommendations a) and b) in this State of Conservation Report. Please refer to the current state of and issues in visitor management and basic policies and methods for improvement as noted in the tables attached as Appendices from c)-2-1 to c)-2-17.

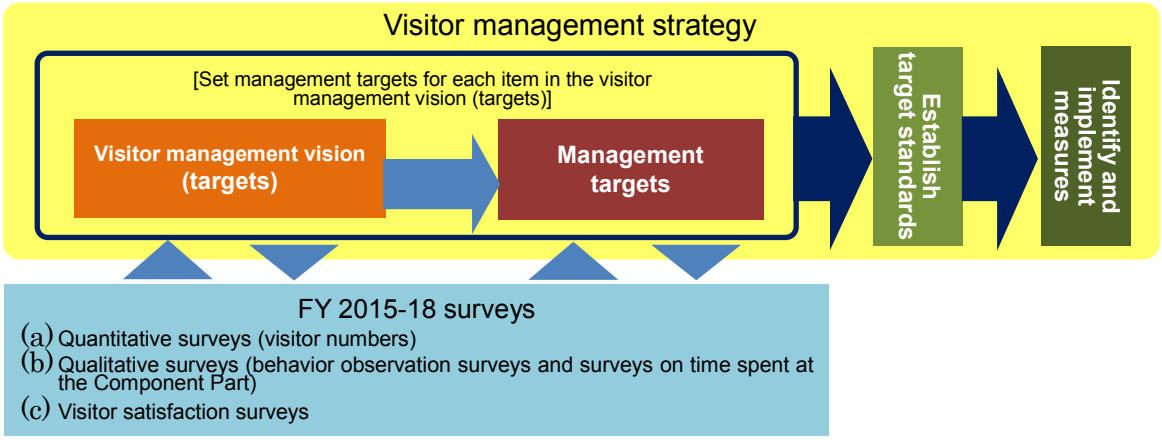


Figure 9: Structure of visitor management strategy (corresponds to Table 2)

Subject of visitor management	Visitor management vision (targets)	Management indicators	Surveys implemented
(a)Component Part (A)	・No physical damage to the land and materials of the component part ・Facilities, equipment and operational arrangements in place so that the component part can be physically protected	・Is there a crowding situation that could lead to physical damage? ・Are security arrangements in place? (physical distance, surveillance, etc.)	○FY 2016-18 ⇒Quantitative surveys (visitor numbers) ○FY 2017-18 ⇒Qualitative surveys (behavior observation surveys)
(b) Component Part (A)/surrounding environment (B)	・Facilities, equipment and operational arrangements in place so that visitor safety and security can be retained ・Visitors able to focus on feeling value (comfort, time) ・Facilities, equipment and operational arrangements in place to contribute to promoting and deepening visitors' understanding ・Facilities, equipment and operational arrangements in place for enjoyment of visit	・Can danger be avoided and is there a strong sense of safety and security during visit? ・Do visitors have sufficient time to observe the Component Part comfortably? ・Is interpretation of a high standard and quantity, sparking and heightening visitor interest? ・Do visitors have the opportunity for food, drink, shopping, and other services?	○ FY 2015 ⇒Identification of visitor flow lines and creation of an impact area map ○ FY 2016-18 ⇒Quantitative surveys(visitor numbers) ○ FY 2017-18 ⇒Qualitative surveys (behavior observation surveys and time surveys) ⇒Visitor satisfaction surveys

Table 2: Management targets to be established in the management strategy (correspond to Figure 9)

7. Establishment of visitor threshold levels

Based on the visitor management strategy that will be created in FY 2019 pursuant to the scale, nature, and location of each component part and the results of visitor surveys, and bearing in mind also the results of improvements made to visitor management issues based on the "Conservation Work Programme and Implementation Programme" of each component part pursuant to Recommendations a) and b) and "Interpretation Strategy" pursuant to Recommendation g), careful examination will be made for the possibility/necessity of setting visitor threshold levels of each of the component parts in order to secure high levels of visitor understanding and satisfaction.

8. Reference materials

Appendix c)-1 Survey report on visitor numbers (interim report)

Appendix c)-2-1 Current State, Issues and Directionality in Relation to Visitor Management at Hagi Reverberatory Furnace (Area 1 Hagi/Component Part 1-1)

Appendix c)-2-2 Current State, Issues and Directionality in Relation to Visitor Management at Ebisugahana Shipyard (Area 1 Hagi/Component Part 1-2)

Appendix c)-2-3 Current State, Issues and Directionality in Relation to Visitor Management at Ohitayama Tatara Iron Works (Area 1 Hagi/Component Part 1-4)

Appendix c)-2-4 Current State, Issues and Directionality in Relation to Visitor Management at Hagi Castle Town (Area 1 Hagi/Component Part 1-5)

Appendix c)-2-5 Current State, Issues and Directionality in Relation to Visitor Management at Shokasonjuku Academy (Area 1 Hagi/Component Part 1-6)

Appendix c)-2-6 Current State, Issues and Directionality in Relation to Visitor Management at Shuseikan (Area 2 Kagoshima/Component Part 2-1)

Appendix c)-2-7 Current State, Issues and Directionality in Relation to Visitor Management at Terayama Charcoal Kiln (Area 2 Hagi/Component Part 2-2)

Appendix c)-2-8 Current State, Issues and Directionality in Relation to Visitor Management at Sekiyoshi Sluice Gate (Area 2 Hagi/Component Part 2-3)

Appendix c)-2-9 Current State, Issues and Directionality in Relation to Visitor Management at Nirayama Reverberatory Furnaces (Area 3 Nirayama/Component Part 3-1)

Appendix c)-2-10 Current Status, Issues, and Directionality in Relation to Visitor Management at Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/Component Part 4-1)

Appendix c)-2-11 Current State, Issues and Directionality in Relation to Visitor Management at Mietsu Naval Dock (Area 5 Saga/Component Part 4-2)

Appendix c)-2-12 Current State, Issues and Directionality in Relation to Visitor Management at Kosuge Slip Dock (Area 6 Nagasaki/Component Part 6-1)

Appendix c)-2-13 Current State, Issues and Directionality in Relation to Visitor Management at Takashima Coal Mine (Area 6 Nagasaki/Component Part 6-6)

Appendix c)-2-14 Current State, Issues and Directionality in Relation to Visitor Management at Hashima Coal Mine (Area 6 Nagasaki/Component Part 6-7)

Appendix c)-2-15 Current State, Issues and Directionality in Relation to Visitor Management at Glover House and Office (Area 6 Nagasaki/Component Part 6-8)

Appendix c)-2-16^{-1} Current State, Issues and Directionality in Relation to Visitor Management at Miike Coal Mine (Miyanohara Pit) (Area 7 Miike/Component Part 7-1)

Appendix c)-2-16^{-2} Current State, Issues and Directionality in Relation to Visitor Management at Miike Coal Mine (Manda Pit) (Area 7 Miike/Component Part 7-1)

Appendix c)-2-17 Current State, Issues and Directionality in Relation to Visitor Management at Misumi West Port (Area 7 Miike/Component Part 7-2)

Appendix c)-2-18 Current State, Issues and Directionality in Relation to Visitor Management at The Imperial Steel Works, Japan (Area 8 Yawata/Component Part 8-1)

Appendix c)-2-19 Current State, Issues and Directionality in Relation to Visitor Management at Onga River Pumping Station (Area 8 Yawata/Component Part 8-2)

No negative impact by visitors is expected due to limited access to the component parts that are currently working (the four component parts within the Mitsubishi Nagasaki Shipyard belonging to Area 6 Nagasaki [Component Part 6-2 to 6-5]. Therefore no appendices on their current state, issues and directionality have been attached.

Recommendation d)

Monitoring the effectiveness of the new partnership-based framework for the conservation and management of the nominated property and its components on an annual basis;

1. Background

While nominating the Sites of Japan's Meiji Industrial Revolution for inscription on the World Heritage List in 2015, the Cabinet Secretariat of the Government of Japan laid out the General Principles and Strategic Framework for the Conservation and Management of the Sites of Japan's Meiji Industrial Revolution in order to take on all responsibilities in relation to the conservation and management of the property and respond to international obligations and requests.

Under this strategic framework, all relevant national and local government agencies and private owners involved in the conservation and management of the component parts participate in the protection of the Sites of Japan's Meiji Industrial Revolution as partnership members, sharing appropriate information and views amongst the relevant parties and engaging in harmonized decision-making. The governance structure developed to that end comprises (1) Local Conservation Councils set up for each Area, (2) site-specific Working Groups set up beneath the National Committee of Conservation and Mnagement, and (3) a National Committee of Conservation and Management ("Conservation Committee") (**Figure 1**).

The Industrial Heritage Expert Committee including Working Properties ("Expert Committee") comprising domestic and international members with expertise in this field was also established to garner views on the appropriateness of conservation, management and interpretation measures for the property.

Given the above governance structure, the report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B p. 99) notes the following point as the premise of the Recommendation d) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- ICOMOS recommends that the State Party monitor the effectiveness of the new partnership-based framework for the conservation and management of the nominated property and its components on an annual basis. It is also recommended that the State Party monitor the implementation of the conservation management plans.

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation d).

To check whether the governance structure is functioning properly, a checklist will be created based on the three points below in relation to the effectiveness of the structure (**Appendix d)-1)**), and monitoring will be conducted on an annual basis. Results of checking and evaluation work by the Local Conservation Councils and site-specific Working Groups will also be compiled into an annual report (**Appendix e)-3)**) and reported to the Conservation Committee.

- Are Local Conservation Councils and the Conservation Committee meeting regularly organized and functioning properly?

- Are site-specific Working Groups meeting where necessary?
- Are reports for each Area being made by both Local Conservation Councils and site-specific Working Groups to the Conservation Committee, and is the partnership structure functioning properly on the basis of good communication?

The site-specific Working Groups were set up to ensure communication and cooperation between the working and non-working component parts in the three Areas (Area 4 Kamaishi, Area 6 Nagasaki, Area 7 Miike) that contain both, but because communication and cooperation at the Local Conservation Council level has been sufficient to date, Working Groups have not been convened.

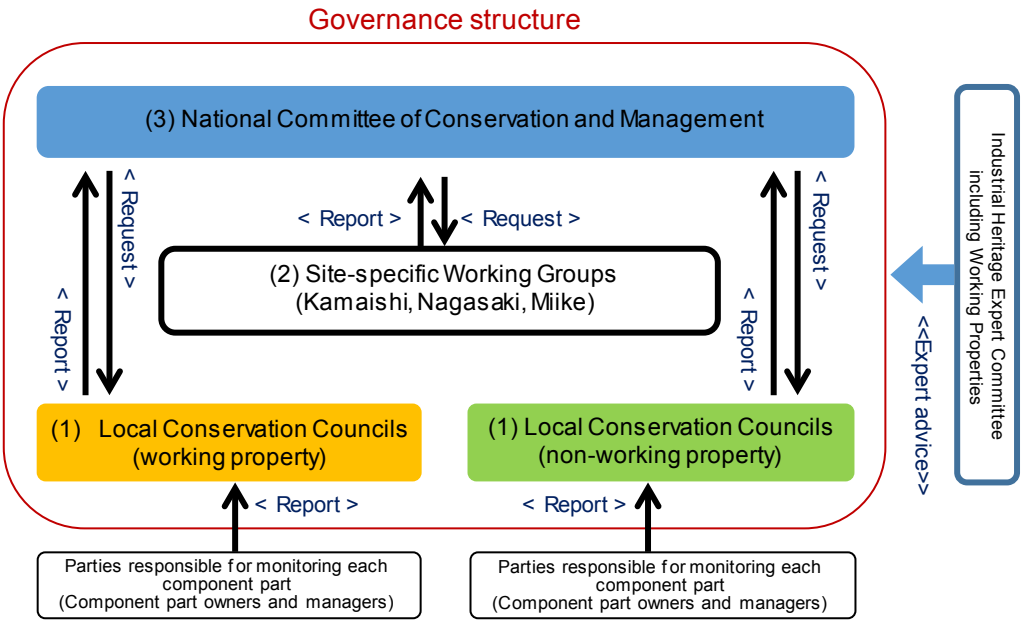


Figure 1: Governance structure

3. Monitoring results

The meeting schedules and minutes from the governance structure comprising (1) Local Conservation Councils, (2) Site-specific Working Groups, and (3) Conservation Committee, as well as of Expert Committee, which advises these groups from an expert perspective, are appended as **Appendices d)-2 to d)-4**.

Monitoring revealed that groups (1)-(3) have met regularly from the time of inscription of the property on the World Heritage List to the present; that they are functioning properly; and that there is good mutual communication and cooperation through annual reports, with the governance structure operating appropriately.

4. Reference Materials

Appendix d)-1): Checklist of Governance Framework Validation

Appendix d)-2): Past records of the schedule and agenda of the meetings of Local Conservation Councils of individual Areas

Appendix d)-3): Past records of the schedule and agenda of the meetings of National Committee of Conservation and Management

Appendix d)-4): Past records of the schedule and agenda of the meetings of Industrial Heritage Expert Committee including Working Properties

Recommendation e)

Monitoring the implementation of the conservation management plans, the issues discussed and the decisions made by the Local Conservation Councils on an annual basis;

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B p. 100) noted as the premise of Recommendation e) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

However, while Chapter 6 of the "Conservation Management Plan" (CMP) for each component part lays out an overarching consistent monitoring approach such as observational indicators, measurement content, timing, and who will be in charge of recording observations, a sufficient level of detail was not provided for the implementation of work on each constituent element contributing to the Outstanding Universal Value as noted in the CMPs (Chapter 2).

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation e).

To make monitoring more effective, all the information on the current state of component parts needs to be gathered and monitoring undertaken systematically based on the parts and materials of each constituent element of the component part. Monitoring charts will therefore be created in line with the characteristics of each component part.

The state of implementation of the above monitoring will be reported to Local Conservation Councils at least once a year in order to feed the results of monitoring appropriately back into conservation and management.

3. Monitoring Procedure

The monitoring procedure will be as follows.

1) The following four types of monitoring will be implemented:

- Monitoring for the component part and the buffer zone as a whole

Monitoring charts for the component part and the buffer zone as a whole consist of "individual charts" and "general charts" (**Appendix e)-1**). Multiple fixed points first will be selected in appropriate locations within each component part and its buffer zone and "individual charts" will be created based on photographs regularly taken from the fixed points to ascertain changes in the outlook and/or landscape. The contents of "individual charts" will then be compiled into "general charts". Monitoring results on changes in outlook and/or landscape identified through the monitoring charts will be reflected in the annual report (**Appendix e)-3**).

- Monitoring for the Component Part

The "individual charts" will be created that records all the current information for each part of the various constituent elements and others making up the component part according to the nature of the particular part. The "general charts" will be created by bringing together these "individual charts", then monitoring charts will be completed (**Appendix e)-1**). Monitoring results identified through monitoring

charts ("individual charts" and "general charts") will be reflected in annual report (**Appendix e)-3**).

- Monitoring of interpretation activities

The results of various types of activities undertaken in relation to interpretation, including lecture meetings and seminars etc., will be compiled and reflected in annual report (**Appendix e)-2**).

- Monitoring of related groups

The results of various types of activities undertaken by the groups involved in the conservation and management of the component parts will be compiled and reflected in annual report (**Appendix e)-2**).

2) The template for an annual report will be created based on the observation indicators laid down in the CMP for each component part (**Appendix e)-2**), and actual monitoring results based on the observation indicators will be reflected in annual report.

3) Local Conservation Councils will confirm the content of annual report and, where necessary, discuss the issues and make decisions. The schedule and agenda of Local Conservation Council meetings to date are noted in **Appendix d)-2**.

4. Monitoring results

As an example, monitoring charts of Shuseikan (Component Part 2-1), the Terayama Charcoal Kiln (Component Part 2-2), and the Sekiyoshi Sluice Gate of Yoshino Leat (Component Part 2-3) in Area 2 Kagoshima (Appendix e)-3)), as well as their annual reports (Appendix e)-4), have been attached as representative of the 23 Component Parts of the property.

The three Component Parts were selected on the grounds that they include all four types of remains contained in the 23 Component Parts: (1) stone walls (including stonework structures); (2) buildings; (3) underground archaeological remains and the related topography; and (4) gardens and ponds.

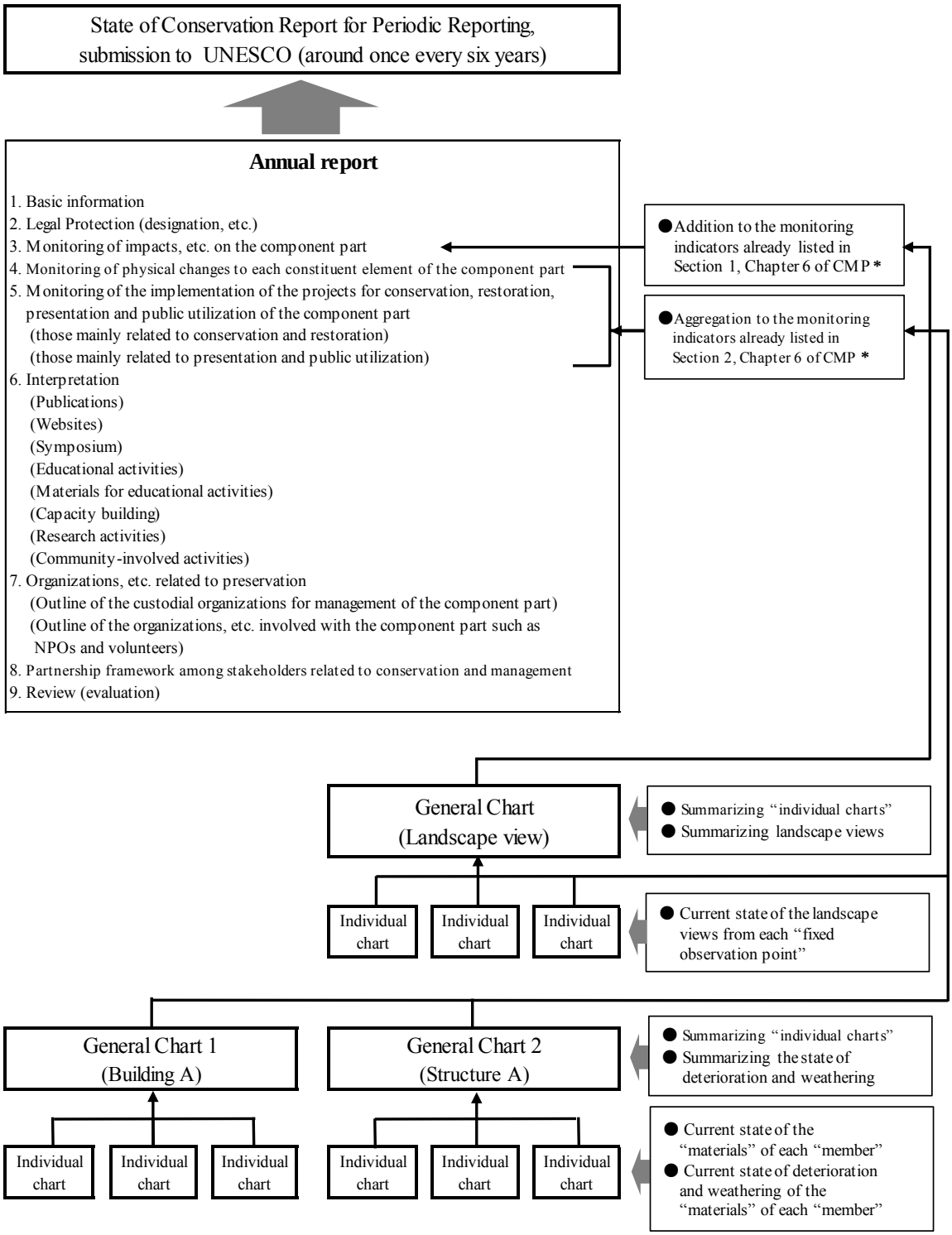
5. Reference materials

Appendix e)-1): Monitoring charts consisting of general and individual charts (samples)

Appendix e)-2): Examples of general and individual charts for Shuseikan (Area 2 Kagoshima/Component Part), the Terayama Charcoal Kiln (Area 2 Kagoshima/Component Part 2-2), and the Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/Component Part 2-3).

Appendix e)-3): Template for Annual Report FY20XX for the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining"

Appendix e)-4): Example of Annual Report FY 2016 for Shuseikan (Area 2 Kagoshima/Component Part), the Terayama Charcoal Kiln (Area 2 Kagoshima/Component Part 2-2), and the Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/Component Part 2-3).



* CMP: "Conservation Management Plan" for each of the 23 component parts of the property were attached to the Nomination Document in 2014.

Figure 1. Relationships between UNESCO State of Conservation Report for Periodic Reporting by the Government of Japan, annual report by the Local Conservation Councils, and general/individual charts by the owners and municipalities concerned

Recommendation f)

Establishing and implementing an ongoing training programme for all staff and stakeholders responsible for the day-to-day management of each component to build capacity and ensure a consistent approach to the nominated property's ongoing conservation, management and presentation;

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B, p. 100) noted the following points as the premise of the Recommendation f) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- Though the conservation management plans provide consistency on the overall policies for the components' conservation and management, there are variations between the plans as mentioned above. In order to ensure consistency across each of the components, ongoing regular training and capacity building is needed on the appropriate conservation and management methods.
- ICOMOS considers that capacity building through training needs to be better articulated, particularly to ensure a consistent conservation and management approach across all components of the nominated property.
- It has not been demonstrated that the private companies have internal heritage expertise. It is essential that the relevant managers and staff within the private companies undergo training to understand OUV and how each of the sites contributes. It is also important that the companies engage/consult with relevant heritage experts as required, particularly with regard to balancing the need for routine maintenance with the need for conservation.

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation f).

(1) Identification of the current state and issues in relation to capacity building of human resource and clarification of the policies in individual Areas and component parts

The current state and issues of capacity building of human resource in each component part (capacity building measures already being implemented) will be identified with a view to the Area as a whole, then future approach will be clarified.

(2) Identification of the current state and issues in relation to capacity building of human resource and clarification of the policies that are common to the property as a whole

Personnel involved in conservation, restoration, presentation and public utilization measures for the component parts can be divided into the four types as below. Based on the results of (1), common policies and methods of capacity building of human resource for the property as a whole will be indicated for each type of personnel.

a) Owners and managers of the Component Part
b) Personnel engaged in actual conservation and management work on-site at the component part (designated managers, etc.)
c) Personnel engaged in routine maintenance and management work on-site at the component part (including cleaning and repairs)

d) Personnel engaged in permanent interpretation work on-site at the component part, including volunteer guides.

(3) Identification of the common state of capacity building of human resource across all the component parts and introduction of the improvement process

To ensure consistency in capacity building of human resource across all the component parts, the current state will be regularly checked and improvements made where necessary.

3. Current state, issues, and future policies of capacity building of human resource in the individual Areas/component parts

In relation to 2-(1), the current state, issues, and future policies of capacity building of human resource in each of the Areas and component parts are laid out in **Appendices f)-1 to f)-8**.

Methods for capacity building of human resource currently being implemented in each of the Areas and component part will be continued while also maintaining consistency with the across-property capacity building policies and methods noted in 4 below.

4. Policies and methods of capacity building of human resource that are common to the property as a whole

The policies and methods that are common to the individual Areas and component parts are noted in (1) to (4) below.

(1) Necessary capacity for each type of human resource

ⓐ Owners and managers of the component part

Owners and managers of the component part must have appropriate understanding of the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution consisting of 23 component parts as a whole, as well as the positioning and characteristics of the particular component part therein, and have the capacity to pursue various measures for appropriate conservation and management and those for proper conservation, restoration, presentation and public utilization holistically pursuant to existing CMPs as well as "Conservation, Restoration, Presentation and Public Utilization Plan" developed by the owners, managers and municipal authorities concerned.

ⓑ Personnel engaged in actual management work on-site at the component part (designated managers, etc.)

Personnel engaged in actual management work on-site (personnel or groups designated as designated managers, etc.) must have a precise understanding of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution consisting of 23 component parts as a whole, as well as the positioning and characteristics of the particular component part therein, and have the capacity to execute various measures for conservation and management, and those for proper conservation, restoration, presentation and public utilization under the guidance of the owners or managers of the component part.

ⓒ Personnel engaged in routine maintenance and management work on-site at the component part (including cleaning and repairs)

Personnel engaged in routine maintenance and management work (including cleaning and repairs) on site at the component part must have a precise understanding of the Outstanding Universal Value of the Japan's Meiji Industrial Revolution consisting of 23 Component Parts as a whole, as well as the positioning and characteristics of the particular component part therein, and have the capacity to execute cleaning, repairs, and other maintenance and management work without fail at the component part under

the guidance of the owners or managers of the component part.

(d) Personnel engaged in permanent interpretation work on-site at the component part, including volunteer guides

Personnel engaged in permanent interpretation work on site at the component part must have a precise understanding of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution consisting of 23 component parts as a whole, as well as the positioning and characteristics of the particular component part therein, and have the capacity to provide interpretation of the component part without fail to visitors under the guidance of the owners or managers of the component part.

(2) Necessary training for each type of human resource

Of the training items necessary for each of the types of personnel noted in (a) to (d) below, (i) to (v) are common items to all types of human resources, while (vi) is the training item required for the particular type of personnel.

(a) Owners and managers of the component part

(i) Overview of the World Heritage property (including the concept of World Heritage Convention)

(ii) Understanding of the Outstanding Universal Value of the property and the positioning and characteristics of the relevant component part therein

(iii) Understanding of conservation and management mechanisms for the property as a whole

(iv) Understanding of the CMP and "Conservation, Restoration, Presentation and Public Utilization Plan" for the relevant component part (including the Area concerned)

(v) Understanding of the conservation and management mechanisms (monitoring methods, regular training, etc.) for the relevant component part (including the Area concerned)

(vi) As the officer in charge of capacity building of human resource, a comprehensive grasp of the duties of the various types of personnel in (b) to (d) and an understanding of methods for dealing with issues that arise

(b) Personnel engaged in actual management work on-site at the component part (designated managers, etc.)

(i) Overview of the World Heritage property (including the concept of World Heritage Convention)

(ii) Understanding of the Outstanding Universal Value of the property and the positioning and characteristics of the relevant component part therein

(iii) Understanding of conservation and management mechanisms for the property as a whole

(iv) Understanding of the CMP and "Conservation, Restoration, Presentation and Public Utilization Plan" for the relevant component part (including the Area concerned)

(v) Understanding of the conservation and management mechanisms (monitoring methods, regular training, etc.) for the relevant component part (including the Area concerned)

(vi) Understanding of specific conservation and management methods (directing works for cleaning and repairs, use of the daily checklist, emergency responses, etc.) for the relevant component part (including the Area concerned)

(c) Personnel engaged in routine maintenance and management work on-site at the component part (including cleaning and repairs)

(i) Overview of the World Heritage property (including the concept of World Heritage Convention)

(ii) Understanding of the Outstanding Universal Value of the property and the positioning and characteristics of the relevant component part therein

(iii) Understanding of conservation and management mechanisms for the property as a whole (in the context of routine management, distinguishing between dos and don'ts, as well as understanding liaison methods in the event of a problem arising in terms of conservation and management as a World Heritage component part)

(iv) Understanding of the CMP and "Conservation, Restoration, Presentation and Public Utilization Plan" for the relevant component part (including the Area concerned)

(v) Understanding of the conservation and management mechanisms (monitoring methods, regular training, etc.) for the relevant component part (including the Area concerned)

(vi) Understanding of specific conservation and management methods (points to note in routine duties, use of the daily checklist, etc.) for the relevant component part (including the Area concerned)

(d) Personnel engaged in permanent interpretation work on-site at the component part (including volunteer guides)

(i) Overview of World Heritage property (including the concept of World Heritage Convention)

(ii) Understanding of the Outstanding Universal Value of the property and the positioning and characteristics of the relevant component part therein

(iii) Understanding of conservation and management mechanisms

(iv) Understanding of the CMP and "Conservation, Restoration, Presentation and Public Utilization for the relevant component part (including the Area concerned)

(v) Understanding of the conservation and management mechanisms (monitoring methods, regular training, etc.) for the particular component part (including the Area concerned)

(vi) Understanding of methods of interpreting the relevant component part (including the Area concerned) for visitors

(3) Project items which should be added to the work for capacity building of human resource

(a) Project items for capacity building for the owners and managers of the component part

Many of the cities involved with the Sites of Japan's Meiji Industrial Revolution implement (i) and (ii) of the training for capacity building noted in 4(2)(a) at training sessions for new hires, etc., but do not really implement (iii) through (vi). The future goal will be to implement training for all items (i) through (vi).

In addition, there are many cases where personnel do not gain a sufficient understanding through classroom training, so visits to other component parts and exchange with their owners and managers will also be considered as means of ensuring understanding of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution.

In particular, as personnel transfers within municipal authorities can lead to a change in officers, the aim will be to provide the new appointees with proper training. Another aim will be to hold training

sessions for officers from not only those departments and divisions primarily in charge of World Heritage conservation and management, but also from departments and divisions handling tourism promotion, P.R., and infrastructure management, etc.

In conjunction with the Cabinet Secretariat, the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution, which was set up in order for municipal authorities to work together on conservation, management and interpretation for the property as a whole as well as the individual component parts, holds training sessions twice per every year. The sessions target officers from municipal authorities, etc., involved in measures supporting conservation and management and practical work for conservation, restoration, presentation and public utilization at the various component parts, dealing from a comprehensive perspective with the system of World Heritage Convention, the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, and methods for conservation and management of the property as a whole. These sessions will be continued. Training sessions held to date are noted in **Appendix f)-9**.

(b) Project items for capacity building for the personnel engaged in actual management work on-site at the component part (designated managers, etc.)

Many Areas do not conduct training sessions for personnel involved in management work, and this will need to be addressed. In the Area 7 Miike, Arao City holds training sessions at the regular Manda Pit meetings for the designated manager, but training items are inadequate and need to be expanded.

In terms of the upcoming schedule, training session for personnel engaged in management work will be held in Area 2 Kagoshima.

Training material No. 1 noted in 4(3)(d) also must be utilized for seminars for the staff from municipal authorities who run the training sessions for personnel involved in management work.

(c) Project items for capacity building for the personnel engaged in routine maintenance and management workon-site at the component part (including cleaning and repairs)

While various groups are involved in cleaning, repairs, and other types of routine maintenance and management work in each Area, at this moment no Areas or Component Parts other than Area 2 Kagoshima (Component Part 2-1 Shuseikan) and Area 6 Nagasaki (Component Part 6-8 Glover House and Office) implement the work for capacity building.

In Area 2 Kagoshima, local neighborhood associations within the individual Component Parts undertake cleaning activities, and training sessions are scheduled for members of these associations.

However, large-scale training sessions are not necessary for all Areas, and in some areas it will be sufficient to hold small-scale training for staff education and provide information by distributing materials, etc.

Measures will be taken so that when companies and groups handling cleaning and security are instructed on their tasks, items (i) to (vi) are communicated to them, and training will be provided where necessary through the concise educational material No.1 indicated in 4(3) d).

(d) Project items for capacity building for the personnel engaged in permanent interpretation work on-site at the component part

Many Areas hold training sessions for guides, but these focus on items (i), (ii), and (vi), which is not always adequate. Even when guides understand the history and characteristics of respective component

parts, it is difficult for them to understand the Outstanding Universal Value of the property as a whole and the positioning and characteristics of the relevant component part therein.

Based on the current state mentioned above, the National Congress of Industrial Heritage is currently underway of implementation of capacity building projects under the subsidies by the Agency for Cultural Affairs. These projects consists of creating capacity building materials and organizing seminars for the on-site visitor guides.

The capacity building materials will be created as three types as below.

(i) Materials that cover all information regarding the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution as a World Heritage property, each component part's contribution to and positioning in the Outstanding Universal Value, and the system for conservation, management and interpretation of the property as a whole and its individual component parts. (Its completion will be scheduled in December, 2017).

(ii) Materials that help visitors to learn about the techniques to be transmitted to next generations. This was completed in October, 2017.

(iii) Materials that help visitors to learn about the history of industries of iron and steel, ship making, and coal mining. (completion of the learning guide material for iron and steel will be firstly scheduled in December, 2017)

Materials will be on Web-site to enable every one access. Seminars for on-site guides of individual component parts will be organized in each Area respectively between October 2017 and February 2018. The provisional schedule will be as follows.

2017;

October	Area 4 Kamaishi
November	Area 8 Yawata
December	Area 3 Nirayama

2018;

January	Area 1 Hagi, Area 2 Kagoshima, Area 7 Miike
February	Area 5 Saga, Area 6 Nagasaki

In the seminar, lectures utilizing the materials mentioned above and explanation regarding the user guide on how to operate mobile App. of the Sites of Japan's Meiji Industrial Revolution will be made.

In Area 6 Nagasaki, Nagasaki City held tours to Area 5 Saga's Mietsu Naval Dock (Component Part 5-1) , Area 7 Miike's Miike Coal Mine and Miike Port (Component Part 7-1), and Misumi West Port (Component Part 7-2) and social events exchanging information among local guides as part of volunteer guide training activities in FY 2015. The City will continue to promote tours for guides to visit other component parts, as well as exchange between guides from different component parts.

The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution also holds an information exchange meeting and observation tours once a year to enable volunteer guides from the various regions to share the challenges they face, discuss solutions, and improve their conservation, management and interpretation skills. Meetings and tours to date are noted in **Appendix f)-9**.

ⓔ Implementation and improvement of the project items for consistent capacity building of human resource across the property as a whole

The state of the project items for capacity building of human resource at each component part as well as across the property as a whole, including those noted in (a) to (d) above, will be regularly checked to ensure consistent operation by the Cabinet Secretariat of the Government of Japan and relevant municipal authorities. Improvement measures will be examined and implemented based on the results.

5. Reference Materials

Appendix f)-1: Current state, issues, and directionality of capacity building of human resource in Area 1 Hagi

Appendix f)-2: Current state, issues, and directionality of capacity building of human resource in Area 2 Kagoshima

Appendix f)-3: Current state, issues, and directionality of capacity building of human resource in Area 3 Nirayama

Appendix f)-4: Current state, issues, and directionality of capacity building of human resource in Area 4 Kamaishi

Appendix f)-5: Current state, issues, and directionality of capacity building of human resource in Area 5 Saga

Appendix f)-6: Current state, issues, and directionality of capacity building of human resource in Area 6 Nagasaki (non-working property)

Appendix f)-7: Current state, issues, and directionality of capacity building of human resource in Area 7 Miike (non-working property)

Appendix f)-8: Current state, issues, and directionality of capacity building of human resource in Area 8 Yawata

Appendix f)-9: Schedules and content of training sessions and other plans held to date by the World Heritage Council for the Sites of Japan’s Meiji Industrial Revolution

Recommendation g)

Preparing an interpretive strategy for the presentation of the property, which gives particular emphasis to the way each of the sites contributes to Outstanding Universal Value and reflects one or more of the phases of industrialisation; and also allows an understanding of the full history of each site1;

1 The World Heritage Committee takes note of the statement made by Japan, as regards the interpretive strategy that allows an understanding of the full history of each site as referred to in paragraph 4.g), which is contained in the Summary Record of the session (document WHC-15/39.COM/INF.19).

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B, pp 99-100) noted the following points as the premise of the Recommendation g) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015:

- *The presentation of the components is mainly place specific and does not present the OUV or indicate how each component relates to each other or to the whole property.*
- *What is urgently needed is clear interpretation to show how each site or component relates to the overall series, particularly in terms of the way they reflect the one or more phases of Japan's industrialisation and convey their contribution to OUV.*

Recommendation g) also referred to a footnote regarding the Government of Japan's statement at the time of the inscription, and indicated:

- *Preparing an interpretive strategy which allows an understanding of the full history of each site.*

2. Response: Methodology and Outputs

Methodology

The Government of Japan formulated the following methodology to respond to recommendation g) of the World Heritage Committee:

- Conduct a full **Interpretation Audit**, involving specially commissioned independent international experts at two principal levels: WHS-wide, and at component parts/sites;
- Develop the **Interpretation Strategy** based on the result of the Interpretation Audit and the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites (2008);
- Specially invite the President of the ICOMOS International Scientific Committee (ISC) on Interpretation and Presentation to review progress (WHS-wide and site-specific, including site visits) and provide specific advice on the interpretation of the **"full history" of each site**.

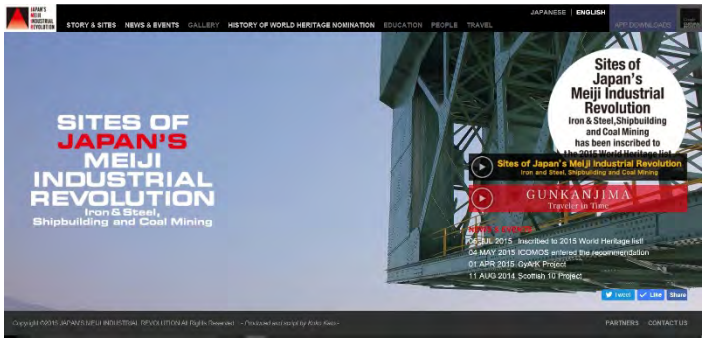
Outputs

1. Audit Report of WHS-wide Interpretation (May-September 2017, by Cabinet Secretariat and international experts),
   Audit Report of Component Parts/Site-Specific Interpretation and Presentation (January-September 2017, this report was prepared by an expert who, in a separate and earlier role, was the ICOMOS expert for the technical evaluation mission of the WH nomination);
2. Interpretation Strategy (Cabinet Secretariat, November 2017);
3. Included in 2. (above) is an Interpretation Plan that outlines outstanding issues identified during the Audit (with corresponding programmed actions), and actions based on the advice of the ICOMOS ISC President with specific regard to the interpretation of the "full history" of each site.

3. Outline of the "Interpretation Strategy"

The Interpretation Audit created a baseline of interpretive provision for "Sites of Japan's Meiji Industrial Revolution". This included substantial post-inscription achievements at a common WHS-wide level, and a range of site-specific developments at all component parts.

Examples of Existing WHS-Wide Interpretation



Website



Official Pamphlet



Map



App



DVD





Stamps



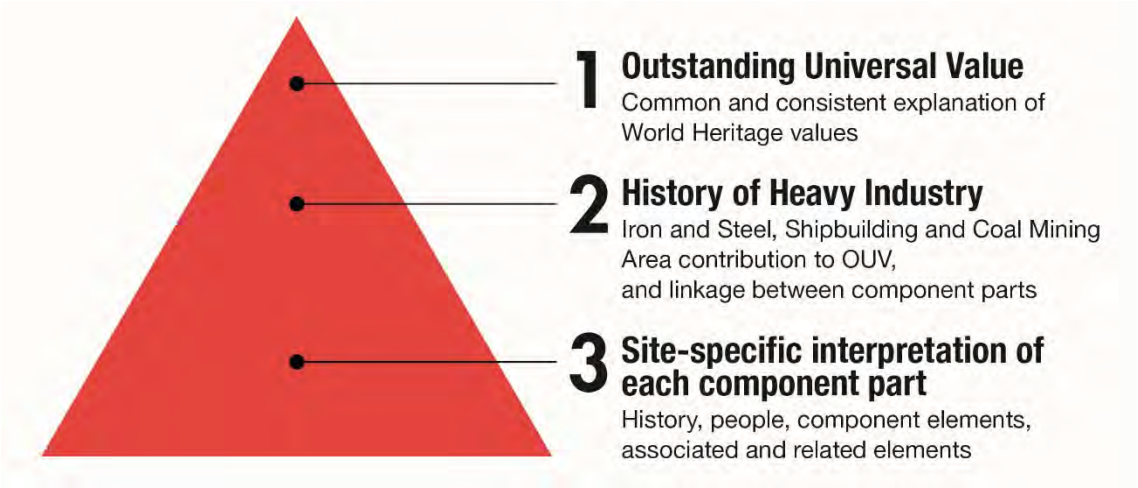
Commemorative Coin Sets

Whilst the ICOMOS Interpretation Charter, 2008 guides the structure and contents of the Interpretation Strategy, content is derived from input received from a wide spectrum of stakeholders; from the sites and their communities, and from local and national government agencies, to national and international experts (Refer to **Appendix g)-1**).

Hierarchical Approach to Layered Interpretation

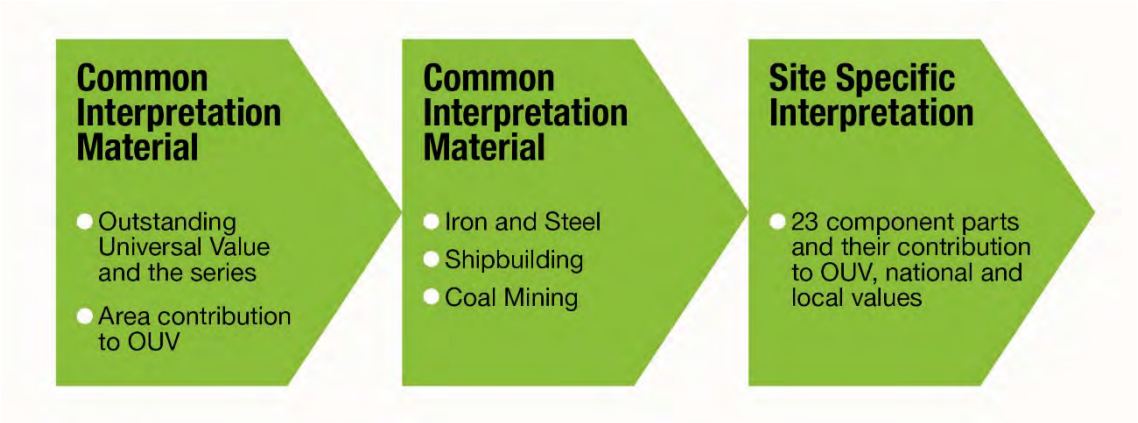
Interpretation and Presentation of "Sites of Japan's Meiji Industrial Revolution":

Hierarchy of values and themes

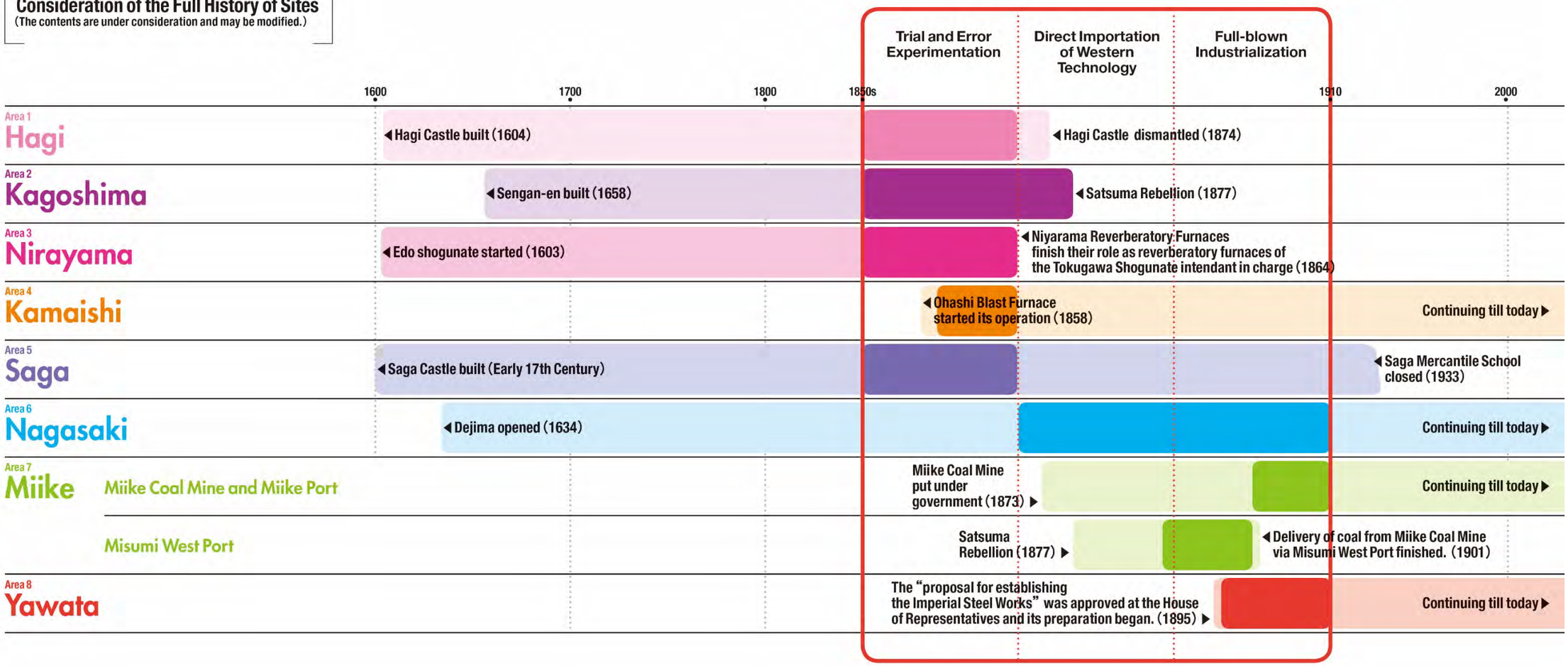


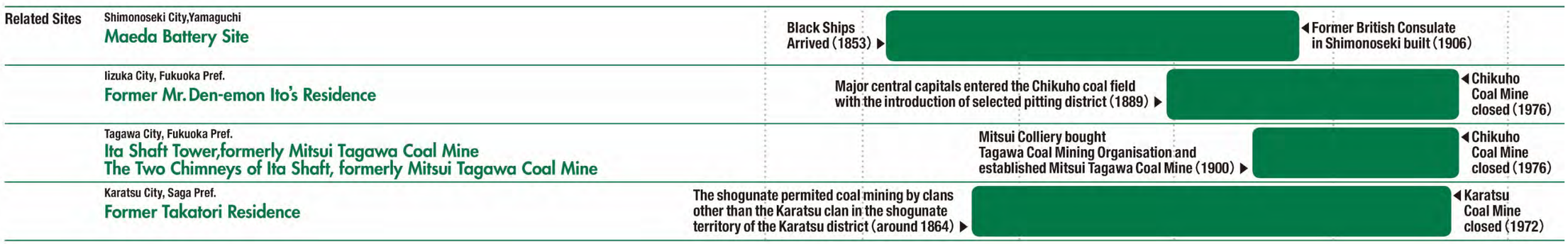
The overarching interpretive theme, derived from OUV, will be shared consistently between all areas and component parts. It acts as a headline theme for a hierarchy of area and site-specific themes and stories. This will ensure that all values – from World Heritage to local - are presented in an integrated manner across the entire property.

Interpretation flow at each local visitor centre: Hierarchy of Interpretation



Consideration of the Full History of Sites
(The contents are under consideration and may be modified.)





In the support of the understanding of the “full history” of each site, sites that are supplementary to component parts are to be interpreted and the following definition applies:

Associated sites and facilities = Sites and facilities that possess local/national values that contribute to the understanding of the full history of each site

Related sites = Sites that are closely connected to, or belong to the same “family group” as, component parts of the Sites of Japan’s Meiji Industrial Revolution, and that supplement the series to fully understand its World Heritage significance; although such sites do not necessarily meet UNESCO requirements to be included.

Hierarchy of Physical Interpretation & Presentation

Industrial Heritage Information Center

- Outstanding Universal Value
- ·Connection between industrial history and each area
  ·Positioning of component parts in the industrial history
- Explanations on component parts
- Explanations on related sites
- Information that contibute to the understanding of the "full history" of each site

World Heritage Visitor Center

Area1 Hagi

1-1 Hagi Reverberatory Furnace
1-2 Ebisugahana Shipyard
1-3 Ohitayama Tatara Iron Works
1-4 Hagi Castle Town
1-5 Shokasonjuku Academy

- Hagi Meiringakusha Visitor Center
- Hagi Museum
- Ohitayama Tatara Information Center
- Ohitayama Tatara Exhibition Hall
- Shoin Memorial Museum
- Cradle of the Meiji Restoration

Area2 Kagoshima

2-1 Shuseikan
2-2 Terayama Charcoal Kiln
2-3 Sekiyoshi Sluice Gate of Yoshino Leat

- Former Shuseikan Machinery Factory (Currently Shokoshuseikan Museum)
- Former Kagoshima Foreign Engineer's Residence (Ijinkan)
- Kagoshima Prefectural Museum of Culture Reimeikan
- Kagoshima City Museum of the Meiji Restoration
- Kagoshima City Museum of Archaeology
- Defending Japan's Southern Gateway／Samurai's Challenge in Science and Technology／Cradle of Industrial Japan

Area3 Nirayama

3-1 Nirayama Reverberatory Furnaces

- Nirayama Reverberatory Furnaces Guidance Center
- Egawa Residence
- Defending Edo／Challenge of the Iron Cannon

Area4 Kamaishi

4-1 Hashino Iron Mining and Smelting Site

- Hashino Iron Mining and Smelting Site Information Center
- Iron and Steel History Museum
- Former Kamaishi Mine's Office Building
- Kamaishi Historical Materials Display
- Birthplace of Japan's Modern Iron and Steel Industry

Area5 Saga

5-1 Mietsu Naval Dock

- Tsunetami Sano Memorial Museum
- Saga Castle History Museum
- Historical Museum Chokokan
- Defending Nagasaki／Samurai's Challenge in Technology／Developing skills for naval defense

Area6 Nagasaki

6-1 Kosuge Slip Dock
Mitsubishi
6-2 No.3 Dry Dock
6-3 Giant Cantilever Crane
6-4 Former Pattern Shop
6-5 Senshokaku Guest House
6-6 Takashima Coal Mine
6-7 Hashima Coal
6-8 Glover House and Office

- Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Historical Museum
- Nagasaki City Gunkanjima Museum
- Former Mitsubishi NO.2 Dock House
- Nagasaki Port Terminal Building
- Nagasaki City Takashima Coal Museum
- Gunkanjima Digital Museum
- From Clan to Company／Mitsubishi Goshi Kaisha／Technology as the spirit for developments for the sea and land

Area7 Miike

7-1 Miike Coal Mine and Miike Port
7-2 Misumi West Port

- Omuta Coal Industry and Science Museum
- Ryujokan
- Miike Port observation deck
- Old Nagasaki Customs House Miike Branch Office
- Mikawa Pit
- Manda Pit Station
- Manda Coal Mine Museum
- Mitsui, Miike, Coal Industry and Logistics／to Japan's First Coal-based Chemical Industry Complex

Area8 Yawata

8-1 Imperial Steel Works, Japan
8-2 Onga River Pumping Station

- Kitakyushu Innovation Gallery & Studio
- Onga River Pumping Station Information Center
- The Imperial Steel Works, Japan First Head Office Viewing space
- Higashida Blast Furnace NO.1
- Onga River Pumping Station Viewing space
- The Imperial Steel Works and the Emergence of Industrial Japan / Japan's Industrial Revolution

Related Sites

Maeda Battery Site
Shimonoseki City, Yamaguchi Prefecture
Countering the combined navies of four countries The Shomonoseki Campaign From closed-period to open Japan

Former Mr. Den-emon Ito's Residence
Iizuka City, Fukuoka Prefecture
Former Mr. Den-emon Ito's Residence and Memories of Coal Mines of Chikuho Iizuka

Ita Shaft Tower, formerly Mitsui Tagawa Coal Mine The Two Chimneys of Ita Shaft
Tagawa City, Fukuoka Prefecture
Sakubei Yamamoto and Memories of Coal Mines of Chikuho Tagawa

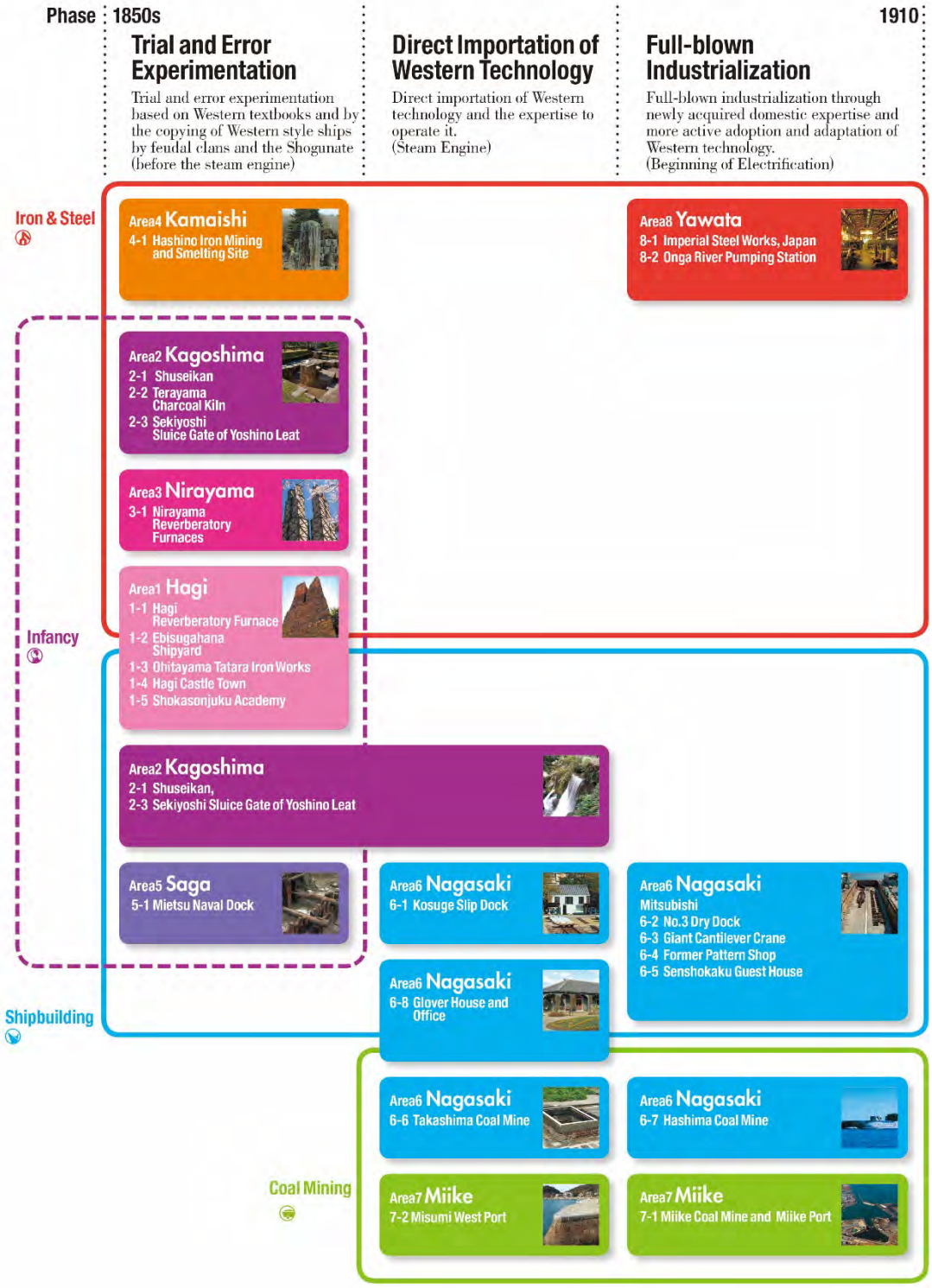
Former Takatori Residence
Karatsu City, Saga Prefecture
Former Residence of Koreyoshi Takatori who made a fortune from the Takashima Coal Mine and Memories of Coal Mines in Karatsu

Associated facilities that exhibit component parts and industries

Associated sites and facilities that contribute to the understanding of the "full history" of each site

Chronological Development Phase of Three Industrial Typologies (1850s to 1910)

Industrial History of Japan in the Heavy Industries (Iron and steel,Shipbuilding and Coal Mining) in the period 1850s to 1910



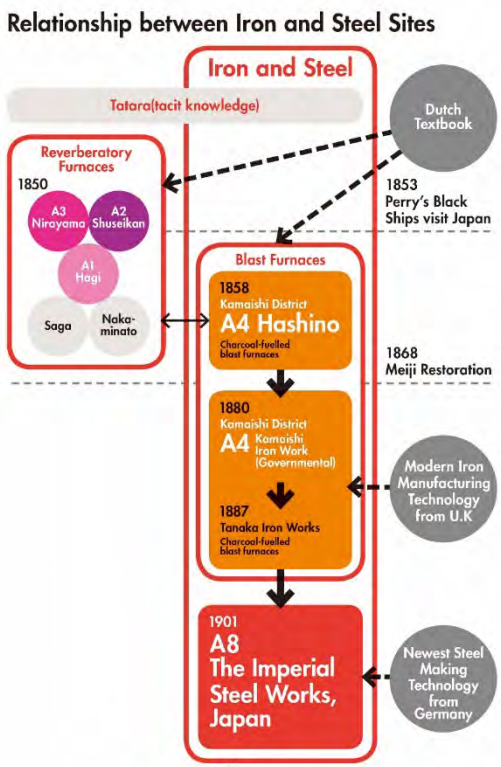


Figure 3-2

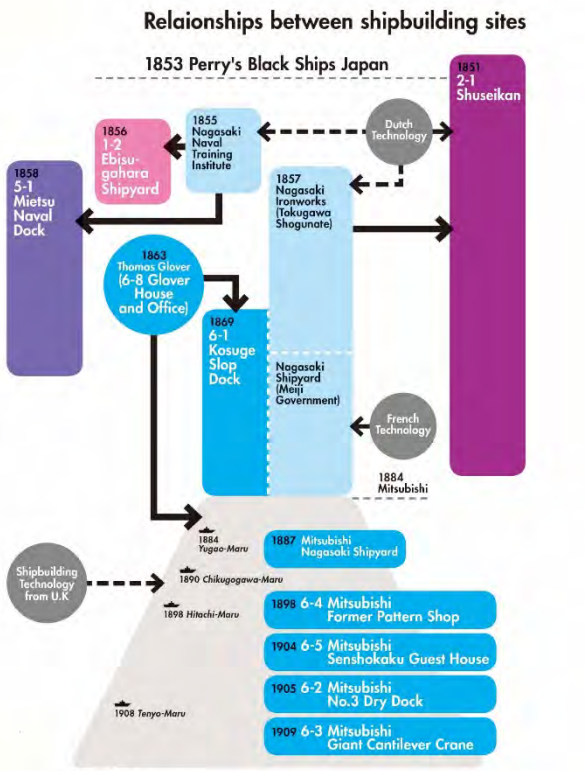
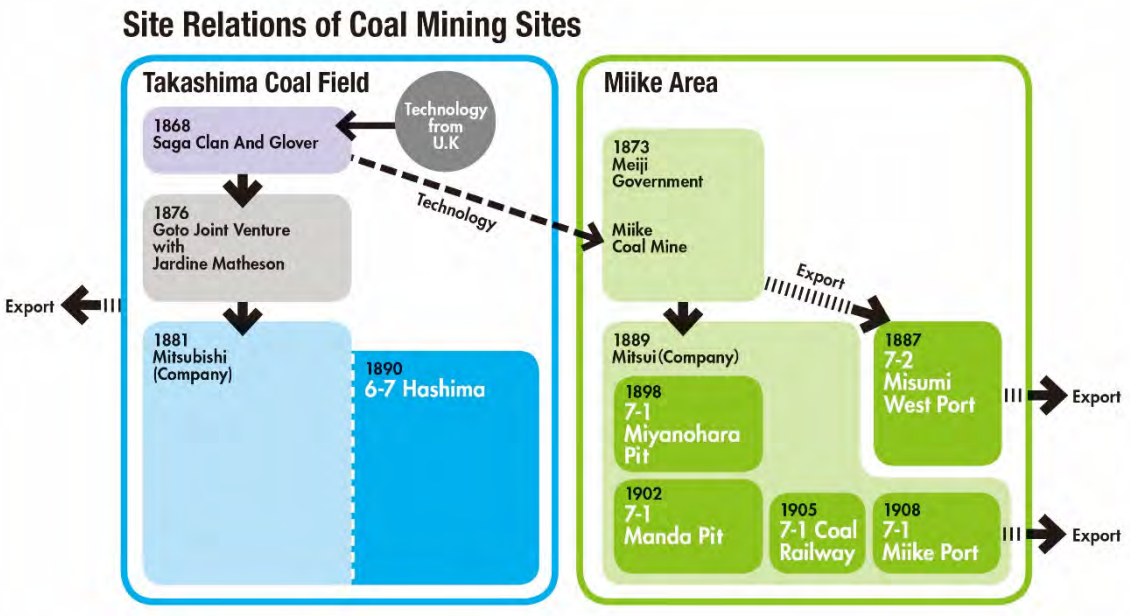


Figure 2-3



4. Summary of the "Interpretation Plan"

As an outcome of the Interpretation Audit and Interpretation Strategy, nine key steps are identified in the following programme:

Task	Description	Responsibility	Timescale
(1)	Consistent OUV rollout across all component parts	Cabinet Secretariat, local authorities	From FY 2018
(2)	Updates of the full history of each site	Cabinet Secretariat, local authorities	From FY 2018
(3)	Information gathering related to workers, including Korean workers	General Incorporated Foundation National Congress of Industrial Heritage	Continued from FY 2016
(4)	Establishment of the "Industrial Heritage Information Centre", Tokyo	Cabinet Secretariat	During FY 2019
(5)	Consideration of a certification programme for the interpretation of "Sites of Japan's Meiji Industrial Revolution"	General Incorporated Foundation National Congress of Industrial Heritage, local authorities	From FY 2018
(6)	Human resource training programmes and training manual	General Incorporated Foundation National Congress of Industrial Heritage, World Heritage Council	During FY 2017
(7)	World Heritage Route	World Heritage Route Promotion Council	Ongoing

(8)	Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Nagasaki sites with no public access: No.3 Dry Dock, and the Giant Cantilever Crane – especially virtual visits	General Incorporated Foundation National Congress of Industrial Heritage	Ongoing
(9)	Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Kosuge Slip Dock and Gunkanjima – notably digital reconstruction of the coal mine	General Incorporated Foundation National Congress of Industrial Heritage	Ongoing

Details of these steps are provided below.

(1) Consistent OUV rollout across all component parts

Based on the Interpretation Strategy, the consistent interpretation of OUV should be presented across all component parts. This will be agreed by all stakeholders, and coordinated and implemented commonly in a branded World Heritage style.

(2) and (3) Progress in dealing with the "full history" of each site, including information gathering related to workers

Advice from international experts who are members of the Expert Committee on the Industrial Heritage including Operational Properties (Cabinet Secretariat of Japan), from the international heritage expert who was the ICOMOS technical evaluation field assessor of the World Heritage nomination of "Sites of Japan's Meiji Industrial Revolution", and from the President of the ICOMOS International Scientific Committee on Interpretation and Presentation, comprises the following four key policies:

1) Focus on the interpretation of Outstanding Universal Value; in conformity with the primary purpose of the World Heritage, OUV of the inscribed property should be presented clearly at each site, not confusing with other, albeit related, issues. Based on this, Recommendation g) should be implemented.

2) The scope of the "full history" of each site, except for the OUV period (from 1850s to 1910) as described on page44, falls into two parts: prior to 1850s, and from 1910 to the present. The target of the full history should be narrowed down, considering the local values that supplement the understanding of the background of each component part. Where relevant, with regard to the interpretation of the full history on the location of each component part, high quality research such as collecting primary historical documents and recording oral testimonies should be carried out, and the result of this research should, at some stage, be made publicly available through appropriate media.

3) Given the focus on OUV, the interpretation of industrial workers' stories should focus on Japanese industrial workers during the OUV period, whilst the interpretation of those outside the OUV period may allow an understanding of the fact that the Government of Japan implemented its policy of requisition of workers under the National Mobilisation Law during World War II, and that there were a large number of those from the Korean Peninsula who supported Japanese industries before, during, and after the War.

4) In view of the above guidance, research on Koreans in Japan before, during, and after the War, including research on the policy of requisition of Korean workers, should be undertaken.

From the above policies provided (against each of the above points 1) to 4)), detailed progress and timescales are as follows:

1) A scheme has been developed in FY 2016-17, and the interpretation of OUV will be implemented at all sites, in a consistent manner, under the coordinated direction of the Cabinet Secretariat of Japan from FY 2018.

2) A specially commissioned "Interpretation Audit" noted that the "full history" as described on page 44 was already adequately interpreted at a number of sites. Those that require attention are planned for updates from FY 2018.
   In addition, the "Sakubei Yamamoto Collection" composed of annotated paintings and diaries is described on page 239 of the Nomination Document as materials to promote an understanding of industrial workers. The collection can be regarded as part of the Interpretation Strategy, since it was registered as the *Memory of the World* during the nomination process of the *"Sites of Japan's Meiji Industrial Revolution"*. The collection is of great significance in facilitating an understanding of the coal mine workers at that time in Chikuho Coal Mine that

supplied coal to make coke at Yawata. Currently, the collection is exhibited at facilities such as Tagawa City Coal Mining Historical Museum established in the same premise as the Ita Shaft Tower and the Two Chimneys of Ita Shaft, formerly Mitsui Tagawa Coal Mine, one of the related sites of the WHS.

3) As appropriate, workers' stories are planned for updates from FY 2018, based on primary historical documents and oral testimonies.

4) The Cabinet Secretariat of Japan intends to share the primary historical documents regarding workers' stories with the public, ultimately in the "Industrial Heritage Information Centre" to be located in Tokyo during FY 2019. Numerous research targets have been pursued, including oral testimonies, reviews of published materials, together with the investigation of primary historical documents hitherto little consulted.

(4) Establishment of the "Industrial Heritage Information Centre", Tokyo

When the World Heritage Committee adopted the Decision (39COM 8B.14) at its thirty-ninth session, a record of the Government of Japan's statement was referred to as a footnote to Recommendation g).

Thus, the Government of Japan is planning the establishment of the "Industrial Heritage Information Centre" as a comprehensive information centre in Tokyo during FY 2019, and the construction cost is included in the draft budget for FY 2018. As a "think tank" that contributes to dissemination and enlightenment of industrial heritage conservation, the Centre will dispatch information mainly on the overall property of "Sites of Japan's Meiji Industrial Revolution", as well as other information on industrial heritage, including workers' stories. The details of the contents are under consideration.

(5) Consideration of a certification programme for the interpretation of "Sites of Japan's Meiji Industrial Revolution"

Following the implementation of the Interpretation Strategy, in order to ensure a "quality assurance" of interpretation, a certification programme for a wide range of interpretive providers will be considered from FY 2018, promoting dissemination and enlightenment of interpretation at all component parts, as well as at related sites.

(6) Human resource training programmes and training manual

Following the inception series of interpretation lectures given at all component parts

during the Interpretation Audit, a further series of human resource training programmes are being provided at each site during FY 2017, together with the provision of a training manual to be used by sites' interpretive staff and volunteers.

(7) World Heritage Route

Promotion of the World Heritage Route, providing WH guidance and tourism infrastructure, is ongoing. This includes maps and apps, GPS navigation, traffic signage using the common logo, and other aspects, guiding visitors to all component parts and related sites. The "Association for the World Heritage Route Promotion" comprises WHS stakeholders, tourism agencies, and transport agencies including railways, airlines, bus and taxi.



Promotion using Classic Car



Promotion at a Travel Fair in Taiwan, 2016







Special Promotion by JR Kyushu, Kumamoto Prefecture:
Special limited tours by Roman Cruise and 'A' Train for 80 people per day to visit Manda Pit and Misumi West Port.

(8) Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Nagasaki sites with no public access: No.3 Dry Dock, and the Giant Cantilever Crane – especially virtual visits

In 2014, the 3D digital documentation work by the Scottish Ten resulted in the laser scanning of both the Giant Cantilever Crane and No.3 Dry Dock in Nagasaki. Both these sites are operational and cannot be accessed by members of the public. For this reason, detailed 3D model created by these surveys is being developed as a content of

official apps, providing virtual visits to the sites.

(9) Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Kosuge Slip Dock and Gunkanjima – notably digital reconstruction of the coal mine

In 2014, the 3D digital documentation work by the Scottish Ten resulted in the laser scanning of both Kosuge Slip Dock and Gunkanjima in Nagasaki. Both these sites can be accessed by members of the public, but the enhanced digital resources provided by the detailed 3D record can be used to develop both onsite and online interpretation resources in the future.

5. Reference materials

Appendix g)-1 Interpretation Strategy

Recommendation h)

Submitting all development projects for road construction projects at Shuseikan and Mietsu Naval Dock and for a new anchorage facility at Miike Port and proposals for the upgrade or development of visitor facilities to the World Heritage Committee for examination, in accordance with paragraph 172 of the Operational Guidelines for the Implementation of the World Heritage Convention.

1. Background

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B, p.96) noted the following points as the premise of Recommendation h) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015.

- Proposed road at Shuseikan

  Japan's National Route 10 currently runs just outside the boundary and is within the buffer zone[2]. There is a proposal to bypass the road through the nearby mountain. The agency responsible for the development of the bypass is required to undertake its design and development in accordance with the Japanese Government's Cabinet Decision for the protection of World Heritage[3], and with conservation management plan and all relevant legislation. This project is currently in the planning phase. There is no date yet for construction to commence. This proposal provides the opportunity to enhance the component's setting with the removal of some modern small-scale commercial buildings and provide opportunities to enable more archaeological surveys to enhance understanding of the site.

- Proposed road at Mietsu Naval Dock

  Consultation locally, nationally and internationally has been undertaken to modify the original design for the construction of a road and bridge just outside the north east side of the buffer zone. As a result, the original bridge design has been modified to try and avoid impact on the site or on the visual setting with its distant views across the river. This development is still in the planning phase and a date for the commencement of construction is yet to be set. As this is a comparatively major project, further details should be submitted for review.

- Proposed development at Miike Port

  There is a proposal for the development of a new small anchorage facility for the local fishing fleet to provide safer access between the fishing fleet and much larger shipping vessels and to protect the fishing fleet from tidal surges. Planning for this development commenced prior to the development of the nomination but construction is not due to commence until the 2020s. However, subsequent to the nomination's development, the original design has been amended to minimise its physical and visual impact. The new facility is to be located at the western tip of the port and will cut into the existing dock. Further details should be provided for review.

[2] Currently, Route 10 passes through the area of the component part and not the buffer zone. What ICOMOS has pointed out regarding this part, therefore, is wrong.

[3] General Principles and Strategic Framework for the Conservation and Management of the Sites of Japan's Meiji Industrial Revolution: See **Appendix d)-1**.

● Proposals for new Visitor Centres/Facilities

There are proposals to develop new visitor facilities in the buffer zones to accommodate the anticipated visitor increase at:

- Hagi: new facility planned (construction from 2015 and open in 2017);
- Nirayama: new facility planned (construction from 2015 and open in 2016);
- Miike: new facility for Miike Port planned (construction from 2016 or later);
- Yawata: new facilities planned (new or extension at Kitakyushu, and new construction in Nakama from 2016 or later)

2. Directionality

Given the above, the following directionality has been determined in relation to Recommendation h).

(1) Proposals for which the progress reports have already been submitted

Of the four proposals for development projects referred to in Recommendation h), the progress reports were submitted on the following three Component Parts to the UNESCO World Heritage Centre on November 30, 2015.

(a) Progress report on the Shuseikan bypass authorized in city plan (see **Appendix h)-1**)

(b) Heritage impact assessment report for the road and bridge planned for the Mietsu Naval Dock (see **Appendix h)-2-1**)

(c) Progress report on the visitor centre (guidance facility) under construction at the Nirayama Reverberatory Furnaces (see **Appendix h)-3-1**)

(2) Proposals for which the progress reports will be submitted

The development of a new small anchorage facility at Miike Port which is referred to in Recommendation h) is currently at the planning and discussion stage. Once the plan outline has been firmed up, a progress report will be submitted.

While not mentioned in in Recommendation h), of the four planned Visitor Centres noted in the ICOMOS Evaluation Report, the progress report of Hagi Visitor Centre project will be submitted as a reference material attached to this State of Conservation Report (see **Appendix h)-4**).

(3) Proposals on hold

There is currently no schedule for construction of the Miike Visitor Centres noted in the ICOMOS Report. As for the construction project of Yawata Visitor Centre noted in the ICOMOS Report, the details of the plan have not been decided at this moment, there is a possibility of consideration of the construction in the future.

The progress report on the restoration projects of the Imperial Steel Works, Japan (Component Part 8-1) and Onga River Pumping Station (Component Part 8-2), which will be launched within FY 2017, was submitted to the UNESCO World Heritage Centre on September 28th 2017, in accordance with the paragraph 172 of the Operational Guidelines for the Implementation of the World Heritage Convention. A copy of the report will be attached to this State of Conservation Report as **Appendix h)-5**.

3. Progress of projects and impacts on the Outstanding Universal Value

(1) Proposed Shuseikan bypass authorized in city plan

This plan entails moving the national road that currently passes through Shuseikan (Area 2

Kagoshima/Component Part 2-1) to the mountain area to the west of Shuseikan. While this will mean the road running though the edge of the buffer zone, it will pass through a tunnel under the mountain side of Shuseikan, and will therefore have no impact on the view from the component part, and will also have no negative impact on the buffer zone which preserves the visual setting of the component part (**Appendix h)-1**).

The report submitted in November 30th 2015 was intended to report on the current state of progress. After that, Kagoshima Prefectural Government decided the road course, as was indicated in the progress report, on the Kagoshima prefectural city plan on December 22nd 2015.

When the Government of Japan has secured the funds and work begins on the implementation design, a heritage impact assessment will be undertaken and a further report will be submitted to the World Heritage Centre.

(2) Proposed construction of a new road and bridge at Mietsu Naval Dock

This is a plan for construction of the Ariake Coastal Road and a bridge to constitute part of this to adjoin the outside edge of the buffer zone for the Mietsu Naval Dock (Area 5 Saga/Component Part 5-1). Those elements contributing to the Outstanding Universal Value of the Mietsu Naval Dock are underground archaeological remains, so the construction work outside the scope of the component part and buffer zone will have no direct impact. The impact on the view from within the component part was also assessed and the design changed as a result, minimizing the impact on the visual setting. Consultations will also be continued between the road manager and Saga City as a heritage manager (**Appendix h)-2**).

(3) Plan for the construction of a Visitor Centre/Facility (guidance facility) at the Nirayama Reverberatory Furnaces

This is a plan for the construction of a Visitor Centre/Facility (guidance facility) on the adjoining land to the southwest of the Nirayama Reverberatory Furnaces (Area 3 Nirayama/Component Part 3-1). Construction of this facility will make a major contribution to understanding of the Outstanding Universal Value of the property as a whole and the positioning and characteristics of the Nirayama Reverberatory Furnaces in that. Full consideration has also been given to the surrounding landscape linking to the component part, and there are no issues in terms of the pre-construction procedures. Accordingly, the construction of this facility and development of the surroundings will have no impact on the Outstanding Universal Value of the property (**Appendix h)-3-1**).

The outside appearance of the facility, which opened in December 2016, as well as the state of the exhibits inside, are shown in **Appendix h)-3-2**.

(4) Construction of a new visitor centre in the buffer zone of Area 1 Hagi

This is a plan to restore a wooden building that was part of the Hagi Meirin Elementary School (located within the buffer zone of Hagi Castle Town (Area 1 Hagi/Component Part 1-4)), creating a World Heritage Visitor Centre there. The new facility will make a major contribution to understanding of the Outstanding Universal Value of the property, and of the positioning and characteristics of the five component parts of Area 1 Hagi therein (**Appendix h)-4**).

The new Visitor Centre is located within the buffer zone of Hagi Castle Town, and uses the interior

of a restored wooden building that was originally part of Hagi City Elementary School, which opened in 1885.

The two-floor wooden building (one of the four original school buildings) housing the Visitor Centre was originally built in 1935. In addition to restoring the interior and exterior of the building to its original appearance, the seismic resistance was also improved. There are also no issues in terms of the legal or consensus-building procedures in relation to its conservation, restoration, presentation and public utilization. Accordingly, the opening of the Visitor Centre and exterior repairs to the surrounding area will make a substantial contribution to understanding and conservation of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and will have absolutely no negative impact.

(5) Restoration of the Imperial Steel Works, Japan and Onga River Pumping Station

This plan aims at restoration of the buildings of First Head office, Repair shop, and Former Forge Shop included in the Imperial Steel Works, Japan (Area 8 Yawata/Component Part 8-1) and Onga River Pumping Station (Area 8 Yawata/Component Part 8-2). As for the building of First Head Office of which aseismic improvements have completed, its interior furnishing will be restored to the original state. Restoration of the deteriorated parts of the architectural members of the Repair shop, Former Forge Shop of the Imperial Steel Works, Japan, and Onga River Pumping Station will be undertaken. Every item of the project aims at maintaining and enhancing the constituent elements contributing to the Outstanding Universal Value (**Appendix h)-5**).

While removing original interior wall papers of the building of First Head Office due to considerable deterioration over time, they will be restored to the original state using traditional materials and techniques. Also, restoration will be undertaken for the deteriorated parts of the exterior wall of the buildings of Repair shop, Former Forge Shop of the Imperial Steel Works, Japan, and Onga River Pumping Station in order to maintain its stability. Instable structural elements found on the process of restoration, will be removed and replaced with the new materials same as original. Such improvements and treatments will enable enhancing the structure of the building as a whole and maintaining the architectural members contributing to the Outstanding Universal Value on a long-term basis.

4. Reference materials

Appendix h)-1: Progress report on the urban planning project road construction plan in the vicinity of Shuseikan

Appendix h)-2: Heritage impact assessment report on the road bridge construction project in the vicinity of Mietsu Naval Dock

Appendix h)-3-1: Progress report on the visitor facility (guidance facility) being constructed in the adjacent area of the Nirayama Reverberatory Furnaces

Appendix h)-3-2: Visitor centre/facility (guidance facility) opened in December 2016 at the Nirayama Reverberatory Furnaces

Appendix h)-4: Report on new Visitor Center in the buffer zone of Hagi Castle Town (Component Part 1-4, Area 1 Hagi)

Appendix h)-5: State of Conservation Report: Proposed works at The Imperial Steel Works, Japan, and Onga River Pumping Station—Component parts of the *Sites of Japan's Meiji Industrial Revolution—Iron and Steel, Shipbuilding and Coal Mining*.

II. Appendices

- Appendices to Response to Recommendation a) ・・・・ 1- 36
- Appendices to Response to Recommendation b) ・・・・ 37- 229
- Appendices to Response to Recommendation c) ・・・・ 230- 273
- Appendices to Response to Recommendation d) ・・・・ 274- 288
- Appendices to Response to Recommendation e) ・・・・ 289- 356
- Appendices to Response to Recommendation f) ・・・・ 357- 368
- Appendix to Response to Recommendation g) ・・・・ 369- 677
- Appendices to Response to Recommendation h) ・・・・ 678- 779

Standard form for the "Conservation, Restoration, Presentation and Public Utilization Plan" which could be a source when creating a "Conservation Work Programme" pursuant to Recommendations a) and b) for each component part

For developing a "Conservation, Restoration, Presentation and Public Utilization Plan" for each of the Component Parts of "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining", it is required to note the following points with reference to the Annex 1 to 3.

- It should be noted that the "Conservation, Restoration, Presentation and Public Utilization Plan" (hereinafter referred to as the "Plan") established by the relevant owners and/or municipal governments of each Component Part in FY 2016-2017 will become the source of the "Conservation Work Programme" (hereinafter referred to as the "Programme") for each Component Part that was dscribed in the Recommendations a) and b) out of totally eight Recommendations of the Decision 39COM.8B14 adopted by the World Heritage Committee in 2015 (see Annex 3).
- It is needed to consider the contents and processes of each operation as well as the reciprocal relations of Recommendations from a) to h) (see Annex 1). Recommendations a) and b), which have common characteristics, and recommendations c) and f), which have a similar relation, are combined. Further, the contents, processes, etc. of each operation are organized in six columns in Annex 1.
- The focal point of the contents and processes of six operations described in Annex 1 is to develop the Plan as a source of the Programme, as specified in the center.
- The contents and processes of operations regarding Recommendations a) to h) should be appropriately reflected in the corresponding parts of the Plan describing specific measures. Reciprocal arrangements should also be made on the basis of "Vision" and six basic policies: A. Promotion of survey; B. Conservation, reinforcement, and stabilization of materials, characteristics of the materials, and structures of the Buildings and Historical and Archaeological remains/objects; C. Presentation and interpretation considering the industrial system in the Component Part and/or Area; D. Arrangement and Improvement from the viewpoint of landscape; E. Utilization as a cultural resource and/or information transmission base; and F. Implementation of the projects.
- Each Plan should have an equivalent nature as the basic conservation plan for Historic Sites designated under the Law for the Protection of Cultural Properties.
- Regarding the Component Part that is not directly involved in the industrial operations but indispensable for explaining the background of the modern industrial revolution, such as a castle town of the early modern period, it is required to appropriately translate the items of each chapter of this standard form in accordance with the characteristics of such Component Part.

Chapter 1 Process and objective for developing the Plan

(1) Process of developing the Plan

- Describe the background and process of developing the Plan.
- Clarify that it is based on the Recommendations included in the Decision made by the World Heritage Committee (39COM 8B. 14) (see Annex 3).

(2) Objective of the Plan

- Describe the objective for the Plan.
- Specify the scope of the Plan. The scope is basically set for the Buffer Zone of the Component Part of the World Heritage Property, with consideration of arrangement and improvement of the landscape in the surrounding area; if necessary, the inclusion of the external area of the Buffer Zone from the perspective of the construction of access routes should be considered.
- Describe the difference from the objective of the Conservation and Management Plan (CMP) already established for nomination of the property to the World Heritage List (see **Annex 2**).

(3) Establishment of the expert committee

- Outline the expert committee, which was established for the Plan-development, the list of the committee members, discussion process, etc.

Chapter 2 Outline, current state and challenges of the Component Part and/or Area

Organize the current state and challenges of the Component Part and/or Area based on the following aspects.

(1) Constituent elements[1] contributing to the Outstanding Universal Value and other elements of the Historic Site

- Organize the three points: 1) Outstanding Universal Value of the World Heritage Property consisting of 23 Component Parts (8 Areas) as a whole, 2) Categorizing the relevant Component Part within the whole World Heritage Property, 3) Cnstituent elements1 contributing to the Outstanding Universal Value. Regarding 1), it should be based on the Statement of Outstanding Universal Value adopted by the World Heritage Committee for inscription on the World Heritage List as a principle.
- Organize the current state and challenges of the whole Component Part and/or Area as well as each constituent element of the Component Part/Site contributing to the Outstanding Universal Value.
- Organize the two points: 1) the value as a National Historic Site and 2) the elements constituting the value of a National Historic Site. As for 1), it is based on the description of the national value provided by the Council for Cultural Affairs (until the year 2000, the Council for the Protection of Cultural Properties) at the time of designation of the Historic Site as well as its additional designation as a principle.
- Organize the summaries, current state and challenges of elements such as of the Historic Site.
- Describe in details the historical process of changes and developments of the Component Part and/or Area, with due attention to the concept of its "full history" noted in the Decision (39COM.8B) by the World Heritage Committee (**Annex 3**) and the report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties".

(2) Comprehension of the current state of the Component Part and/or Area for its presentation and public utilization

- Figure out not only the current state and the requests of local residents for presentation and public utilization of the Component Part and/or Area, but also the administrative conditions related to

[1] Constituent elements: According to "Additional Information" submitted to International Council on Monuments and Sites (ICOMOS) as of November 5, 2014, "Constituent elements" included in each Component Part is used synonymously with "Attributes".

culture/education, city planning, construction and engineering, park work, agriculture/forestry/fisheries, tourism, etc. in order to organize the challenges of the relevant Component Part.

- Discern the dynamics, number, etc. of visitors, including the surrounding area of such Component Part to organize the current state and challenges.[2]

(3) Relations between the projects for regional improvement and those for the Plan

- Assess the contents and characters of the projects related to conservation, restoration, presentation and public utilization of the Component Part and/or Area and organize their challenges.

Chapter 3 Basic policy

The basic policy comprises two parts: (1) "Vision" showing the future image to be realized and (2) several "Policies" showing such image as specific directions, as described below.

(1) Vision

Considering the future image of the Component Part and/or Area and the desired way of conservation, restoration, presentation and public utilization, summarize the essential points of one to two pages of A4 paper (1,600 to 3,200 characters in Japanese).

To realize the Vision, the basic policy should be set according to Chapter 3-(2) and specify each method for conservation, restoration, presentation and public utilization in Chapter 4 and below.

Special notification is to be given to how important it is to envision the future image of the relevant Component Part, which is one of the industrial heritage sites in a group, and to find out an effective solution for the challenges in the Vision. Because those efforts will become a critical starting point to ensure the advancement of projects for conservation, restoration, presentation and public utilization and take steps for improvement[3] .

(2) Policies

Based on the basic policy of conservation and management specified in each Conservation and Management Plan (CMP) of the relevant Component Part and items specified in Joint ICOMOS–TICCIH Principles for the conservation of industrial heritage sites, structures, areas and landscapes (2010), the individual policies of conservation, restoration, presentation and public utilization of the Component Part should be set in line with the following directions.

While clarifying positioning of the relevant Component Part in the whole story illustrated by 23 Component Parts from the viewpoint of Outstanding Universal Value, specify the individual policies of conservation, restoration, presentation and public utilization that is unique to the Component Part, according to the five points: (1) survey, (2) structure, (3) Component Part and/or Area, (4) landscape, and (5) cultural resource and/or information transmission base.

A.Promotion of survey

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[2] In case the survey of the number of visitors is underway, it is appropriate to organize the current state and challenges considering the interim progress or results.

[3] For the Vision, it is required to briefly describe what the future image of the Component Part should be and what kind of methods for conservation, restoration, presentation and public utilization should be taken to realize such image to contribute to the Outstanding Universal Value by considering that the Component Part is one of the 23 Component Parts of the World Heritage, "Sites of Japan's Meiji Industrial Revolution."

- Clarify the direction to conduct highly accurate survey systematically, aiming for highly credible conservation, restoration, presentation and public utilization of the Component Part.
- Clarify the direction of the excavation and survey of the relevant historical documents to specify the contribution of the Component Part to the Outstanding Universal Value as a World Heritage Property (and/or historical value as a National Historic Site).
- Clarify the direction of the survey of the relevant historical documents, interviews to the local residents, etc. to specify the physical and psychological role of the Component Part in the community.
- Clarify the direction of other surveys necessary for conservation, restoration, presentation and public utilization, including measurement and ground survey as well as survey regarding landscapes (transition of land use).
- As an adjustment to Recommendation c), clarify the direction of the survey regarding the number and dynamics of visitors in view of the Component Part, relevant associated sites and other historical and cultural resources in the surroundings.
- As an adjustment to Recommendation e), clarify the direction of the preparation and operation for the monitoring charts (general and individual charts) and for the annual report.

B.Conservation, reinforcement and stabilization of materials, substance, and structures of the buildings and historical and archaeological remains/objects

- Considering the physical and psychological role of the buildings and historical and archaeological remains/objects in the community during operation and after shutdown, clarify the direction of the following two points.
- As for a deteriorated and/or collapsed member or a member with the possibility of deterioration and/or collapse, clarify the direction of restoration (conservation and reinforcement) to create the stable state of the materials and their substance.
- Clarify the direction of restoration (reinforcement/stabilization) of a destabilized part or a part with the possibility of destabilization.
- As for the machinery/relevant documents left in association with the Component Part and/or Area, clarify the appropriate direction of conservation and restoration according to the location and nature regardless of attaching to the site (land) or not.

C.Presentation and Interpretation considering the specific industrial system in the Component Part and or Area

- Clarify the direction of in-situ presentation and interpretation with full consideration of the relationship among the constituent elements of the Component Part.
- While industrial operation has been already ceased, focusing on the whole process of the past industrial activities and the positioning and role of each constituent element in the Component Part, clarify the direction of in-situ presentation and interpretation for the industrial system in the Component Part as a whole so that visitors can understand it.
- As an adjustment to Recommendation g), clarify the direction of interpretation in view of public utilization integrated not only with the Component Part but with the relevant associated sites in the surrounding area.

D. Arrangement and improvement in terms of landscape

- Specify the ideal model of the (relict or active industrial) landscape[4] of the Component Part contributing to the Outstanding Universal Value of the property.
- Clarify the direction of arrangement and improvement in terms of (relict or active industrial) landscape including not only the constituent elements of the Component Part contributing to the Outstanding Universal Value but also other elements in the surroundings.
- Clarify the direction of maintenance, arrangement and improvement of in terms of environment and landscape widely intended for the Buffer Zone including the closest area to the Component Part.
- As an adjustment to Recommendations d) and e), clarify the direction of the development and its operation of the monitoring chart in terms of the view from the surrounding area toward the Component Part, the view from the Component Part toward the surrounding area, and the direction of arrangement and improvement integrated with the relevant associated sites in the surrounding area.

E. Public utilization as a cultural resource and/or information disusemination base

- Position the Component Part as a part of cultural resource in the local community, relate them to each other under the series of networks, and clarify the direction of public utilization as an information transmission base.
- Clarify the direction of participation of the local community in the projects included in the Plan.
- As an adjustment to Recommendation c), clarify the direction of visitor management including consideration of the possibility and/or necessity for setting the acceptable visitor threshold.
- As an adjustment to Recommendation f), clarify the direction of capacity building of the relevant stakeholders.

F. Implementation of the projects

- Clarify the direction about how to conduct policies A. to E. as a whole, mentioned above.
- As an adjustment to Recommendations c), d), e), f), and g), clarify each direction regarding the following points.
  - ・Clarify the direction of operation and management needed for developing each step of a project.
  - ・Clarify the direction of promoting framework of the projects, roles and corporation of the relevant department/section.
  - ・Clarify the direction of the follow-up of the project's progress.

Chapter 4 Survey

Specify the content, method, and procedure of the survey that are needed to develop the conservation, restoration, presentation and public utilization of the Component Part and to conduct a projects included in the Plan concerned.

- Excavation and related survey
  - ・Especially for the excavation project, it should be careful to get necessary information within the

[4] The "landscape" mainly refers to both the past industrial landscape and the present relict landscape.

minimal scope.

- In parallel with the archeological survey, the survey of movable assets including the relevant historical documents should also be conducted.

- Survey of historical documents
- Other surveys including survey of the role of the Component Part in the local community, measurement and ground survey, survey of landscape (transition of land use), and survey of the number and dynamics of visitors in view of the Component Part and the relevant associated sites in its surroundings.
- Monitoring
  - Clarify the composition and the method of operation for the monitoring charts (general and individual charts) and the annual report.
  - Specify the methods to properly execute Chapters 5 to 8 below based on the state of deterioration/weathering or subsequent modification to the constituent elements, etc. that are obtained by the monitoring.

Chapter 5 Conservation and restoration of buildings and historical or archaeological remains/objects

(1) Conservation and restoration of the constituent elements included in the Component Part contributing to the Outstanding Universal Value

A. Conservation and restoration of buildings

- Specify the conservation and restoration method of historical buildings (architectural and other structural elements), stone walls and gardens.
  - Cleaning
  - Coating of deteriorated materials
  - Enhancement (conservation-scientific measures)
  - Partial replacement, relocation/storage
  - Dismantling and major repair (complete/partial, etc.)
  - Enhancement of destabilized structures (earthquake-resistant/unequal settling measures)
- Specify the disaster-preventing method for historical wooden structures.

B. Conservation and restoration of historical and archaeological remains/objects

- Categorize the remains/objects into the buried and the unburied and specify the conservation and restoration method respectively.
- Specify the stabilizing and collapse-preventing method for the geography of historical and archaeological remains/objects.

(2) Conservation and restoration of other elements of the National Historic Site included in the Component Part

- As for the classification of A (conservation and restoration of buildings) and B (conservation and restoration of historical and archaeological remains/objects), same as (1).

(3) Conservation and restoration of machinery, relevant historical documents, etc.

- Specify the conservation and restoration methods of machinery installed in the architecture, which is

one of the constituent elements of the Component Part, as well as relevant historical documents stored in the Component Part.

Chapter 6 Presentation and interpretation considering industrial system

Specify the method of in-situ presentation and interpretation of the Component Part and/or Area, based on the following points for the purpose of clarification and explanation of the specific industrial system.

(1) Zoning

- Considering both aspects of the whole industrial system of the Component Part and/or Area and public utilization of the constituent elements, put zoning in place appropriately and specify the methods for presentation, interpretation and improvement for public utilization according to each zone's characteristic.
- Specify the methods for ideal visitor management of each zone as well as of all zones. If possible, set the ideal number of visitors.
- Specify the methods for effective interpretation based on zoning. As this issue is also related to (2) to (7) below, if appropriate, it may be mentioned in each item.

(2) Traffic and flow line planning

- Bearing in mind the image of the whole industrial system, specify the methods of traffic line for visitors and flow line of management in and around the Component/Site.
- Specify also surface-finishing materials of visitors' paths, etc. that will become traffic lines in the Component Part.

(3) Land formation/environmental improvement

- Based on the land formation, which is needed at minimum, specify the methods of water-supply/discharge, etc.
- Under the following 2 points, specify materials, construction methods, etc. used for presentation and enhancement of the remains so that the characteristics of the historical and archaeological remains/objects including scale/shape/character, and function/space structure/production mechanism are able to be shown in an appropriate manner.
  - Physical presentation and improvement method showing the relations among constituent elements in the industrial system in an easy-to-understand manner.
  - Comprehensible interpretation (information dissemination) about the relations among constituent elements in the industrial system
- Taking into consideration the geographic formation and character of the whole Component Part and its zones, specify a pavement method or ground cover as needed.

(4) Arrangement and improvement of landscape and planting vegetation

- Specify the method for arrangement and improvement from a viewpoint of (relict or active) landscape, including not only the constituent elements of the Component Part contributing to the Outstanding Universal Value but also other elements.
- Considering the function of vegetation, specify the arrangement and improvement method for landscape with appropriate species, number, and greenery amount of plants.

(5) Guide/Information facility (including signage)

- Specify the method of information provision of the whole World Heritage property consisting of 23 Component Parts and the relevant Component Part.
- Depending on the quality and amount of provided information, specify the signs' positions, designs, forms, contents, etc.

(6) Management facility and accommodations

- Ensuring visitors' convenience, specify the location of the minimum number of rest areas, toilets, benches, lightings, etc. as well as design and structure of the facilities.

(7) Exhibition Facility/Utilizing Facility

- Through indoor exhibitions, experience learning, etc., specify the scale, form, appearance, location, etc. of the facilities that help public understanding of the whole World Heritage property consisting of 23 Component Parts and the relevant Component Part as needed.
- Specify appropriate utilizing methods of the items such as machinery installed in the architecture and of relevant historical documents stored in the Component Part.

Chapter 7 Arrangement and improvement for the landscape of the Buffer Zone

- For the Buffer Zone of the Component Part, specify the methods of arrangement and improvement from a viewpoint of landscape, etc.
- Specify the comprehensive arrangement and improvement method for public utilization related to the entire cultural resources centering on the Component Part including the relevant cultural assets inside and outside of the Buffer Zone.

Chapter 8 Public utilization as a cultural resource and/or information dissemination Base

- Position the facilities, including guidance facilities (visitor centers), established in the Component Part and its surroundings as a part of cultural resource in the Area, and specify the method to utilize them as an information dissemination base.
- Specify the method of approaching the Component Part, such as visitor's access and preparation of parking lots.
- Specify the method of participation of the local community in the projects of conservation, restoration, presentation, and public utilization.
- If possible, set the acceptable visitor threshold level and specify the methods of the visitor management.[5]
- Specify the method of capacity building of the people in the local community and relevant institutions involved in conservation, restoration, presentatio and public utilization of the World Heritage Component Part and National Historic Site.

Chapter 9 Implementation of the projects included in the Plan

(1) Implementation schedule of the projects

[5] It is not possible to specify the acceptable visitor threshold level or the method for visitor management in the Plan of which development will be completed in 2017 because the survey of the number of visitors for setting the acceptable visitor threshold level will be conducted from 2016 to 2018.

- Specify the contents, implementation period, process, etc. of the projects. In that case, classify the projects into the following three groups and clearly show the relations among them by using a bar chart, etc.[6]
  - ・Projects that can be launched immediately
  - ・Projects that should be implemented systematically in the short term
  - ・Projects that should be aimed for implementation in the medium- and long-term
- Showing a rendering by perspective drawing, etc. is easily understandable

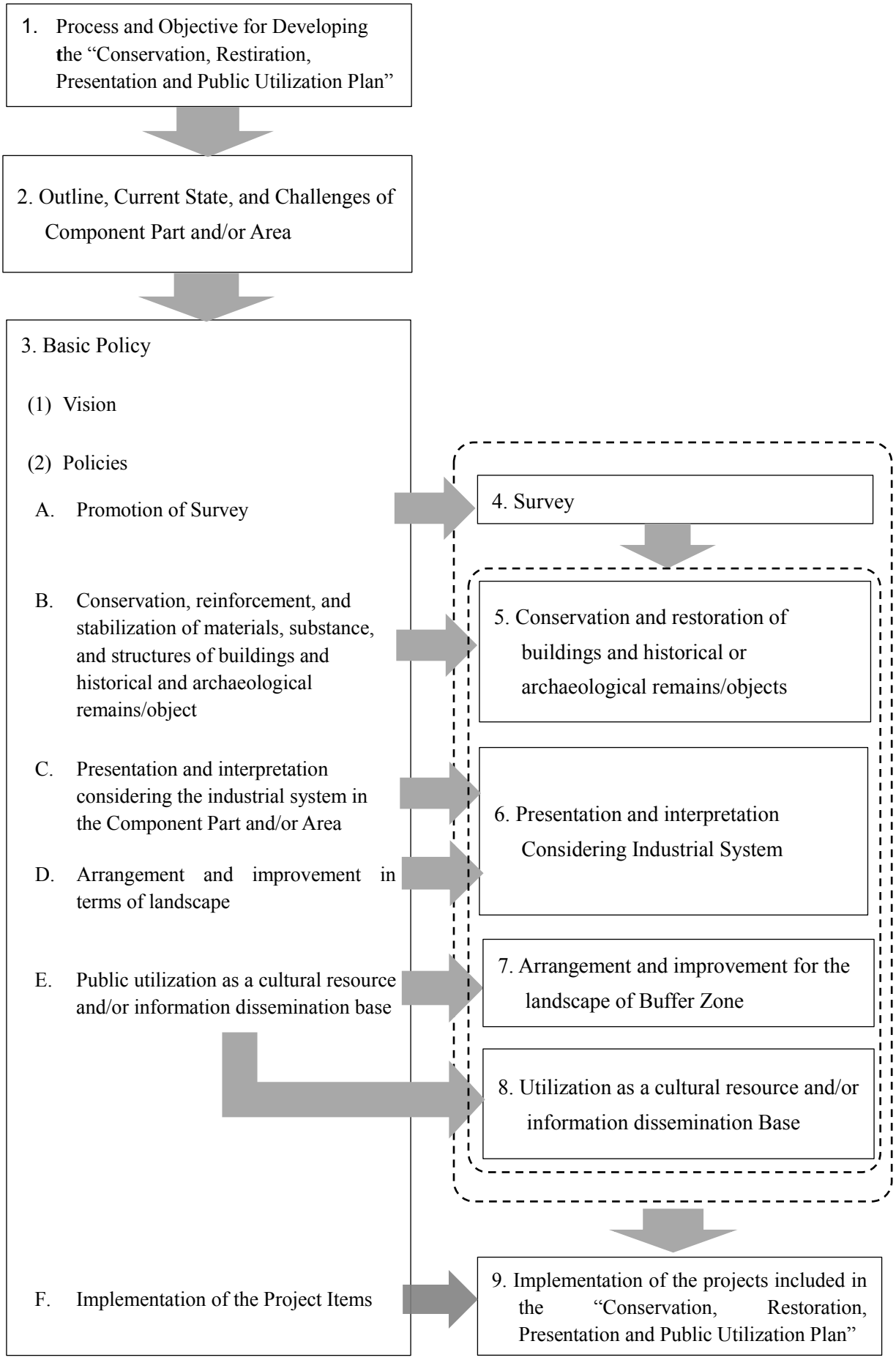
(2) Framework for Implementing the Project Items

- Specify the method of management and operation for the Component Part and/or Area, which is needed for each step of the implementation of the projects.
- Specify the concrete image of the framework for implementing the projects, responsibilities of the relevant departments and sections, cooperation method, and capacity building of staff in charge.
- Specify the method of follow-up for the progress of the projects.

[6] Specifying the short term and medium- to long-term projects and specifying the contents, implementation period, processes, etc. in the "Chpter 9 Implementation of the projects included in the Plan" mean nothing less than specifying which project has high priority out of all projects for conservation, restoration, presentation and public utilization of the relevant National Historic Site. It has the same meaning as the "priority" required in Recommendation b).

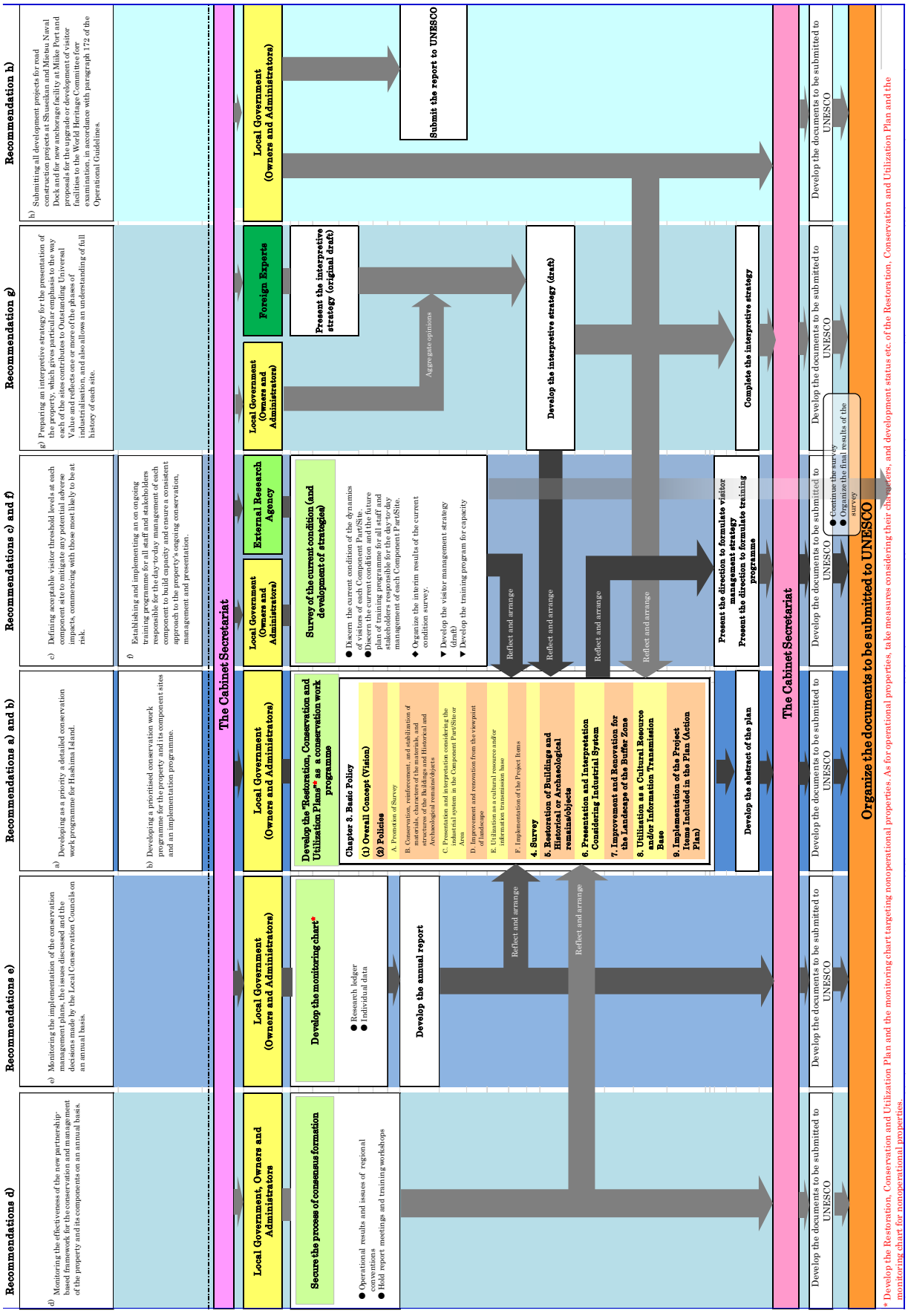
Appendix a)-1 Standard form for the "Conservation, Restoration, Presentation and Public Utilization Plan" which could be a source when creating a "Conservation Work Programme" pursuant to Recommendations a) and b) for each component part

Flow Chart of Developing the Conservation, Restiration, Presentation and Public Utilization Plan



Appendix a)-1 Standard form for the "Conservation, Restoration, Presentation and Public Utilization Plan" which could be a source when creating a "Conservation Work Programme" pursuant to Recommendations a) and b) for each component part

(Annex 1)



Correlation among the Recommendations of the UNESCO World Heritage Committee and Ways to Deal with the Recommendations

* Develop the Conservation, Restoration, Presentation and Public Utilization Plan and the monitoring charts targeting the non-working Component Parts. As for the working Component Parts, take measures considering their characters, development states etc. of the Conservation, Restoration, Presentation and Public Utilization Plan and the monitoring charts for the non-working Component Parts.

(Annex 2)

Classification among Conservation and Management Plan / Conservation, Restoration, Presentation and Public Utilization Plan / State of Conservation Report

1. Conservation and Management Plan

(1) Conservation and Management Plan (hereinafter referred to as "CMP") has been developed to show that the state of legal/administrative and financial protection of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution satisfies the sufficient conditions for its inscription on the World Heritage List.

(2) CMP has described the basic policies for protection (conservation and management) specifying the constituent elements contributing to the Outstanding Universal Value; however, it does not specifically show the future image (vision) in view of location, form, and characteristic of individual Component Parts nor methods or processes to realize their future images because such basic policies are common to all 23 Component Parts.

* In cases of the past inscribed serial cultural heritage properties in Japan, Comprehensive Preservation and Management Plan developed for World Heritage nomination of the property as a whole also had a similar nature of CMP mentioned above, and the plan for the most of specific items for conservation, restoration, presentation and public utilization of each Component Part were developed after the inscription.

2. Conservation, Restoration, Presentation and Public Utilization Plan

(1) This "Conservation, Restoration, Presentation and Public Utilization Plan" (hereinafter referred to as "Plan") to be developed for each Component Part and/or Area includes the content of "Conservation Work Programme and Implementation Programme" pursuant to Recommendation b) of the Decision (39COM 8B. 14) by the World Heritage Committee at the time of inscription on the World Heritage List.

> b) Developing a prioritized conservation work programme for the property and its component sites and an implementation programme

Since what is required in the above Recommendation b) is not a "plan" but a "programme," we understand that it is required to submit a more specific conservation and restoration method that includes an implementation programme.

Therefore, from now on, "conservation work programme" to be developed on the basis of Recommendation b) should be distinguished from CMP which indicates the framework of the protection (conservation and management) of the property. Plan of each Component Part should be developed first, then some of the parts and items of the Plan relating to conservation and restoration should be extracted to complete the "conservation work programme" and "implementation programme".

* When any project of conservation, restoration, and utilization of designated National Cultural Property begins, the development of a same plan as the above Plan is required in advance regardless of the Recommendation by the World Heritage Committee.

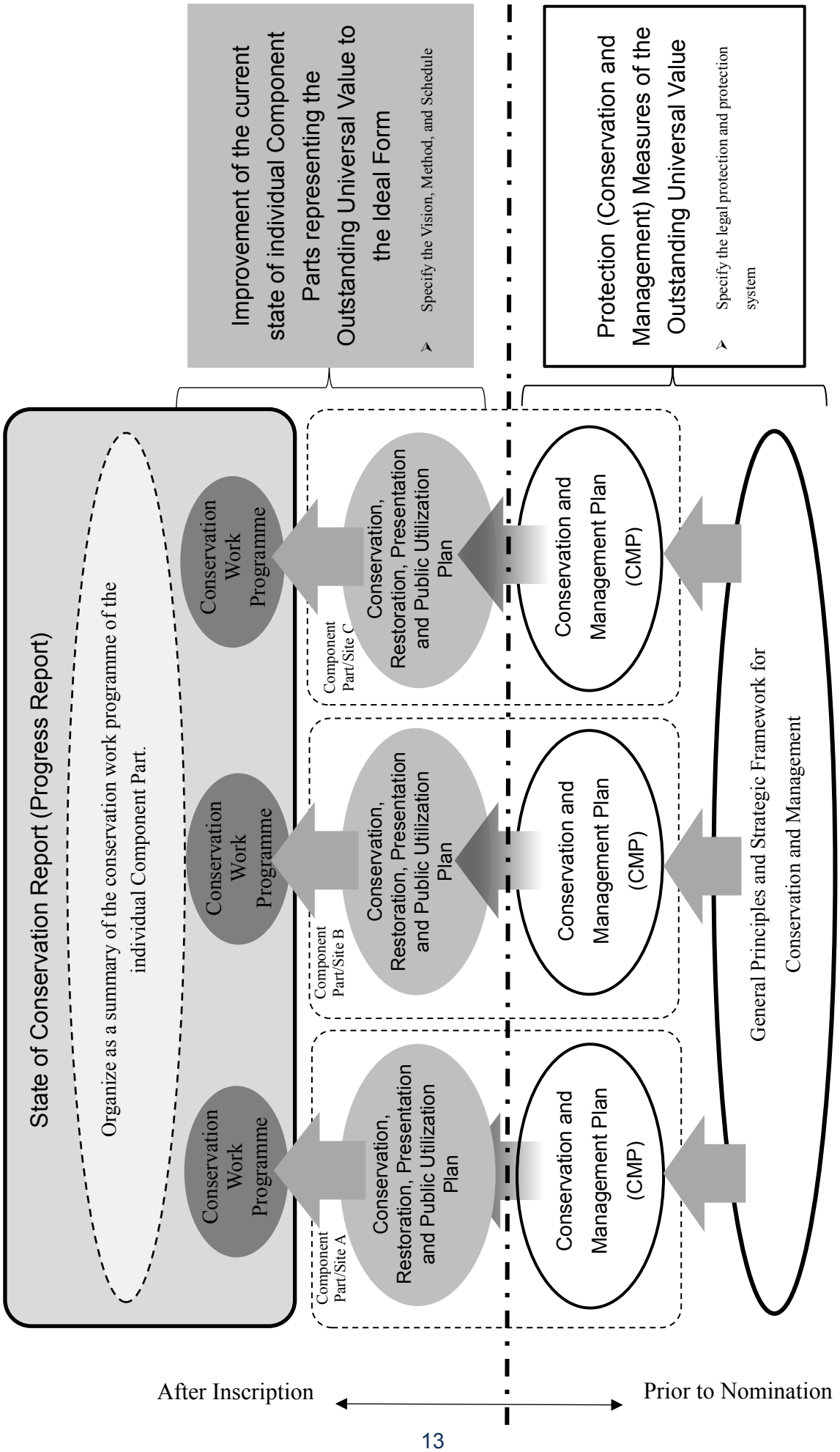
(2) To develop Plan, it is necessary to first show the future image of each Component Part and/or Area. In addition, the methods and processes for its realization must be specified. As for the visitor threshold level required in Recommendation c) of the Decision, the possibility of estimation will be considered only after envisioning such ideal future image.

3. State of Conservation Report

The "State of Conservation Report" (progress report) must be submitted to UNESCO World Heritage Centre by December 1st, 2017, to show the progress related to Recommendations a) to h).

Since the schedule, policy and measures for implementation of the prioritized projects will be included in the "Chapter 9 Implementation Projects" of the Plan of each Component Part, it is not needed to develop another plan with prioritized projects form the point of view of the property as whole.

Appendix a)-1 Standard form for the "Conservation, Restoration, Presentation and Public Utilization Plan" which could be a source when creating a "Conservation Work Programme" pursuant to Recommendations a) and b) for each component part



(Annex 3)

Decision by the World Heritage Committee at its 39th session (Bonn, 2015)

Decision: 39 COM 8B.14 (Excerpt)

The World Heritage Committee,

4. Recommends that the State Party give consideration to the following:

a) Developing as a priority a detailed conservation work programme for Hashima Island;

b) Developing a prioritised conservation work programme for the property and its component sites and an implementation programme;

c) Defining acceptable visitor threshold levels at each component site to mitigate any potential adverse impacts, commencing with those most likely to be at risk;

d) Monitoring the effectiveness of the new partnership-based framework for the conservation and management of the property and its components on an annual basis;

e) Monitoring the implementation of the conservation management plans, the issues discussed and the decisions made by the Local Conservation Councils on an annual basis;

f) Establishing and implementing an on ongoing training programme for all staff and stakeholders responsible for the day-to-day management of each component to build capacity and ensure a consistent approach to the property's ongoing conservation, management and presentation;

g) Preparing an interpretive strategy for the presentation of the property, which gives particular emphasis to the way each of the sites contributes to Outstanding Universal Value and reflects one or more of the phases of industrialisation; and also allows an understanding of full history of each site[1];

h) Submitting all development projects for road construction projects at Shuseikan and Mietsu Naval Dock and for new anchorage facility at Miike Port and proposals for the upgrade or development of visitor facilities to the World Heritage Committee for examination, in accordance with paragraph 172 of the Operational Guidelines;

5. Requests the State party to submit a report outlining progress with the above to the World Heritage Centre, by 1 December 2017, for examination by the World Heritage Committee at its 42nd session in 2018;

6. Also recommends that the State Party consider inviting ICOMOS to offer advice on the implementation of the above recommendations.

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[1] The World Heritage Committee takes note of the statement made by Japan, as regards the interpretive strategy that allows an understanding of the full history of each site as referred to in paragraph 4.g), which is contained in the Summary Record of the session (document WHC-15/39.COM/INF.19).

Conservation work programme for the Hashima Coal Mine (Area 6 Nagasaki/ Component part 6-7)

Nagasaki City drew up the Conservation Work Programme for Hashima Coal Mine (hereinafter referred to as “Programme”) during FYs 2015 and 2017. This Programme is for detailed measures of conservation of the Hashima Coal Mine, which is a Component Part of the “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining” (hereinafter referred to as “Sites of Japan’s Meiji Industrial Revolution”), and is based on the Recommendation a) of the Decision: 39 COM 8B. 14 adopted by the World Heritage Committee at its 39th session in 2015.

1. Concept underlying the conservation work

The conservation work will be conducted to pass to the future generations the remains of the Hashima Coal Mine and coal mining community. The mine succeeded the mining technology of the Takashima Coal Mine, where Japan’s modern coal mining industry began, and developed as a base for undersea coal mining operations.

Area 6 Nagasaki to which the Hashima Coal Mine belongs encompasses eight of the 23 component parts of the Sites of Japan’s Meiji Industrial Revolution. These component parts relate to the shipbuilding and coal industries after the ban on building of large ships was lifted. All the sites are associated with Mitsubishi, founded by Yataro Iwasaki, who was employed in the Kaiseikan of the Tosa Clan, one of the central major clans in the Meiji Restoration, and with Thomas Glover, a driving force for industrialization from the end of Edo Period to the early Meiji era.

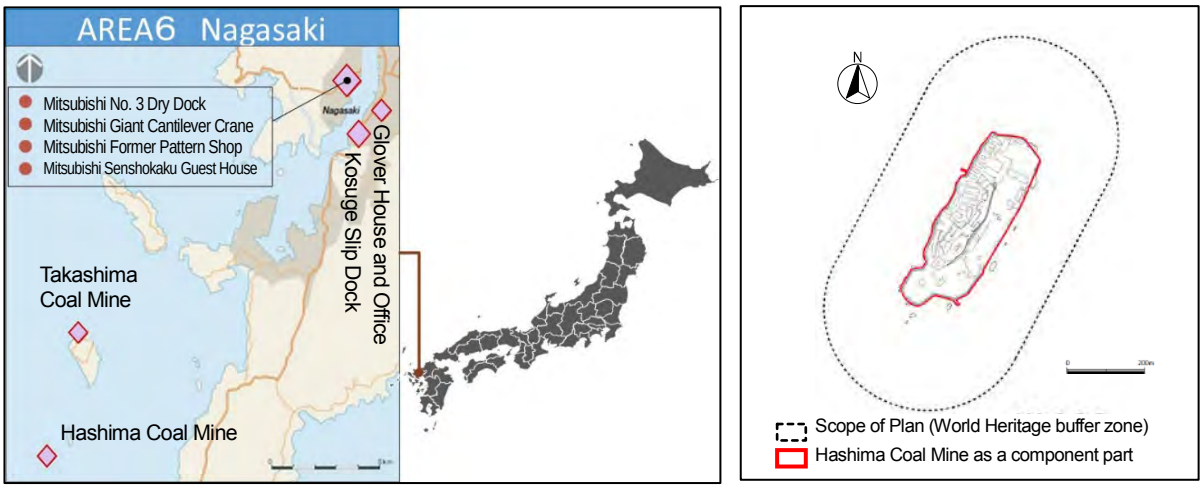


Figure 1: Location of the component part and scope of Plan

Coal supported the rapid industrialization of Meiji Japan, both as fuel for steamships and steam engines, and as coking coal for iron and steel making. The Hashima Island where the Hashima Coal Mine (Component Part 6-7) is located in approximately 3 kilometers southwest of Takashima Island, site of the Takashima Coal Mine. The Hashima Coal Mine belongs to the same mineral deposits as the Takashima Coal Mine (Component Part 6-6), the first place in Japan to introduce a steam engine. The coal mining techniques of the Takashima Coal Mine were passed on to Hashima. As electrification was introduced, both coal mines came to ship stable supplies of large amounts of coal. Shipment of coal from Hashima began in 1891, and by 1897 it had surpassed Takashima in

volume. As the amount of coal extracted grew, the coal wastes generated in the mining process were used to expand the landfill area around the island. The new land thus created around the rock of an island was surrounded by a fortress-like seawall to protect the island from high waves. At its peak, Hashima formed a coal mining community with the highest population density in the world.

The Hashima Coal Mine, which succeeded and developed the Western coal mining technology introduced in the Takashima Coal Mine, is a significant real-world example showcasing its development as a base for undersea coal mining operations. It represents the phase of “direct importation of Western technology” and “full-blown industrialization”. In the Conservation Management Plan (hereinafter referred to as “CMP”) for Hashima Coal Mine, which was prepared for nomination of “Sites of Japan’s Meiji Industrial Revolution” for the World Heritage inscription, the list of elements constituting the Hashima Coal Mine and their respective value categories was provided as shown in **Table 1** as below.

Property	Period		Element	Value Types of Element		
				OUV	Nat’l	Local/Other
Value Types of Hashima Coal Mine Production Facilities and Revetment Remains						
Hashima Coal Mine	Meiji	Initial Period	Adit remains	○	○	○
		Development Period	Revetment remains	○	○	○
			Former pit No. 2	○	○	○
			Pit No. 3	○	○	○
			Pit No. 3 Winding machine room (Material storage warehouse)	○	○	○
	Taisho		Pit No. 4		○	
			Pit No. 4 winding machine room		○	
	Showa (Pre-war)	Period of Influx	Loading pier		○	
			Tipple		○	
			Loading belt conveyor		○	
			New pit No. 2		○	
			Pit No. 2 Capstan		○	
			Pit No. 2 winding machine room		○	
			Engineering section plant (finishing plant)		○	
			Coal storage yard belt conveyor		○	
			Tunnel conveyor		○	
			Loading office		○	
			13-ton crane mount		○	
			20-ton crane mount		○	
			15-ton crane mount		○	
			Compressor room		○	
			Material storage warehouse		○	
			Mine entry landing (physical inspection screening)		○	
			Mine entry landing		○	
			Coal weighing room		○	
			RAW coal pocket		○	
			Coal analysis room		○	

Appendix a)-2 “Conservation work programme for Hashima Coal Mine (Area 6 Nagasaki/ Component part 6-7)”

	Showa (Post-war)	Reconstruction Period	Smokestack		○	
			Blower room		○	
			Coal refuse conveyor belt entrance		○	
			Pit No.4 wind tunnel		○	
			Mine car repair shop		○	
			Flotation machine room		○	
			Coal-mining machine plant		○	
			Oliver filter room		○	
			Electric material warehouse		○	
			Iron pole plant		○	
	Showa (until Closure)	Redevelopment Period	Engineering section plant (smithy)		○	
			General office (Mine manager’s office)		○	
			Freshwater tank		○	
			Water tank		○	
			Office		○	
			Main fan room		○	
			Substation		○	
			Compressor room		○	
			General office		○	
			Dorr thickener		○	
			Berthing dolphin		○	
Value Types of Hashima Coal Mine Housing Facilities and Outer Revetments						
Hashima Coal Mine	Taisho	Development Period	Building 30			○
			Subcontractor housing			○
			Building 16			○
			Building 17			○
			Building 18			○
			Building 8			○
			Building 23			○
			Building 19			○
			Building 20			○
			Building 12			○
	Showa (Pre-war)	Period of Influx	Building 50			○
			Building 25			○
			Building 56			○
			Building 57			○
			Building 66			○
			Building 14			○
	Showa (Post-war)	Reconstruction Period	Building 65 North			○
			Building 65 East			○
			Building 2			○
			Building 67			○

			Building 22			○
			Building 59			○
			Building 60			○
			Building 61			○
			Building 7			○
			Building 21			○
			Building 48			○
	Showa (until Closure)	Redevelopment Period	Building 31			○
			Building 65 South			○
			Building 68			○
			Building 69			○
			Building 70			○
			Pool			○
			Chidori-so (housing)			○
			Building 3			○
			Building 51			○
			Building 39			○
			Building 13			○
			Outer revetments (other than revetment remains)			○
		Period of Decline	Building 71			○

Table1　Value types of Hashima Coal Mine（excerpt from CMP）

Out of these elements shown in the Table 1, while the Conservation Work Programme for Hashima Coal Mine will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to other elements that represent the value categorized as national and/or local, and others in view of the process of historical changes and developments of the component part.

The Hashima Coal Mine went into operation during the Meiji era and closed in 1974, and the following remains still stand aboveground and underground: (1) Seawall revetments and retaining walls that are remnants of the expanded and developed part of the island (2) Coal production facilities that were kept updated in keeping with technological progress (3) Reinforced concrete housing facilities built to accommodate the island’s growing population. These remains ((1)-(3)) have not been properly maintained for more than 40 years since the closedown of the coal mine in 1974. Therefore, the buildings made of wood, steel, and reinforced concrete have fallen apart or irreversibly decayed. Since further damage and collapse are expected, the City will carefully consider the characteristics of these constructions and prioritize their conservation works.

In Area 6 Nagasaki, the Takashima Coal Mine and Hashima Coal Mine belong to the same mineral deposits, and can be seen as a unified resource enabling the history of the Mitsubishi coal industry to be experienced. From the standpoint of gaining an overall grasp of the Sites of Japan’s Meiji Industrial Revolution, the seawall and the production facilities that continued to be renewed with progress in technology, which both contribute to the Outstanding Universal Value of a World Heritage property, will be preserved. In addition, the elements that tell us about the mining community at the time the industry was started up will be preserved as important elements for showing the history of the region, taking into account the course of historical changes and development of the Hashima Coal Mine, even though they do not contribute to the Outstanding Universal Value.

In implementing the conservation work for the Hashima Coal Mine, the following three points are important:

1) Ensuring the sustainment and preservation of the Hashima Island with its revetments and retaining walls in order to protect the landscape of the island, which provides the foundation for preserving the remains and remnants on the island.
2) Maintaining in a stable condition the remains that represent the intrinsic value of the National Historic Site and contribute to the Outstanding Universal Value as a World Heritage component part.
3) Maintaining the relict landscape of the Hashima Island, including its unique silhouette resembling a battleship when looked from afar as well as the closeup view of decayed abandoned buildings and structures

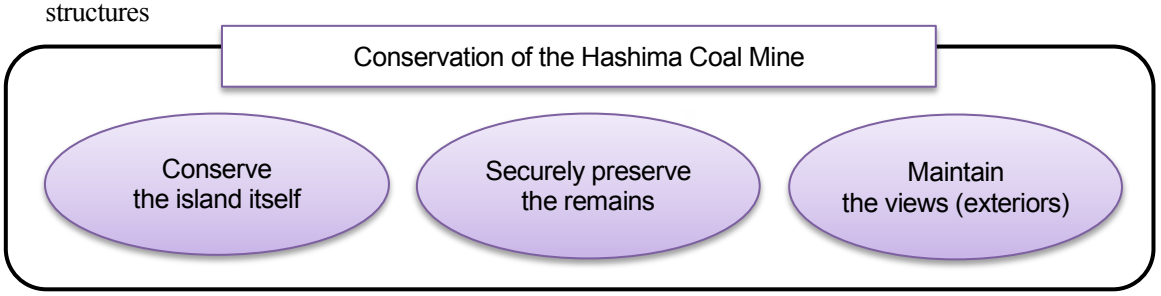


Figure 2: Conservation of the Hashima Coal Mine

The City will holistically look at each of the elements in terms of these three principles and prioritize them to plan and carry out physical improvement measures. It is technically impossible at this moment to keep intact the remains of reinforced concrete production and housing facilities that are increasingly deteriorating and damaged. However, the City plan to carry out conservation in stages, taking account of technical and financial issues.

The above three points can be rearranged as follows from the perspective of Outstanding Universal Value.

1) Conserve and restore elements that contribute to the Outstanding Universal Value (including the Meiji era seawall revetment, and production facility remains) to keep them stable.
2) Apart from elements that contribute to the Outstanding Universal Value, repair those elements that represent the intrinsic value of the National Historical Site (including concrete production and residential facility remains) to maintain the unique battleship-like silhouette, showcase the development and decline of the coal industry and preserve evidence of the realities of the community.
3) Make comprehensive and diverse evaluations and prioritize from a range of perspectives, including the state of deterioration of elements, the availability or absence of applicable conservation techniques, the degree of contributions to the Outstanding Universal Value, the impact of other constituent elements and visitor safety, and budget requirements, and commence restoration and conservation in phases.
4) Some steel reinforced concrete remains at the Hashima Coal Mine could be hard to conserve owing to advanced deterioration and damage. Although structural density will gradually decline of the long term, accord maximum care to maintaining the battleship-like silhouette when viewed from the surrounding sea.

2. Policy

Conservation work policy for the Hashima Coal Mine will be set forth based on the following five points:

(1) Promoting research and study

The City plan to launch the following projects in order to reaffirm and enhance the Outstanding Universal Value of the Hashima Coal Mine as a component part of the World Heritage Property: studies of the remains; studies of historical documents that show how the industrial (mining) system worked; studies of landscape of the component part and its surrounding; and studies of visitor number and their impact on the component part.

Furthermore, the City will conduct annual monitoring by using monitoring charts in order to assess the condition of the component part of the World Heritage property and its buffer zone. Then the City will provide

the assessment and an annual report to the Nagasaki Conservation Council, and reflect the Council’s feedback in the process of conservation, restoration, presentation and public utilization.

(2) Restoring the buildings and remains (preserving, reinforcing, and stabilizing materials, substance and structure)

In restoring and conserving buildings and remains, the City will prioritize work on elements that contribute to the Outstanding Universal Value.

The Programme is primarily to make improvements on conservation efforts to ensure that the remains will continue to exist in stable condition, providing day-to-day maintenance work and conducting monitoring. Then the City will holistically assess the roles of the remains and degradation levels to prioritize the needs and provide conservation work (e.g., reinforcement, stabilization) in stages. The Programme will focus particularly on the remains of seawall revetments in not only the coastline but also coal production facilities and housing facilities areas. The City will continue monitoring for any changes in the condition and take action if necessary to keep these remains intact. As for the remains of the coal production and housing facilities, the city will continue research for conservation, and restore the constructions according to the priorities to control degradation. The following are the policies on conservation work for the elements:

- Seawall revetment remains in the coastline

  The seawall revetment remains in the coastline play a critical role in protecting the whole of Hashima from ocean waves. Therefore, the City should give the highest priority to actions for keeping them from collapsing. The City will take measures to prevent collapse attributable to the degradation of the current state, thereby keeping these revetments soundly functioning. The view of the island that looks like a battleship at sea (i.e., the exterior and silhouette) will remain as intact as possible.

- Revetment remains in the coal production and housing facilities areas

  A tableland was made to create enough space on the small island for mining facilities and residents’ day-to-day living. Land was reclaimed by the ocean for expansion of the island five times during the Meiji era. It is inferred that these expansion projects pushed land and revetments by the water’s edge inland. The revetment remains found across the island today are the traces of the expansion efforts. Since these traces contribute to the Outstanding Universal Value, the City must prevent the collapse of these remains and keep them functioning. At the moment, the city have not found any spot in the remains that may lead to collapse and thus requires urgent conservation work.

- Production and housing facility remains

  The City will repair and strengthen the reinforced concrete constructions to keep their structures intact and thereby retain the current shape. Since the characteristics and corrosion of the structures make it technically impossible to retain the shape permanently, the City will keep watch for advances in conservation technology to select the best possible means to preserve the remains.

  The reinforced concrete structures of the housing facility remains suffer irreversible damage and degradation, and may collapse at any time. These buildings may be removed as an exception in order to ensure the preservation and safety of the other elements on the component part of the World Heritage property.



Figure 3: Constituent elements of Hashima Coal Mine

(3) Presentation of the mining system

The Hashima Coal Mine is related to the two eras of industrialization, the period of directly introducing

Western science techniques and the period of establishing industrial infrastructure. It is also closely involved in the interrelationship of three industrial fields, not only the coal industry itself but the steelmaking and shipbuilding industries that developed thanks to coal. The Sites of Japan’s Meiji Industrial Revolution, in addition to the Mitsubishi Takashima Coal Mine and Hashima Coal Mine sharing the same mineral deposits, also include the Mitsui Miike Coal Mine. The Mitsubishi mines, however, have a particularly deep technological connection to the development of the Nagasaki Shipyard in the Mitsubishi Goshi Kaisha era. With the electrification of coal mining operations, the coal production infrastructure system was rapidly developed, and large volumes of coal were shipped. The coal wastes generated as a result were then used to expand the landfill area around the island. The new land created around the rock of an island was surrounded by a fortress-like seawall to protect the island from high waves.

By the time the industry reached its peak, Hashima had formed a Mitsubishi coal mining community that was the most densely populated in the world. The mine housing built on the landfill-expanded island to support the work of the coal industry testifies to the Mitsubishi corporate culture behind the rapid industrialization of the time. New viewing plazas will be installed within the minimum scope needed for clearly conveying the nature of the facilities on the island at the time the mine was in operation, so that visitors can understand them. These facilities are not only those for mining (mine shafts), transporting, and preparation of coal, and for stockpiling and loading coal, but also the entire coal production system such as for drainage, electrification, and powering the operations. The viewing plazas will be equipped with small wireless transmitters for communicating information to mobile devices. Visitor understanding will be further enhanced by tying in with existing facilities, such as the Takashima Coal Museum on the Takashima Island, and the Nagasaki City Gunkanjima Museum located in Nomozaki.

(4) Retaining better views (exteriors) of the island

The City aims to pass down how the coal mining started and developed from the Meiji era and to conserve the distinctive views (exteriors) of the island as an undersea coal mine, namely: (i) Current views of the coal production facility remains that represent the island’s industrial structures (ii) Unique battleship-like views (exteriors) that consists of seawall revetments, coal production and housing facilities. (iii) Relict landscape of the ruins with degradation and damage further in progress.

As a rule, the City will maintain the upright bulkheads that constitute a significant part of long-distance views of the Hashima Coal Mine. Primarily for the sake of short-distance views, conservation work on any part of the structures visible from passages must be done in such a way that retains the colors, shapes, and textures of the current views as much as possible. Any equipment needed for reinforcement will be installed inside the structure if possible.

(5) Implementing projects

Nagasaki City will develop an Action Plan that covers project deadlines, implementation techniques for phased work, what to do during each of the fiscal years, and the required expenditure.

The City will check the progress of the project annually and share the information with people involved in the project. This is to make sure that the efforts to conserve and utilize the World Heritage component part will be properly managed and the projects for conservation, restoration, presentation and public utilization will methodically proceed. Moreover, since the City is the managing organization responsible for the operation of the overall component part that entails coordination between public relations, events, and stakeholders, the City will act as a liaison between people and organizations involved in the projects.

3. Methods

(1) Research and study

(a) Archaeological excavation and field study

Aboveground structures of the coal production facilities were demolished to be replaced by new facilities. This means that the coal production facilities continued to be upgraded. The housing facilities were also rebuilt anew after suffering a disaster or when their features needed upgrading. The masonry revetment remains were also rebuilt when a typhoon devastated them. Given these historical facts, it is unlikely that any of the original aboveground structures still remain, while it is likely that underground structures from that time still do.

For part that are likely to be the remains of production facilities from Meiji era, such as mine mouths and shaft winding areas, survey of underground remnants as much as possible during structural repair, etc.

The Hashima Coal Mine has clusters of aboveground structures that have survived intact, which means that the archaeological excavation of underground remains is possible only in a limited part of the island. In the meantime, the City will launch an archaeological excavation of the masonry revetment remains, which bear traces of expansion of the island. The sites will be the schoolyard of Hashima Elementary and Junior High Schools because the yard has no aboveground structures.

(b) Study of historical documents

The City will study documents archived at research institutes, labor unions’ publications, newspaper articles at the time, and old videos and photographs to ensure that the city have accurate knowledge of the history of Hashima as a thriving island of a coal mine. The City will also work with citizen groups to interview former miners and their families to learn about the realities of their labor and day-to-day lives in Hashima at the time.

(c) Research on structural materials

The City will analyze the materials of the reinforced concrete, masonry, and brick structures and test their strength to scientifically assess the structures’ degradation levels. The City also plan to research how to conserve regular and reinforced concrete structures as well as specific ways of conservation in the current environment where no essential utilities are available. Before any conservation work on structures, the City will survey the facilities and research their structures, and the ground upon which they are built in order to ensure the safety of on-site research and conservation work and to assess the safety performance of the structures. Comparative study with similar cluster housing facilities will also be undertaken.

(d) Research on the number and movement of visitors

The City will research the number and movement of visitors to assess the impact of intense tourism on the remains and reflect the results in better utilization of Hashima.

(e) Monitoring

The City will prepare monitoring charts that systematically collect complete information about the elements of Hashima in order to regularly assess the current condition of the component part and buffer zone. The City will also compile the results of monitoring into an annual report to provide it to the Nagasaki Conservation Council for feedback in accordance with the operation system for the “Sites of Japan’s Meiji Industrial Revolution”. If any negative impact on Hashima and/or its buffer zone is found, the City will take action to eliminate the cause or to reduce the impact, conduct a follow-up inspection, and examine the effects of the measures the City have taken.

The City have surveyed the whole of the island with a 3-D laser (**Figure 3**), and will install four stationary cameras to record and monitor the current state. The City plans to identify individual spots on the remains of seawall revetments, coal production and housing facilities that are likely to need monitoring in order to measure any slant and widths of cracks every six months.







Figure 4:
3-D Model of Hashima Coal Mine made from 3-D laser survey

(2) Conservation

(a) Approaches for gradual conservation of the remains

The relationship between the elements of the Hashima Coal Mine (remains of the seawall revetment, retaining wall, and production and residential facilities) and the three points relating to conservation of the mine that are indicated in the **Figure 2**, is as follows (**Table 2**).

Hashima Coal Mine elements	Contributions to conserving Hashima Coal Mine remains		
	(1) Conserving the island	(2) Securely preserving the remains	(3) Maintining the views (exterior)
Seawall Revetment	○	○	○
Retaining walls	○	○	○
Production facilities		○	○
Residential facilities			○

Table 2: Relationship between conservation and elements of Hashima Coal Mine

In light of the three conservation points, the City of Nagasaki is prioritizing and implementing material improvements over three phases over 30 years for the seawall revetment, retaining walls, and production and residential facilities elements of Hashima Coal Mine.

The City will take measures to preserve the seawall revetment remains in the coastline starting from Phase I to ensure that they will continue to function well because they are critical elements covered by all the principles of conservation.

Coal production facility remains are elements covered by two of the principles “Securely preserve the remains” and “Maintain the views (exteriors).” Since these remains are critical to understanding the coal production system, the city will take measures to preserve them starting from Phase I to “maintain the current shape.” The revetment remains incorporated in the coal production and housing facilities are covered by all the principles just as the seawall revetments in the coastline, and their “forms will be maintained as seawall revetments.” Since these seawall revetments have relatively few deteriorating spots, the City will take measures to preserve them starting from Phase II, taking into account the progress of conservation work across Hashima. The housing facility remains are covered by “Maintain the views (exteriors).” The City will take measures starting from the later part of Phase I to “maintain the current shape,” taking into account the progress of conservation work across Hashima.

As part of the restoration process, the city will monitor and continue recording all the remains and conducting repairs in 10-year phases. In Phase I, places that require urgent work and for which established methods are available will receive conservation. The City will also conduct research into conservation methods during this phase. From Phase II, the City will apply the research results to repairs. The City will

also review the Programme every 10 years, taking account of the progress, finances, and preservation and other study results.

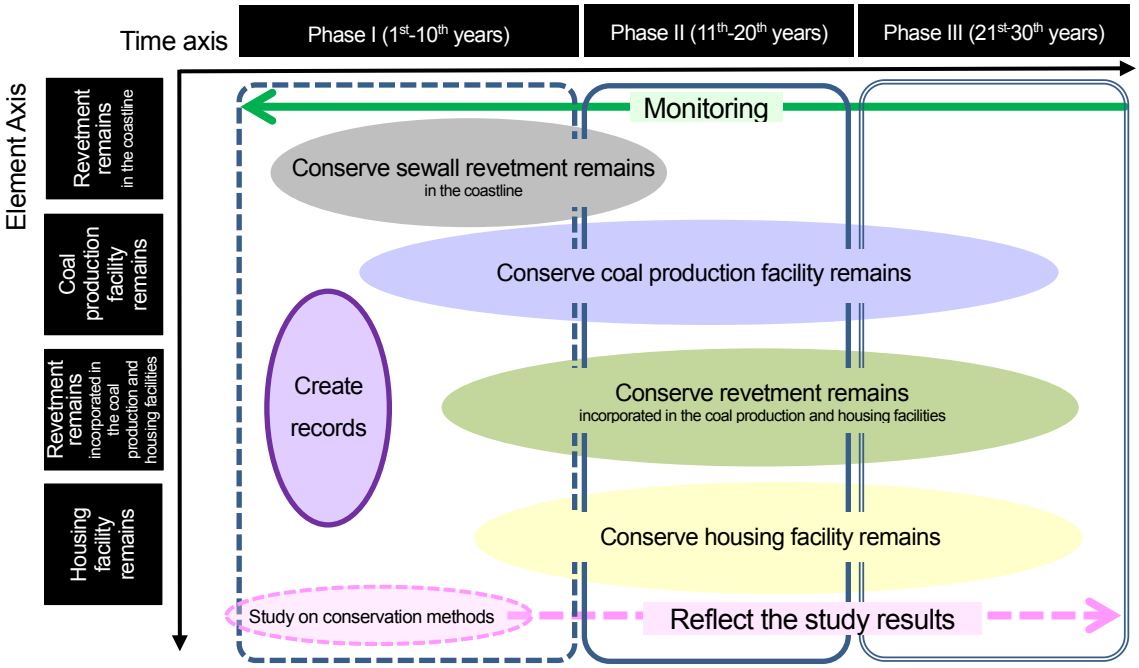


Figure 5: Approaches for phased conservation measures

(b) Approaches for prioritizing conservation measures for each element

Conservation measures are prioritized for each element of the remains from all angles, rather than from a single point of view. They include the extent of deterioration, applicable restoration and conservation techniques, the extent of contributions to the Outstanding Universal Value, the safety of other buildings and visitors, and the cost requirements.

In the process of conservation work for the seawall revetment remains in the coastline, the City will give priority to maintaining the World Heritage constituent elements. Therefore, places with damage that may significantly alter the shape of the remains of the seawall revetment in the coastline and impair their functions will be repaired first. Then the surrounding remains will be reinforced in order to maintain the seawall revetments’ functions.

The remains of seawall revetment in the coastline are not damaged much at this moment, and thus the City will take maintenance measures if any, taking into account the progress of conservation work across Hashima. In the process of maintaining these remains, the City will give priority to conserving the World Heritage constituent elements. Therefore, parts of the remains with high levels of degradation will be repaired first.

In the process of conserving the coal production facility remains, the City will give priority to conserving the World Heritage constituent elements. Therefore, remains with high levels of degradation will be repaired first. Then a series of remains that show the workflow of the coal production system will be repaired.

In the process of conserving the housing facility remains, buildings that significantly contribute to the unique view (exteriors) of the island and show high levels of urgency and feasibility will be repaired first.

Element	Viewpoint for prioritization					Approach for prioritization by element
Seawall revetment remains in the coastline	World Heritage constituent element	>	Factor for altering shapes	>	Degradation level (high to low)	Give the highest priority to conserving the World Heritage constituent elements. First repair places with damage that may significantly alter the shape of the remains in stages. Then reinforce the surrounding revetments.
Revetment remains incorporated in the coal production and housing facilities	World Heritage constituent element	>	Degradation level (high to low)			Give the highest priority to conserving the World Heritage constituent elements. The revetment remains are essential to preserve the topography of the island. Repair them in stages, taking into consideration their degradation levels and the progress of conservation work across Hashima.
Coal production facility remains	World Heritage constituent element	>	Degradation level (high to low)	>	Contributions to coal production system (high to low)	Give the highest priority to conserving the World Heritage constituent elements. First repair severely degraded remains. Then repair a series of the remains that show the production system.
Housing facility remains	Elements related to maintaining the views (exteriors)	>	Feasibility of preservation (high to low)			First repair buildings that contribute significantly to the views (exteriors) of Hashima, where restoration and conservation techniques are well established and preservation is highly feasible.

Table 3: Relationship between conservation and elements of Hashima Coal Mine

(c) Conservation method

Hashima is perpetually exposed to the elements, suffering salt, wind and flood damage. Hence, many of the reinforced concrete structures are irreversibly damaged and degraded. At this moment, there is no established technology to preserve structures in this state. The following are conservation methods the City could turn to today. Attention should be given to the fact that the examples of these methods are current as of this moment, and that the City will continue to research and explore other methods and revisit these examples in the future.

- Seawall Revetment remains in the coastline

In the process of conserving the seawall revetment remains in the coastline, give priority to maintaining the World Heritage constituent elements. Therefore, first repair places with damage that may significantly alter the shape of the remains and impair the functions of the seawall revetments, where restoration and conservation techniques are sufficiently established for easy and instant repairs.

The method of restoration of the revetment remains described below was the subject of discussion at Nagasaki City Takashima Coal Mine Conservation and Utilization Committee established by Nagasaki City. However, in order to restore the revetment remains in a harsh environment, further consideration is required, from the technical point of view of the seawall strength aspect. Discussion will be continued in a working group composed of technical and specialized framework.

Fundamental policies

- Make drainage and outlets to drain seawater that wash over the seawalls into the island.
- Ensure that the shapes of the upright bulkheads of the seawalls are visible. Do not install any protective structures (e.g., tetrapods) in front of the revetments.
- Install any facilities for reinforcement on land unless doing so is physically impossible.
- Install any structures needed to reinforce the masonry revetments of the seawalls located in areas visible to visitors. Ensure that the original masonry revetments are partially visible.

Examples of conservation methods

- Fill cracks with mortar (A & B)
- Fill damaged parts underwater (e.g., cavities in the revetments) with concrete (C-F)
- Coat existing revetments with concrete (G-N)
- As for the exposed masonry built using the *Amakawa* (traditional bonding agent of lime mixed with red soil), reinforce the back of the seawall revetments with concrete (G-N)
- Coat the exposed *Amakawa* masonry with a surface coating material to protect it from damage. Note that we will need to further research and explore technical methods that use coating materials. (G-N).

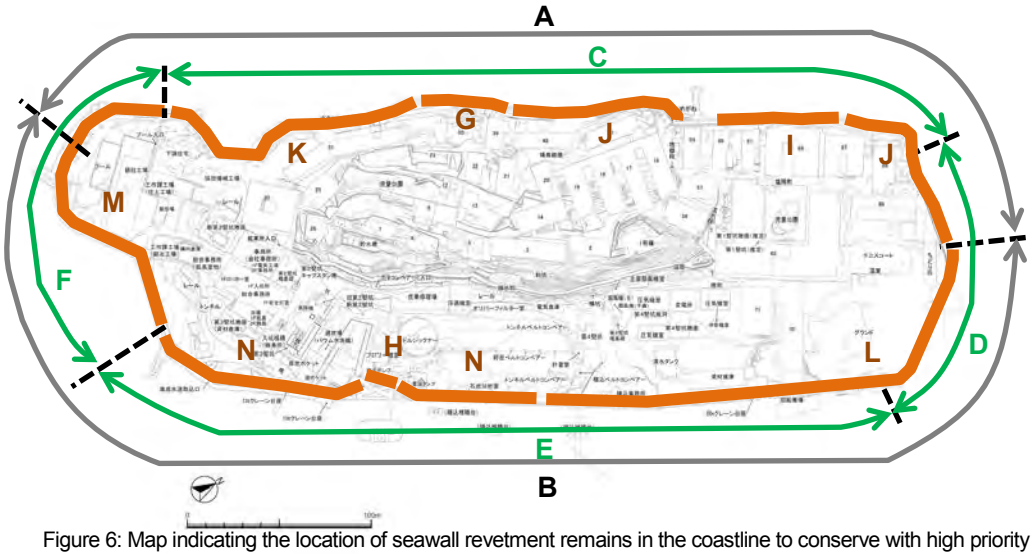


Figure 6: Map indicating the location of seawall revetment remains in the coastline to conserve with high priority (see the below table for details of the conservation methods etc.)

Zone	Conservation work with high priority	Reason for high priority
A	Repairing cracks (west side)	These cracks may significantly alter the shape of the remains and impair the functions of the seawall revetments. Those for which conservation and restoration techniques are established for instant repairs will be worked on.
B	Repairing cracks (east side)	
C	Filling underwater cavities (west side)	These cavities may significantly alter the shape of the remains and impair the functions of the seawall revetments. Those in the underwater revetments must be filled.
D	Filling underwater cavities (north side)	
E	Filling underwater cavities (east side)	
F	Filling underwater cavities (south side)	
G	Reinforcing the seawall revetments (west of Building 50)	These seawall revetments may significantly alter the shape of the remains and impair the functions of the seawalls. Structures for reinforcement need to be installed for the parts of the seawall revetments for which there are no established conservation and restoration techniques. The reinforcement method most suitable for this purpose will be selected from the three options below (Options 1 to 3).
H	Reinforcing the seawall revetments (south side adjacent to the pier)	
I	Reinforcing the seawall revetments (northwest side)	
J	Reinforcing the seawall revetments (north side)	
K	Reinforcing the seawall revetments (west side)	
L	Reinforcing the seawall revetments (east side)	
M	Reinforcing the seawall revetments (south side)	
N	Reinforcing the seawall revetments (southeast side)	

Table 4: Prioritized conservation work on the seawall revetment remains in the coastline

To reinforce Zones G to N (see above table), the City will examine following three Options:

Option 1 Coat the top sides of the seawall revetments and part of the sides facing land with concrete. Avoid coating the *Amakawa* masonry revetments built during the Meiji era wherever possible.

Option 2 Coat the top sides of the seawall revetments and the whole surface of the sides facing land with concrete.

Option 3 Coat the top sides of the seawall revetments and the sides facing the ocean with concrete.

The method for Option 1 is to keep the *Amakawa* masonry revetments exposed wherever possible. It is to work mainly on places near tour spaces for visitors (**Figure 7**). The method for Option 2 is to reinforce the seawall revetments facing land. The method for Option 3 would be selected only when no space is available for construction on land.



Figure 7: Images of seawall revetments conserved by Option 1 (left: before conservation; right: after conservation)

- Revetment remains incorporated in the coal production and housing facilities

Give priority to conserving the constituent elements that contribute to the Outstanding Universal Value of the World Heritage property. Therefore, start repairs from considerably degraded revetment remains. Note that the field study results concluded these remains currently have no spots that require urgent repairs.

Fundamental policies
- Maintain the current shape.

Conservation methods
- Coat the exposed *Amakawa* masonry with a surface coating material to protect it from damage. Note that we will need to further research and explore conservation methods that use coating materials.
- Fill the parts that fell off with sandstone (a material of the same quality) if they are structurally essential.
- Restore collapsed parts using materials of the same quality as the original wherever possible (i.e., cobblestones and ashlars for masonry walls; concrete and reinforced concrete for concrete walls).

- Coal production facility remains

The coal production facility remains are vital to understanding the industrial (mining) system at the time in that they are direct representations of the realities of the coal mining industry. Give priority to conserving the elements that contribute to the Outstanding Universal Value of the World Heritage property, and start conservation work from the series of the severely degraded remains that show the workflow of the coal production system. The fundamental policies and conservation methods for these remains are as follows:

Fundamental policies
- Maintain the current shape. Changes made to the exteriors must be minimum and only for the purpose of maintaining the structures.
- Any facilities needed to reinforce ferroconcrete structures should be installed in places invisible to visitors wherever possible (e.g., inside the constructions) so that they will not affect the exterior views.
- Conduct examinations before using rust inhibitors and impregnating and other agents to ensure that they do not harm the remains.

Conservation methods

(1) Reinforced concrete structures
- Reinforce beams and pillars mainly by placing steel frames inside or outside of them.
- Apply corrosion inhibitors to exposed steel frames.
- Apply impregnants of corrosion inhibitors to the exterior walls.
- Inject corrosion inhibitors into cracks in the building frames (pillars and beams).

(2) Brick structures
- Add new bricks to areas where bricks are missing to prevent further falling-off. Do not repair cracks (e.g., by applying mortar) in order to ensure reversibility.
- The addition of new bricks as stated above must be limited to the part of the arch crown and to the extent necessary to retain the structure (Figure 8).
- Ensure that the colors and shapes of newly added bricks are close to those of the existing ones on the severely degraded and damaged structures. Also ensure that these new bricks bear the mark “Repaired in 20XX” on the four sides (front, back, left and right) to distinguish them from original ones.
- Use lime mortar (with the ratio of lime to sand is 1:3) as a joint filler in order to prevent any impact on the surrounding original bricks and to ensure reversibility, since lime mortar’s bond strength is lower than that of cement mortar.
- Fix newly added bricks with anchor pins (φ3 mm × 60 mm) to prevent them from falling off.

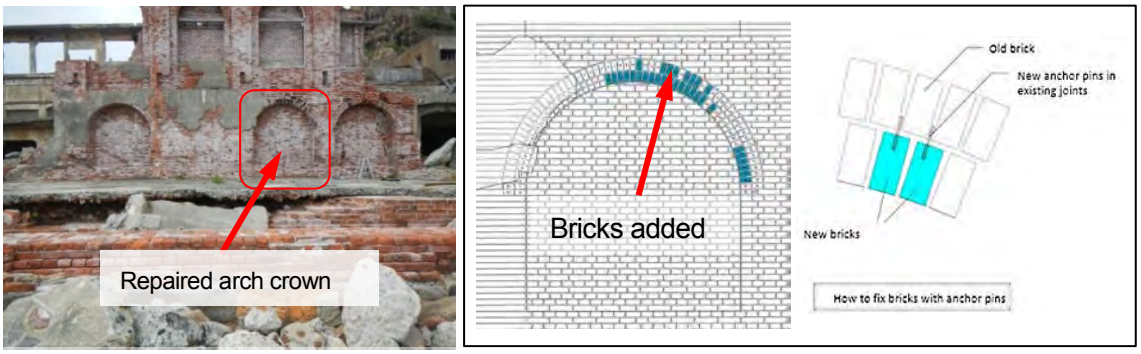


Figure8: Repairs to a brick structure

- Housing facility remains

The dilapidated housing facility remains soaring in clusters overwhelm visitors. These remains form the major part of the unique battleship-like views (exteriors) of the island. Begin repairs from housing facilities remains that contribute significantly to the views (exteriors) unique to Hashima Coal Mine and for which conservation and restoration techniques are established.

Fundamental policies

- As a rule, make no major changes to the exterior views.
- Repair and/or reinforce the interior of the buildings only to maintain the structures and any other work must be limited to the removal of obstacles to such repairs and reinforcement. Conserve the current condition wherever possible.
- As a rule, install any facilities for reinforcement in places invisible from the tourist routes, the sea, and thoroughfares in the area of the housing facilities.
- Research construction methods for degradation control and reinforcement of materials and structures and makes sure the methods work before applying them.
- Some of these remains may be removed as an exception in order to ensure the preservation of the other buildings or the safety of visitors.

Conservation methods

- Inject corrosion inhibitors into cracks in the building frames (pillars and beams).
- Apply impregnants of corrosion inhibitors to the exterior walls.
- Apply corrosion inhibitors and then mortar for coating to exposed reinforcing steel in pillars and beams visible from the tourist route.
- Wrap steel plates or carbon fiber sheets around exposed reinforcing steel in pillars and beams invisible from the tourist route, and then apply extra reinforced concrete.
- Place facilities for reinforcement inside the pillars and beams for further strength. (Reinforcement is mainly to prevent collapse under the pillars’ or beams’ own weight.)
- Waterproof the roofs with asphalt or an urethane coating.

Location	Facilities with high priority	Reason for high priority	Photo
A	➢ Former 3rd shaft winding area ➢ Entrance to the dock	These are production facility remains in the Meiji era where visitors can imagine how miners entered and exited the mine.	 Former 3rd shaft winding area  Entrance to the dock
B	➢ Dorr thickener ➢ Conveyor belt for coal storage ➢ Conveyor belt for loading	These remains help visitors understand the workflow of coal transport that consists of coal cleaning, storage, and loading.	 Dorr thickener
C	➢ 4th shaft ➢ Foundations of the derrick ➢ Former 4th shaft winding area ➢ Substation ➢ Pneumatic machine rooms (large and small) ➢ Main electric fan room ➢ 4th shaft wind tunnel	These remains help visitors understand the aboveground coal mining system.	 Substation (right foreground) and others
D	➢ Building No. 1	Workers prayed for work safety in labor-management cooperation in this building. These remains also form a part of the industrial landscape.	 Building No. 1

Table 5: Conservation of production facility remains: Priority
(the letters under “Location” correspond to those in Figure 9)

Location	Facilities with hgh priority	Reason for high priority	Photo
E	➢ Building No. 3	The building forms a part of the battleship-like views of the island. It is also typical remains of the housing facilities.	 Building No. 3

Table 6: Conservation of housing facility remains: Priority
(the letters under “Location” correspond to those in Figure 9)

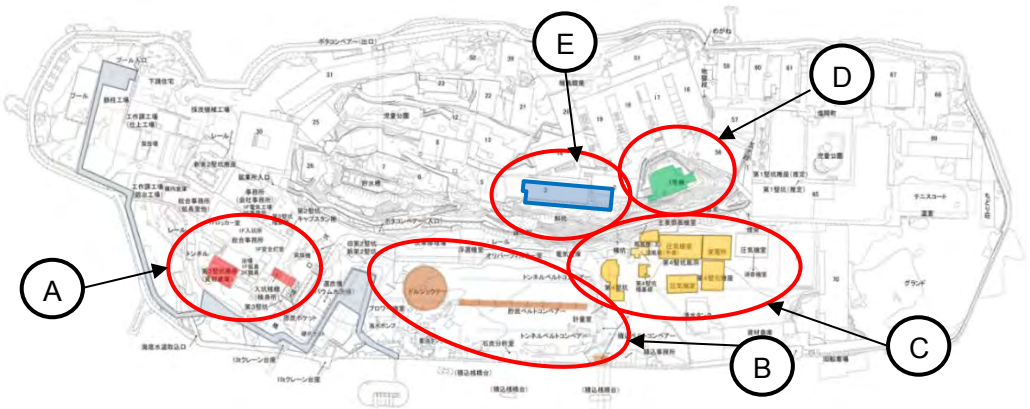
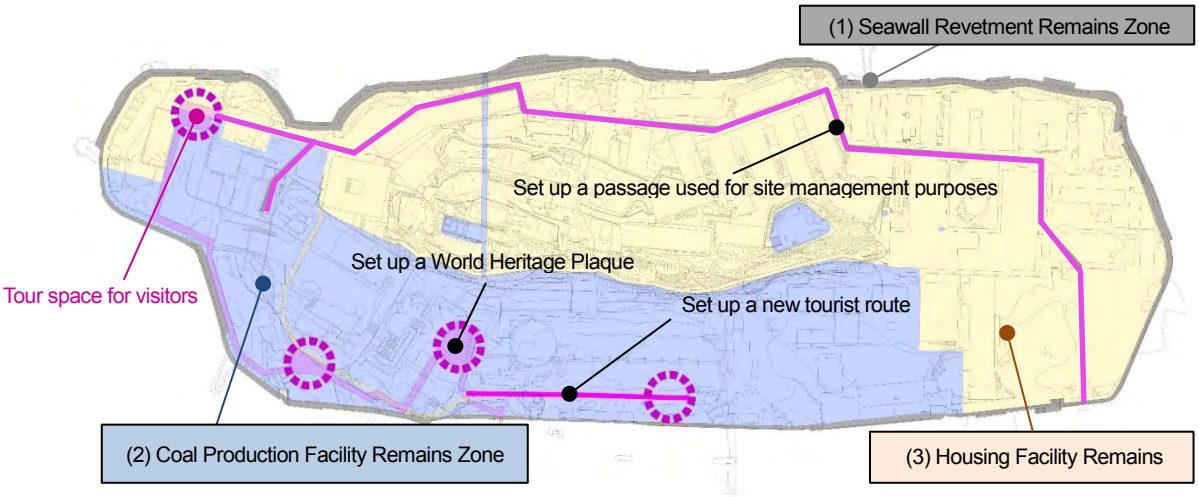


Figure 9: Locations of the facilities to conserve with high priority (coal production and housing facilities)

(3) Presentation of the mining system

The facilities for use will be set up in three different zones: Seawall Revetment Remains, Coal Production Facility Remains, and Housing Facility Remains Zones.



Zone	Methods
(1) Seawall Revetment Remains Zone	This zone is for the seawall revetment remains surrounding the island. Conservation will be primarily for preservation. No facilities for use will be set up.
(2) Coal Production Facility Remains Zone	This zone is for the coal production facility remains. It will be open only to visitors on the tourist route. Minimum facilities needed for research and study as well as for visitors will be set up. ➢ Set up a new tourist route in a minimum size
(3) Housing Facility Remains Zone	This zone is for facilities connected to day-to-day living of miners and other workers. Minimum facilities needed for research and study will be set up. ➢ Set up a passage used for site management purposes

Figure 10: Zoning and locations of main facilities to set up

(a) Paths

Set up a new tourist route in the Coal Production Facility Remains Zone, and a passage needed for studies of and academic research on the remains, and Conservation work in the Housing Facility Remains Zone.

Keep the height of the new tourist route as low as possible to make it easy for visitors to imagine what the facilities in operation were like. Pave the route with concrete slabs to preserve the remains and ensure the route will blend in with the surrounding buildings. (Consider concrete that is less bright to match the look of the ruins)

As for the passage used for site management purposes, make its width minimum to ensure it will not affect the surrounding remains.

* Notes on the maintenance of the passage used for site management purpose

a. Move fragments of certain size to the edges of the passage if pieces of rubble are scattered over the floor.

b. As a rule, sweep soil and stone to the sides of the passage, or move them someplace else on the island if they cannot be swept to the sides.

c. If heavy loads may be carried on the passage, cover the original concrete surface that must be protected with a sheet or an iron sheet, or pave it with concrete for protection.



Figure 11: Current site management passage

(b) Trees and plants

Branches and roots of trees may affect the buildings, and trees may fall at any time. Hence, fell trees that may affect the preservation of the remains on the island as necessary, and ensure that no more trees will be planted.

(c) Signposts and information boards

In consideration of the decayed landscape of the Hashima Island, no information boards, etc. will be newly set up. A signpost indicating the name of the island as a National Historic Site and a World Heritage Plaque will be set up in first visitor area.

(d) Facilities for site management and convenience for visitors

Set up refuge facilities needed for academic research (used as an evacuation place when weather is inclement and for storing monitoring and survey equipment, etc.) in locations invisible from the tour spaces for visitors (see **Figure 15**). Keep these facilities for site management and convenience minimum. No rest facilities, toilets, benches, and lighting for visitors will be set up (visitors will use the toilets on the ship that carrys them to the island)

(4) Arrangements and improvements for the buffer zone

The City currently have no plan to set up any new structures in the adjacent seas that serves as the buffer zone. The City will continue to protect the zone in accordance with the Coast Act, the Port and Harbor Act, and the Nagasaki Prefecture Sea Control Ordinance.

4. Implementation of the Projects (Schedule)

(1) Review of implementation schedule

Nagasaki City will prepare under this Programme an project schedule for the 30 years that starts at 2018. This Schedule will cover projects taken in stages during each of the decades, and will be reviewed every ten years from a perspective gained after examining the progress, finances, and results of research on technical methods for conservation.

Details of Conservation Work	Preparation Period (2014-2017)	Phase I (1-10years)		Phase II (11-20 years)	Phase III (21-30 years)
		(1-5 years)	(6-10 years)		
(1) Repairing and reinforcing the revetment retains					
a) Repair the revetments (west of Buildings No. 31and 51)	↔				
b) Repair cracks in the revetment remains		↔			
c) Fill underwater cavities		↔	→		
d) Reinforce the revetments		↔	→		
e) Protect the surfaces of the masonryretaining wall remains				↔	↔
f) Survey of the current state of underwater seawall revetment and its height		↔	↔	↔	↔ ↔
(2) Protecting the retaining wall remains					
a) Protect the surfaces of the masonry retaining wall remains				↔	↔
(3) Repairing and reinforcing the coal production facility remains					
a) Provide temporary reinforcement of the former 3rd shaft winding area	↔				
b) Provide temporary reinforcement of the entrance to the dock	↔				
c) Repair and reinforce the former 3rd shaft winding area		↔			
d) Repair and reinforce the entrance to the pier		↔			
e) Repair and reinforce the coal storage yard belt conveyor		↔			

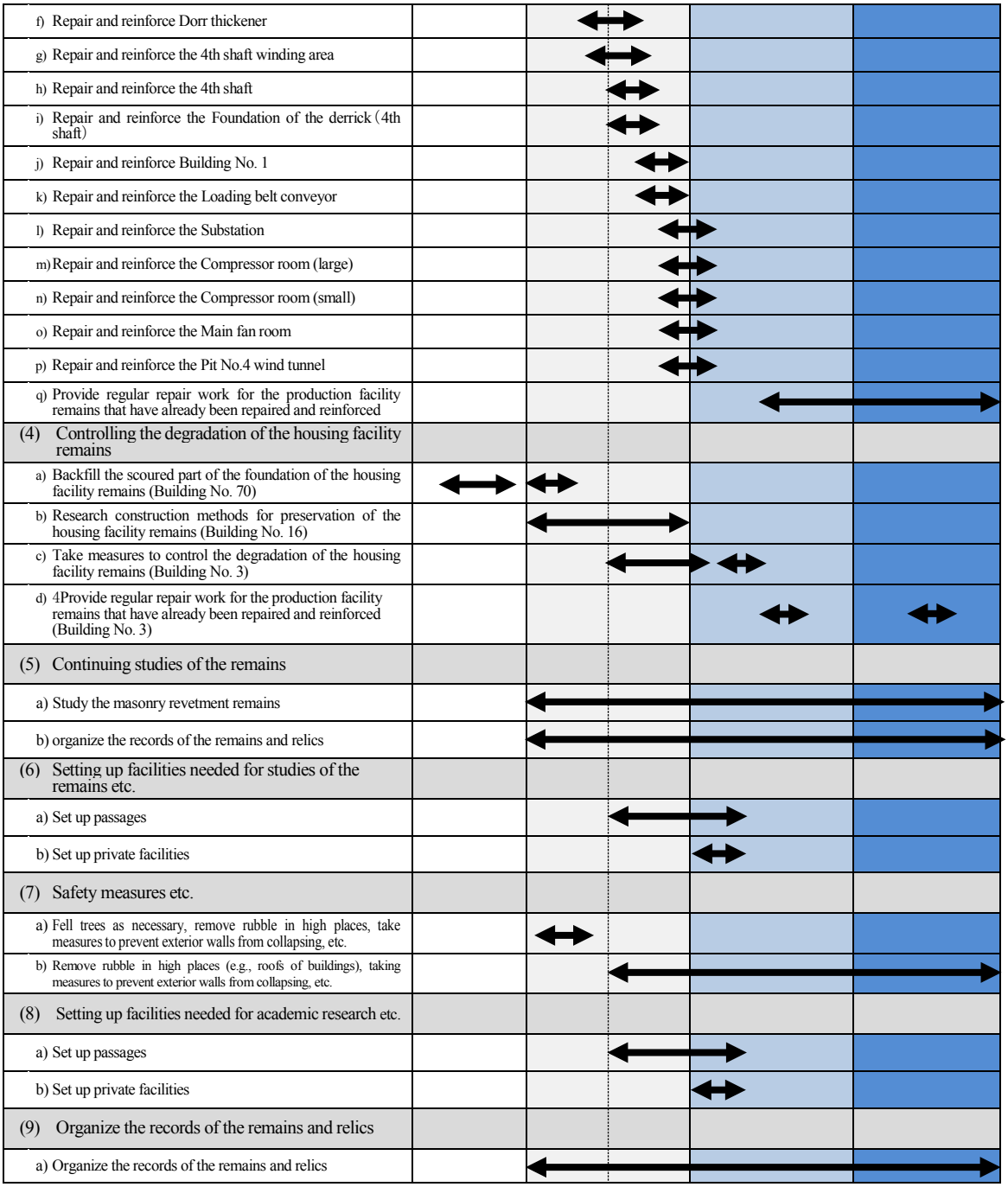


Table 7: Project Schedule ＊changing will be expected

(2) Project cost estimate and financial resources

Nagasaki Cuty estimates that the costs of the current action plan over 30 years (including costs relating to promotion) will amount to approximately 10.8 billion yen. Nagasaki City will make effective use of the Hashima (Gunkanjima) Provision Fund set up in 2015, etc.

(3) Order of priorities

In Phase I, the City will work on places that require urgent conservation. The City will also conduct research on technical methods for conservation during this phase (**Figures 13 and 14**).

In Phase II, the city will continue repairs that reflect findings from the research on technical methods for conservation (**Figure 15**).

The time before the start of Phase I (FY2018) is defined as a preparation period. During this period, the City will take actions urgently needed for conservation, and then carry out the following items that are preparations for conservation work: (i) a survey of the current condition of structures to conserve (ii) taking safety measures in areas where visitors are warned to watch their heads, e.g., removing rubble and working on the exterior walls to prevent them from collapsing (iii) taking measures to maintain structures assessed as “structurally unstable,” e.g., providing temporary reinforcement.

b) Urgent actions during the preparation period

Any urgent actions will be taken as the need arises (**Figure 12**).

The facility remains listed below are not only severely degraded but also at high risk of collapsing, which poses a threat to the preservation of the surrounding remains. Hence, the City gave priority to these facilities and started works to conserve their structures as urgent actions from 2014. These actions were completed by the end of FY2018 before the projects based on this Proogramme begin.

A: Seawall revetment reinforcement (west of Building No. 31) - Complete in September 2015

B: Seawall revetment reinforcement (west of Building No. 51) - Complete in September 2015

C: Repairs to and temporary reinforcement of the coal production facility remains’ brick walls (former 3rd shaft winding area) - Complete in March 2017

D: Temporary reinforcement of the coal production facility remains (entrance to the pier) - Complete in March 2017

E: Design of the process of backfilling the scoured areas in the foundations of the housing facility remains - 2018～

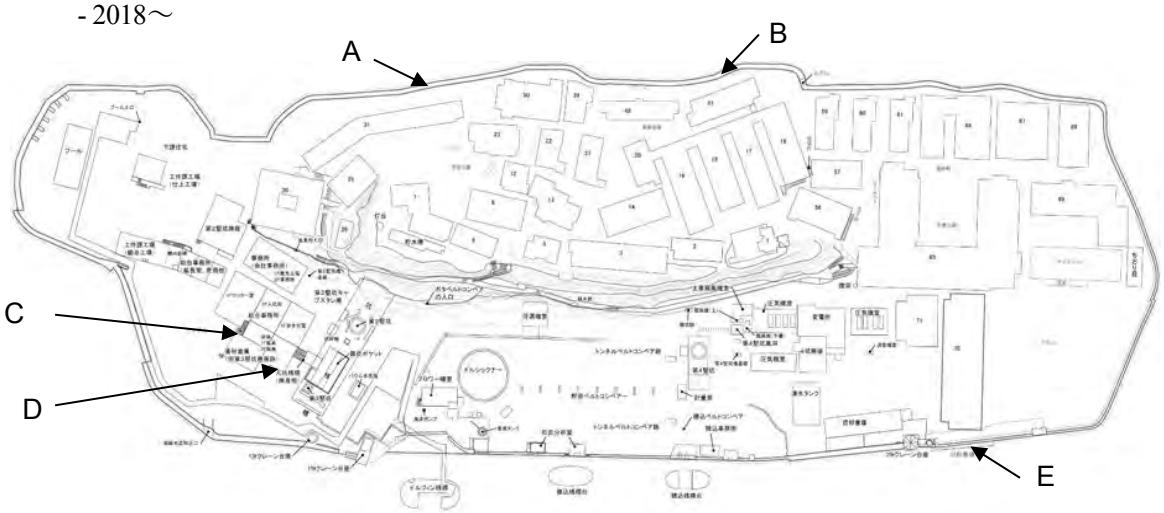


Figure 12: Locations of urgent actions A-E during the preparation period

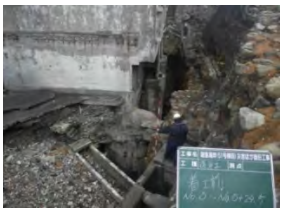
Location	Before action	Progress state
A	➢ The back of the seawall revetment was scoured and caved in 	➢ The cavity facing the sea is closed with concrete. ➢ The caved-in part is filled with concrete. 
B	➢ The back of the seawall revetment was scoured by typhoons and caved in. 	➢ The cavities facing the sea is closed with concrete. ➢ The caved-in part is filled with concrete. 
C	➢ One wall stands alone, which is structurally unstable. There are cracks all over it. Bricks in the arch crown are missing. 	➢ Bricks have been added to the parts of the arch crown where bricks were missing. ➢ Temporary facilities for reinforcement of the revetments have been set up. 
D	➢ The truss-like steel frames that once supported the stepped passage corroded and crumbled, leaving only the concrete structure. The whole shape became bowed, and the supporting point of the steel is degraded. 	➢ Temporary facilities for reinforcement have been set up. 
	➢ The typhoon in 1991 scoured the building to expose the foundations of concrete piles, and some of the piles were lost. 	➢ The construction work for backfilling the scoured part has been designed. ➢ This construction will be carried out after FY 2017.

Table8: Urgent actions during the preparation period (FY2014-FY2017) (See Figure 12 for the locations of A-E)

5. Maps of Phased Plans

Each of the projects and its location that will be implemented in Phase I-III is as shown in Figures 13-16.

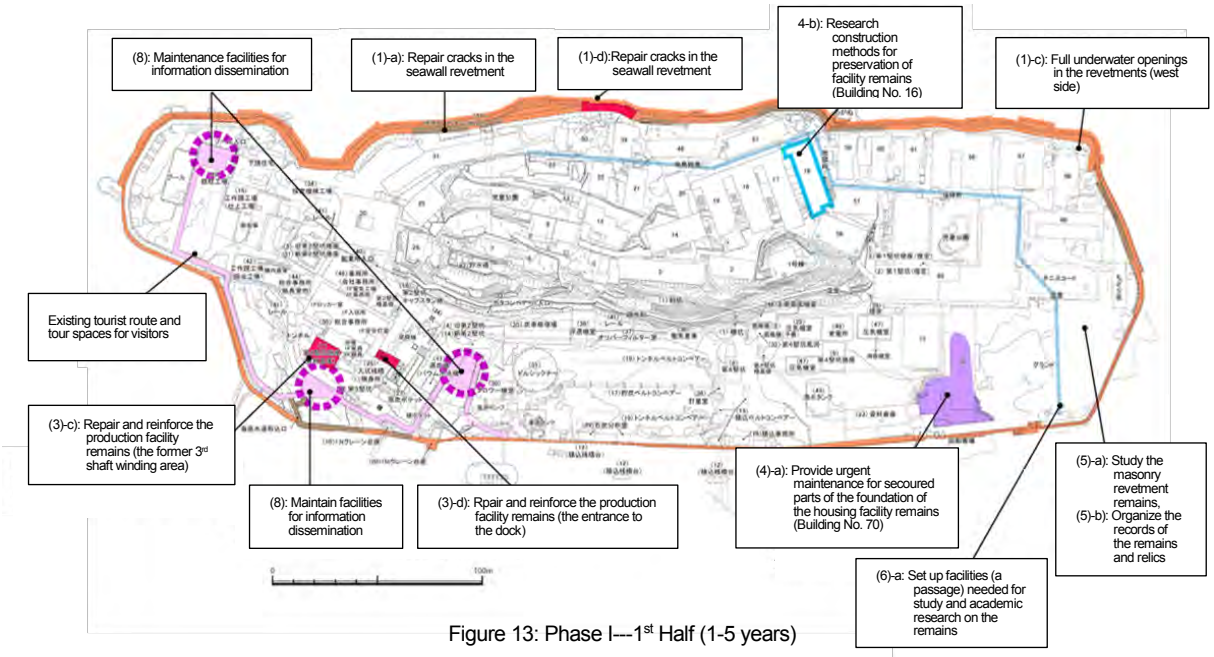


Figure 13: Phase I---1st Half (1-5 years)

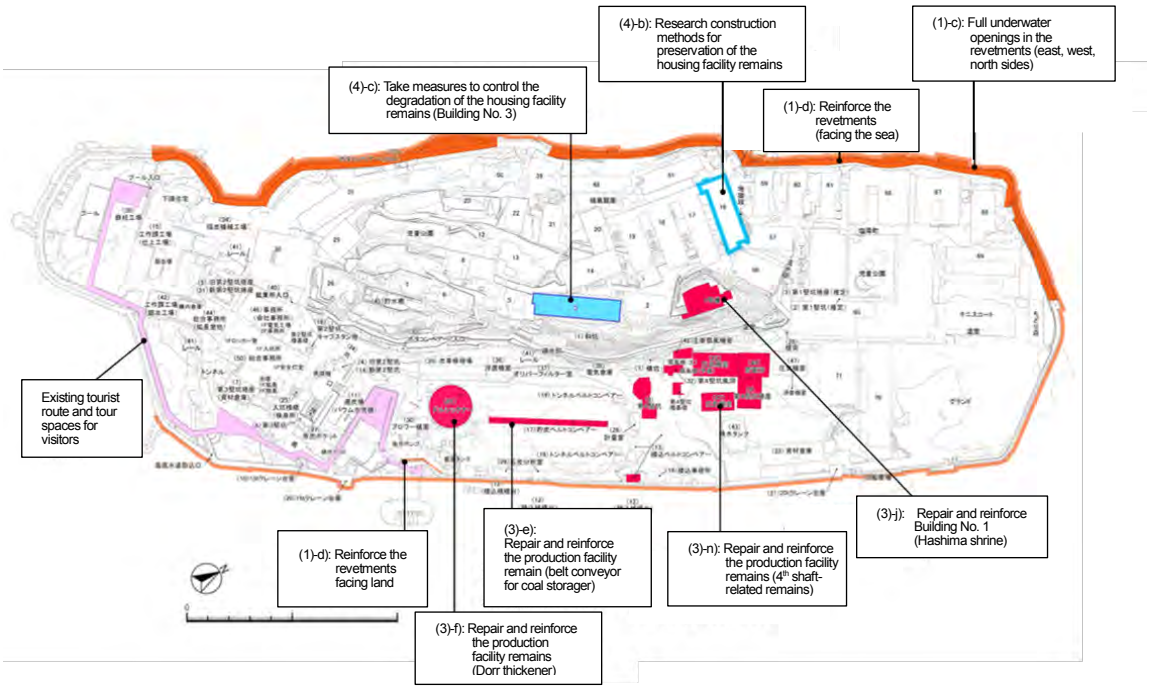


Figure 14: Phase I---2nd Half (6-10 years)

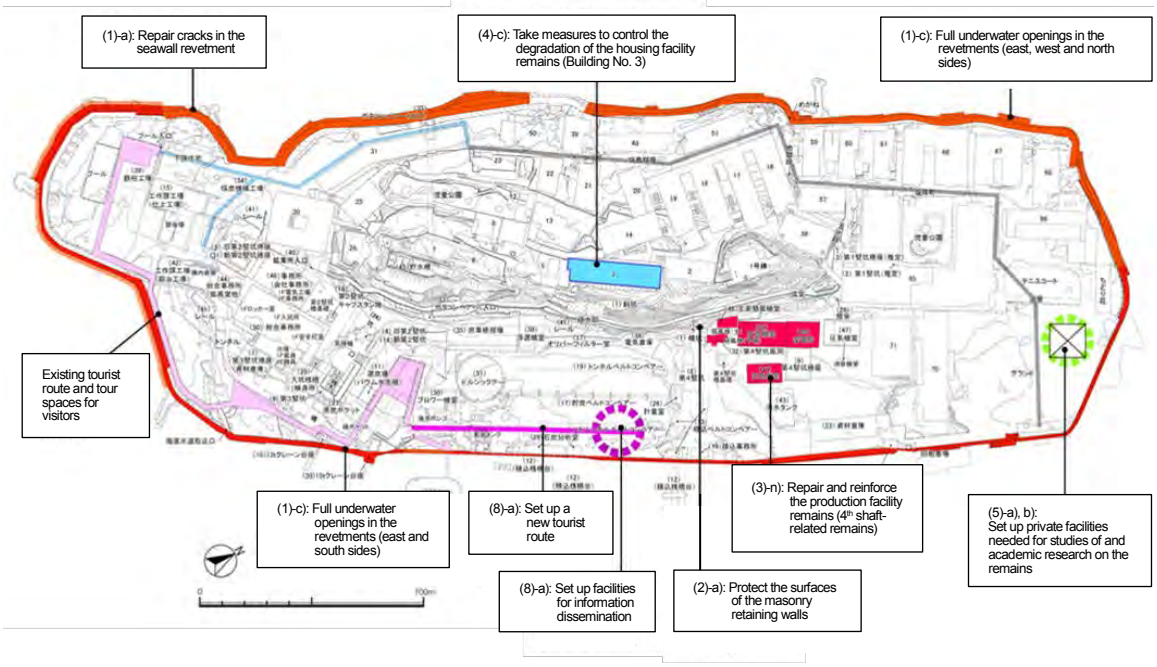


Figure 15: Phase II (11-20 years)

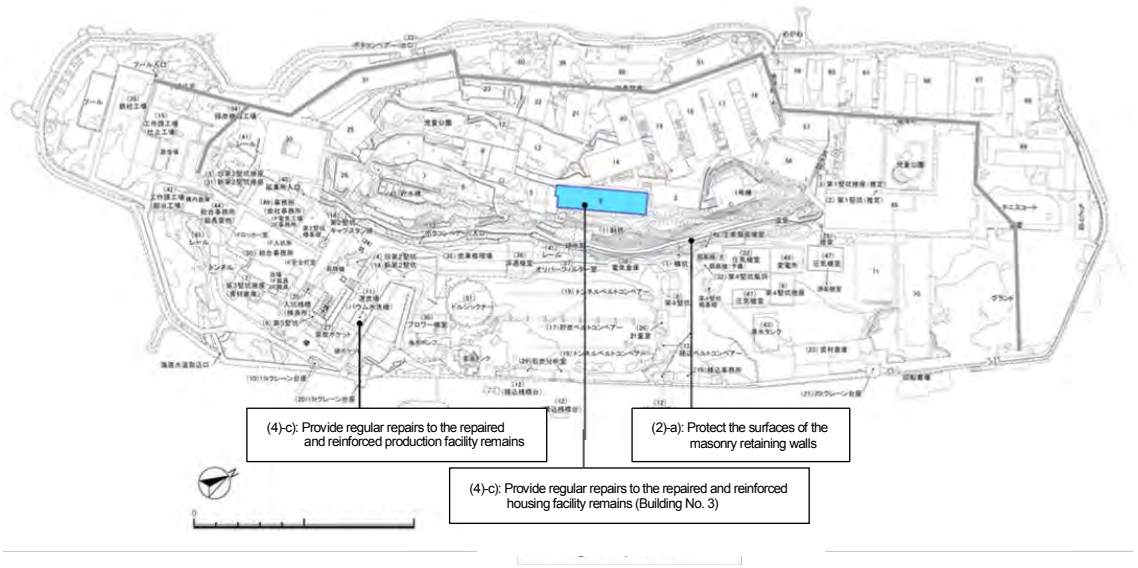


Figure 16: Phase III (21-30 years)

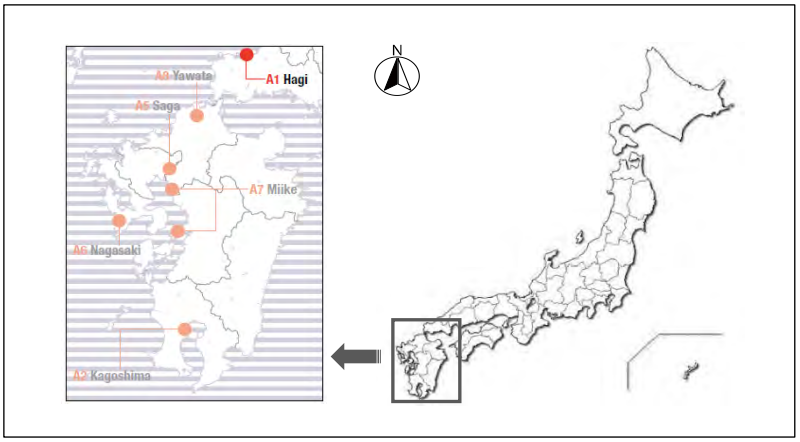
6. Other matters

An excerpt of the Plan for the Conservation, Restoration, Presentation and Public Utilization of the Hashima Coal Mine, which served as the basis for formulating the Programme, is available on Nagasaki City’s website (URL; http://www.city.nagasaki.lg.jp/kanko/840000/843000/index.html).

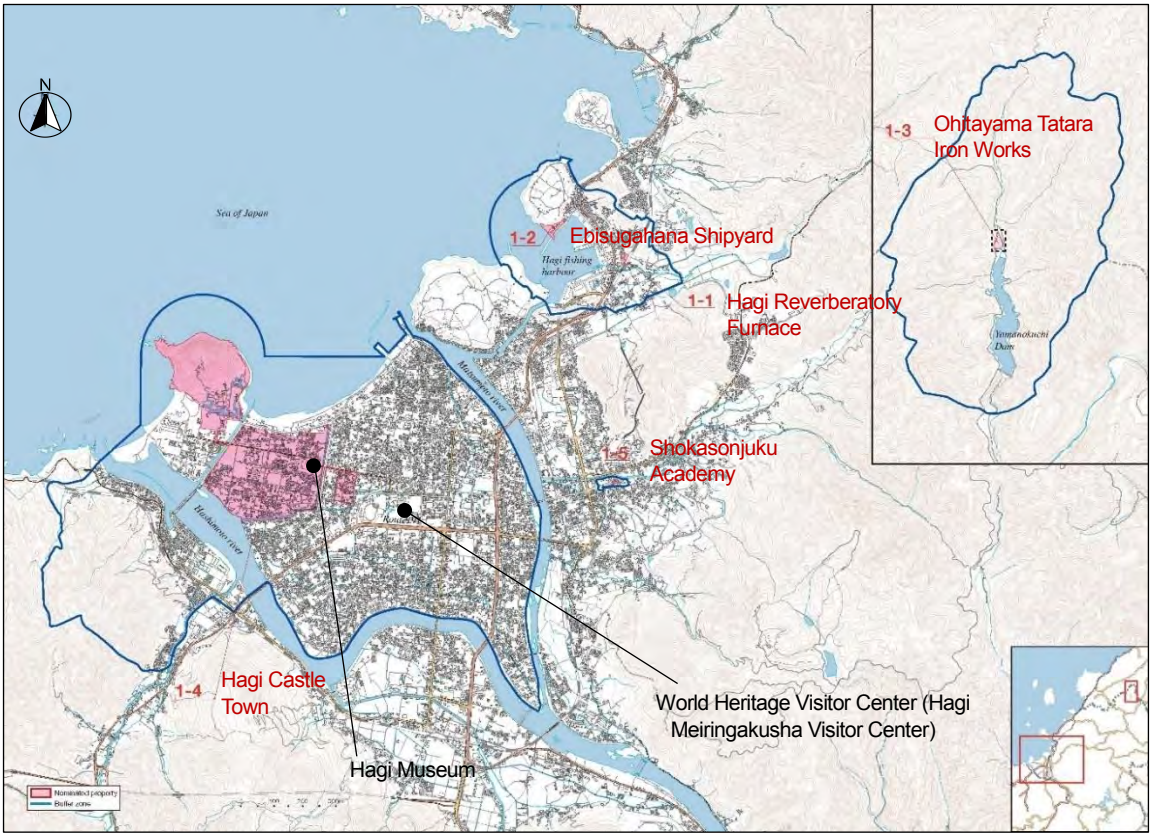
Conservation work programme and implementation programme for Hagi Reverberatory Furnace (Area 1 Hagi/ Component part 1-1)

Hagi City drew up a "Conservation Work Programme and Implementation Programme" for Hagi Reverberatory Furnace in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

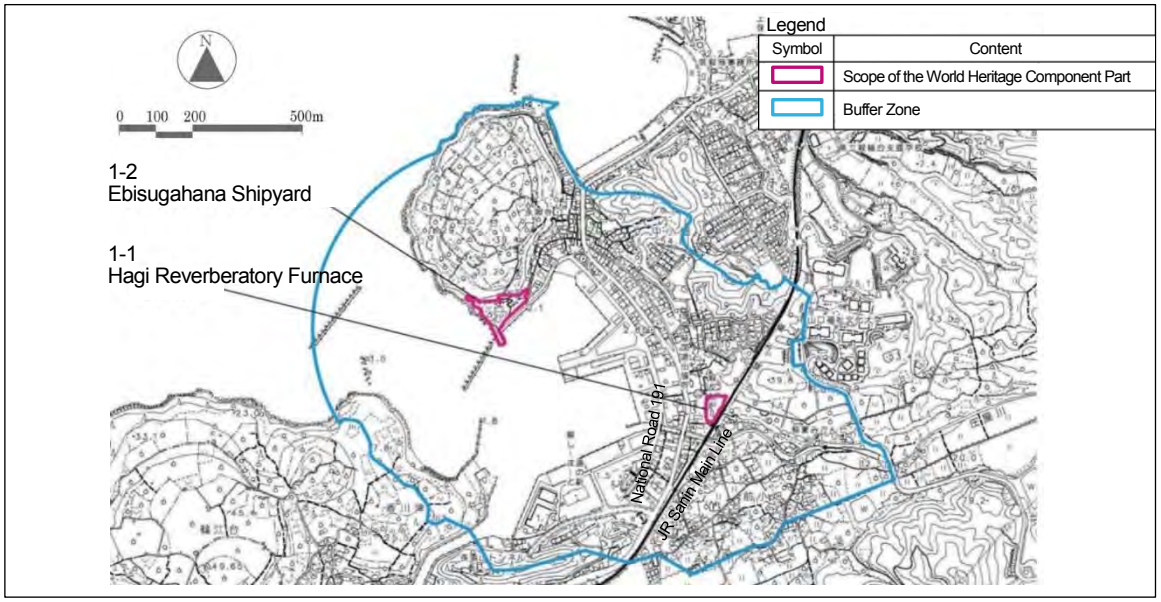
(1) Area 1 Hagi: Location



(2) Distribution of component parts of the "Sites of Japan's Meiji Industrial Revolution" in Area 1 Hagi



(3) Scope of the programme (scope of Hagi Reverberatory Furnace component part and buffer zone)



1. Approach to conservation

Recognizing the site as embodying the early industrialization process of trial and error in the iron-making field, by restoring degraded materials and strengthening structures, the conservation work will conducted to maintain the furnace in a stable condition.

The Hagi Reverberatory Furnace was an attempt by the Hagi (Choshu) Clan, which lacked Western blueprints, to build a smelting plant using local materials and traditional technologies. While the plant never became operational, it stands as a symbol of the early industrialization process of trial and error, when Japan and the Hagi (Choshu) Clan were seeking to respond to the rapid pace of industrialization. No major restorations have been made to date, with only enough work undertaken in the 1970s to stabilize the existing state of the facility, but while the brickwork at the top of the structure has seriously deteriorated, the building retains almost all its original shape and materials, the stonework at the bottom included. The furnace is one of the five component parts of Area 1 Hagi that illustrate the challenge phase of trial and error in the iron and steel manufacturing and ship-building fields.

In the Conservation Management Plan for Hagi Reververatory Furnace, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription., The list of elements constituting Hagi Reverberatory Furnace and their value categories are shown as Table 1.

Component parts	Period	Element	Value Category of Element		
			OUV	State	Region
Hagi Reverberatory Furnace	Period of construction and operation of reverberatory furnace	Body of reverberatory furnace	○	○	○
		Underground ruins	○	○	○
	Element during the period from the end of operation to designation as a National Historic Site				
	Elements during the period from designation as a National Historic Site to the present				

Table 1: The elements constituting Hagi Reverberatory Furnace and their value categories

Out of these elements in the Table 1, while the Conservation Work Programme for Hagi Reververatory Furnace will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Hagi City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points.

(1) Restoration as a "symbolic site", with maintaining the original form and materials

The most critical aspect will be to maintain the original style and materials of the Hagi furnace to the greatest possible extent, while also preserving them in situ into the future. In terms of immediate restoration work, therefore, Hagi City will not undertake any large-scale dismantling and restoration work on the upper brick section but rather engage in the minimum necessary intervention, primarily mounting replacement bricks in places that have deteriorated particularly badly and supplementing this with other methods where necessary. For the lower stone portion, the city will take steps to reinforce the existing stone materials.

The city will engage in long-term monitoring of the furnace through ongoing displacement surveys and fixed-point observations, as well as studying building methods and materials about which little has been known to date in order to accumulate new knowledge and skills for the next stage of restoration.

(2) Conservation and restoration to maintain the furnace's unique form

Maintaining the unique form of the Hagi Reverberatory Furnace will be the most effective method of explaining the value of the remains. The city will therefore also maintain and arrange the surrounding landscape and scenery which serve as the context for the furnace.

the city will establish viewing points along visitor paths within the site that enable visitors to see the furnace in its entirety, as well as ensuring lines of movement that enable them to approach the furnace and view its appearance from multiple directions. Vegetation will be trimmed so that the furnace can also be seen from the surrounding area. The city will create a viewing point so that visitors can look out over the Ebisugahana Shipyard, a neighboring component part, from the furnace site.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

Research to date has not elucidated the entirety of the iron-making system at the Hagi Reverberatory Furnace, and certain details of the design and structure of the actual furnace also remain unclear. The city will continue to conduct excavation surveys and studies of relevant historical ducuments. The details of the furnace construction method in particular are not apparent, and as there are few prior or similar examples, the city will conduct the various types of studies needed to undertake restoration appropriately. A survey of visitors will be undertaken to confirm the extent of their impact on the site, and the city will also institute monitoring to trace changes over time.

(2) Restoring the furnace and related remains (preserving, reinforcing, and stabilizing materials and structure)

The city will restore the seriously degraded brickwork at the top of the furnace building by mounting replacement bricks made with the same types of materials and methods, supplemented with other methods as necessary. For the comparatively stable lower stonework, the city will preserve the current materials and structure and monitor these on an ongoing basis. Where damage is detected, preservation and reinforcement methods will be explored.

At the same time, because the furnace masonry employs a masonry construction[1] which is a combination of stone, brick, concrete blocks, and other materials, it has limited seismic strength. To avoid the collapse of the entire structure, the city will take secondary reinforcement and stabilization measures, such as adding the minimum necessary reinforcing material to the interior and exterior of the chimneys.

(3) Illustrating the iron-making system in the component part and the Area

Given that viewing the furnace's unique form from the outside is the best way of explaining its contribution to the Outstanding Universal Value, the city will create viewing points so that the whole furnace can be seen from key points along visitor paths.

(4) Arranging and improving the landscape from a scenic perspective

The city will trim and otherwise maintain vegetation so that the whole furnace can be seen from paths leading to it. Care will be taken to ensure that the furnace, which is built on a hill, can be seen from the surrounding area, and particularly that visitors can see as far as the Ebisugahana Shipyard as an adjacent component part.

(5) Implementing projects

The city will be responsible for managing and operating the projects included in the Programme, determining the appropriate projects and schedule with consideration to the state of the component part and the wishes of owners and managers. It will also work together with the Government of Japan and with Yamaguchi Prefectural Government to secure financial resources and the necessary specialist knowledge and personnel for implementation of the projects.

In terms of the order of implementation of the projects, the city will prioritize restoration of the furnace. The various surveys and experiments necessary to restore the upper brickwork will be implemented first, with the results evaluated and restoration launched accordingly. The phased upgrading of existing guidance and explanation boards and restoration of trails will be undertaken at the same time, coordinated with progress on the Programmes of other component parts in the Area.

3. Methods

(1) Research and study

(a) Excavation surveys

From the perspective of site preservation, the city will not conduct an overall excavation survey of the furnace and surrounds. Instead, excavation surveys will be undertaken only where restoration work is needed or when facilities need to be established. If it emerges from the historical documents that related sites might exist, the city will conduct systematic surveys of those areas.

(b) Historical document surveys

The city will continue to collect, survey, analyze, and research related documents and other materials to ascertain the role that the Hagi Reverberatory Furnace has played in the local community from a full perspective of its process of historical changes and developments.

(c) Surveys needed for furnace restoration

As preparatory work to ensure that major restoration work is undertaken appropriately, the city will conduct exposure tests and other experiments using bricks created for that purpose, and will also create a mockup using more such bricks to undertake experimental restoration work. Deterioration surveys of various parts of the furnace will be undertaken, selecting multiple set points and engaging in ongoing observations to determine the amount of movement. A survey will also be conducted to ascertain the seismic resistance of the furnace.

All these survey results will be collectively evaluated and reflected in actual restoration content and processes.

[1] Masonry construction ; A building structure for walls assembling such materials as stone, brick, concrete blocks, and other materials.

(d) Visitor surveys

The city will conduct a survey on visitor numbers, as well as regular surveys and observations of the behavior of regular visitors and their degree of understanding.

(e) Monitoring

The city will create monitoring charts that comprehensively and systematically aggregate current information, regularly assessing the state of the component part and the buffer zone.

The city will present monitoring results in annual reports for confirmation and agreement at the Hagi Area Conservation Council, thereafter reporting to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Restoration of the furnace and related remains

(a) Furnace restoration

The city will assess the results of the various surveys undertaken prior to restoration with a focus on materials, specifications, and building methods and closely investigate restoration methods before launching actual restoration work. Detailed studies of the furnace chimneys that are only possible during restoration will be undertaken on an ad hoc basis, with the results recorded together with the content of restoration work as material for further restoration work. An ex post facto assessment will be made of building methods, design, and execution after the restoration work is complete, recording the necessary information as basic materials to be reflected in subsequent maintenance and repairs and any major restorations undertaken in the future.

(b) Restoration of related remains

Where excavation surveys of certain areas are conducted during restoration, structures in those areas that will be impacted by the survey work will be preserved and restored. Where the surface protective layer has scoured away or the possibility of tree roots impacting a structure is detected, more soil will be added to the protective layer and tree roots cut back or out.

(3) Presentation of the iron making system in the component part

(a) Zoning

The city has created the following zoning to increasing understanding of the Hagi Reverberatory Furnace.

Zone name	Zone outline and features
Reverberatory furnace zone	Location of furnace and remains for which excavation surveys were conducted. This is also the zone from which the whole furnace can be seen, and plays a key role in enhancing understanding.
Landscape preservation zone	The hillsides around the reverberatory furnace zone, where that hilly terrain will be preserved. Part of the integrated visual landscape with the furnace, which stands on the hill, and includes two paths from the utilization zone to the furnace zone.
Utilization zone	Links the furnace and landscape preservation zones with Route 191, the main access route from the outside. Parking, toilets, and other convenience facilities are located there as the first point of contact for visitors, playing a role in promoting furnace utilization.

(b) Path planning

To enable visitors to understand Hagi Reverberatory Furnace's iron-making system and to experience the whole facility, the following two routes will be established.

Outward route (Path A): Goes up the stairs in the center of the car park and proceeds to the flat area at the top of the hill, goes past the guide station, and reaches the furnace from the front.

Return route (Path B): Goes from the furnace down the walking path on the eastern side of the hill and through the narrow lane to reach the carpark.

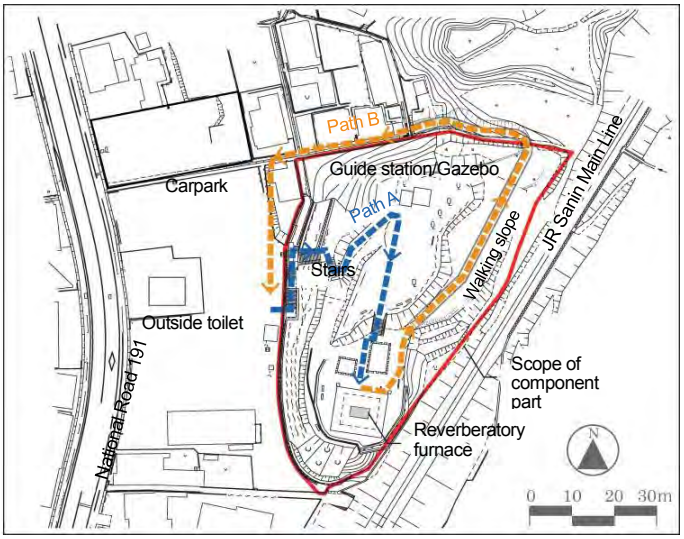


Figure 1: Path map

(c) Terrain correction

Pavement of appropriate thickness of decomposed granite blended with a small amount of cement will continue to be used for the flat area at the top of the hill. In places where the surface soil has subsided or been scoured as a result of rain or compaction from visitor traffic, etc., the city will use the pavement mentioned above to conduct repairs, maintaining an appropriate ground height.

(d) Arranging and improving landscape and planting vegetation

The trees around the furnace are significant in terms of shielding it from strong winds and also in forming the appearance of the hill together with the furnace. The city will therefore engage in systematic branch trimming and partial felling, as well as pruning trees into appropriate shapes, in order to deal with the influence of overgrown tree branches and roots and to maintain the view from the furnace as well as views of the furnace from the surrounding area. Trees growing on the sides of the hill will also be pruned to maintain the sloping terrain and the view.

(e) Guidance and explanation boards

Hagi City will set up guidance and explanation boards in appropriate spots along the paths so that visitors can read them while walking around the site. The detailed explanation of the actual furnace provided on the tiled explanation board will be updated.

When setting up new guidance and explanation facilities, the city will maintain and manage existing facilities appropriately while reconsidering their content, design, and position.

(f) Conservation and management facilities

The city will build paths and improve the carpark to enable visitors to visit the site safely and appropriately, and to boost both the safety and convenience of going to the toilet which was established in 2016. The narrow part of the walking slope which was built to the east of the site will also be widened and otherwise improved.

The current guide station, gazebo, benches, safety fences, stairs, and rails will be repaired on an ongoing basis and used until the end of their life. When they are then upgraded, they will be merged at their current locations with facilities with forms and designs in harmony with the site, with thought also given to other functions that should be added (rest, guidance, information, etc.).

(4) Arranging and improving landscape in the buffer zone

Pursuant to the landscape planning stipulated in Hagi City Landscape Regulations and the standards in the Hagi City Outdoor Advertising Regulations, the World Heritage Office within the Hagi City Cultural Property

Protection Division will work closely with the Hagi City Town Planning Division, which is in charge of landscape administration, to arrange the landscape and preserve the scenery around the Hagi Reverberatory Furnace, nearby roads included, and constrain unplanned development.

In the carpark, which is located in the foreground of the hill on which the furnace is built, new facilities will be kept to the minimum necessary and appropriate appearance arranged in terms of both design and form, existing facilities included, to ensure a good view of the furnace while harmonizing with the surrounding landscape.

4. Project implementation

(1) Order of priorities

The implementation schedule will be as in Table 2.

To ensure the preservation of the Hagi Reverberatory Furnace, the various studies and basic planning necessary to restore the seriously deteriorated upper brickwork will be undertaken over the short term (three years; FY 2018-20). Based on the results, the restoration work will be conducted over the medium term (three years; 2021-23), along with the upgrading and new placement of guidance and explanation boards and carpark improvement. As of 2024 when restoration work has been completed (the long term), monitoring will be continued along with the necessary maintenance and studies, with administration and convenience facilities updated as necessary.

To move restoration work ahead and enhance visitor understanding of the significance of the furnace as part of the iron-making system, priority will be given to the following tasks:

- Undertaking the necessary studies for furnace restoration (creation of a mockup of the upper brickwork and exposure tests using this, etc.)
- Implementing monitoring (establishment of fixed points on the furnace and regular observation)
- Implementing furnace restoration (based on the results of the above studies)
- Establishing or upgrading guidance and explanation boards

(2) Review of implementation schedule

After the scheduled medium-term period (up until 2023), the implementation schedule will be revised in view of Programme progress. However, if any new measures become necessary, the city will review the schedule without waiting for 2023.

(3) Other

The city has carried out conservation and restoration work, etc. for the Hagi Reverberatory Furnace by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 9 million yen was spent in FY2016 and 8 million yen has been budgeted for FY2017, both including costs incurred or earmarked for plan making and the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

The city will also secure and appropriately allocate the human and financial resources needed for the conservation, restoration, presentation and public utilization of the other four component parts in Area 1 Hagi, thereby working in conjunction with Shoin Shrine (religious corporation); the owner of the Shokasonjuku Academy (Component Part 1-5), to ensure the smooth implementation of the projects in the Area as a whole.

Category	Project	Short term (2018 to 2020)	Medium term (2021 to 2023)	Long term (2024 onward)
(1) Research and study	(a) Excavation surveys (where necessary)	■		
	(b) Survey of related historical documents		■	■
	(c) Necessary surveys for furnace restoration	■	■	■
	(d) Visitor surveys	■	■	■
	(e) Monitoring	■	■	■
(2) Restoration of furnace and related remains	(a) Furnace restoration	■	■	
	(b) Restoration of remains (as necessary)		■	
(3) Presentation of the iron making system in the component part	(c) Terrain correction (repair surface as needed)		■	■
	(d) Arranging and improving landscape and planting vegetation (tree management, etc.)		■	
	(e) Guidance and explanation board	■	■	
	(f) Update administration and convenience facilities (carpark improvement, etc.)		■	
(4) Arranging and improving landscape in the buffer zone		■	■	■

Table 2: Project implementation schedule

5. Master plan

The master/zoning plan and conceptional drawing after projects completion of the site are shown in Figures 2 and 3 below.

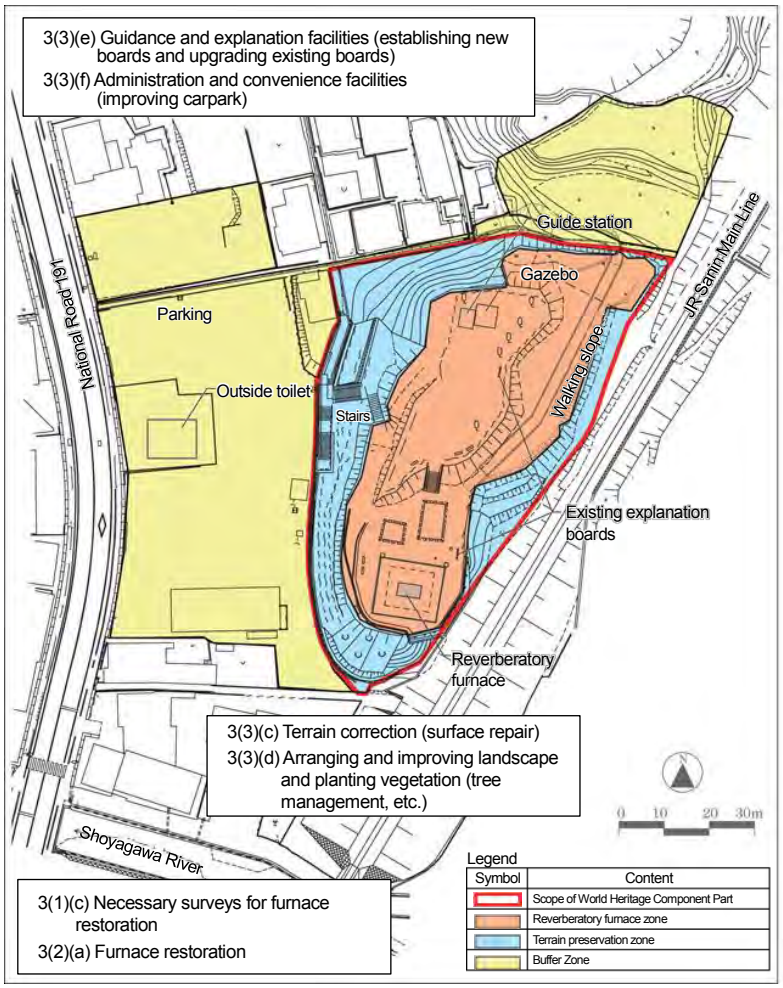


Figure 2: Master Plan



Figure 3: Conceptional drawing after projects completion of the site

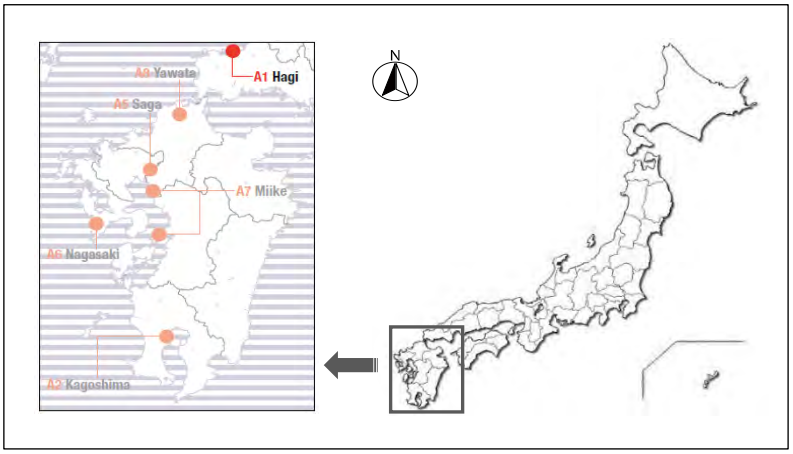
6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Hagi Reverberatory Furnace, which became a source of "Conservation Work Programme and Implementation Programme" is available on Hagi City's web site. <http://www.city.hagi.lg.jp/site/sekaiisan/h19508.html>

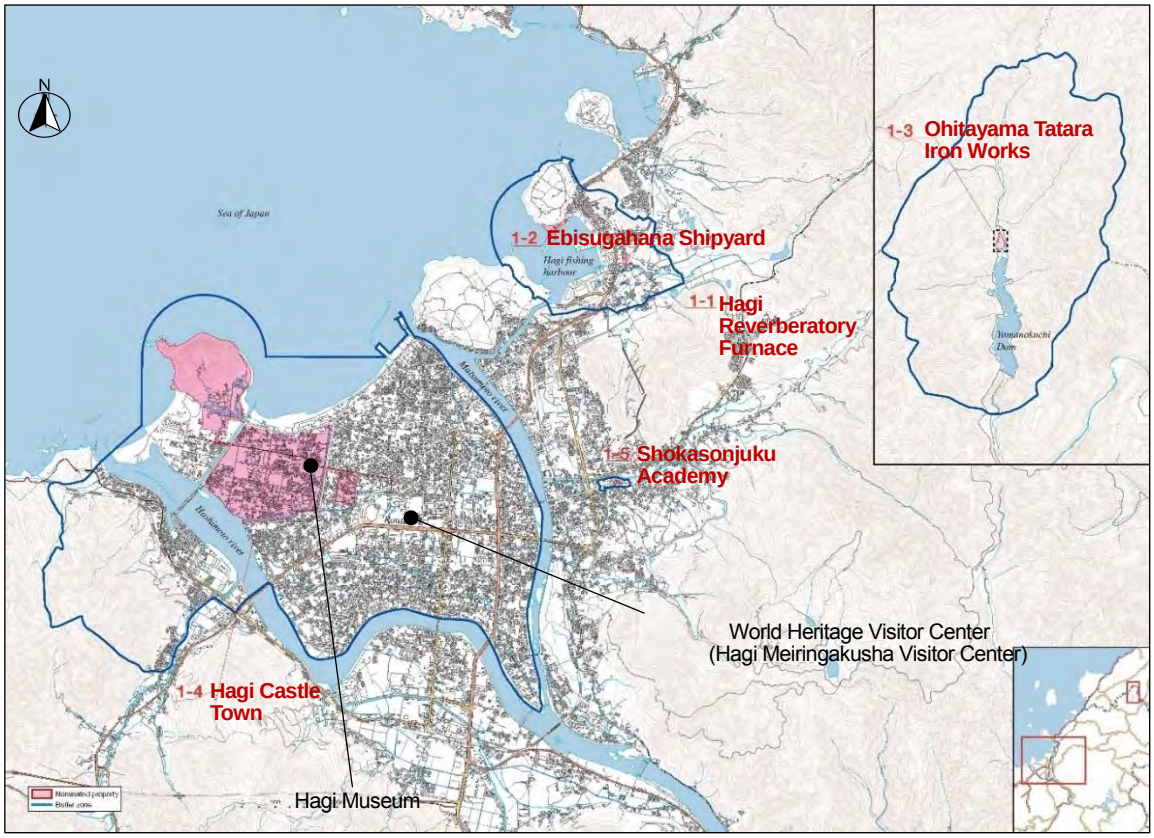
Conservation work programme and implementation programme for Ebisugahana Shipyard (Area 1 Hagi/ Component part 1-2)

Hagi City drew up a "Conservation Work Programme and Implementation Programme" for Ebisugahana Shipyard in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

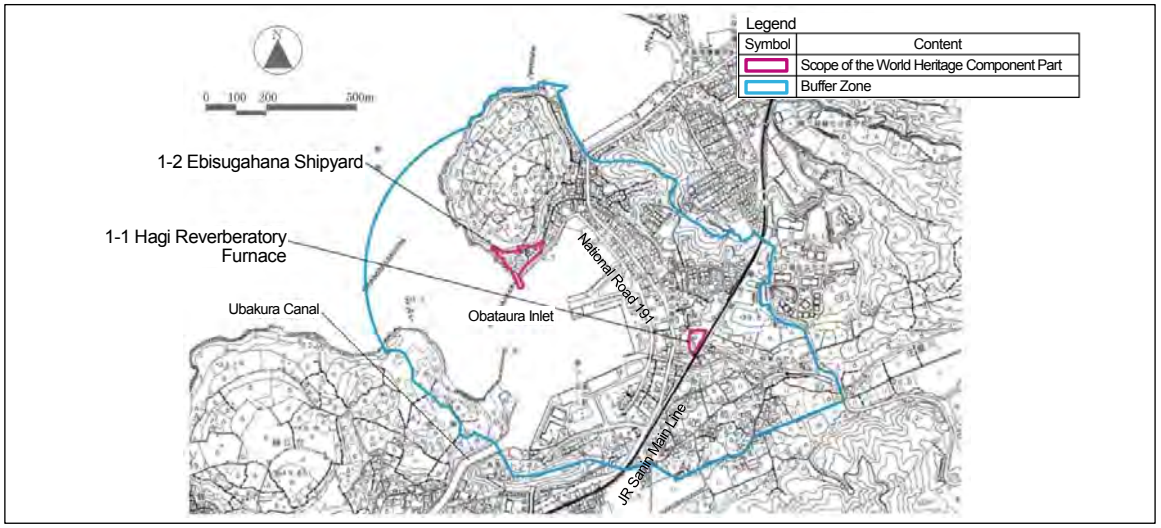
(1) Area 1 Hagi: Location



(2) Distribution of the component parts of the "Sites of Japan's Meiji Industrial Revolution in Area 1 Hagi



(3) Scope of the Programme (scope of Ebisugahana Shipyard component part and buffer zone)



1. Approach to conservation

Maintain in a stable condition as archaeological remains embodying the process of trial and error in the shipbuilding field when Western technologies and traditional Japanese technologies were fused to build Western-style warships, and conduct the conservation work for the remains with consideration to the special features of the surrounding location, port facilities included.

The Ebisugahana Shipyard site is the remains of a shipyard where two Western-style wooden sailing vessels—the warships Heishin-Maru and Koshin-Maru—were built by the Hagi (Choshu) Clan using Western shipbuilding technologies from two different countries based on the limited information available in the period immediately after Japan was opened to the rest of the world. Concerned about maritime defense, the Hagi (Choshu) Clan's aim was to reinforce its military power. One of the five component parts of Area 1 Hagi, the shipyard illustrates the challenge phase of trial and error in the iron and steel manufacturing and ship-building fields.

In the Conservation Management Plan for Ebisugahana Shipyard, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Ebisugahana Shipyard and their value categories are shown as Table 1.

Component parts	Period	Element	Value Category of Element		
			OUV	State	Region
Ebisugahana Shipyard	Before establishment of shipyard	Nakanodai Breakwater	○	○	○
	During operation of shipyard	Ruins of shipyard	○	○	○
	Element for the period from closing the Shipyard to Designation as National Historic Site				
	Element for the period from Designation as National Historic Site to the present				

Table 1: The list of elements constituting Ebisugahana Shipyard and their value categories
※In drawing up this programme, constituent elements stated in CMP are partly reviewed.

Out of these elements in the Table 1, which the Conservation Work Programme for Ebisugahana Shipyard will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Hagi city will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following four points.

(1) Study and restore exposed structures

The stone structures pf Nakanodai Breakwater, which was built before the shipyard and retains its original shape today with some restoration work, will be subjected to ongoing observation using a monitoring chart to check for changes or deterioration in the stone structures. Restoration work to date will be confirmed and additional repairs and restoration work undertaken where necessary, keeping the stone structures stable.

(2) Study and preserve underground structures

The city will conduct partial excavation surveys of the underground structures that remain from the shipyard's various work huts, confirming their location and scale. Their stability will then be maintained by covering them with an earth layer of an appropriate thickness. Planar markers of the location and scale of the underground archaeological remains will be placed on the ground surface immediately above the earth layer as information deepening visitors' understanding.

(3) Identify the fusion of Western and traditional Japanese technologies

The Heishin-Maru is a Western-style warship built with Russian shipbuilding technology, whereas the Koshin-Maru employs Dutch technology. Where, in addition to clear identification in the historical documents, excavation surveys confirm archeological remains indicating shipbuilding technologies from two different countries or structures enabling understanding of the shipbuilding systems, information on the planar position and scale of these underground remains will be indicated to the greatest extent possible, increasing visitors' understanding of the site. The city will also install visiting paths and an observation deck in the site, so that visitors can learn about the shipbuilding systems employed while also getting an idea of the whole shipyard remains overlooked from a relatively high place, making it easy for visitors to get around and also enhancing their understanding.

(4) Maintain and improve the surrounding terrain and landscape

The landscape of the Ebisu Shrine Compound, of which buildings existed before the shipyard was open and maintained its form even after the shipyard closed, along with the hillside and forests spreading out behind it, and the appearance of the pretty fishing ports and villages that fringe the Obataura Inlet will be maintained, and improved where necessary.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

The city will undertake systematic excavation surveys to confirm the scope of the underground archeological remains related to the shipyard. To obtain the maximum results from the minimum survey scope, a ground probing radar survey will be conducted beforehand, narrowing the excavation survey scope accordingly. Artifacts will be studied from an archaeological and physico-chemical perspective.

In pursuing studies of related historical documents and other drawings, because there are insufficient historical materials to offer clues on shipbuilding methods and how to recreate the structures of the various work sheds, the city will continue to discover, collect, analyze, and research documents and photographs.

In addition, the city will conduct a field survey using 3D laser measurement and other methods on the stone

stuructures of Nakanodai Breakwater as well as the stone structures that links with the northwestern side of the breakwater, using the results as basic materials for monitoring any changes or deterioration in stone structures and for conducting a survey of the restoration work to date on those structures.

A visitor survey will be undertaken to confirm their influence on the remains as well as visitor trends, and the city will also use a monitoring chart to observe the component part over time to identify any changes in structures or the surrounding landscape.

(2) Restoring the shipyard and related remains (preserving, reinforcing, and stabilizing materials and structure)

Underground archeological remains could be damaged by rock fall and landslides in the area north of the shipyard where steeply sloping land may slip. The city will therefore install the minimum necessary structures from the slope back to the foothills to prevent rock fall and hold back soil, keeping visitors safe as well as maintaining the stability of underground archaeological remains.

The stone structures of Nakanodai Breakwater and the exposed stone structures connecting to it to the northwest will be monitored to identify any changes or deterioration, and if the city determines that there is a high level of risk, the stone structures will be repaired or restored. If the scope of stone structures with such risk needs temporarily dismantling, it is generally to be restored to the stable state before dismantling.

(3) Illustrating the system of shipbuilding in the component part and the Area

The city will install planar markers displaying the location and scale of underground archaeological remains to enhance understanding of the shipbuilding system. Visiting paths will be built on the periphery of the shipyard to make it easier for visitors to get around the site, and an observation deck will be created to provide a view of the entire site.

(4) Arranging and improving landscape from a scenic perspective

Close to where the water intake for the shipyard is thought to have been located within the component part, trees and concrete structures still remain from houses that were built after the shipyard closed, but these are now obstructing the view of the water intake from within the site. The city will deal appropriately with them and restore and improve the landscape to close to the original landscape with no obstructions. The minimum facilities necessary to prevent terrain collapse will be installed in the hillside forest behind the shipyard ruins, respecting the natural forest and maintaining the rich natural landscape while also ensuring the safety of steeply sloping land that could potentially collapse.

In the buffer zone, the city will coordinate work conducted by the relevant organizations to maintain the fishing port scenery that stretches along Obataura Inlet. The city will set up the viewing spot in the site for Ubakura Canal on the opposite shore as the source of the earth used to build the shipyard, and will trim the vegetation around the adjoining Hagi Reverberatory Furnace, another component part, so that the furnace can be seen from the shipyard site.

(5) Implementing projects

The city will be responsible for managing and operating the projects included in the Programme determining the appropriate content and schedule with consideration to the state of the component part and the wishes of owners and managers. It will also work together with the Government of Japan and with the Yamaguchi Prefectural Government to secure financial resources and the necessary specialist knowledge and personnel for implementation of the projects.

First, the city will continue systematically conducting excavation surveys as well as establishing a viewing paths to enhance visitors' understanding of the site and ensure their safety. Based on the survey results, the city will maintain the shipyard's underground remains in a stable state and install planar markers displaying their scale and location on the ground surface. Specific methods will be implemented based on guidance and advice from an expert committee, the Government of Japan, and Yamaguchi Prefectural Government.

3. Methods

(1) Research and study

(a) Excavation surveys

The city will conduct excavation surveys to verify the consistency between underground archaeological remains and the scale and structure of the work sheds as noted in old maps and documents, and it will also set out planar markers on the ground surface to display the accurate location and scale. The excavation surveys will embrace the entire shipyard site, but to make steady progress with planar displays of the structures alongside the surveys, three broad areas (I-III) as shown in Figure 1 will be delineated and excavation surveys and planar display work pursued in each.

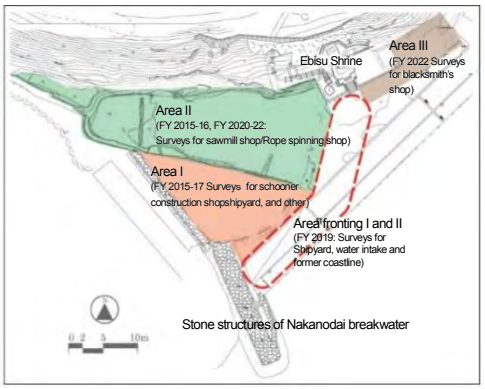


Figure 1: Excavation survey map

(b) Studying historical documents and drawings

"Copy of the Order to Build the Heishin-Maru"and Kansen ikken [Heishin-Maru production instructions and Ship, single item] for the Heishin-Maru and "Copy of a Series of Orders to Build Big Warships"for the Koshin-Maru are the basic documents, and the city will continue to study these, as well as identifying and collecting new historical documents. Studies will also be conducted of shipbuilding materials from Izu Heda and the Nagasaki Naval Training Institute as the source of production technology for the two ships, and circumstantial evidence will be gathered from the document that the Hagi (Choshu) Clan used as a textbook for Western-style warship construction in order to surmise the shipbuilding methods for the Heishin-Maru and the Koshin-Maru.

(c) Ground probing radar survey

Before launching excavation survey work, the city will conduct a non-destructive ground probing radar survey, narrowing the excavation survey scope.

(d) 3D laser survey

The city will conduct a 3D laser survey of stone structures starting with the exposed portion of the Nakanodai Breakwater, as well as a field survey of the underwater portion, creating the basic materials necessary for detailed monitoring, and also conducting a detailed examination of the restoration history of the exposed stone structures based on the results.

(e) Visitor surveys

The city will conduct a survey on visitor numbers, as well as regular surveys and observations of the behavior of regular visitors and their degree of understanding.

(f) Monitoring

The city is producing monitoring charts that comprehensively and systematically aggregate current information, and will regularly assess the state of the component part and the buffer zone and enhance the content of the monitoring chart accordingly. The city will present monitoring results in annual reports for confirmation and agreement at the Hagi Conservation Council, thereafter reporting to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Restoration of remains

(a) Preservation and restoration of underground and exposed remains

The city will cover the underground archaeological remains confirmed through the excavation surveys with a protective earth layer and place planar markers on the ground surface immediately above to show their location and scale. In areas outside the excavation survey scope, archaeological remains are to be kept stable underground.

(b) Restoration of exposed stone structures

According to the degree of urgency, the city will repair or restore stone structures which fixed-point observations reveal to be changing or deteriorating. If the scope which has changed temporarily needs dismantling, it is generally to be restored to the stable state before dismantling. In addition, to enhance fishing port functions, they city will consult with the organizations concerned and remove later modern structures and repaired portions that no longer have a relevant function, restoring to the original state.

(c) Harmonization of surrounding terrain and landscape

In the surrounding hillside forest area where steeply sloping land presents the danger of collapse, the city will cut down unnecessary trees, install rock fall prevention nets on the slope, and install gabions or large sandbags at the foot of the slope to keep visitors safe as well as to maintain the stability of underground archaeological remains.

(d) Repair of other constituent elements within the site

Hagi City will coordinate with the owners of the Ebisu Shrine to ensure that when repairs are carried out, appropriate methods are to be used which are in harmony with the shipyard site.

(3) Presentation of the shipbuilding system in the component part

(a) Zoning

The city has created the following zoning to increasing understanding of the Ebisugahana Shipyard remains (see Figure-3).

Zone name	Zone outline and features
Shipyard zone	Underground archaeological remains which were the shipyard work sheds and the exposed stone structures of the Nakanodai Breakwater. This zone will focus on stable maintenance of the remains and presentation and public utilization of the remains to promote understanding of the shipbuilding system.
Ebisu Shrine zone	Existing before the shipyard was set up and still a site of local worship today, the shrine is an important zone in terms of understanding the process of the historical changes and developments of the shipyard and the surrounding environment.
Landscape harmonization zone	The zone where the Ebisu Shrine and the landscape since the time before the shipyard was built can be seen. The mountain forests behind the shrine, the fishing ports and villages along Obataura Inlet, the Ubakura Canal on the opposite shore which sparked the construction of the shipyard, and other spots all fall within this zone, which requires unified harmonization.

(b) Planar markers for presentation of the underground archaeological remains

The city will place planar markers indicating the location and scale of the underground archaeological remains of the various work huts identified through excavation surveys on the surface above protective earth layer. Where the underground archaeological remains exist in good condition, another option may be to use a semi three-dimensional display method for physical presentation based on the results of the research and study of the remains.

(c) Installing viewing paths

The city will establish viewing paths, including an observation deck from which visitors can enjoy a perspective of the component part, based on a design and structure that gives full consideration to preservation of the remains, harmonization of the surrounding landscape, and the safety of visitors.

(d) Path planning

The city will establish Path A, from which visitors can stand on the shipyard site where underground archaeological remains are indicated with planar markers and look out, and Path B, which will enable visitors to gain a perspective of the stone structures of Nakanodai Breakwater and the periphery of the shipyard remains from a newly-installed observation deck.

Path A will enable visitors to understand the Western warship-building process and shipbuilding system as gleaned from the historical documents and from the results of excavation surveys.

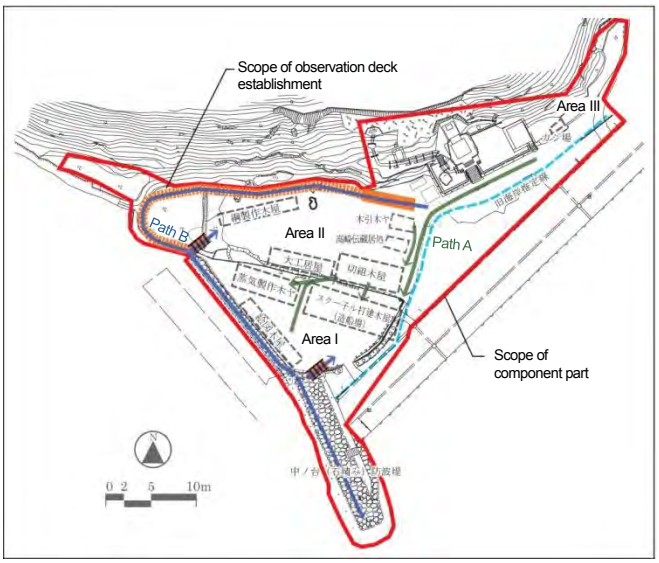


Figure 2: Path map

Path B will be an observation paths that enables visitors to understand locations and connections from a broader perspective, including the Hagi Reverberatory Furnace near the shipyard and the Ubakura Canal on the opposite shore.

(e) Terrain maintenance and correction

There appear to have been no major changes to the surrounding environment through to the present day. Hagi City will work to maintain that terrain with the exception of the minimum possible changes required for safety purposes. The city will also engage in regular cleanups of the rubbish which washes up on the shore, working to maintain and harmonize the environment around the component part with the help of local residents.

(f) Arranging and improving landscape and planting vegetation

Trees and concrete structures post-dating the establishment of the shipyard will be removed in conjunction with excavation surveys, ensuring views of the Obataura coast and the Ubakura Canal opposite. Planar markers for presentation of the underground archaeological remains will be installed on the ground surface, and new trees will not be planted in order to maintain those underground remains in a stable condition.

(g) Information and explanatory boards

The city will install a new information boards at a nearby crossroad to which visitors are directed by national road signs.

(h) Management and convenience facilities

The city will ascertain trends in visitor numbers and install guide stations and toilets of an optimal scale to facilitate visitors' use of the shipyard site. There is currently no carpark adjoining the shipyard, but the city will consult with the related organizations owning the land with a view to putting in a carpark in future.

(4) Landscape conservation and harmonization in the buffer zone

The city will work to conserve landscape elements that have been maintained since before the shipyard opened, including the buildings of Ebisu Shrine located in the north-east hillside of the component part and the verdant forest extending to the slope behind, and the sea surface of Obataura Inlet and the Ubakura Canal on the opposite shore to the southeast.

4. Projects implementation

(1) Order of priorities

The implementation schedule will be as in Table 2.

The city began systematic excavation surveys in FY 2015 toward elucidating the character of the Ebisugahana Shipyard site and placing planar markers to present the locations and scale of the underground archaeological remains. The implementation schedule, including this current period, will comprise a short-term phase of five years, a medium-term phase from the sixth year onward, and a long-term phase as of the 10th year.

Over the short- and medium-term phases, the city will undertake phased excavation surveys in areas I-III and install planar markers indicating the location and scale of underground archaeological remains. When this work within the shipyard site has been completed, the city will consider the possibility of establishing convenience facility in the vicinity, taking into account the state of monitoring from a long-term perspective.

The city will prioritize excavation surveys and the ground probing radar survey to ensure that the results of studies and research are reflected immediately in restoration work, compiling the results of the survey conducted in the areas I to III within the shipyard site. At the same time, the city will also move ahead with the conservation and improvement of the surrounding terrain and the harmonization of the landscape, the establishment of observation paths, and the phased installation of planar markers, aiming to have this work completed over the medium-term. Given the above, priority will be given to the following tasks:

- Undertaking excavation surveys (including the ground probing radar survey and 3D laser survey)
- Preserving and restoring underground archaeological remains and artifacts
- Installing rock fall prevention nets, etc.
- Installing planar markers showing the location and scale of underground archaeological remains
- Installing observation paths
- Selective removing of trees and structures post-dating the shipyard
- Installing signs and explanation boards

(2) Review of implementation schedule

After the scheduled medium-term period (up until 2026), the implementation schedule will be revised in line with the progress. However, if any new measures become necessary, the city will review the schedule without waiting for 2026.

Category	Project	Short term (2015 to 2019)	Medium term (2020 to 2023)	Long term (2024 onward)
(1) Research and study	(a) Excavation surveys	■		
	(b) Historical documents survey	■	■	■
	(c) Ground probing radar survey	■		
	(d) 3D laser survey		■	
	(e) Visitor survey	■	■	■
	(f) Monitoring	■	■	■
(2) Restoring ruins	(a) Preserve and restore underground archaeological remains and artifacts	■	■	
	(b) Restore exposed stone structures	■	■	■
	(c) Preserve surrounding terrain (install rock fall prevention nets, etc.)		■	
	(d) Restore other elements within the site	■	■	■
(3) Presentation of the shipbuilding system in the component Part	(b) Install planar markers for presentation of the underground archaeological remains		■	
	(c) Install observation paths		■	
	(e) Maintain and correct terrain	■	■	■
	(f) Improve landscape (manage trees, etc.) (selectively remove trees and structures post-dating the shipyard)	■	■	
	(g) information and explanatory boards		■	
	(h) Build management and utility facilities		■	
(4) Landscape conservation and harmonization in the buffer zone		■	■	■

Table 2: Project implementation schedule

(3) Other

The city has carried out conservation and restoration work, etc. for the Ebisugahana Shipyard by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 11 million yen was spent in FY2016 and 6 million yen has been budgeted for FY2017, both including costs incurred or earmarked for plan making and the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

The city will also secure and appropriately allocate the human and financial resources needed for the conservation, restoration, presentation and public utilization of the other four component parts in Area 1 Hagi, thereby working in conjunction with Shoin Shrine (religious corporation); the owner of the Shokasonjuku Academy (Component Part 1-5), to ensure the smooth implementation of the projects in the Area as a whole.

5. Master plan

The Ebisugahana Shipyard master/zoning plan and conceptional drawing after projects completion of the site are shown in Figures 3 and 4 below.

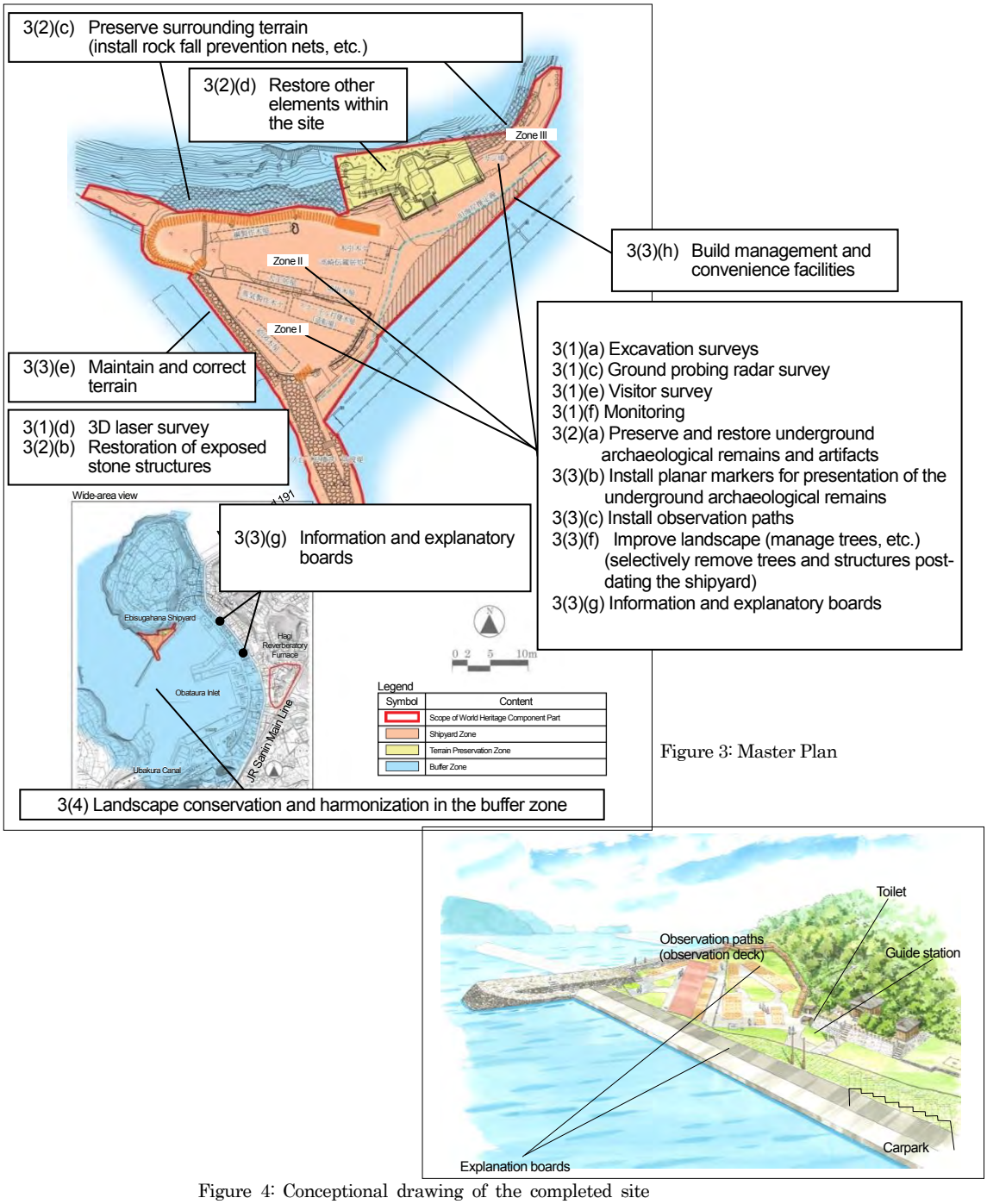


Figure 3: Master Plan

Figure 4: Conceptional drawing of the completed site

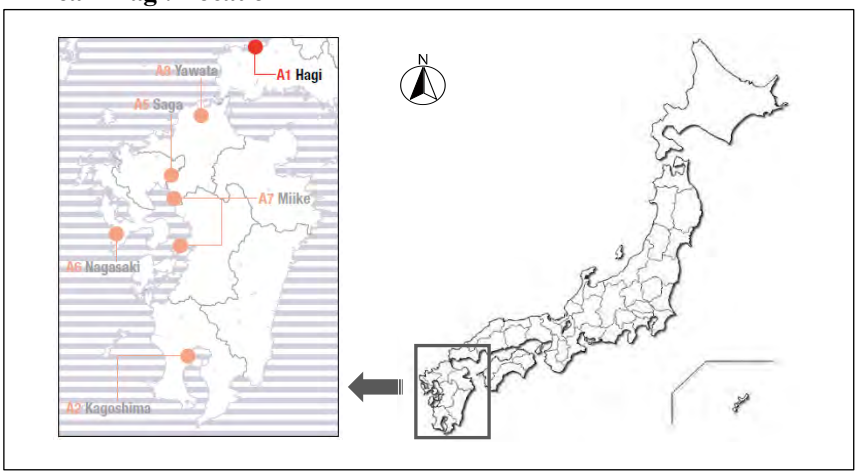
6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Ebisugahana Shipyard, which became a source of "Conservation Work Programme and Implementation Programme" is available on Hagi City's web site. <http://www.city.hagi.lg.jp/site/sekaiisan/h19508.html>

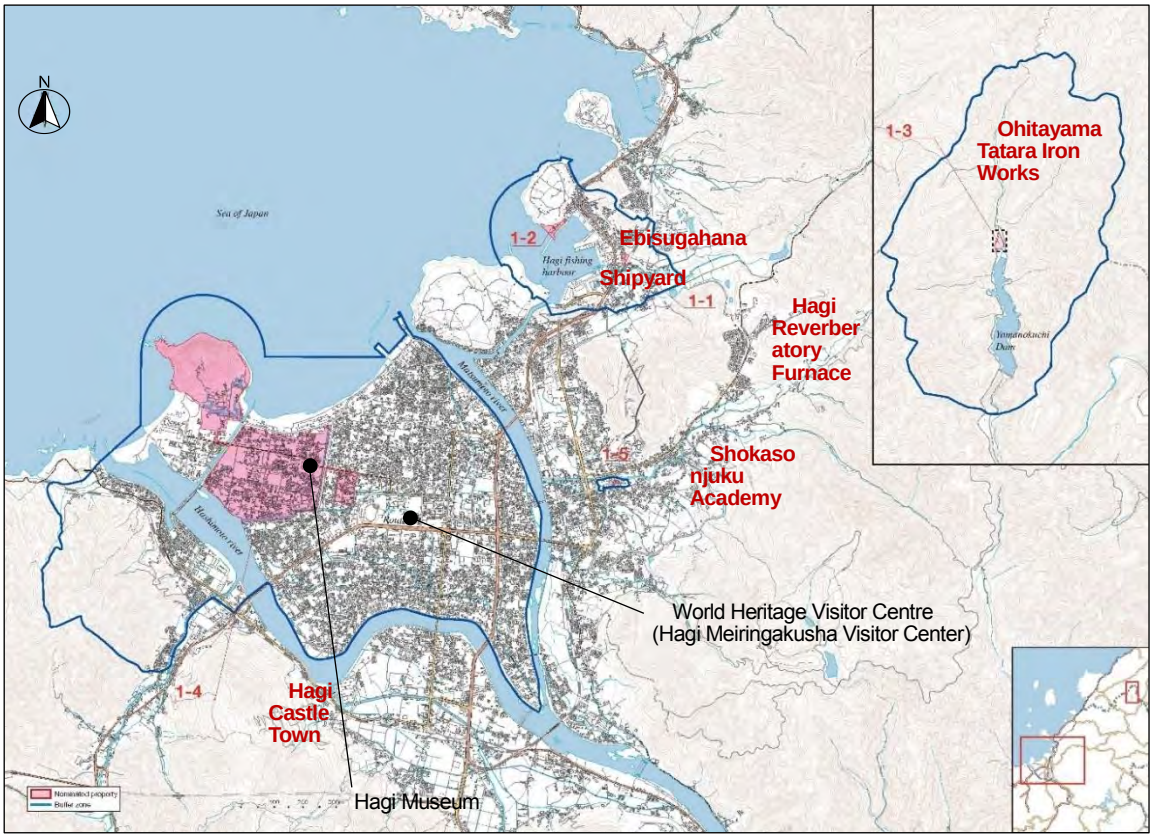
Conservation work programme and implementation programme for Ohitayama Tatara Iron Works (Area 1 Hagi/ Component part 1-3)

Hagi City drew up a "Conservation Work Programme and Implementation Programme" for Ohitayama Tatara Iron Works in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

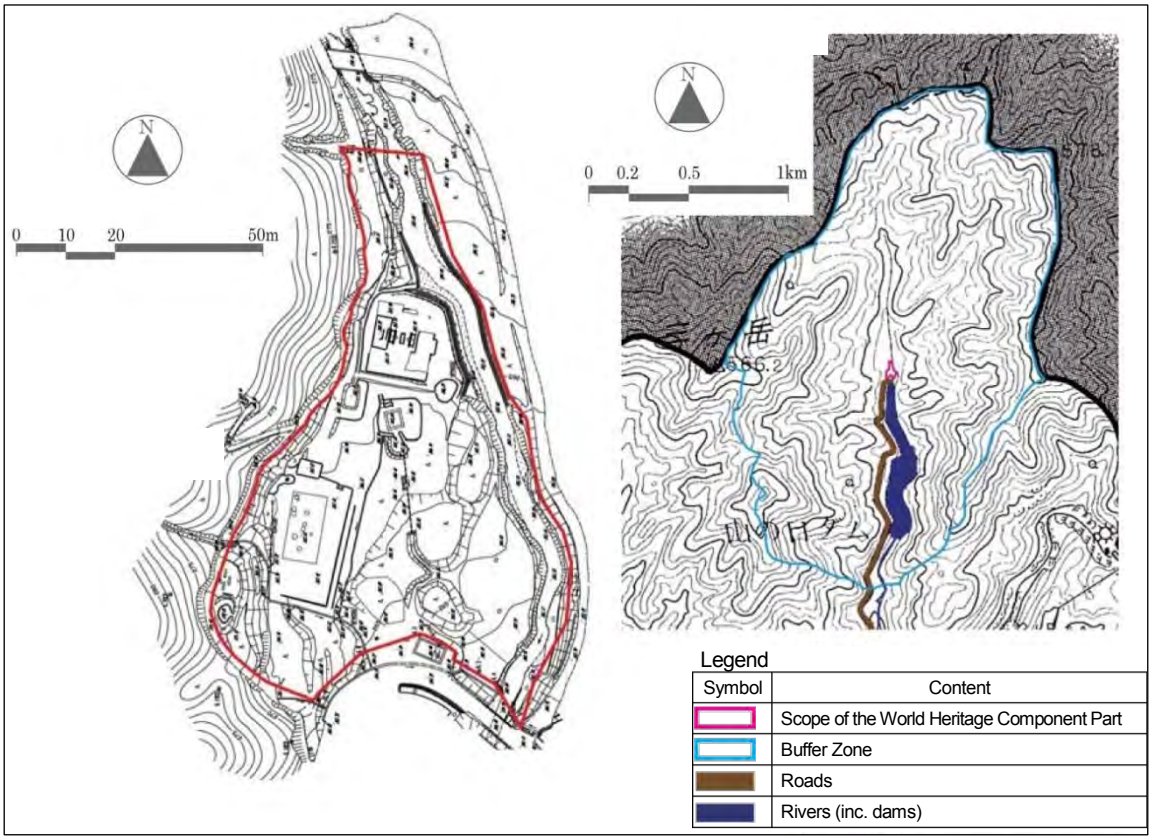
(1) Area 1 Hagi: Location



(2) Distribution of the component parts of the "Sites of Japan's Meiji Industrial Revolution in Area 1 Hagi



(3) Scope of the Programme (scope of Ohitayama Tatara Iron Works component part and buffer zone)



1. Approach to conservation

Restore the site from the perspective of stable maintenance of exposed stone materials as archaeological remains evidencing the traditional Japanese "tatara" method of making iron, and approach conservation work with consideration to the site's relation to the Ebisugahana Shipyard.

The Ohitayama Tatara Iron Works is the archaeological remains of an ironworks that utilized the ancient Japanese tatara ironworking technique to supply the iron for making the necessary nails and anchors, etc., for building Western-style wooden sailing vessels to reinforce the military power of the Hagi (Choshu) Clan, which was concerned about maritime defense. One of the five component parts of Area 1 Hagi, the ironworks illustrates the challenge phase of trial and error in the iron and steel manufacturing and ship-building fields.

In the Conservation Management Plan for Ohitayama Tatara Iron Works, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Ohitayama Tatara Iron Works and their value categories are shown as Table 1.

Component parts	Period	Element	Value Category of Element		
			OUV	State	Region
Ohitayama Tatara Iron Works	Operation period during Horeki, Bunka-Bunsei and at the end of the Edo Period	Production equipment ruins	○	○	○
		Connection to Iron Road	○	○	○
		Yamanokuchi river	○	○	○
	Element during the period from the end of operation at the end of the Edo Period to designation as a National Historic Site				
	Elements during the period from designation as a National Historic Site to the present				

Table 1: The list of elements constituting Ohitayama Tatara Iron Works and their value categories
※In drawing up this programme, constituent elements stated in CMP are partly reviewed.

Out of these elements in the Table 1, which the Conservation Work Programme for Ohitayama Tatara Iron Works will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due to attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above. Hagi City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following three points.

(1) Maintain and restore in a sustainable condition those remains embodying the ancient Japanese tatara ironmaking technique

Work on underground remains will be premised on maintaining these in a sustainable condition in situ. The city will conduct detailed studies of the state of exposed remains such as floor stones in order to identify the deteriorated areas and the causes of deterioration. Restoration methods that minimize the impact on the exposed remains will be studied, with the optimal methods used to maintain and strengthen them.

(2) Promote understanding of the contribution of the ancient Japanese tatara ironmaking technique to production processes and the construction of Western-style warships

Various remains related to tatara ironmaking are scattered throughout the site, but visitors do not necessarily have a sufficient understanding of the role of each and the relationships between them. The city will install paths that enable visitors to clearly envision the production process and smelting, and help visitors gain a full understanding. The connections between the site and the Ebisugahana Shipyard where the warships were built will also be actively highlighted.

Excavation surveys will be undertaken on the basis of a long-term plan for those areas that have yet to be surveyed.

(3) Arrange landscape and improve the surrounding scenery

The surrounding forests were the source of the fuel coal for the ironworks, while the river provided the huge amount of water necessary to scour the iron sand which was the raw material for tatara ironmaking. The city will therefore ensure that landowners and managers manage the harmoniously inter-related forest and river landscape appropriately, and in relation to forests in particular, ensure that the city and forest owners and managers recreate over the long term the same type of forestscape that existed back when the ironworks was operating.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

The city will undertake excavation surveys of areas not yet surveyed pursuant to a long-term plan to clarify the entirety of the smelting process. In terms of historical document surveys, the city will continue to discover and collect new documents and pictures, etc., with a particular emphasis on elucidating the connections with the Ebisugahana Shipyard (Component Part 1-2) and the Hagi Reverberatory Furnace (Component Part 1-1), as well as the route taken by the “iron road” used to bring in raw materials and take out products. Surveys will also be made of the other 23 tatara ironwork sites remaining within the territory of Hagi (Choshu) Clan, conducting analyses and research on similarities and unique features, etc. A further survey will examine the negative impacts caused by wildlife within the component part.

A visitor survey will be undertaken to confirm their influence on the remains as well as visitor trends, and the city will also use a monitoring sheet to observe the component part over time to identify any changes in structures or the surrounding landscape.

(2) Restoring archaeological remains (preserving, reinforcing, and stabilizing materials and structure)

To protect underground and exposed archaeological remains, the city will supplement protective earth layer

that have partially eroded and nurture the surface of the current layer, taking further steps to prevent earth from washing away.

The city will also install observation paths within the site so as to clarify locations offering useful views and the scope of these, as well as alleviating the impact on exposed and underground archaeological remains of compaction and vibration from visitor traffic. The substrate of deteriorating floor stones, etc., in exposed remains will be strengthened using conservation treatment based on analysis results from detailed surveys. In such cases, empirical experiments will be conducted on samples of the same types of stone, looking closely at the results.

(3) Illustrating the steel-making system in the component part and the Area

Because there are currently no observation paths, it is difficult for visitors to understand the smelting process. The city will therefore install observation paths along the smelting process to direct visitor flow.

In spots where stone walls have been restored with adding new stones on the original stone structures remained, it can be difficult to tell the difference between original and added parts, so the city will make the distinction clear using explanatory boards and materials, avoiding visitor misunderstanding.

(4) Arranging and improving landscape from a scenic perspective

The surrounding forests played an important role in the traditional tatara ironmaking process. The city and landowners and managers of the forest will therefore coordinate with related organizations with the aim of creating over the long term a type of forestscape that closely resembles that at the time when the ironworks was operating.

(5) Implementing projects

The city will be responsible for managing and operating the Programme, determining the appropriate projects and schedule with consideration to the state of the component part and the wishes of owners and managers. It will also work together with the Government of Japan and with Yamaguchi Prefectural Government to secure financial resources and the necessary specialist knowledge and personnel for implementation of the projects.

In the case of chemical substrate strengthening such as conservation treatment of exposed structures, the city will need to determine the appropriateness of such a step from the perspective of whether or not it will be possible to maintain reversibility. The period of time necessary for this will be built into the schedule and full investigations undertaken, including empirical experiments.

3. Methods

(1) Research and study

(a) Excavation surveys

The city will conduct excavation surveys based on a long-term plan in relation to areas not yet surveyed, including the part adjoining the “iron road,” so as to elucidate the entirety of the smelting process. These surveys will be conducted efficiently within the minimum scope under the guidance by the Government of Japan, Yamaguchi Prefectural Government, and an expert committee with the aim of gleaning the necessary information for conservation, restoration, presentation and public utilization measures.

(b) Historical document surveys

The city will continue to discover and collect new historical documents with a focus on elucidating connections with the Ebisugahana Shipyard, pictures of the ironworks in operation, and the route taken by the "steel road" by which raw materials were brought in and manufactured products transported out.

Historical materials on the other 23 tatara ironwork sites remaining within the territory of Hagi Clan will be analyzed and comparative research conducted on technical similarities and differences in relation to cases outside the territory of Hagi (Choshu) Clan, ascertaining the role that the Ohitayama Tatara Iron Works played in tatara ironmaking at the end of the Edo period.

(c) Surveys for existing states and measurement

At the site, some parts of the remains, including stone walls and corner and floor stones, etc., are displayed exposed, and various portions are deteriorating. A survey will therefore be undertaken on the state of deterioration and restoration methods determined for each section. A 3D survey will be conducted to create a detailed map of the current state of stone walls and elevational views and ortho-images, etc., created which show areas that were restored in the past to serve as basic materials for monitoring.

(d) Artifact survey

To verify the connections between the Ohitayama Tatara Iron Works and the Ebisugahana Shipyard from the perspective of artifacts, a constituent analysis will be conducted of ship nails, anchors, and other iron products excavated from the shipyard, comparing these with iron artifacts excavated from the ironworks and referencing the historical document to draw up materials backing the connections between the two sites.

(e) Wildlife damage survey

A survey will be conducted on negative impacts caused by boars and other wildlife.

(f) Visitor surveys

The city will conduct a survey on visitor numbers, as well as regular surveys and observations of the behavior of regular visitors and their degree of understanding.

(g) Monitoring

The city will create monitoring charts that comprehensively and systematically aggregate current information and periodically assess the state of the component part and the buffer zone.

The city will present monitoring results in annual reports for confirmation and agreement at the Hagi Conservation Council, thereafter reporting to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Restoration of archaeological remains related to ironworks

(a) Restoration of constituent elements contributing to the Outstanding Universal Value within the site

(i) Underground archaeological remains

To maintain underground structures in a stable condition in situ, the city will supplement the earth layer in those spots where some earth has been washed away, and will also nurture the earth surface to prevent further erosion. In addition, while visitors currently have access to exposed stone walls and corner stones, etc., the city will install observation paths and restrict those areas which people can walk through, alleviating the negative impact on the remains of compaction, etc., caused by visitor traffic.

(ii) Exposed structures

Deterioration caused by ultraviolet light and the impact of compaction and vibrations caused by visitor traffic have caused cracks and detachment in some stone walls, corner and floor stones, and exposed rock in the remains of garden pond, etc. To deal with the problem, the stone substrate will be strengthened through conservation treatment, etc. In such cases, experiments will first be conducted using the same type of stone and observations conducted over time before determining what chemical agents and methods to use.

(3) Presentation of the iron making system in the component part

(a) Zoning

The city has created the following zoning as a means of increasing understanding of the remains of Ohitayama Tatara Iron Works.

Zone name	Zone outline and features
Tatara zone	The zone where the main tatara ironmaking structures are located
Landscape improvement zone	The zone where the surrounding mountain forest landscape will be preserved and the type of forestscape returned to the same state as in the days of the ironworks was in operation
Public utilization zone	The zone where information will be communicated to local residents and visitors

(b) Path planning

The city will establish three model courses starting at the exhibition and rest space shown in Figure 1 to promote visitor understanding of the iron-making system.

Symbol	Content
	Key structure viewing course
	Overview course
	Loop course

(c) Creation of observation routes

Because there are underground and exposed archaeological remains scattered throughout the site, once earth layer have been added, observation paths comprising low wooden structures will be built. The paths will basically be structures that stop visitors from walking on the surface of exposed stones and earth. In steeply sloping areas where it would be difficult to create a wooden path, earth will be used instead as the building material. The paths will be designed in such a way that they can be removed, lightening the burden on the structures.

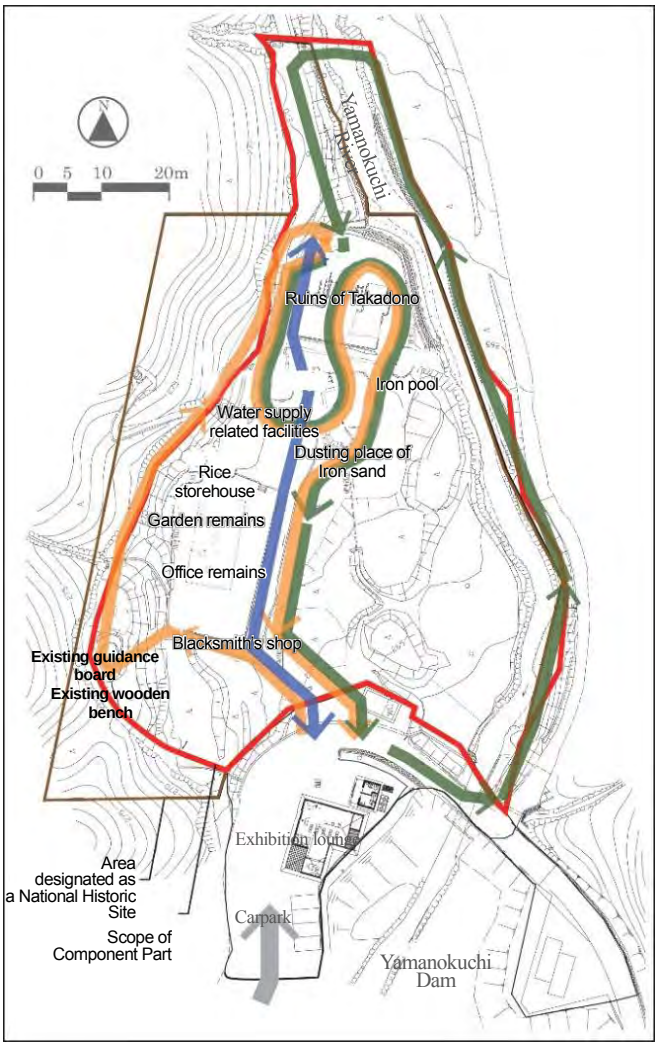


Figure 1: Flow plan

(d) Terrain correction and environmental improvement

Drainage facilities will be improved as a means of dealing with the rainfall that flows down from the steep mountain area adjoining the western side of the site, preventing erosion of planar markers and earth layer.

To maintain the overall site in a stable condition, underground archaeological remains included, the drainage capacity of existing culvert pipes and the open conduits of concrete secondary products will be checked and improvements made if that drainage capacity proves to be insufficient.

Planar markers displaying the location and scale of underground archaeological remains will be installed

on the surface of earth layer, particularly for those remains from the third phase of ironmaking at the ironworks over the 1855-60 period.

(e) Arranging and improving landscape and planting vegetation

The impact on underground archaeological remains of the artificial forest extending out from the center of the site over the eastern and western slopes will be checked, and if an impact is confirmed or if excavation surveys will be conducted there pursuant to the long-term plan, trees will be cut back or removed.

(f) Information and explanatory boards

Signs will be set up in effective locations to guide visitors around the site in line with the flow plan.

(g) Conservation and management facilities

It has been over 20 years since the existing wooden benches were installed, and some deterioration is evident. The safety and performance of these benches will therefore be regularly checked and upgrades made where necessary. In such cases, a design will be chosen that is in harmony with the surrounding landscape.

(4) Arranging and improving landscape in the buffer zone

The buffer zone around the component part is managed as a forest reserve. However, because it is an artificial forest, the type of forestscape at the time that the ironworks was operating will be confirmed based on objective information from a historical document survey, and the city will then coordinate with related organizations to return the forest to its original form as a long-term plan.

4. Project implementation

(1) Order of priorities

The implementation schedule will be as in Table 1.

The schedule will comprise a short-term phase of the five years from FY 2018 to FY 2022, a mid-term phase for the five years from FY 2023 to FY 2027, and a long-term phase from FY 2028 onward.

From the perspective of site conservation and restoration, swift measures will need to be taken to deal with deteriorating sections of the exposed archaeological remains and washed-out portions of earth layer. The city will therefore start by undertaking a survey of the current state to identify those areas that need to be addressed immediately. In launching archaeological remains conservation and restoration, the city will conduct field tests and analyze the results of observation over time before determining detailed methods in terms of restoration, etc. At the same time, the city will also proceed with establishing observation paths. Restoration work will be undertaken together with the installation of planar markers on the earth layer displaying the location and scale of underground archaeological remains.

Excavation surveys will be undertaken to clarify currently unknown parts of the tatara smelting process, with underground archaeological remains conservation work and other measures pursued based on the results.

Given the above, priority will be given to the following tasks:

- Undertaking surveys of current state of the site and measurement
- Conserving and restoring underground and exposed archeological remains
- Restoring existing planar markers for presentation of underground archaeological remains
- Installing observation paths
- Installing and repairing signs and guidance boards
- Conducting excavation surveys for areas of the site not yet surveyed

(2) Review of implementation schedule

After the medium-term period scheduled to run up until FY 2023, the implementation schedule will be revised in line with Programme progress. However, if any new measures become necessary, the city will review the schedule without waiting for 2023.

Category	Project	Short term (2018 to 2022)	Medium term (2023 to 2027)	Long term (2028 onward)
(1) Excavation survey	(a) Excavation survey			
	(b) Historical document survey			
	(c) Current state and measurement surveys			
	(d) Artifact survey			
	(e) Wildlife survey			
	(f) Visitor surveys			
	(g) Monitoring			
(2) Restoring ruins	(a) Restore underground archaeological remains			
	(a) Restore exposed archaeological remains			
	(a) Conduct field tests and observations before restoration			
(3) Presentation of iron-making systems in the component part	(c) Create observation routes			
	(d) Terrain correction and environmental improvements (drainage, etc.)			
	(d) Terrain correction and environmental improvements (planar markers, etc.)			
	(e) Arranging and improving landscape and planting vegetation			
	(f) Information and explanatory boards (install and repair signs and explanation boards)			
(4) Buffer zone conservation and harmonization	Improve type of surrounding forest landscape			

Table 2: Project implementation schedule

(3) Other

The city has carried out conservation and restoration work, etc. for the Ohitayama Tatara Iron Works by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 39 million yen was spent in FY2016 (including the amount spent for the construction of the exhibition lounge) and a million yen has been budgeted for FY2017, both including costs incurred or earmarked for plan making and the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

The city will also secure and appropriately allocate the human and financial resources needed for the conservation, restoration, presentation and public utilization of the other four component parts in Area 1 Hagi, thereby working in conjunction with Shoin Shrine (religious corporation); the owner of the Shokasonjuku Academy (Component Part 1-5), to ensure the smooth implementation of the projects in the Area as a whole.

5. Master plan

The Ohitayama Tatara Iron Works master/zoning plan and conceptional drawing after projects completion of the site are shown in Figures 2 and 3 below.

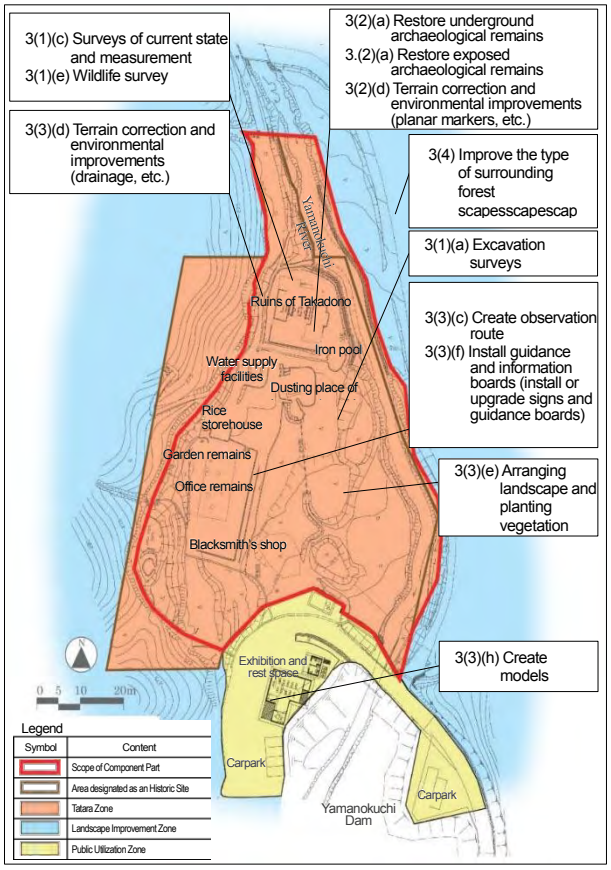


Figure 2: Master Plan



Figure 3: Conceptional drawing after projectscompletion of the site

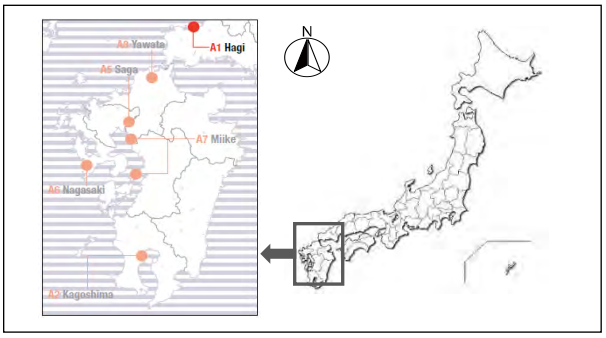
6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Ohitayama Tatara Iron Works, which became a source of "Conservation Work Programme and Implementation Programme" is available on Hagi City's web site. <http://www.city.hagi.lg.jp/site/sekaiisan/h19508.html>

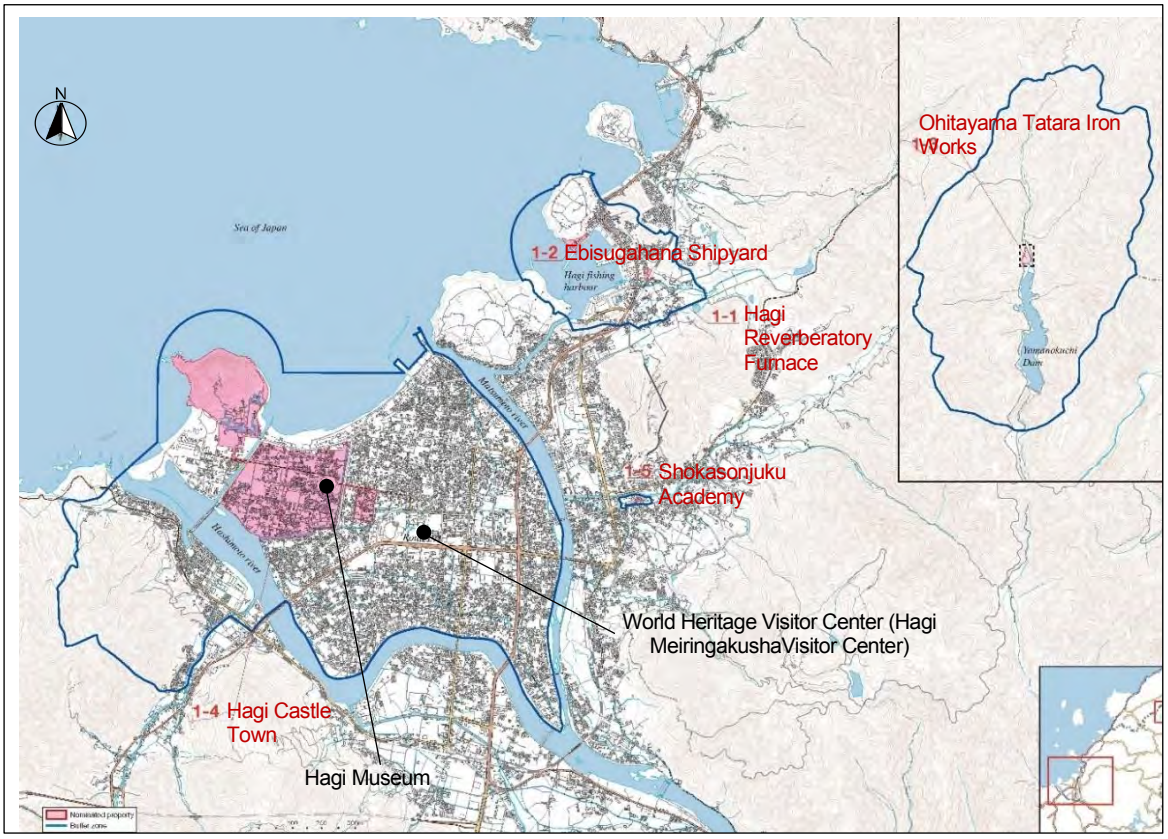
Conservation work programme and implementation programme for Hagi Castle Town (Area 1 Hagi/Component part 1-4)

Hagi City drew up a "Conservation Work Programme and Implementation Programme" for Hagi Castle Town in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

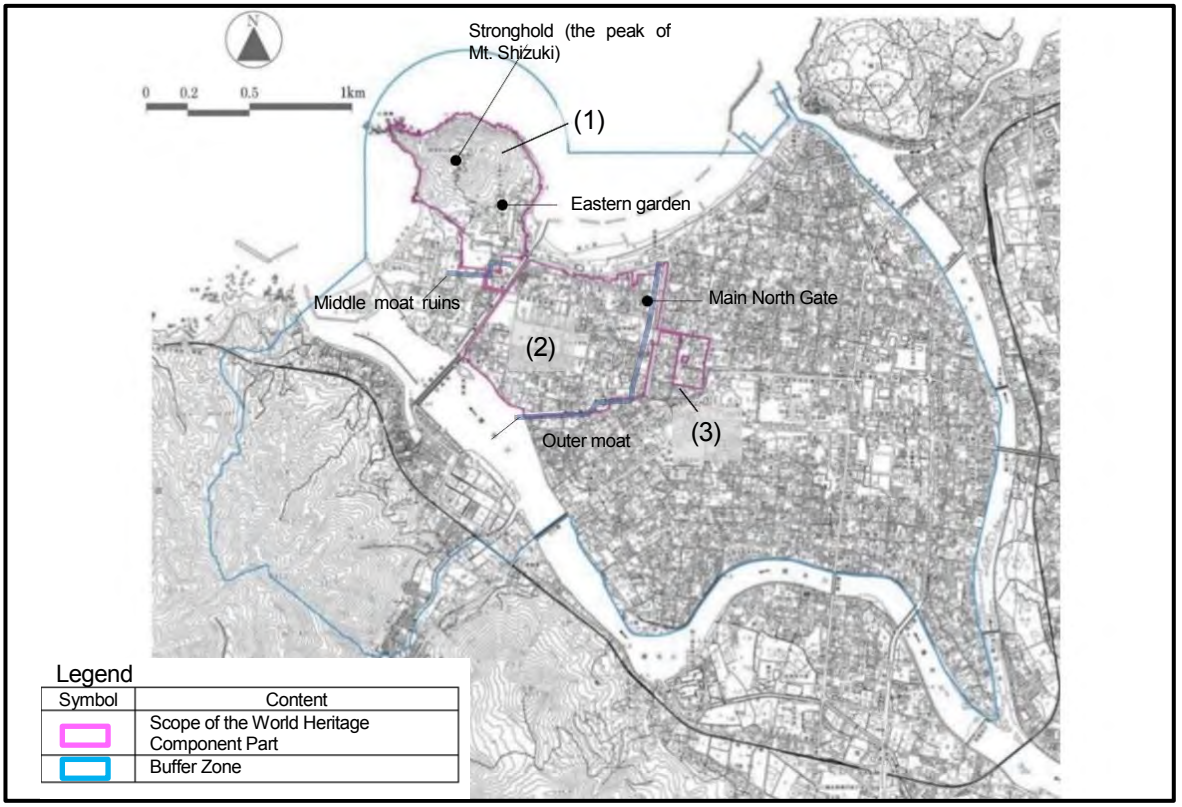
(1) Area 1 Hagi: Location



(2) Distribution of component parts of the "Sites of Japan's Meiji Industrial Revolution" in Area 1 Hagi



(3) Scope of the Programme (scope of Hagi Castle Town component part and buffer zone)



1. Approach to Conservation

Conserve and restore the roads, blocks and buildings, etc., constituting the townscape in a manner that hands down to the present day the aspect of a castle town that was a starting point for modern industrialization, approaching conservation based on the nature of the town as a place where people still live today.

Hagi Castle Town comprises the remains of Hagi Castle and the accompanying town, built on a delta at the mouth of the Abu River by Mori Terumoto, who lost in the battle of Sekigahara in 1600. Hagi Castle (1) was originally built on Mt. Shizuki and its foothills, and while none of the original buildings survive, the stone walls and moats are still virtually intact. Across virtually the entire residential blocks of District of the Upper Class Samurai (2), the sprawling those blocks belonging to Hagi (Choshu) Clan senior vassals have been converted to modern housing along with the mandarin orchards reclaimed to provide livelihoods for former samurai families after the Meiji Restoration, but generally remain in good condition, while the mud and stone walls dividing the residential blocks have been maintained through to the present day. Residential blocks of District of the Merchant Class (3) was where the properties of government-patronized merchants and middle- and lower-class samurai were located, and the townscape of samurai's residential compounds and merchant houses remains in good condition. Along with the other four component parts of Area 1 Hagi, Hagi Castle Town is a component part embodying an entire local community during the challenge phase of trial and error in the iron and steel manufacturing and ship-building fields.

In the Conservation Management Plan for Hagi Castle Town, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage Inscription. The list of elements constituting Hagi Castle Town and their value categories are shown as Table 1.

Component parts	Period	Element	Value Category of Element		
			OUV	State	Region
Hagi Castle Town (Ruins of the Castle)	Clan government period	Fort	○	○	○
		Castle Grounds	○	○	○
		Intermediate outworks	○	○	○
		Underground ruins	○	○	○
		Mt. Shizuki	○	○	○
	Elements during the period from relocation of Clan Office to designation as a National Historic Site				
	Elements during the period from designation as a National Historic Site to the present				
Hagi Castle Town (District of the Upper Class Samurai)	Clan government period	Layout of the town	○	○	○
		Buildings of samurai premises	○	○	○
		Structures of samurai premises	○	○	○
		Underground ruins	○	○	○
		Outer moat	○	○	○
	Elements during the period from relocation of Clan Office to selection as a National Important Preservation District for Groups of Historic Buildings				
	Elements during the period from selection as a National Important Preservation District for Groups of Historic Buildings to the present				
Hagi Castle Town (the District of the Merchant Class)	Clan government period	Layout of the town	○	○	○
		Buildings of middle- and lower class samurai premises and district of merchant class	○	○	○
		Structures of middle- and lower class samurai premises and district of merchant class	○	○	○
		Underground ruins	○	○	○
	Elements during the period from relocation of Clan Office to designation as a National Historic Site				
	Elements during the period from designation as a National Historic Site to the present				

Table 1: The list of elements constituting Hagi Castle Town and their value categories
※In drawing up this programme, constituent elements stated in CMP are partly reviewed.

Out of these elements in the Table 1, while the Conservation Work Programme for Hagi Castle Town will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Hagi City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points.

(1) Restore the districts and buildings, etc., to maintain historical ruins and the castle town appearance

In Hagi Castle Town, the work for conservation and restoration will be carried out using appropriate methods to maintain those historical buildings, etc., above ground as well as underground archaeological remains in a stable condition, preserving an outstanding landscape of the Hagi Castle ruins and Hagi Castle Town. For Ruins of the Castle, to maintain the stability of the stone walls, which convey the ambience of the original castle, any areas where there is swelling or loosening will be restored using primarily traditional methods. The outer wall has already been completely restored, so in general only the necessary spot restorations will be

made to maintain the wall in its current state. Traditional buildings in District of the Upper Class Samurai and District of the Merchant Class will generally be restored to maintain them in a stable condition in their current state, with places that were clearly added at a later time converted to traditional materials.

(2) Conservation and restoration to convey Hagi Castle Town's history as a starting-point for industrialization

To throw more light on the history and functions of the three districts making up Hagi Castle Town—(1) Ruins of the Castle, (2) District of the Upper Class Samurai, and (3) District of the Merchant Class—multiple tour routes will be set up and road signage and explanatory signage installed to convey information to visitors.

For Ruins of the Castle, the stone walls and moats, etc., created for defense of the castle will be restored so as to highlight the castle's military functions. The castle's eastern garden namely To-en, which still remains within the ruins, will be restored into the appearance of the recreation space used by the feudal lord back in those days, and opened to the general public as an introduction to the lifestyle of the feudal lord within the castle grounds. Trees obstructing the view from the stronghold (at the peak of Mt. Shizuki) will be trimmed or felled and a viewing point set up so that visitors can look out over Hagi Castle Town as a whole.

In District of the Upper Class Samurai and District of the Merchant Class, facilities and equipment will be put in place to help visitors understand the social structure and daily life during the rule of the Hagi (Choshu) Clan from the appearance of the town. Facilities and equipment will be designed to maintain and enhance the historical atmosphere of a castle town, making effective use of land that has become public property, etc., to set these up.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

For the stone walls of Ruins of the Castle and outer moat, as well as the eastern garden, preliminary excavation surveys will first be conducted to identify the layout of the castle grounds and the structure of the garden's remains, and the findings will be reflected in the methods for future conservation, restoration, presentation and public utilization. In the cases of upgrading park facilities and trees, exploratory surveys and on-site observation will be used to design measures for preserving the underground archaeological remains, aiming to accumulate the necessary information for the future work for conservation, restoration, presentation and public utilization.

In District of the Upper Class Samurai and District of the Merchant Class, where any digging is involved in restoring traditional buildings and historical remains, a prior excavation survey will be undertaken to elucidate structures and reflect this in the conservation and restoration. In other places, when new housing is built or existing housing is extended, rebuilt, or removed, an exploratory survey and on-site observation will be used to preserve underground archaeological remains and accumulate information.

A survey of visitors will be undertaken to confirm the extent of their impact on the site, and the city will also create a monitoring charts to trace changes over time.

(2) Conserving and restoring buildings and remains (preserving, reinforcing, and stabilizing materials and structure)

The city will conserve and restore the stone walls of Ruins of the Castle and outer moat based on risk-based annual plans. Areas where change is detected will be temporarily undertaken dismantling and the cause of the change identified before being rebuilt in order to stabilize the structure. Trees close to the walls where roots are pushing out the stones or otherwise negatively impacting on them, or could potentially do so, will be moved elsewhere or cut down. Conservation and restoration of the outer moat has been completed to the greatest extent possible, so from now on, the focus will be as a rule on systematic spot conservation and restoration of any areas where this is necessary to maintain the current state.

In District of the Upper Class Samurai and District of the Merchant Class, owners of traditional buildings will be directed and assisted by the city to systematically restore as a rule any areas where this is necessary to maintain the current state, such as rethatching roofs and re-plastering walls. From now on, when buildings, earthen walls, and other structures are restored, areas that do not fit with traditional forms will be improved, and when the original form is unclear, they will be recreated in line with the surroundings or else hidden behind hedges.

(3) Illustrating feudal society as a key agent in industrialization in Hagi Castle Town

To highlight the role of Hagi Castle Town as a starting point for industrialization and modernization in the late Edo period, the city will undertake conservation, restoration and other projects that treat the Ruins of the Castle, District of the Upper Class Samurai, and District o the Merchant Class as a single unit. Routes will be laid out and signs and information boards installed to help visitors gain an overall picture of the town as they move around the various constituent elements.

(4) Arranging and improving landscape from a scenic perspective

For the Ruins of the Castle, the city will trim and otherwise manage vegetation so that visitors can see the entire main enclosure of the castle and the base of the castle keep. A viewing spot will also be setup at the stronghold at the top of Mt. Shizuki so that the whole of Hagi Castle Town can be seen at a glance. The viewing spot will be used to monitor and identify any changes to the scenery it looks out on, and if a problem occurs, the spot in question and its vicinity will be improved as appropriate.

In District of the Upper Class Samurai, the mandarin trees which are symbolic of post-Meiji history have been disappearing as housing increases. The city will work with groups such as NPOs as well as local residents to protect the remaining trees and plant new trees. When owners of concrete block walls and modern housing renovate these, the city will provide support for these structures to be removed or brought into harmony with the castle town ambience.

District of the Merchant Class retains areas that well preserve appearances of the town in the late Edo Period. To maintain the landscape, when owners of these areas intend to build new buildings or repair existing ones, Hagi City will give appropriate guidance to them. When existing concrete block walls and modern houses are to be renovated by their owners, they will be removed and the landscape modified under the city's technical and financial support.

(5) Implementing projects

The city will be responsible for managing and operating the Programme, determining the appropriate projects and schedule with consideration to the state of the component part and the wishes of owners and managers. It will also work together with the Government of Japan and with Yamaguchi Prefectural Government to secure financial resources and the necessary specialist knowledge and personnel for implementation of the projects.

Restoration and maintenance work on the stone walls of Ruins of the Castle and the outer moat will be continued. The city will also continue its excavation survey of the eastern garden to clarify the structure and change over time before restoring the garden, rebuilding the tea house and other architectural elements such as roofed mud walls and gates.

The city will continue to conserve, restore and improve districts, buildings, and other structures that comprise key elements of District of the Upper Class Samurai and District of the Merchant Class. The city will provide repairs and direction and guidance for improvement to the owners of structures which have aged, are in danger of collapse, or which impact negatively on the look of the town, as well as providing appropriate subsidies and other funding for restoration and improvement costs in order to lighten the financial burden. The city will also serve as the main agent in conservation, restoration and improvement of constituent elements that have become public property so as to contribute to their public utilization, first building consensus with local residents to that end.

3. Methods

(1) Research and study

(a) Excavation surveys

The city will prioritize conservation and restoration of the stone walls, with Hagi City's buried cultural property experts undertaking an excavation survey of the top of the stone walls, locating and measuring the cornerstones of turrets and other castle elements, the foundations of earthen walls, and other structural elements to create a record. Decisions will then be made about the scope of stone wall dismantling work, and the scope of archaeological remains which will be impacted as a result of, for example, stones being temporarily removed as part of the dismantling process. Because the remains of past conservation and restoration work or new structures may be discovered inside the stone walls when dismantling, Hagi City's experts will go along to observe the work from time to time, conducting a record survey where necessary.

The city also began excavation surveys in the eastern garden in FY 2008. These surveys will be continued, with the results serving as the basis for rebuilding architectures and installing planar markers indicating underground archaeological remains. Excavation surveys will also be conducted sequentially on backfill for the pond's stones and on the remains of roofed mud walls and gates, using the information gained as the basis for recreating the original scenery.

Projections of the central building of the main enclosure of the castle as surmised from pictures are currently being superimposed on maps of the current state. When park facilities are updated and trees felled or shifted, the city will take the opportunity to conduct an exploratory survey to try and identify the location of the central building and its state of archaeological remains, also bearing in mind the future placement of planar markers indicating the location and scale.

In FY 2007, the whole area embracing the District of the Upper Class Samurai and District of the Merchant Class was designated as an area containing recognized buried cultural properties under the Law for the Protection of Cultural Properties. Where development work is undertaken, the city may therefore require excavation surveys, inspections by local government officials, or particular care to be taken in the construction process. The city will continue to preserve and confirm underground archaeological remains.

(b) Historical document surveys

Because there are still many documents which have not yet been studied, historical document surveys on the castle town formation process and the changes which took place through to the end of the Edo period will be continued, finding, collecting, and analyzing new documents, drawings, old photographs, and other materials.

Specialist history curators of the Hagi Museum will conduct these surveys with support of local residents such as NPOs.

(c) Building survey

While virtually all the original castle buildings have been lost, the main building of the post-Meiji Shizukiyama Shrine remains, as does the building of former Fukuhara family's study, transferred from Hagi Castle Town. Because these buildings which were transferred after modernization are also useful materials in terms of explaining the process of historical changes and developments of Hagi Castle Town, the city will continue with building surveys, linking these to the future conservation, restoration and preservation work. In addition, because in some cases returning a building to its original state can boost its value as a cultural property, the city will also consider that possibility.

The city conducted building surveys of District of the Upper Class Samurai in FY 1986 and FY 2004. Preservation measures are currently underway in line with a preservation plan drawn up based on those surveys, and that work will be continued. Over the medium- to long-term, the city will also conduct a review of which buildings merit preservation.

The city has already conducted a building survey of District of the Merchant Class, followed by large-

scale restoration. More restoration work will now be implemented through the same process to ensure the preservation of the various buildings.

(d) Survey for recreation of the middle moat

Re-digging the middle moat which was filled in 1924 will contribute to re-create the shape of the outer citadel of Hagi Castle. The city will undertake a historical document survey, a measurement survey, and a survey of the scenery, etc., toward the long-term re-creation of the moat, gradually purchasing the land where the moat remains are located as public property.

(e) Visitor surveys

The city will conduct a survey on visitor numbers, as well as regular surveys and observations of the behavior of regular visitors and their degree of understanding.

(f) Monitoring

The city will create monitoring charts that comprehensively and systematically aggregate current information, regularly assessing the state of the component part and the buffer zone.

The city will present monitoring results in annual report for confirmation and agreement at the Hagi Conservation Council, thereafter reporting to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Conservation and restoration of buildings and remains

(a) Castle ruins and the outer moat

In restoring the stone walls, the city has been restricting dismantling work only to those areas where change has occurred, creating a chart on each stone material before dismantling the relevant section, and then re-creating it using traditional techniques and avoiding modern techniques to the greatest extent possible. Restoration will continue based on the same policy.

For the eastern garden, the city will use the results of excavation surveys and historical document surveys, etc., to rebuild architectures, install planar markers indicating the location and scale of the underground archaeological remains, and repair the pond's stones. Overgrown vegetation will be pruned or transplanted to another location.

Relocated buildings such as the Fukuhara family's study may be returned to their original location in the long term, but for the meantime they will be maintained by the owners in their current location as buildings in a sound condition, with the city engaging in regular monitoring.

Because the outer moat has deteriorated over the years since the last round of conservation, restoration and environmental improvement work, some of the earthwork, etc., has washed away, woodwork shaping the waterway has rotted, and gravel has built up in the waterways. The city will monitor the state to confirm the degree of deterioration, re-thatch the roofs of the Main North Gate namely Kita-no-somon, and the roofed wall of the rammed earth bridge, and re-plaster the walls, repair the earthwork, replace the waterway woodwork, and dredge the waterway, generally taking a systematic approach to the restoration of the necessary sections for stable maintenance of the current condition.

(b) Former samurai and merchant/craftsman districts

The city will restore buildings with the agreement of the owners so as to maintain and improve the historical appearance based on the standards laid down in the preservation plan. In so doing, the first step will be to understand the particular features of each building, and then generally re-create the same state as before the restoration. However, areas that were added in later restorations and extensions, and areas that impact negatively on the townscape, such as aluminum window frames, will be converted to traditional materials or returned to their original state.

In cases where the city decides based on the results of excavation and building surveys that the re-creation of buildings that were already lost as at immediately prior to restoration but that can be proved to have originally existed will be valuable in maintaining building value, consideration will be given to their re-

creation.

(3) Presentation of Hagi Castle Town as a key agent in industrialization

(a) Zoning

The city has created the following zoning to promote conservation and restoration as a means of increasing understanding of Hagi Castle Town.

Zone name	Zone outline and features
Castle remains zone	Zone where stone walls remain in good condition, including the main closure of the castle and outer citadel, as well as the stronghold at the top of Mt. Shizuki.
Mt. Shizuki zone	Forest zone preserved as a castle forest since the Edo period. Also has value as a National Natural Monument.
Outer moat zone	Zone containing the moat separating the castle from the castle town; the outer moat has been well-preserved through conservation, restoration and presentation in the same form as in the Edo period.
Town district zone	Zone containing the former samurai and merchant/craftsman districts, with the districts remaining much the same as during the Edo period. Various traditional buildings are scattered throughout, very evocative of the original townscape.
Scenery preservation zone	The sea and river banks and other water areas surrounding the component part, combining with the component part to create an outstanding view.
Public utilization zone	The zone from which paths around the component parts begin, containing the carpark from which visitors tour the component parts and the World Heritage Visitor Center (Hagi Meiringakusha Visitor Center), which is the guidance facility for Area 1 Hagi.

(b) Path planning

To promote understanding of the social structure back in the Edo period, the city will suggest that visitors follow standard tour routes that go from the castle ruins to the former samurai district to the former merchant/craftsman district.

Visitors will also be recommended to follow the same route either on board the Hagi City Circular Hop-on Bus or by foot from the World Heritage Visitor Center, which is conveniently located next to the national road with good public transport access, which will make it even easier to promote understanding of the component part.

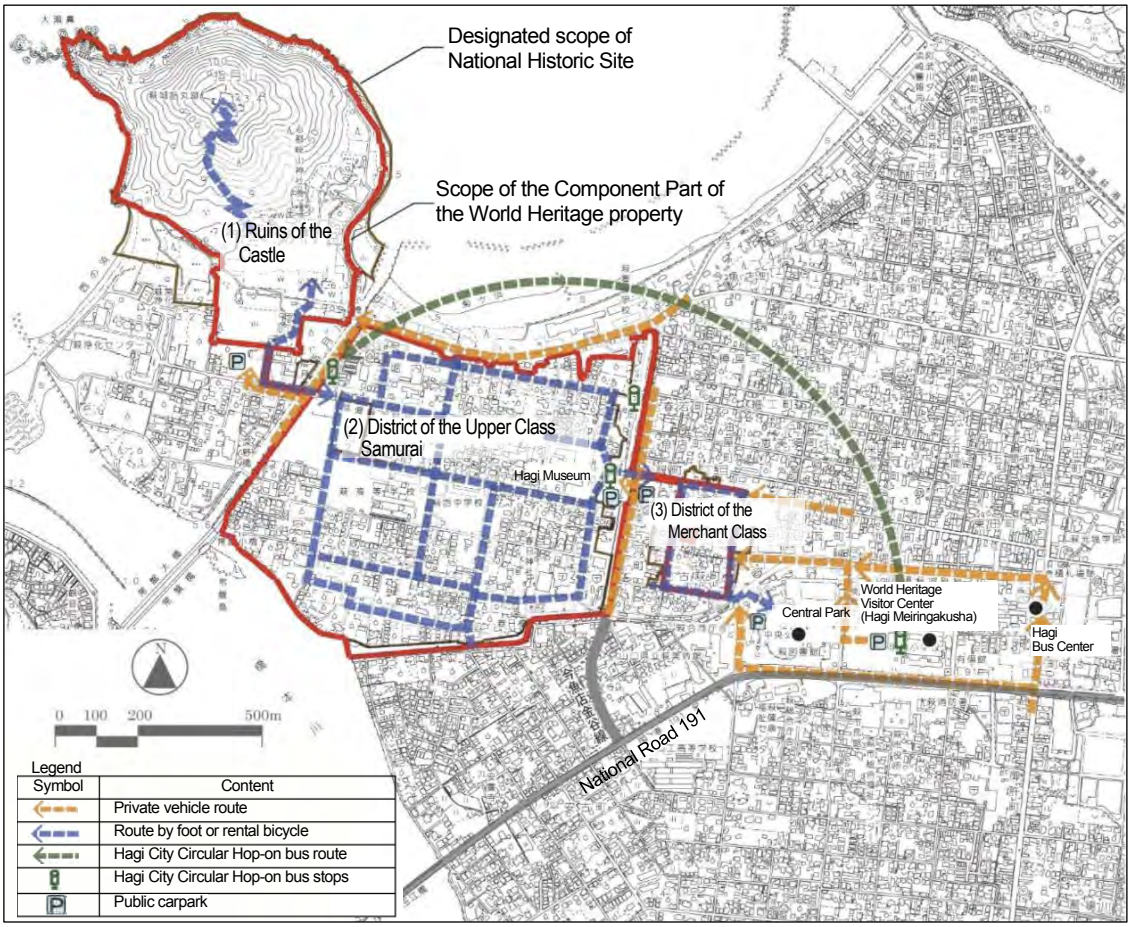


Figure 1: Path planning map

(c) Improvement of tour routes

The tour route within Ruins of the Castle was established post-modernization as Shizuki Park, but the city will maintain the path as it is for the meantime with appropriate management. The Mt. Shizuki mountain trail still has stone stairs from the Edo period, but other places have been newly built where the old stone stairs have collapsed. Heavy rain and typhoons also often cause tree-fall and landslides. The city will continue to monitor the situation and maintain and repair the current trail, but in the long term, it may need to be repaired more extensively so that visitors can climb the hill safely and with peace of mind. In that case, the city will make the repairs with sensitivity to the value of Mt. Shizuki as a National Natural Monument.

(d) Terrain correction and environmental improvement

As a rule, the current terrain will be maintained with the exception of the minimum necessary changes. In cases where the city is aiming to install re-created castle earthwork and moat facilities in the long term, this work will be based on detailed surveys.

Because the water quality of the outer moat could deteriorate, the city will clean it regularly and, based on monitoring results, may in some cases dredge out the mud in order to purify the water.

Power poles and power lines have already been set up within the component part. The city will use national subsidy schemes to bury these underground. Water and sewerage pipes are also buried beneath the road, and roadside ditches still maintain the form and design from back in the Edo period even through the current repair process. Because many spots are still functioning today, the city will continue to use these ditches on the basis of an appropriate maintenance and management scheme.

If it becomes necessary to install new infrastructure such as sewerage and telecommunications networks for the purposes of civil safety, the city will address this using methods and locations with maximum

consideration to the preservation of underground archaeological remains and the harmonization with surrounding landscape and based on full consultation with the relevant institutions.

(e) Arranging and improving landscape and planting vegetation

(i) Castle ruins and outer moats

Since the Meiji period, Yoshino cherry trees have been planted from the main enclosure of the castle ruins to the outer citadel, and the ruins have become a popular cherry blossom viewing spot for locals. At present, the trees are having little impact on the stone walls or underground archaeological remains, but because they could start to cause the stone walls to swell or loosen or disturb underground archaeological remains, for example, as they grow, based on monitoring results, the city will either systematically fell them or transplant them to another place in the ruins where they cannot do damage to underground archaeological remains.

Other trees that have grown tall will also either be trimmed or felled based on monitoring results so that the main enclosure of the castle ruins and the base of the castle keep can be seen in their entirety, maintaining harmony between site preservation and conservation of the surrounding landscape.

Because an observation spot will be set up to enable visitors to look out over the entire site as well as the buffer zone from the stronghold at the peak of Mt. Shizuki, trees will be trimmed or felled while taking care not to damage the value of Mt. Shizuki's natural forest, which has been designated a National Natural Monument.

(ii) District of the Upper Class Samurai and District of the Merchant Class

In the case of concrete block walls and other privately-owned modern structures installed before the component part was designated as a cultural property, the city will direct the owners to replace these with more traditional-looking structures, providing financial assistance for this. The city will also ensure that these structures can be differentiated from Edo period structures.

For hedges that have become overgrown and are no longer in harmony with the surrounding landscape, the city will direct the owners to make improvements such as gradually trimming them back, providing financial support to that end.

(f) Guidance and explanation boards

Because touring around the castle town helps visitors to understand the site, guidance boards and other signage will be maintained and managed.

(g) Management and convenience facilities

Rest spots, public toilets, and other convenience facilities have already been installed at various locations, and the city will continue to maintain and manage these.

(4) Arranging and improving landscape in the buffer zone

Pursuant to the Hagi City Landscape Regulations and other related laws and regulations, the Hagi City Cultural Property Protection Division will work closely with the Hagi City Town Planning Division, which is in charge of landscape administration, to constrain unplanned development, such as regulating the height of buildings that might obstruct Hagi Castle Town views, as well as working to preserve, maintain, and manage local scenery. The city will give strict administrative guidance regarding guidance boards and outdoor advertisement displays in accordance with the city's outdoor advertising regulations stipulated for creating a healthy landscape, and will ensure their appropriate installation, maintenance and improvement.

In particular, for waterside spaces around the component part, such as the sea and river cliffs, because the sandy beach, seawall masonry, pine trees, and planted trees work together with the component part to create an attractive landscape, the city will work to maintain and enhance that landscape.

4. Projects implementation

(1) Order of priorities

The projects implementation schedule will be as in Table 2.

The city has created a 30-year implementation schedule designed to preserve the historical buildings and underground archaeological remains in Hagi Castle Town, undertake ongoing conservation and restoration work to maintain the castle town ambience, and facilitate understanding of the functions and history of the various constituent elements of Hagi Castle Town. The schedule will begin in FY 2017 and end around FY 2046.

The schedule is divided into 10-year short-, medium- and long-term phases, with the phases, the intent behind implementation, and specific projects as follows:

- Short term (10 years): Undertake those products which need to or can be begun or completed immediately.
- Medium term (10 years): Projects requiring surveys longer than the short- term that will then be implemented based on the results
- Long term (10 years): Projects that will lead to greater value but that will require time for surveys and coordination.

Among short-term projects, the city will place particular priority on the following for reasons such as visitor safety, urgency arising from the deterioration of buildings, etc., or the project implementation environment:

- Undertaking excavation surveys and conservation and restoration work for the castle's stone walls
- Conserving and restoring buildings in District of the Upper Class Samurai and District of the Merchant Class
- Undertaking excavation surveys and conservation and restoration work for the eastern garden in the castle ruins

(2) Review of implementation schedule

Based on the results of surveys and monitoring, the order of priorities and implementation schedule will be revised at the appropriate time.

(3) Other

The city has carried out conservation and restoration work, etc. for the Hagi Castle Town by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 121 million yen was spent in FY2016 (including the amount spent for establishment of a visitor center) and 20 million yen has been budgeted for FY2017, both including costs incurred or earmarked for plan making and the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

The city will also secure and appropriately allocate the human and financial resources needed for the conservation, restoration, presentation and public utilization of the other four component parts in Area 1 Hagi, thereby working in conjunction with Shoin Shrine (religious corporation); the owner of the Shokasonjuku Academy (Component Part 1-5), to ensure the smooth implementation of the projects in the Area as a whole.

Category	Project	Short term (2017–26)	Medium term (2027–36)	Long term (2037–46)
(1) Research and study	(a) Excavation surveys			
	・ Stone walls*			
	・ Eastern garden			
	・ Remains of the central buildings of the main enclosure of Ruins of the Castle			
	・ Districts of the Upper Class Samurai and Merchant Class			
	(b) Historical document surveys			
	(c) Building surveys			
	(d) Survey for middle moat restoration			
	(e) Visitor surveys			
	(f) Monitoring			
(2) Conservation and restoration of buildings and remains	(a) Castle ruins and outer moat			
	・ Restoration of stone walls*			
	・ Restoration of eastern garden			
	・ Spot restoration of outer moat			
	・ Spot restoration of buildings			
	(b) Districts of the Upper Class Samurai and Merchant Class			
	・ Restoration of buildings			
(3) Presentation of Hagi Castle Town as a key agent in industrialization	(c) Improvement of tour routes (castle ruins)			
	(d) Terrain correction and environmental improvement			
	(e) Arranging and improving landscape and planting vegetation			
	(f) Guidance and explanation boards (maintain/manage and upgrade)			
	(g) Update administration and convenience facilities (maintain and manage current state)			
(4) Arranging and improving landscape in the buffer zone				

* Dotted lines refer to the Third Plan for Stone Wall Conservation and Restoration (Scheduled)

Table 2: Project implementation schedule

5. Master plan

The master/zoning plan is shown in Figure 2 below.

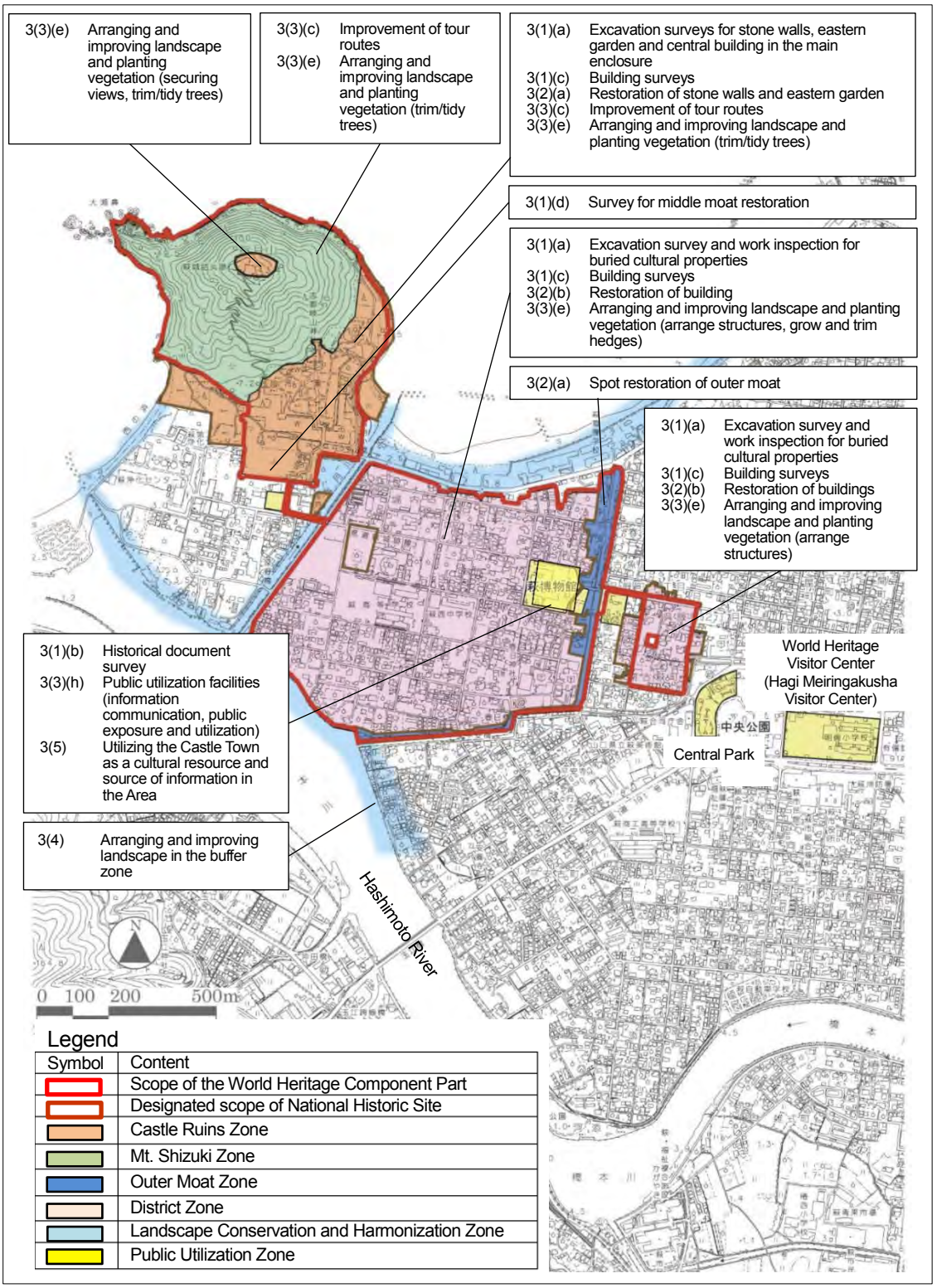


Figure 2: Master plan

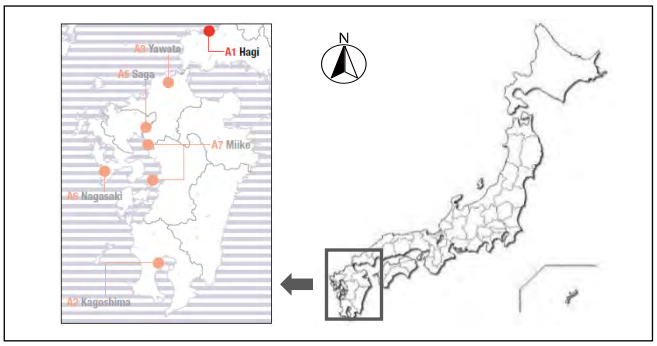
6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Hagi Castle Town, which became a source of "Conservation Work Programme and Implementation Programme" is available on Hagi City's web site. <http://www.city.hagi.lg.jp/site/sekaiisan/h19508.html>

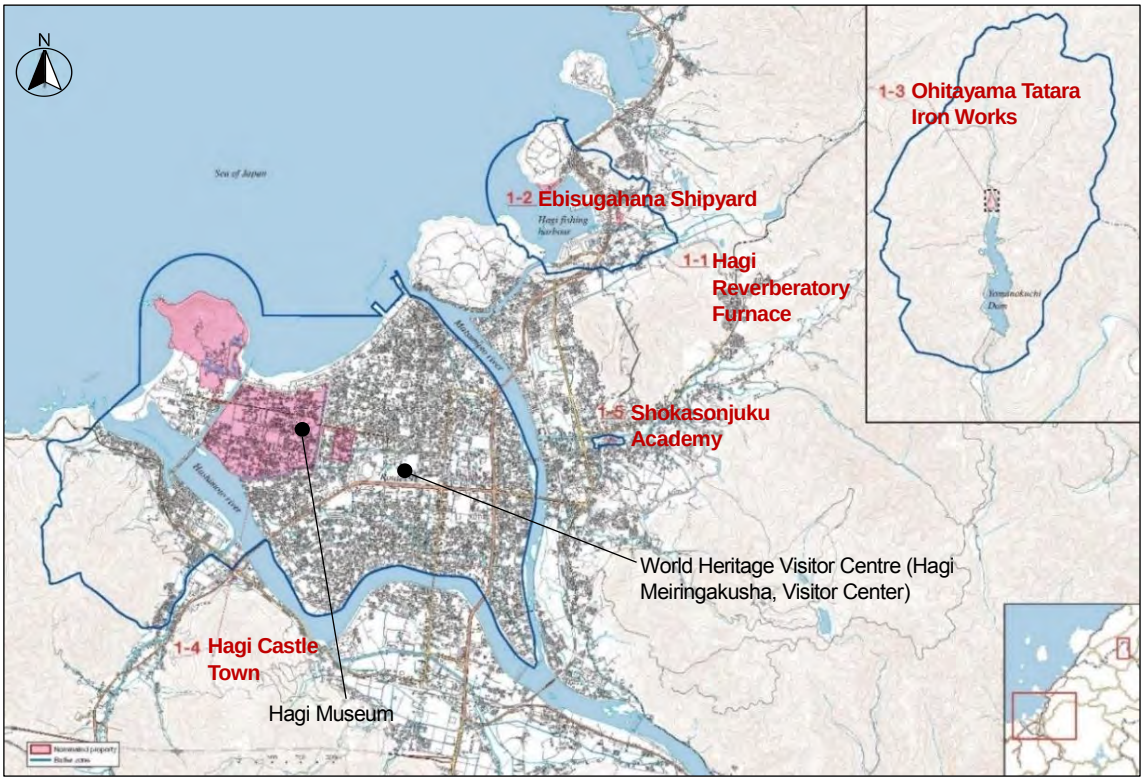
Conservation work programme and implementation programme for Shokasonjuku Academy (Area 1 Hagi/ Component part 1-5)

Shoin Shrine drew up a "Conservation Work Programme and Implementation Programme" for Shokasonjuku Academy in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

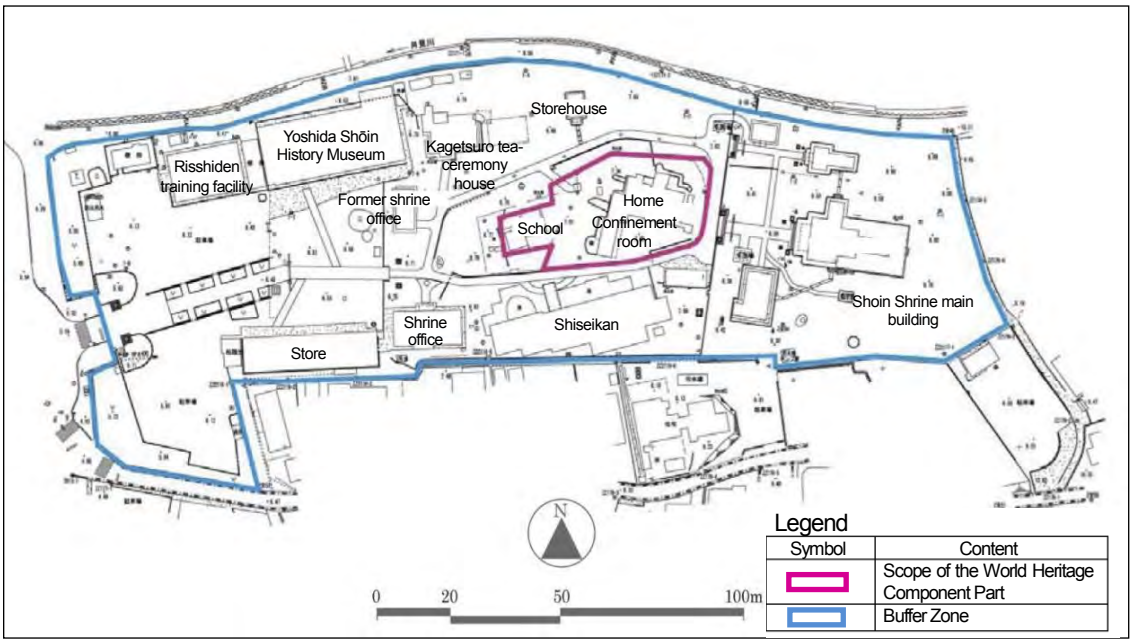
(1) Area 1 Hagi: Location



(2) Distribution of the component parts of "Sites of Japan's Meiji Industrial Revolution" in Area 1 Hagi



(3) Scope of the Programme (scope of Shokasonjuku Academy component part and the buffer zone)



1. Approach to conservation

Conserve and restore the buildings and grounds comprising Yoshida Shoin's school and home as the educational institution which was the intellectual starting point of the Meiji Restoration and industrialization, implementing conservation work of them and the surrounding environment.

Shokasonjuku Academy is a place of education that fostered many individuals who played an active role in Japan's modernization and industrialization from late Edo into the Meiji period. The school is located within the grounds of Shoin Shrine (which is built for dedication to Yoshida in 1907), and remains in good condition in its original form thanks to its management and operation by Shoin Shrine (religious corporation), which has also opened it to the public. The hedges and other walls around the property retain the original scale of the grounds and the surrounding environment. Along with the other four component parts of Area 1 Hagi, Shokasonjuku Academy is a component part that illustrates the challenge phase of trial and error in the iron and steel manufacturing and ship-building fields.

In the Conservation Management Plan for Shokasonjuku Academy, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Shokasonjuku Academy and their value categories are shown as Table 1.

Component parts	Period	Element	Value Category of Element		
			OUV	State	Region
Shokasonjuku Academy	Period of opening Shokasonjuku Academy	Shokasonjuku Academy	○	○	○
		Old Residence of Shoin Yoshida's Confinement	○	○	○
		Front Gate of Old Residence of Shoin Yoshida's Confinement	○	○	○
	Element during the period from closing of the Academy to designation as a National Historic Site				
	Elements during the period from designation as a National Historic Site to the present				

Table 1: The list of elements constituting Shokasonjuku Academy and their value categories

Out of these elements in the Table 1, which the Conservation Work Programme for Shokasonjuku Academy will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Shoin shrine will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points.

(1) Maintain and restore the buildings as the intellectual starting point of industrialization

Shoin Shrine will maintain Yoshida's home and the school building in a good, stable condition and strengthen any areas that become unstable. Regular monitoring will be undertaken to ensure that repairs are made at the appropriate time, maintaining the original design, form, and structure. The state of the trees and hedges, which contribute to the historical atmosphere, will be improved, forming a landscape that is in harmony with the buildings.

(2) Improvement of the surrounding environment to make it reminiscent of the time

The hedge surrounding the compound will be replanted based on pictures, etc., restoring the scope and the atmosphere of the original grounds. The routes used by shrine worshippers and site visitors will also be separated to prevent crowding within the shrine compound and mitigate visitor pressure on it. Visitors will also be encouraged to visit associated places in the surrounding area to deepen their understanding of the place where Shokasonjuku Academy is located.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

The city will undertake excavation surveys as necessary, recording and disseminating the results. The city and Shoin Shrine will identify and collect historical documents and organize and analyze them to clarify the Shokasonjuku Academy's contribution to Outstanding Universal Value and the role which the Academy has played in the local community. A detailed investigation will also be made of the conservation and restoration history by carefully condensing records of conservation and restoration work, etc., undertaken to date and organizing these in chronological order.

The city and Shoin Shrine will undertake a survey of visitors to confirm the extent of their impact on the component part, and a monitoring charts will be used to identify changes to building exteriors and interiors and how wear and tear to parts and materials changes over time.

(2) Conserving and restoring buildings and remains (preserving, reinforcing, and stabilizing materials and structure)

The city and Shoin Shrine will elucidate the causes of changes such as the roofs of buildings (the school, Yoshida's home, and the room to which Yoshida was confined while he was under house arrest) subsiding or leaning, or walls and uprights leaning, etc., as well as changes or deterioration in parts and materials (uprights, crossbeams, furnishings, etc.), conducting regular observations to ensure stable conservation and restoration of materials, with monitoring charts used to trace changes over time

In the case that changes or abnormalities are found in the course of everyday management, conservation and restoration will be undertaken on the basis of the map of current state that has been created. Comprehensive measures will be taken in response to surface-soil runoff in the vicinity of the buildings (the school, home, and confinement room) and resulting drainage issues.

The city will work with the Hagi Museum and related institutions to preserve and restore related historical documents in a manner suited to their materials and form.

(3) Illustrating the role of Shokasonjuku Academy as the intellectual starting point of industrialization and modernization in the Meiji Government

To indicate to visitors the importance of the two buildings and grounds comprising Shokasonjuku Academy as a place of education that fostered individuals who contributed to Meiji period modernization and industrialization, the scope of the Shokasonjuku Academy grounds will be clearly delineated within the shrine compound. To promote visitor understanding, the city will provide information in the context of the surrounding region, including laying out a tour route that links Shokasonjuku Academy to associated sites in the same vicinity. Because Shoin Shrine is open day and night, to address concerns about human damage such as graffiti and natural damage such as lightning strikes, the city will systematically improve disaster management equipment and install surveillance cameras. To maintain safety at night, vehicle traffic in and out of the shrine grounds will be restricted.

(4) Arranging and improving landscape from a scenic perspective

Shoin Shrine will systematically replace concrete block walls around the shrine with white walls to improve the appearance of the Shrine. Based on the historical drawings and old photographs, etc., the area around the buildings (the school, home, and confinement room) will be arranged to make it reminiscent of the scenery back when Yoshida Shoin was teaching, bearing in mind the scope of the component part and the layout of the town at the time.

(5) Implementing projects

Shoin Shrine will be responsible for managing and operating the Plan, with the city providing across-the-board support. Shoin Shrine and the city will determine the appropriate projects and schedule with consideration to the state of the component part. They will also work with the Government of Japan and with Yamaguchi Prefectural Government to secure financial resources and the necessary specialist knowledge and personnel for implementation of the projects.

The main focus will be to maintain the buildings (the school, home, and confinement room) and grounds as elements contributing to the Outstanding Universal Value. In particular, drastic measures will be taken immediately to deal with surface-soil runoff in the vicinity of the buildings and the resulting drainage issues. Information on the current state of buildings and restoration work undertaken in the past will be gathered with a view to rethatching roofs and dismantling and restoring the buildings over the long term.

3. Methods

(1) Research and study

(a) Excavation surveys

The city and Shoin Shrine will implement excavation surveys where necessary within the component part, record the results, and widely disseminate them.

(b) Historical document surveys

Historical document surveys will be undertaken primarily by the Shiseikan specialist history curator, with cooperation also from specialist history curators at the Hagi Museum and NPO groups.

(c) Restoration surveys

The city and Shoin Shrine will create a detailed map of the current state of the buildings (the school, home, and confinement room), recording in detail conservation and restoration work to date and noting this also on the map in preparation for future conservation and restoration work on various scales (minor repairs through to full dismantling and major restoration), as well as structural reinforcement where necessary.

(d) Visitor surveys

The city and Shoin Shrine will conduct a survey on visitor numbers, as well as regular surveys and observations of the behavior of regular visitors and their degree of understanding.

(e) Monitoring

The city will create monitoring charts that comprehensively and systematically aggregate current information, regularly assessing the state of the component part and the buffer zone.

The city and Shoin Shrine will present monitoring results in annual report for confirmation and agreement at the Hagi Conservation Council, thereafter reporting to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Restoration of buildings and remains

To maintain the design and structure of the current buildings (the school, home, and confinement room) and the terrain of the grounds in a stable condition, Shoin Shrine will undertake conservation and restoration in line with the particular characteristics of the buildings and grounds as well as conservation and management issues they present. The buildings and grounds will continue to be maintained in a healthy condition and regular monitoring will be undertaken, with spot repairs made where any issues arise. For the buildings, spot repairs will be made to wooden and plaster walls and furniture, while in other areas, repairs will be made or materials replaced in line with the degree of damage. In future, if any structural defects emerge, roofs will be rethatched and dismantling and major restoration work undertaken. For the grounds, work will be undertaken to ensure that rainwater drains away smoothly and to keep the ground surface stable. A specialist from the city offices will observe this work. If underground archaeological remains are affected, or there is a risk of this occurring, the city will first conduct an excavation survey.

(3) Presentation of Shokasonjuku Academy as the intellectual starting point of modernization and industrialization

(a) Zoning

The city has created the following zoning as a means of increasing understanding of Shokasonjuku Academy.

Zone name	Zone outline and features
Shokasonjuku Academy Zone	Zone where the school and home (including the confinement room) stand
Scenery Preservation Zone	Zone forming a visual unit together with the grounds where the school and home stand
Public Utilization Zone	Zone containing facilities and equipment for public utilization of Shokasonjuku Academy

(b) Path planning

The birthplaces and former homes of various individuals who contributed significantly to Japan's modernization as well as other component parts in the Area are located in the vicinity of Shokasonjuku Academy, and the city and Shoin Shrine will work to create a course in the context of its accessibility and connection to these other places.

Yoshida Shoin's home presents a good example of the residential compound of a middle- to lower-class samurai in the late Edo period, and the northern gate also remains in good condition, with the stone path from the gate to the entranceway also visible. A course will be signposted that has visitors entering from the northern gate, moving from the confinement room at the eastern side of the house to the open space on the southern side and on to the school building. Explanations will also be provided along that course to help visitors experience Yoshida Shoin's life and education (Figure 1).

(c) Arranging and improving landscape, and planting vegetation

In some spots, surface-soil runoff caused by rainfall, etc., is causing drainage ditch and drainage basin exposure, as well as poor drainage as a result of drainage facilities clogging up. Shoin Shrine will maintain and utilize the current facilities to the greatest extent possible, while also creating soil-based paths that are

less likely to suffer surface-soil runoff and restoring drainage facility functions.

The hedge around the compound and the hedge between the home and school will be recreated and improved based on the historical drawings, etc. Where evergreen trees planted in later years are now obstructing the view, they will be pruned or felled.

Shoin Shrine will plant vegetation to create divisions in and undertake scenic arrangement around the school, home, and confinement room based on historical drawings and old photographs, etc.

As the black pines on the northern side of the site grow taller, this might lead to falling branches or trees damaging the school and house buildings, so the pines will be watched and pruned when necessary. In some cases, they may be transplanted or felled as appropriate.

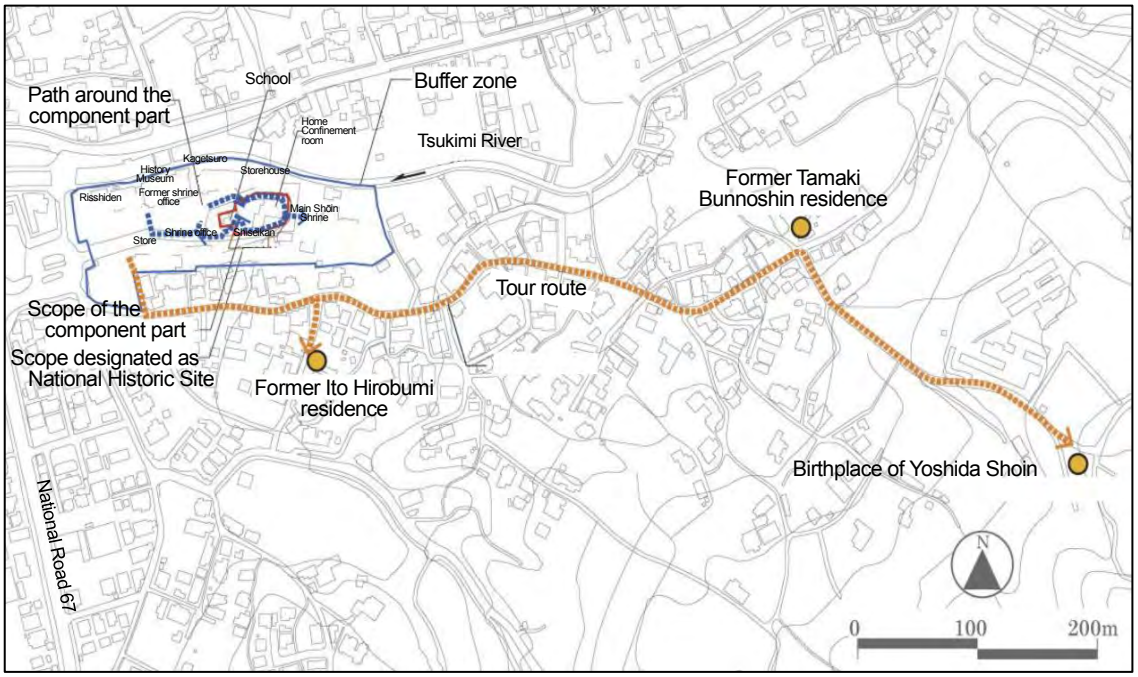


Figure 1: Shokasonjuku Academy and nearby associated places

(d) Guidance and explanation boards

Shoin Shrine will install signage to explain the psitioning of Shokasonjuku Academy in the context of the Sites of Japan's Meiji Industrial Revolution and Area 1 Hagi and its relation to the process of historical changes and developments of Shokasonjuku Academy and other component parts in the Area.

The city and Shoin Shrine will also install signage explaining the tour route, which brings in associated places in the vicinity such as the former Ito Hirobumi and Tamaki Bunnoshin residences and the birthplace of Yoshida Shoin (Figure 1).

(e) Establishment of related facilities

Because Shoin Shrine is open day and night, there is the danger that buildings will be damaged or set alight, or that exhibit items and equipment will be stolen. Disaster management equipment will therefore be systematically improved and surveillance cameras installed. Vehicle traffic in and out of the shrine grounds at night will be restricted by installing car stop poles.

(4) Arrangement and improvement of the landscape in the buffer zone

The front (western entrance) part of the wall around the shrine has been converted to a white earthen wall, and Shoin Shrine will systematically convert the northern and southern concrete block walls in the same manner. The former shrine office—a single-story wooden building with a tile roof—still stands on the western side of the component part, but is no longer in service and is gradually deteriorating. If this building is removed, the view of the component part from the entrance to the shrine should improve. In the case that plans are made

for this kind of building removal within the shrine compound, the history will first be researched and experts asked for their view as to whether the building should be preserved or could reasonably be removed, with decisions made accordingly. Where a building is removed, a map will first be drawn up, photographs taken, and building survey records stored. If new buildings are constructed after the old ones have been removed, full consideration will be given to the design, form, and impact on the appearance of the shrine frontage.

When Shoin Shrine management renovates the store and convenience facilities within the shrine compound, the exterior of these structures will be brought into harmony with the rest of the shrine compound.

When surface and other repairs need to be made to the carpark on the eastern side of the shrine compound, which lies outside the buffer zone, Shoin Shrine will coordinate with the relevant administrative organizations about harmonizing methods, such as using materials that fit with the appearance of the shrine frontage. Careful consideration will also be given to whether the carpark needs to be expanded or a new carpark built based on the results of surveys on visitor numbers and trends.

4. Projects Implementation

(1) Order of priorities

The projects implementation schedule has been created to maintain Shokasonjuku Academy in good condition. It will begin in FY 2017, with the short-term phase continuing until FY 2026 and the medium-term phase until FY 2046, with the long-term phase running from FY 2047 onward (Table 2).

Building repairs, the establishment or renovation of facilities necessary for preservation, and improvement of the surrounding environment will be undertaken over all of these phases. In conjunction with this work, historical document surveys, visitor surveys, and monitoring of any changes to buildings and other elements will also be undertaken, with measures taken on an ongoing basis to communicate information. Priority will be placed on the following projects in order to maintain Shokasonjuku Academy in good condition.

- Installation of related equipment (disaster management facilities, surveillance cameras)
- Conservation and restoration work (repairs to building exteriors and furnishings, etc.)
- Arrangement and improvement of landscape (trees, soil paths, drainage, hedges)
- Installation of guidance and explanation boards

(2) Review of implementation schedule

During the scheduled short-term period (up until 2026), the implementation schedule will be revised in view of Programme progress. However, if any new measures become necessary, the city will review the schedule without waiting for 2026.

(3) Other

Shoin Shrine (religious corporation) has carried out conservation and restoration work, etc. for the Shokasonjuku Academy by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 4 million yen was spent in FY2016 and 6 million yen has been budgeted for FY2017, both including costs incurred or earmarked for plan making and the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

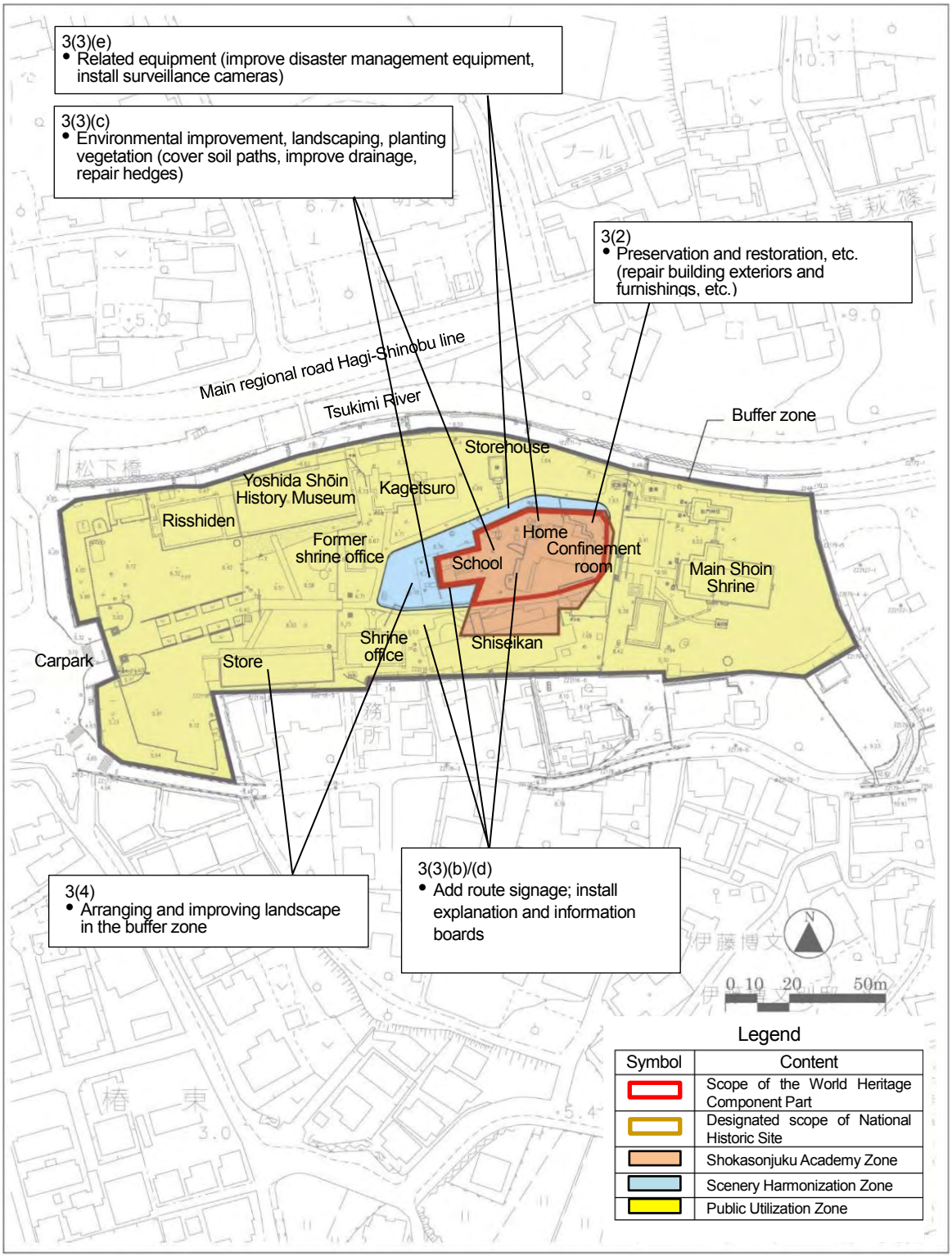
Shoin Shrine will also work on the conservation, restoration, presentation and public utilization of Shokasonjuku Academy, in conjunction with Hagi City and the other four component parts in Area 1, to ensure the smooth implementation of the projects.

Category	Project	Short term (2017-26)	Medium term (2027-46)	Long term (2047-)
(1) Research and study	(a) Excavation surveys (where necessary)			
	(b) Historical document survey			
	(c) Restoration surveys			
	(d) Visitor surveys			
	(e) Monitoring			
(2) Building restoration	Restoration of buildings and remains		Roof rethatching, etc.: Every 30-50 years	Deconstruction and restoration: Every 100-150 years
(3) Presentation of Shokasonjuku Academy as the intellectual starting point of industrialization and modernization	(b) Path planning (route signage)			
	(c) Arranging and improving landscape, and planting vegetation (cover soil paths, improve drainage, repair hedges)			
	(d) Guidance and explanation boards			
	(e) Establishment of related facilities (improve disaster management equipment, install surveillance cameras)			
(4) Arranging and improving landscape in the buffer zone				

Table 2: Project implementation schedule

5. Master plan

The master plan is shown in Figure 2 below.



6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Shokasonjuku Academy, which became a source of "Conservation Work Programme and Implementation Programme" is available on Hagi City's web site. <http://www.city.hagi.lg.jp/site/sekaiisan/h19508.html>

Conservation work programme and implementation programme for the Shuseikan (Area 2 Kagoshima/ Component part 2-1)

Kagoshima City drew up a "Conservation Work Programme and Implementation Programme" for Shuseikan in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

Maintain in good condition the buildings and underground archaeological remains comprising Japan's first Western-style factory complex Shuseikan, as well as the surrounding environment; enhance the value and attractiveness of these elements; and improve the visitor environment.

Shimadzu Nariakira, feudal lord of the Satsuma Clan, responded to the threat posed by the Western powers by building the Shuseikan factory complex to cast iron cannons and manufacture Western-style warships, textiles, and glass as a means of encouraging new industry and making Japan a strong and wealthy nation. In terms of the Sites of Japan's Meiji Industrial Revolution, Shuseikan is a component part that illustrates the phase of trial and error experimentation in the iron and steel manufacturing field up to the phase of direct importation of Western technology in the shipbuilding field.

In the Conservation Management Plan for Shuseikan, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Shuseikan and their value categories are shown as Table 1.

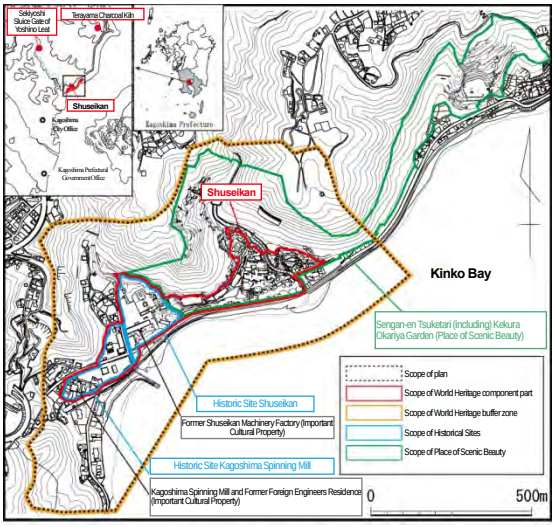


Figure 1: Scope of Plan

Area	Time Period	Element	Value to the actors		
			OUV	Nation	Region
Iso Area	Shuseikan Project Phase I	Site of the reverberatory furnace	○	○	○
		Sites of the blast furnace, No.1 reverberatory furnace (underground remains)	○	○	○
		Leat (Shuseikan side)	○	○	○
		Site of the shrine	○	○	○
		Site of the mint (underground remains)	○	○	○
		Site of the climbing kiln	○	○	○
		Sengan-en	○	○	○
		Crane-shaped Lantern	○	○	○
		Bogakuro Pavilion		○	○
	Shuseikan Project Phase II	Former Shuseikan Machinery Factory	○	○	○
		Shaper (movable property)		○	
		Site of the spinning mill (underground remains)	○	○	○
		Spinning machine (movable property)			○
		Former Kagoshima Foreign Engineer's Residence	○	○	○
		Old structure of the Engineer's Residence (underground remains)	○	○	○
		Facility affiliated with the Engineer's Residence (underground remains)	○	○	○
		Site of the foundry (underground remains)	○	○	○
	Later period	Tsurugane Shrine			○
		Signpost			○
		Monument commemorating the Royal visit of Emperor Meiji			○
		Site of the Hydroelectric Dam			○
		Site of the climbing kiln			○
		Monument commemorating the reverberatory furnace			○
		Monument commemorating the site of the Spinning Mill			○
		Monument commemorating the ship made by Shimadzu Nariakira			○
		Iso Art Gallery			○
		Iso Kohi-kan			○

Table 1: The list of elements constituting Shuseikan and their value categories

Out of these elements in the Table 1, which the Conservation Work Programme for Shuseikan will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Kagoshima City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following five points.

The owner will maintain the buildings and remains in good condition as elements contributing to the Outstanding Universal Value of the component part, install guidance facilities that convey the appeal of Shuseikan and help visitors to

understand industrial systems at each phases, and improve the visitor environment. The site owners will also work to conserve the natural environment and surrounding landscape coexistent with urban facilities, etc.

(1) Undertake conservation and restoration work to maintain in good condition those constituent elements illustrating the fusion of Western technology and traditional Japanese technology

Site of the reverberatory furnace, Former Shuseikan Machinery Factory (hereinafter referred to as "Shuseikan Machinery Factory"), and Former Foreign Engineer's Residence (hereinafter referred to as "Foreign Engineer's Residence")— constituent elements contributing to the Outstanding Universal Value of World Heritage property—are remains demonstrating in a concrete form the fusion of Western technology and traditional Japanese technology.

The owner[1] of the component part (hereinafter referred to as "the owner") will maintain the component part in a stable condition and in its original form, and, in the case that deterioration or damage is identified, clarify the cause and undertake the necessary conservation and restoration work accordingly.

(2) Convey the appeal of the Shuseikan Project and work to build a vibrant community through partnership with other component parts that grew from Kagoshima

The owner will engage in a systematic study of the industrial systems in Phases 1 and 2 of the Shuseikan Project and present the results to promote visitor understanding.

In addition, because Shuseikan is one of the foundation stones of modern Japanese industry, with its technologies spreading throughout Japan, the owner will draw on the results of the above study to reveal in more detail the story of the Sites of Japan's Meiji Industrial Revolution. That story will be shared with the relevant municipal authorities and disseminated on an ongoing basis through partnership with them with the aim of creating a vibrant community that draws numerous visitors to both Area 2 and other Areas.

(3) Enhance guidance facilities in relation to Shuseikan and its contribution to the Sites of Japan's Meiji Industrial Revolution

The Shuseikan remains illustrate the two different developmental phases of the Sites of Japan's Meiji Industrial Revolution, making it difficult to comprehend the respective industrial systems of those two phases. The roles of the Shuseikan Machinery Factory, the annex to this, and the Foreign Engineer's Residence, which are the current guidance facilities, will therefore be clarified and clearer guidance provided. As part of this, a new guidance facility will be set up to present an overview of the Sites of Japan's Meiji Industrial Revolution and Shuseikan Project as a whole, choosing a location that will be convenient for visitors but not adversely impact on the Outstanding Universal Value and component part's landscape, promoting understanding of the Shuseikan as a component part of the World Heritage property.

In presenting guidance information, the owner will bear in mind the process of the historical changes and developments of Shuseikan.

(4) Enhance the environment to assist on-site understanding of the Outstanding Universal Value of the property and the position of the component part within that and industrial systems for visitor

The owner will create an observation route that enables visitors to visualize the industrial systems of the time, from the cannon manufacturing remains from Phase 1 of the Shuseikan Project to the shipbuilding and textile manufacturing remains, etc., from Phase 2, setting up information and guidance boards along the way. Planar markers indicating the location and scale of the underground archaeological remains will also be installed.

The glassworks in particular is the only functional industrial remaining related to the Shuseikan Project, and visitors can view the glass product manufacturing process. The owner will therefore continue operating and using the glassworks as well as widening the observation path and improving the flow to enhance the environment for visitor.

1 In this Abstract, the owner of the component part refers to Kagoshima City and SHIMADZU LIMITED.

(5) Conserve the natural environment and the surrounding landscape coexistent with urban facilities, etc.

National Road 10, a part of which traverse the component part and the rail line running parallel to it , did not exist at the time of the Shuseikan Project. However, they currently serve important function as urban facilities, and the owner will work to ensure that these facilities co-exist with the component part without impacting on the remains or the landscape. Due to ongoing urbanization in later periods, the Foreign Engineer's Residence, for example, is now located amongst residential and commercial premises. The city will work to improve the environment in line with the original landscape that appears in old photographs of the time.

The surrounding landscape and natural environment, such as Kinko Bay, Sakurajima, and the sheer and cliff behind Shuseikan, are important elements that influenced the siting of the component part, and the owners of these areas will therefore work with the city and the relevant administrative institutions to preserve these.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

The owner of the component part will work to elucidate the functions of and relations among the various facilities in Phases 1 and 2 of the Shuseikan Project as depicted in old drawings. Based on the results of long-term surveys continuing through to the present, the owner will undertake additional surveys focused on areas not previously surveyed and areas where such surveys are needed.

Based on progress with the above surveys, measurement and ground surveys will be conducted as necessary. Visitor surveys will be undertaken to confirm the extent of visitor impact on conservation of the component part, and the owner will also create monitoring charts to trace changes to the component part over time.

(2) Conserving and restoring buildings and historical and underground archaeological remains (preserving, reinforcing, and stabilizing materials, substance and structure)

To maintain constituent elements of Shuseikan contributing to the Outstanding Universal Value, the owner will engage in regular monitoring, and if damaged areas, or areas where damage could potentially occur, are discovered, will undertake systematic restoration in order of priority as determined with reference to the views of experts, etc., to stabilize and strengthen those areas. Restoration of exposed structures will be undertaken with due sensitivity to maintaining the structures and materials used at the time. Underground archaeological remains that have so far been detected will be given a protective earth layer of an appropriate thickness and then maintained in a stable condition underground.

(3) Illustrating industrial systems at the component part

The owner will set up information boards to explain to visitors which remains belong to Phase 1 and which to Phase 2 of Shuseikan Project, and how these relate to the component parts of other Areas. The results of further surveys will be actively reflected in the content of explanations and exhibits.

(4) Arranging and improving landscape from a scenic perspective

The owner will conserve trees in the Sengan-en garden which constitute the garden's value. However, trees which have become so large that they might impact on the conservation of remains or on visitor safety will be appropriately maintained with sensitivity to the landscape. As the area around the Foreign Engineer's Residence has changed dramatically due to subsequent urbanization, the city will improve the settings of the area with reference to old photographs of the original landscape.

In the buffer zone, maintenance of the excellent natural environment, which includes the undulating forest belt inland and the Kinko Bay ocean vista to the southeast, will be spearheaded by the city and other relevant administrative institutions. Arranging and improving landscape will be approached with the aim of creating a beautiful town environment in harmony with the natural environment pursuant to the Landscape Act and other laws and regulations.

Where monitoring identifies spots that have or might have a negative impact on the landscape, the owner of the spot will improve the landscape to prevent or mitigate that impact based on the views of experts and in conjunction with the city and other relevant administrative institutions.

(5) Implementing projects

The city will set out a clear implementation schedule that delineates short, medium and long-term phases and the various projects to be addressed within those phases to ensure the steady and phased implementation of the Programme.

The owners and managers of the three component parts of Area 2 Kagoshima and their buffer zones will be responsible for managing and operating the each project regarded as necessary during the three phases pursuant to the Programme. In addition to the owners and managers, the Government of Japan and Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other relevant institutions and groups will coordinate at the Shuseikan Conservation Council and the Partnership Council for Modern Industrial Heritage Sites in Kagoshima to ensure steady progress on each of the conservation and restoration.

3. Methods

(1) Research and study

(a) Historical document surveys

The owner will work to elucidate the industrial systems that formed during Phase 1 of the Shuseikan Project, which included the cannon manufacturing depicted in the "Satsushu Mitoriezu collection owned by Takeo city", and Phase 2, when industries such as spinning were pursued. In particular, a historical document survey will be undertaken to gain a detailed understanding of shipbuilding technologies and compare the Shuseikan Machinery Factory with the Nagasaki Iron Works, which was built by the shogunate prior to Phase 2 of the Shuseikan Project.

(b) Excavation surveys

The owner will spearhead excavation surveys to (i) identify the location and scale of the cannon-boring mill, the cut glass factory, and the blast furnace, (ii) carry out presentation of the leat (Shuseikan side) which was buried in earth and sand due to landslide, and (iii) confirm the remains of a gas lit experiment conducted using Crane-shaped stone lantern in relation to Phase 1; and to (i) confirm the scale of the Spinning Mill, (ii) confirm the location of affiliated facilities, and (iii) confirm remains indicating the location of the original Foreign Engineer's Residence in relation to Phase 2.

(c) Measurement and ground surveys

The owner will conduct measurement and ground surveys as necessary based on the results of the historical document and excavation surveys. The necessary surveys will also be undertaken for the conservation and restoration of the Bogakuro Pavilion where posts are leaning and the storehouse, where plaster is flaking and stone foundations have weathered.

(d) Visitor surveys

The city will conduct a survey on visitor numbers, as well as observations of visitor behavior and the length of visits, to ascertain visitor impact on the state of the component part as well as the degree of visitor satisfaction.

(e) Monitoring

Every year the owner will engage in monitoring in conjunction with the city to inspect the component part and the buffer zone and ascertain their current states. Individual data for the component part will comprise detailed records of the parts and materials of each constituent element, while individual data for the buffer zone will comprise records of the landscape from multiple points selected within and outside the component part. Monitoring charts aggregating the above information will also be used.

(2) Conservation and restoration

(a) Target

The owner will conserve (maintain, repair and restore) the constituent elements of the component part contributing to the Outstanding Universal Value. The location of each of these elements is noted in Figure 2.

(b) Basic concept and methods

○ **Leat (Shuseikan side)**

The owner will engage in conservation and restoration based on the results of excavation survey in order to maintain the remains in stable condition. Because overgrown trees could cause damage to the remains, they will be removed to the extent necessary to prevent such damage. The scope of restoration work will be kept to a minimum pursuant to expert views. A survey will be conducted of the existing drainage canal, determining an appropriate runoff channel so as not to encourage the negative impact of soil runoff by running water on the terrain or the remains.

○ **Shuseikan Machinery Factory**

The owner has undertaken appropriate conservation and restoration on stone buildings, and will continue with the seismic resistance survey, engaging in structural reinforcement where necessary.

○ **Foreign Engineer's Residence**

The owner will conserve and repair foundation stones for the pillars around the outside of the building where cracks have appeared. In terms of repair methods, seriously damaged stones will be replaced, but if there is only superficial damage, cracks will be repaired with adhesive, etc., and reinforced by applying chemicals.

Where paint on the outer wall has flaked markedly over time, the existing coat will be removed, the surfaces prepared, and new paint applied.

○ **Sengan-en**

No areas requiring urgent repair have been found at the sites of climbing kiln (connected kilns on the slope) or on the crane-shaped stone lantern, but the owner will carefully monitor their status and look into undertaking restoration work if deterioration or damage is detected. Conservation and restoration works are also necessary for the following elements and will be undertaken accordingly.

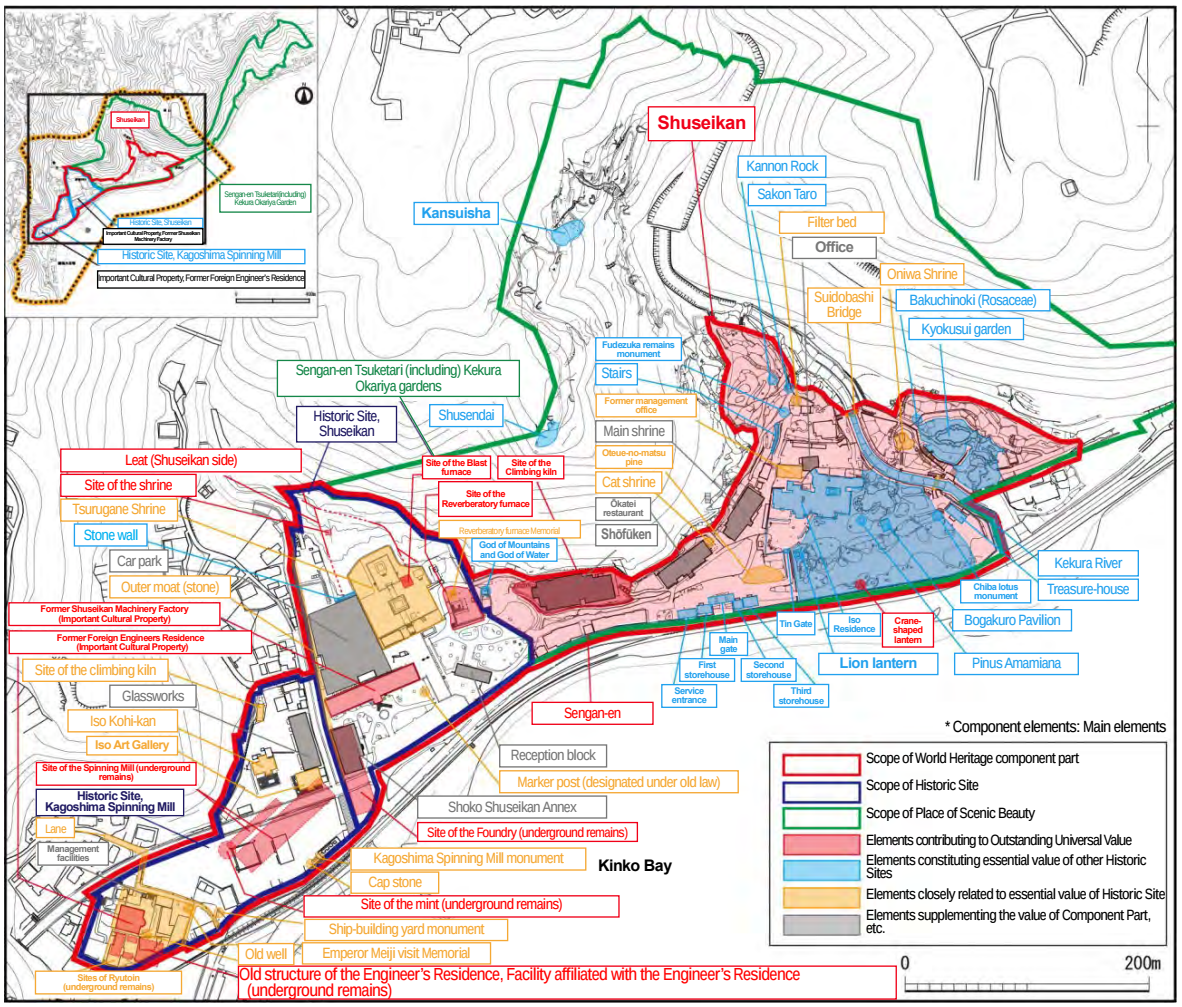


Figure 2: Constituent elements subject to conservation and restoration, etc.

- **Bogakuro Pavilion**

  Pillars will be replaced or reinforced by putting bolts through the splice area and fixing them on both sides. Angle braces will be attached to crossbeams to reinforce the structure. Heavily weathered flagstones will be replaced. The replacement stones will be made to replicate the existing stones.

- **Treasure house**

  The second-floor roof trusses will be examined for termite damage, taking termite eradication or prevention measures. Weathered flagstones will be repaired so as to prevent further damage. Weathered areas of the stone steps at the main gate will be replaced with stones of the same material. The structure of the eaves of the high windows will be improved by changing them to wooden backing material, etc.

○ **Reverberatory Furnace and Site of Spinning Mill, etc.**

No areas requiring urgent repair have been found at this stage, but the owner will carefully monitor the situation and look into undertaking restoration work if deterioration or damage is detected.

(3) Presentation of the component part in light of industrial systems

With the site divided into the Phase 1 Shuseikan Zone, Phase 2 Shuseikan Zone, and Place of Scenic Beauty Sengan-en Zone, the owner will design tour routes that enable visitors to understand the industrial systems of the different periods as well as the connection between the Place of Scenic Beauty Sengan-en Zone and the Shuseikan Project, providing information through display of remains and guidance and information boards. The site will be used not just as a tourism resource but also as a resource contributing to school education, social education, and local revitalization.

(a) Tour routes

The owner will set up a tour route that begins at the Sengan-en reception block and moves from the Phase 1 Shuseikan Zone to the Place of Scenic Beauty Sengan-en Zone and finishes at the Phase 2 Shuseikan Zone. In the Phase 1 zone, the course will follow the order of the cannon-manufacturing process. In the Phase 2 zone, the course will take visitors from the Shuseikan Machinery Factory as a key facility in the Phase 2 Shuseikan Project, and traverse in order the glassworks, Site of the Spinning Mill, and Foreign Engineer's Residence, etc., enabling visitors to understand the positioning of the various facilities and the flow between them. In the Place of Scenic Beauty Sengan-en Zone, the existing path will basically be used on a course that takes visitors to sites deeply implicated in the Shuseikan Project, such as the site of the climbing kiln, the Iso Residence, the crane-shaped lantern, and the Bogakuro Pavilion (Figure 3).

(b) Display of underground archaeological remains and environmental improvement

The owner will create garden paths and drains to promote public utilization of the Leat (Shuseikan side). Planar markers will be installed for the sites of blast furnace, cannon-boring mill, and glassworks to provide information on the location, scale, and structure of the underground archaeological remains based on excavation survey results. The area around the Foreign Engineer's Residence will be arranged so that it can be used together with the land recently purchased by the city, with planar markers installed for related archaeological remains such as the stable, the foundation facilities of which are buried underground. If, once the planned National Road 10 bypass goes in beneath part of the verge of the buffer zone, traffic on the existing National Road 10 dwindles and commercial facilities move elsewhere as a result, the underground archaeological remains of the foundation portion of the Spinning Mill will be indicated on-site with planar markers to the extent possible.

(c) Arranging landscape and planting vegetation

The city will arrange landscape around the Foreign Engineer's Residence by replanting the original evergreens and putting soil-based paths through the grounds with reference to old photographs, etc., while ensuring that the building can be seen from National Road 10, which runs along the northwestern side, and the municipal road which runs along the southwestern side.

In Sengan-en, Shimadzu, Ltd. will preserve and nurture the trees constituting the garden, as well as felling and replacing overgrown trees that might impact on the safety of visitors and the conservation of underground archaeological remains such as the reception block and Tsurugane Shrine approach.

(d) Guidance and information boards

The city will set up a World Heritage Plaque as one of the Sites of Japan's Meiji Industrial Revolution in the vicinity of the Shuseikan Machinery Factory, highlighting the Outstanding Universal Value of the Property and how Shuseikan is contributing to the OUV as one of the 23 component parts. Together with progress on excavation surveys and marking out the remains, guidance boards will be set up to explain the role of the each remains in the industrial system and their relationship to other remains, while information boards indicating the new courses will be installed along the routes. Guidance and information boards set up within Sengan-en will be of a design, form, and quantity and in locations that do not detract from the value of the garden as a Place of Scenic Beauty.

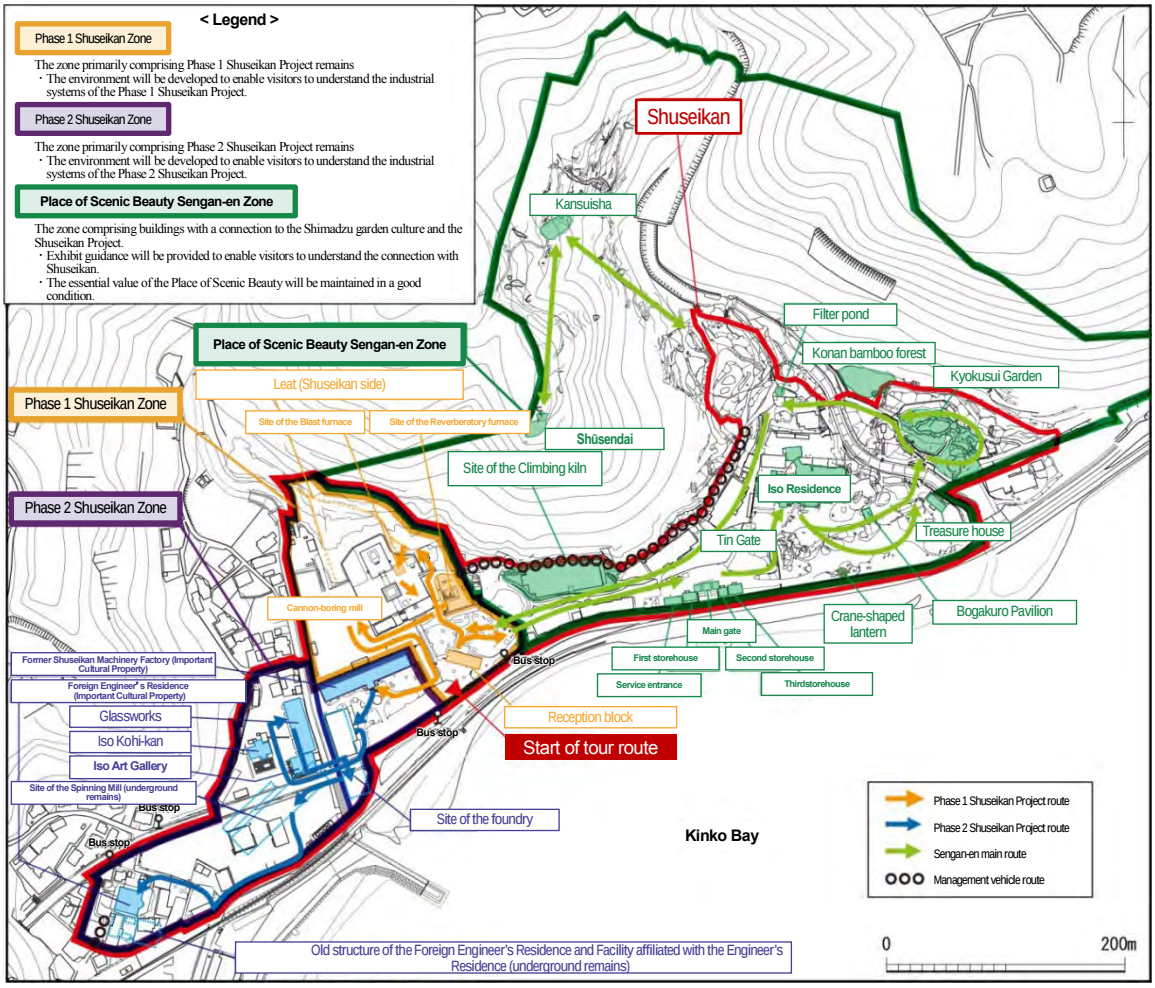


Figure 3: Zoning of constituent elements and surrounding area

(e) Administrative and utility facilities

The administration block, information station, and toilets, etc., scattered around the Foreign Engineer's Residence grounds will be merged into one new facility built with sensitivity to the landscape. All toilets within the component part will be made barrier-free.

The owner will set up a new guidance facility near the Sengan-en reception block, providing clear guidance in the collaboration with Shoko Shuseikan (Shuseikan Machinery Factory), the annex to this, and the Foreign Engineer's Residence. The new facility will present exhibits and provide explanations that enable visitors to understand the Outstanding Universal Value and contribution of Shuseikan, the content of the Shuseikan Project in Phases 1 and 2, the relationships between Shuseikan and other component parts in other Areas, and the connection with nearby historic sites, maintaining an appropriate division of roles with other explanation and exhibition facilities.

The glassworks where visitors can observe the glassmaking process will continue to be opened to the public, as will the Iso Residence, etc. The three storehouses will also be opened to the public after restoration are completed (Storehouses 1, 2, and 3 in Figure 3).

(4) Arrangement and improvement of landscape in the buffer zone

The city and the relevant administrative institutions will conserve the settings and landscape in good condition through regulations pursuant to the Landscape Act, the Natural Parks Act, and the City Planning Act. In the area behind the component part, slopes will be stabilized and mōsō bamboo and dead trees will be

felled. Particularly when restoring slips, etc., on slopes, materials and methods will be applied with sensitivity to the landscape.

In addition, there is a plan to run a National Road 10 bypass tunnel through the west hilly area. At present, this is not expected to adversely impact on the buffer zone. Based on progress with the construction plan, the Cabinet Secretariat will coordinate with the Ministry of Land, Infrastructure, Transport, and Tourism, Kagoshima Prefectural Government, and Kagoshima City to gather the necessary information to create a Heritage Impact Assessment Report, and the city will work through the Shuseikan Conservation Council to build consensus on the content of that report.[2]

4. Projects implementation

(1) Order of priorities

The schedule for implementation of those projects which should be undertaken on a priority basis in each zone will be as in Table 1. Projects which will be given particular priority in the short term phase are as follows:

- Establishment of guidance facilities
- Seismic resistance analysis and structural reinforcement of the Shuseikan Machinery Factory
- Establishment of a World Heritage Plaque
- Conservation and restoration of other constituent elements (buildings and historical and archaeological remains and objects) contributing to the Outstanding Universal Value.

(2) Review of implementation schedule

The schedule will be reviewed after the medium-term phase (15 years) based on the status of project progress. Where new measures need to be taken, a review will be considered prior to that time.

(3) Other

The owner has carried out conservation and restoration work, etc. for the Shuseikan by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 168 million yen was spent in FY2016 (including the amount spent for excavation survey of Former Foreign Engineer's Residence and its vicinity) and 627 million yen has been budgeted for FY2017 (including the amount earmarked for seismic resistance analysis), both including costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

2 The National Road 10 Bypass Construction Plan was submitted to the UNESCO World Heritage Center on November 30, 2015, pursuant to Recommendation h) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. In addition, the ICOMOS Technical Report on "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" was sent to the Government of Japan on June 1, 2017 via the World Heritage Center conducted a Heritage Impact Assessment (HIA) in relation to the above plan and recommended that a report be submitted to the World Heritage Center for the purpose of an ICOMOS assessment.



Figure 4: Conceptional drawing after projects completed in the component part

Zone	Category	Project	Short term					Medium term	Long term
			2017	2018	2019	2020	2021	2022-31	2032 onward
A. Phase 1 Shuseikan zone	(1) Research and study	(a) Excavation surveys for cannon-boring mill, glassworks, and blast furnace							
		(b) Excavation survey on the portion of the leat (Shuseikan side) buried in earth and sand							
	(2) Conservation and restoration of buildings and historical and archaeological remains and objects	(c) Restoration of drainage canal leat (Shuseikan side)							
		(d) Conservation and restoration of sites of reverberatory furnace and Spinning Mill							
	(3) Presentation and Public utilization in light of industrial systems	(e) Arrangement and improvement of landscape with felling and replacing large and dead trees							
		(f) Establishment of guidance facility							
		(g) Display information on tour routes							
		(h) Installation of barrier-free toilets in Sengan-en carpark							
		(i) Improve leat (Shuseikan side) and open to public							
		(j) Installation of signage on underground archaeological remains of cannon-boring mill, glassworks, and blast furnace							
B. Phase 2 Shuseikan zone	(1) Research and study	(a) Excavation survey of Spinning Mill							
		(b) Excavation survey of original location of Foreign Engineer's Residence							
	(2) Conservation and restoration of buildings and historical and archaeological remains and objects	(c) Conservation and restoration of Foreign Engineer's Residence							
		(d) Conservation and restoration of reverberatory furnace and Spinning Mill (relisted)							
		(e) Seismic resistance analysis and structural reinforcement of Shuseikan Machinery Factory							
	(3) Presentation and Public utilization in light of industrial systems	(f) Establishment of a World Heritage Plaque							
		(g) Combined public utilization of glassworks and Iso Art Gallery							
		(h) Installation of barrier-free toilets in Iso Art Gallery							
		(i) Updating of guidance boards based on the results of excavation survey							
		(j) Installation of planar markers on site of Spinning Mill							
		(k) Improvement of settings of Foreign Engineer's Residence for public utilization with the land owned by city							
		(l) Establishment of management and toilet facilities to merge the administration block and information station, etc., into one place							
		(m) Installation of barrier-free toilets in the Foreign Engineer's Residence							
		(n) Arrangement and improvement of landscape reminiscent of the historical background							
C. Place of Scenic Beauty Sengan-en Zone	(1) Research and study	(a) Excavation survey around crane-shaped stone lantern							
		(b) Measurement of amount of lean in Bogakuro Pavilion, etc., and ground survey							
	(2) Conservation and restoration of buildings and historical and archaeological remains and objects	(c) Conservation and restoration of sites of climbing kiln and crane-shaped stone lantern							
		(d) Conservation and restoration of treasure house							
		(e) Conservation and restoration of Bogakuro Pavilion							
	(3) Presentation and Public utilization in light of industrial systems	(f) Conservation and nurturing the trees forming the garden							
		(g) Continued use of the Iso Residence							
		(h) Opening of the storehouses to the public							
D. Buffer zone	Presentation and Public utilization in light of industrial systems	(i) Stabilization of slopes							
		(j) Felling of mōsō bamboo							
		(k) Felling of dead trees, planting of replacements							
		(l) Legal protection sensitive to the natural terrain and landscape							

Table 2: Project implementation schedule

5. Master plan

The master plan showing those project to be implemented at Shuseikan is as in Figure 5 below

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for Shuseikan, which became a source of "Conservation Work Programme and Implementation Programme" is available on Kagoshima City's web site. <http://www.city.kagoshima.lg.jp/kanko/sekaiisan/bunkazai-sekaiisan/syuufuku-koukaikatsuyoukeikaku2.html>

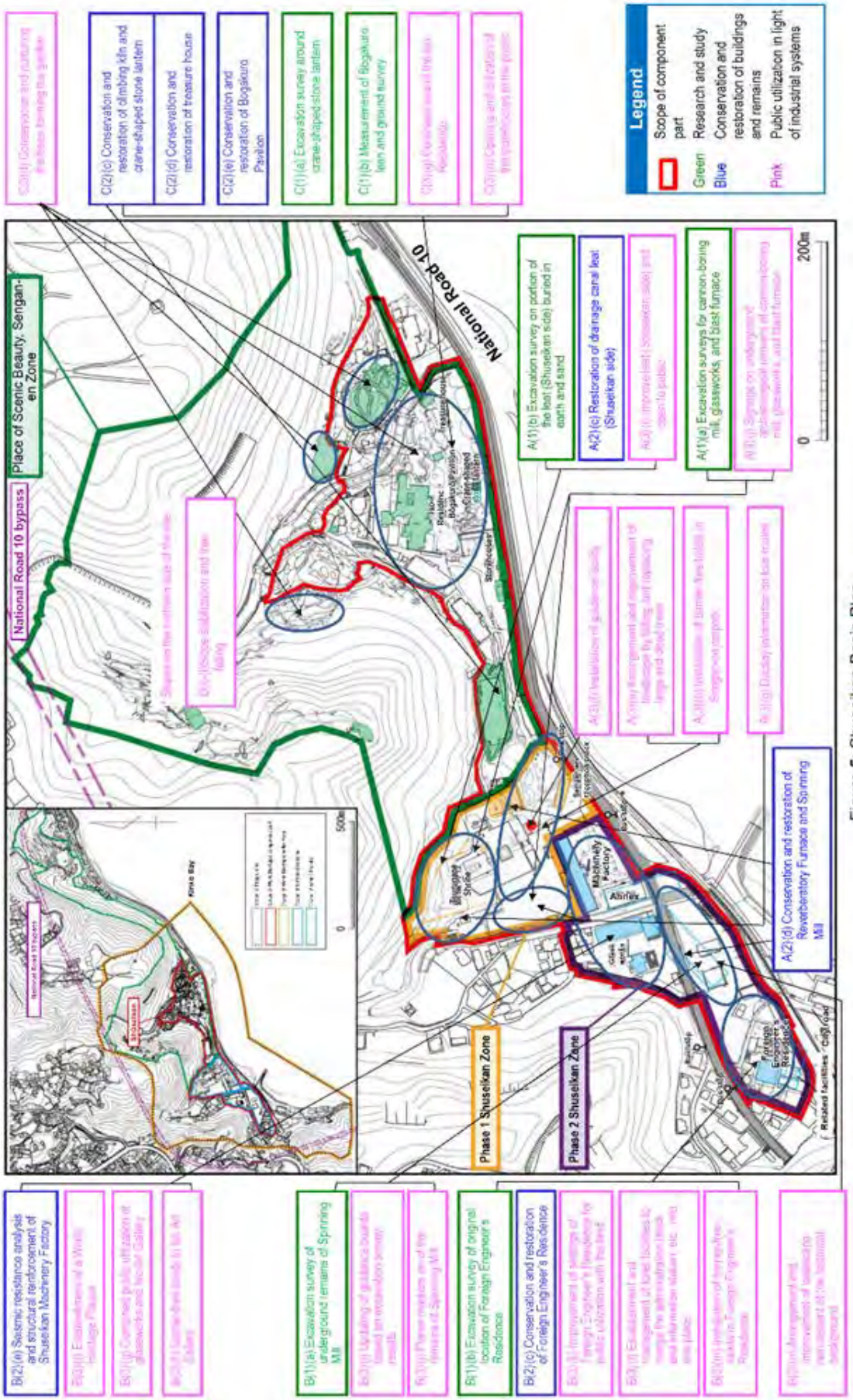


Figure 5: Shuseikan Basic Plan

Conservation work programme and implementation programme for Terayama Charcoal Kiln (Area 2 Kagoshima/ Component part 2-2)

Kagoshima City drew up a "Conservation Work Programme and Implementation Programme" for Terayama Charcoal Kiln in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

Maintain in good condition those remains and its settings embodying the production system for hard charcoal, which served as the fuel for the Shuseikan Project; enhance the value and attractiveness of these, and the visitor environment.

The Terayama Charcoal Kiln was a large kiln built for the mass production of powerful-firing hard charcoal to supply the fuel needed for the Shuseikan Project. In addition to representing the hard charcoal production system, the site also forms part of the whole Shuseikan industrial system which illustrates the phase of trial and error experimentation in the iron and steel manufacturing field that took place at the Sites of Japan's Meiji Industrial Revolution.

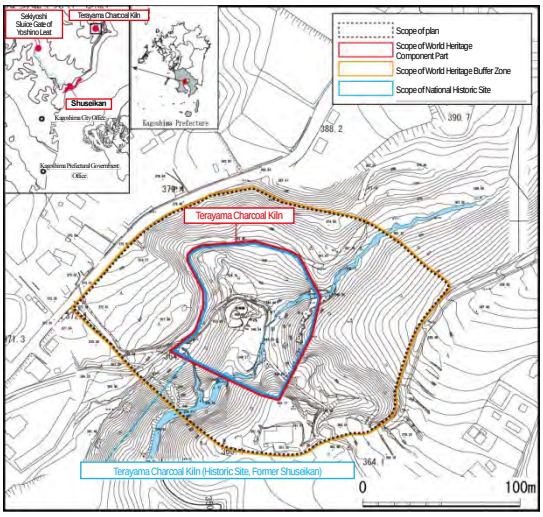


Figure 1: Scope of programme

In the Conservation Management Plan for Terayama Charcoal Kiln, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Terayama Charcoal Kiln and their value categories are shown as Table 1.

Area	Time Period	Element	Value to the actors		
			OUV	Nation	Region
Terayama Area	Shuseikan Project Phase I	Site of the Charcoal Kiln	○	○	○
		Monument to the Charcoal Kiln	○	○	○

Table 1: The list of elements constituting Terayama Charcoal Kiln and their value categories

Out of these elements in the Table 1, which the Conservation Work Programme for Terayama Charcoal Kiln will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Kagoshima City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following three points.

The city will serve as the main agent in not only maintaining the kiln itself as remains contributing to the

Outstanding Universal Value of the World Heritage property, but also undertake surveys of surrounding remains that embody the whole charcoal production system, and conserve the settings, such as the forests that provided the raw materials and the streams that supplied the cooling water after firing.

The city will enhance explanation functions so that visitors can understand the hard charcoal production system as well as the role which the site played in supplying fuel to the Shuseikan Project and ensure a safe observing environment.

(1) Conduct surveys of and conserve (maintain, repair and restore) the charcoal kiln and related remains

The city will conduct a displacement measurement survey of the kiln's masonry, which remains above ground in the same condition as when it was built, engaging in conservation and restoration where necessary under the direction of experts, and maintaining the masonry in a stable condition. If any underground archaeological remains related to hard charcoal production are discovered through excavation surveys, appropriate measures will be taken to conserve them underground.

(2) Conserve (maintain, repair and arrange) the settings, which is closely related to kiln operation, and arrange and improve later installations appropriately for landscape

The Castanopsis sieboldii, tan oak, and other evergreen broad-leaved trees around the kiln which supplied the raw materials for the kiln, as well as the stream running down the eastern side of the kiln which was necessary to secure the charcoal cooling water for the production process, are both essential elements in understanding the hard charcoal production system. Therefore, the city will appropriately manage and maintain elements and undertake conservation and restoration, arrange and improve landscape where necessary. The significance of trees and concrete installations from later times that hamper understanding of the original hard charcoal production system will be carefully judged, and, where necessary, these will be felled, removed, or arranged, improved.

(3) Provide clear explanations of the original kiln operation

Considering the process of historical changes and developments, to enable visitors to understand the role of the kiln in the hard charcoal production and utilization system from the sequence of coal production processes (gathering raw materials, firing the kiln, extracting and cooling the charcoal) to transportation to Shuseikan, as well as the use of hard charcoal in the reverberatory furnace, etc., the city will install explanation boards for the site of the charcoal kiln based on excavation survey results, in addition to installing planar markers indicating the locations, scales, and structures of the underground archaeological remains of related facilities.

Where explanation boards are installed, and planar markers laid down for underground archaeological remains, care will be taken to harmonize these with the terrain and the natural landscape surrounding the site of the charcoal kiln. Where necessary, measures for the safety of paths leading to the kiln in order to maintain a safe observation environment.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Promoting research and study

The city will undertake the following research and surveys.

The historical document survey will seek to elucidate the entirety of the hard charcoal production system, including the sequence of the processes conducted at the Terayama Charcoal Kiln and the location of the related facilities at that time, while the excavation survey will focus on understanding the actual state of the storehouse remains and other related facilities, as well as elucidating the structure of the kiln. Where the excavation survey reveals carbide, this will be subjected to a physico-chemical analysis. At the same time of the historical document and excavation surveys, the city will also conduct measurement and ground surveys as necessary. In addition, displacement measurements of the kiln masonry will be continued to identify and analyze the behavior of each stone materials. A visitor survey will be undertaken to confirm the extent of visitor impact on conservation of the component part, while monitoring will also be implemented to identify any changes in the component part.

(2) Conserving, reinforcing and stabilizing of materials, substance and structures of masonry of the kiln

To maintain constituent elements of Terayama Charcoal Kiln contributing to the Outstanding Universal Value, such as the kiln masonry, etc. the city will engage in regular monitoring, and if damaged areas, or areas where damage could potentially occur, are discovered, will undertake systematic restoration in order of priority as determined with reference to the views of experts, etc., to stabilize and strengthen those areas. Restoration of exposed structures will be undertaken with due sensitivity to maintaining the structures and materials used at the time. Underground archaeological remains that have so far been detected will be given a protective earth layer of an appropriate thickness and then maintained in a stable condition underground.

(3) Illustrating the hard charcoal-production system at the component part

The city will explain to visitors (a) the hard charcoal production system, (b) the role that the kiln played in the Shuseikan Project; and (c) the connection to other historic sites in the area. The results of surveys conducted by the city will be actively reflected in the content of explanations and exhibits.

(4) Arranging and improving landscape from a scenic perspective

The city will preserve the Castanopsis sieboldii and tan oak trees within the component part which supplied the raw materials for the kiln, and concrete installation and barrier fences that were added later period will be arranged for landscape. In the buffer zone, the city will maintain the surrounding forests where Castanopsis sieboldii and tan oak are distributed, as well as working to maintain a safe and pleasant walking environment along the nature trail.

Where monitoring identifies spots that have or might have a negative impact on the landscape, the owner of the spot will improve the landscape to prevent or mitigate that impact based on the views of experts and in conjunction with the city and other relevant administrative institutions.

(5) Implementing projects

The city will set out a clear implementation schedule that delineates short, medium and long-term phases and the various projects to be addressed within those phases to ensure the steady and phased implementation of the Programme.

The owners and managers of each of the component parts of Area 2 Kagoshima and the related buffer zones will be responsible for managing and operating the each project regarded as necessary for the three phases pursuant to the Programme. In addition to the owners and managers, the Government of Japan and Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other relevant institutions and groups will coordinate at the Shuseikan Conservation Council and the Partnership Council for Modern Industrial Heritage Sites in Kagoshima to ensure steady progress on each of the conservation and restoration projects.

3. Methods

(1) Research and Study

The city will undertake the following surveys.

(a) Historical document surveys

Because Nariakira Shimadzu dispatched Yamamoto Tosuke to Kii and Kumano region to collect information in preparation for building the kiln, a survey will be conducted on the structure of kilns and the hard charcoal production process in Kii and Kumano, and information will be collected on Nishu Oteyama (Miyakonojo City and Ayacho, Higashimorokata district in Miyazaki Prefecture), which was managed by the Yamamoto family.

(b) Excavation surveys

Additional excavation surveys will be conducted on the structure of the interior of the kiln masonry, as well as surveys of facilities related to the charcoal-producting process (setting materials in the kiln, firing the kiln, refining and cooling the charcoal, etc.) and the remains of these. Where an excavation survey reveals carbide, this will be subjected to a physico-chemical analysis.

(c) Measurement and ground surveys

Measurement and ground surveys will be conducted as necessary based on the results of the historical document and excavation surveys. In addition, displacement measurements of the kiln masonry will be continued to identify and analyze the behavior of the each stone materials.

(d) Visitor surveys

The city will conduct a survey on visitor numbers, as well as observations of visitor behavior and the length of their visits, to ascertain their impact on the state of the component part as well as the degree of visitor satisfaction.

(g) Monitoring

Every year city will inspect the component part and the buffer zone and ascertain their current state. Individual data for the component part will comprise detailed records of the parts and materials of each constituent element, while individual data for the buffer zone will comprise records of the landscape from multiple points selected within and outside the component part. Monitoring charts aggregating the above information will also be used.

(2) Conservation and restoration

(a) Target

The city will conserve and restore masonry and other constituent elements of the component part contributing to the Outstanding Universal Value. The location of each of these elements is noted in Figure2.

(b) Basic concept and methods

Charcoal kiln (including the foreground) and monument to the charcoal kiln

Where areas of the kiln masonry are found to have loosened or swollen, the city will conduct displacement measurement surveys over multiple years and, based on the results, specify which areas need to be restored, undertaking that work using the optimal methods. The extent of restoration work will be kept to a minimum pursuant to expert guidance. If sheets for covering, sandbags, or other items have been temporarily installed to prevent rain damage, these will be removed before the restoration work.

While no areas of the monument to the kiln (Figure 2) appear to be in need of urgent repair at this point, the state of the monument will be monitored and restoration work undertaken if any deterioration or damage is identified.

(3) Presentation of the component part in light of hard charcoal production system

In the scope of the component part, all the constituent elements of the hard charcoal production system, including the kiln, the flat ground where the related facilities are thought to have been located, and the surrounding forests are converged. The city will therefore treat the area as one unified zone, using the component part not only as a tourism resource but also as a resource contributing to school and social education as well as regional revitalization. Zoning is shown in Figure 4.

(a)Tour route

A route will be set out between the car park of Terayama Fureai Park around 800 meters to the south of the component part and the car park to be built next to Prefectural Road 220 around 100 meters west, using the nature trail to take visitors through to the kiln and its foreground (Figure 5).

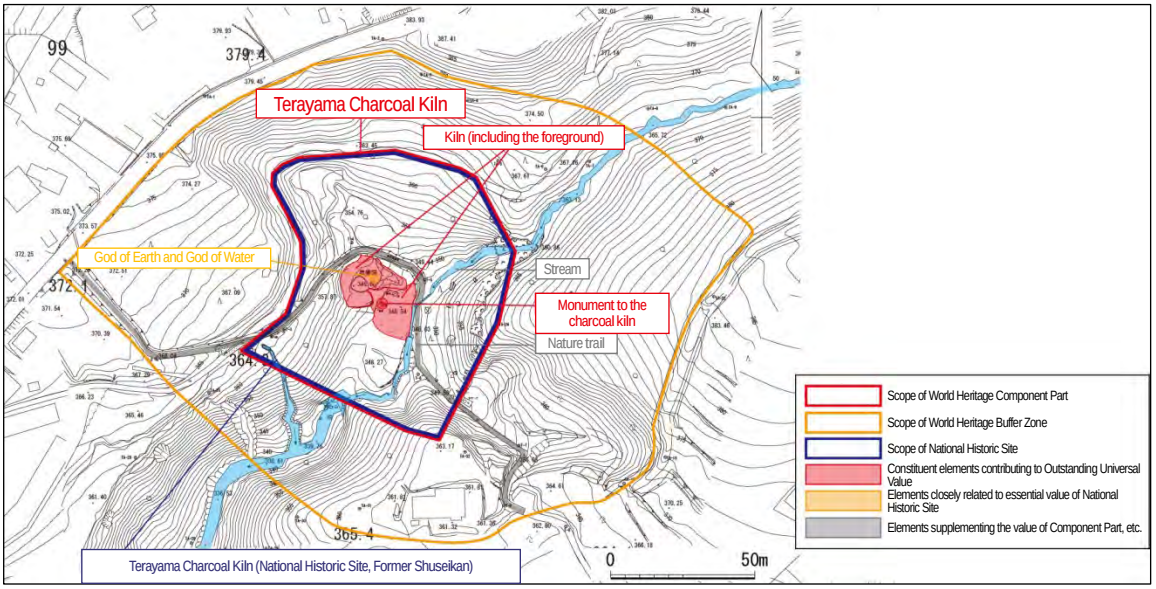


Figure 2: Constituent elements, subject to conservation and restoration, etc.

(b) Planar markers for presentation of underground archaeological remains and environmental improvement

An excavation survey will be undertaken of the original related facilities such as storehouse and others. Based on the results, planar markers will be installed to provide information on the locations, scales, and structures of underground archaeological remains. In the foreground of the kiln, a layer of earth will be maintained to protect underground archaeological remains. The stone monument standing to the southeast of the kiln obstructs the front view of the kiln and will therefore be moved to a more appropriate spot. Improvements will be made to rain runoff on the nature trail and the surface of the trail.

(c) Arranging and improving landscape and planting vegetation

The artificial wooden fence that restricts visitors from going inside the masonry of the kiln will be upgraded into a barrier of a design and materials suited to the landscape. The concrete embankment along the edge of the stream will be arranged using natural stone in a way that maintains continuity with the downstream stone embankment. Cedars and other trees planted in later years will be progressively felled while maintaining and planting the Castanopsis sieboldii and tan oak trees which supplied the raw materials for hard charcoal.

(d) Guidance and information boards

A World Heritage Plaque as one of the Sites of Japan's Meiji Industrial Revolution will be set up in the foreground, highlighting the Outstanding Universal Value of the World Heritage property as a whole and the fact that the kiln is one of the 23 component parts of the property. The results of future surveys will be reflected in the content of guidance boards, etc., for related facilities in the vicinity of the kiln.

(e) Administrative and utility facilities

Given trends in visitor numbers, a car park and toilets will be set up next to Prefectural Road 220 at the western end of the nature trail, which is close to the kiln (Figure 5).

(4) Arrangement and improvement of landscape in the buffer zone

The city and the relevant administrative institutions will conserve the excellent local environment and landscape through regulations pursuant to the Landscape Act, the Natural Parks Act, and the City Planning Act.

The city will also work to protect the wild Castanopsis sieboldii and tan oak trees which supplied the raw material for charcoal, as well as maintaining a good walking environment along the nature trail.

4. Projects Implementation

(1) Order of priorities

The schedule for implementation of those projects which should be undertaken on a priority basis in the each zone will be as in Table 1. Projects which will be given particular priority in the short term phase are as follows:

- Masonry displacement measurement and kinetic analysis
- Restoration of the kiln and the kiln monument
- Establishment of a World Heritage Plaque
- Improvement of the surface of the nature trail

Category	Project	Short term					Medium term	Long term
		2017	2018	2019	2020	2021	2022-31	2032 onward
(1) Research and study	(a) Additional research on kiln structure							
	(b) Excavation surveys on storehouse remains and other related facilities							
	(c) Masonry displacement measurement and kinetic analysis							
(2) Conservation and restoration of buildings and historical and archaeological remains and objects	(d) Restoration of kiln and monument of kiln							
(3) Presentation and Public utilization in light of industrial systems	(e) keeping earth layer for the foreground							
	(f) Protection of the wild Castanopsis sieboldii and tan oak trees which were the raw material for charcoal							
	(g) Establishment of a new carpark and toilets based on visitor trends							
	(h) Installation of a World Heritage Plaque							
	(i) Improvement of the surface of the nature trail							
	(j) Improvement of nature trail drainage							
	(k) Upgrading of barrier fence							
	(l) Arrangement of concrete water channel for landscape							
	(m) Updating of guidance boards based on survey results							
	n) Installation of planar markers for underground archaeological remains of storehouse and other related facilities							
	(o) Shifting of the monument							

Table 2: Project implementation schedule

(2) Review of implementation schedule

The schedule will be reviewed after the medium-term phase (15 years) based on the state of project progress. Where new measures need to be taken, a review will be considered prior to that time.

(3) Other

Kagoshima City has carried out conservation and restoration work, etc. for the Shuseikan by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 2 million yen was spent in FY2016 (including the amount spent for improvement of visiting path) and 3 million yen has been budgeted for FY2017 (including the amount earmarked for masonry displacement measurement and kinetic analysis), both including costs incurred or earmarked for the presentation

and public utilization of the component part, but excluding the cost for day-to-day maintenance.



Figure 3: Conceptional drawing after project completion of Terayama Charcoal Kiln

5. Basic plan

The Terayama Charcoal Kiln basic plan and conceptional drawing after projects completion of the component part are shown in Figures 4 and 5.

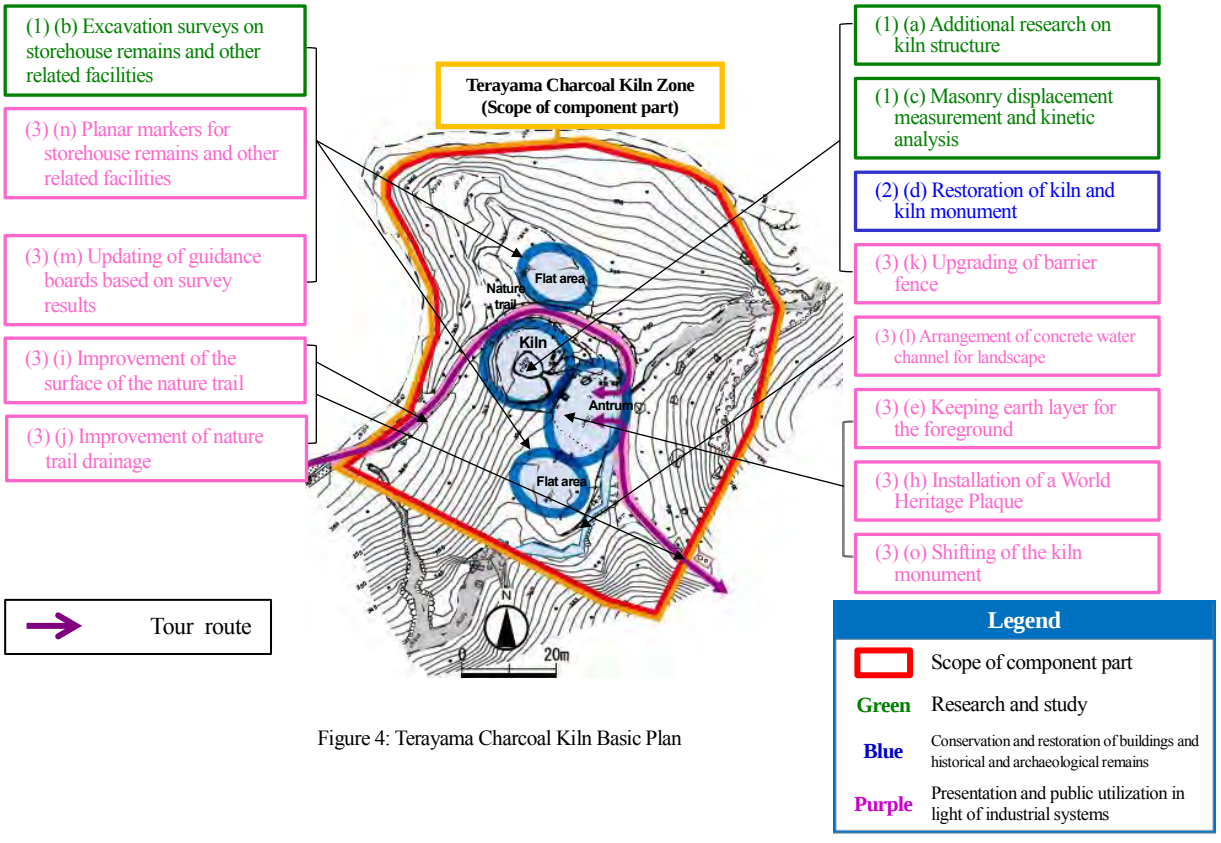


Figure 4: Terayama Charcoal Kiln Basic Plan

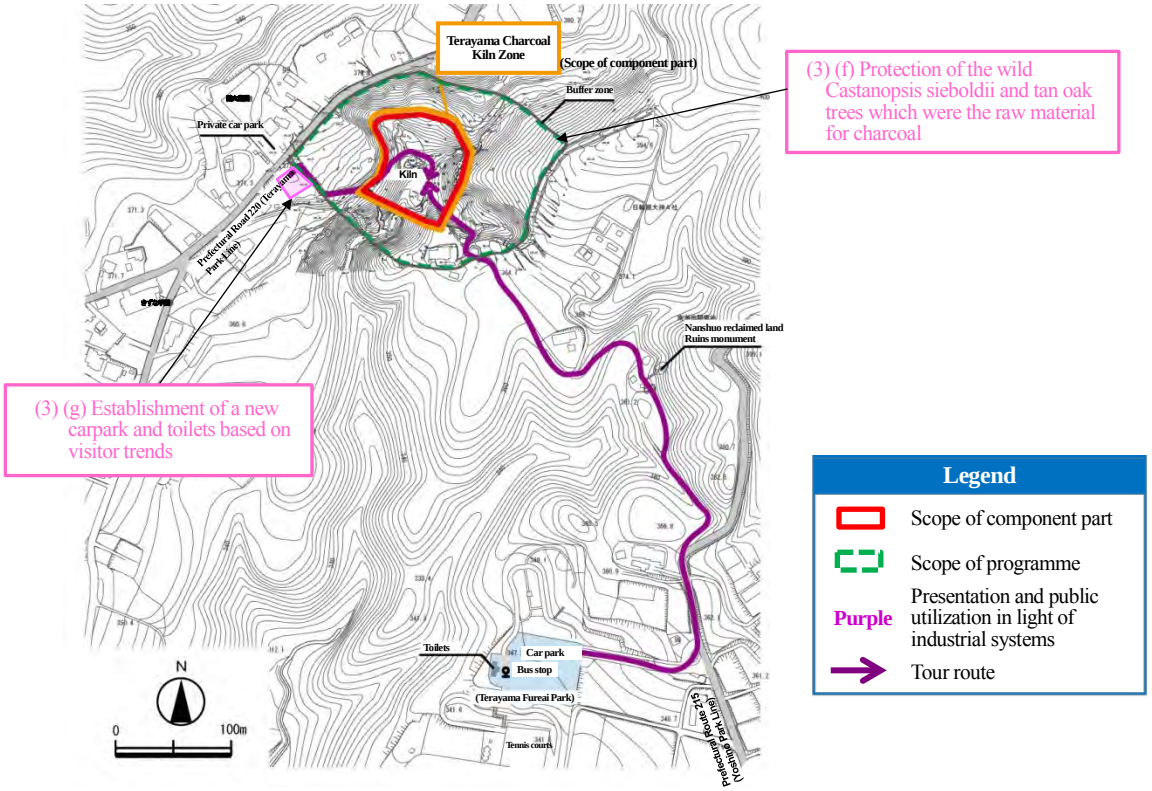


Figure 5: Terayama Charcoal Kiln vicinity Basic Plan

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for Terayama Charcoal Kiln, which became a source of "Conservation Work Programme and Implementation Programme" is available on Kagoshima City's web site. <http://www.city.kagoshima.lg.jp/kanko/sekaiisan/bunkazai-sekaiisan/syuufuku-koukaikatsuyoukeikaku2.html>

Conservation work programme and implementation programme for Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/ Component part 2-3)

Kagoshima City drew up a "Conservation Work Programme and Implementation Programme" for Sekiyoshi Sluice Gate of Yoshino Leat in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to Conservation

To maintain the remains of the leat that was modified for conveying water to the waterwheel that powered Shuseikan, and its settings in favorable condition for future generations, while at the same time enhancing the value and attractiveness of these, and visitor environment .

The Sekiyoshi Sluice Gate of Yoshino Leat is a gate of the leat modified to supply water that drove a waterwheel as a source of power for the Shuseikan Project. Among the Sites of Japan's Meiji Industrial Revolution, it is part of the Shuseikan industrial system, a component part that shows the phase of trial and error experiment in the steelmaking field, and in the shipbuilding field, up to the phase of direct importation of Western technology.

In the Conservation Management Plan for Sekiyoshi Sluice Gate of Yoshino Leat, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Sekiyoshi Sluice Gate of Yoshino Leat and their value categories are shown as Table 1.

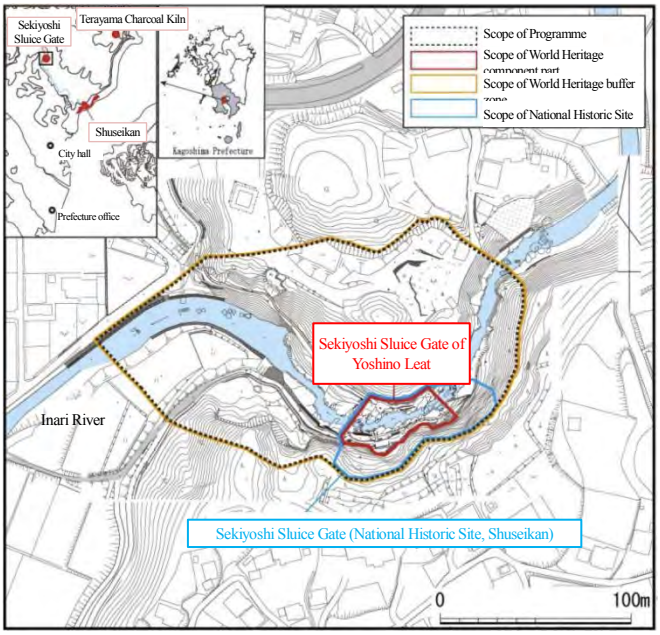


Figure 1. Scope of Programme

Area	Time Period	Element	Value to the actors		
			OUV	Nation	Region
Sekiyoshi Area	Shuseikan Project Phase I	Remains of the sluice gate (Genroku period)	○	○	○
		Monument to Water god Suiten	○	○	○
	Later period	Remains of the sluice gate (Taisho period)			○
		Monument commemorating the repair works			○

Table 1: The list of elements constituting Sekiyoshi Sluice Gate of Yoshino Leat and their value categories

Out of these elements in the Table 1, which the Conservation Work Programme for Sekiyoshi Sluice Gate of Yoshino Leat will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Kagoshima City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following three points.

Kagoshima City serving as the leading entity to carry out conservation and restoration of the constituent elements contributing to the Outstanding Universal Value, such as the remains of the sluice gate (Genroku Period: 1691-1704), dam remains representing its use through the Edo Period, the leat still in use today, and the surrounding rural landscape and natural environment. Explanatory displays will be enhanced so visitors can understand not only its function as a sluice gate (water intake) but its geographical and functional relationship to the Shuseikan Project; moreover, a safe facilities for visitors will be installed.

(1) Undertake conservation work and arrangement and improvement of landscape of remains representing the process of modification of sluice gate and its historical changes and developments

The scope of the component part and its buffer zone encompasses remains and facilities belonging to each period from the Edo Period to the Taisho and Showa Eras. The current sluice gate was modified in the Taisho Era. It is used even today for irrigation water and still deeply relevant to the lives and occupations of people in the area. In consideration of these factors, the City, while adopting a basic policy of maintaining the settings of the sluice gate as modified in the Taisho Era, will arrange the concrete installations and other features added in Showa Era and after to the extent that their use for irrigation water is not hindered.

(2) Explain sluice gate's role in Shuseikan Project and historical changes and developments comprehensibly

The Sekiyoshi Sluice Gate connects in a direct line to Shuseikan, serving as the water source for the waterwheel that powered the blast furnace, cannon-boring mill, etc. To help visitors readily grasp this role of the sluice gate in the Shuseikan Project, considering the process of historical changes and developments of the Sekiyoshi Sluice Gate of Yoshino Leat, the City will provide explanation of the mechanism by which water was diverted from the river and of the changes and developments of industrial systems, from creation through extension, improvement, and modification, while reflecting the results of surveys to be conducted.

(3) Work to improve observing environment in consideration of remains and landscape, and to maintain historic settings

The City will improve the visiting path, etc., to ensure a safe observation for visitors.

In making these improvements to the visiting path and installing guidance and explanatory boards, due consideration will be made for harmonious scale, design, and layout so as not to adversely impact the remains and landscape. Efforts will also be made to conserve the rural landscape and natural environment of the area around the Inari River, which is estimated to be largely unchanged from the original era.

2. Policy

The policy consisting of following five items has been set to approach conservation.

(1) Promoting research and study

Kagoshima City will undertake the following researches and studies.

Historical document surveys will be conducted to shed light on the water utilization systems used by the Shuseikan Project, such as their damming methods. Excavation surveys will study the leat remains buried under the current visiting path from the time of the Shuseikan Project and look for traces of modifications over time. In parallel with these studies, the necessary measurement and ground surveys will be carried out to examine the mechanism and functions of waterwheel power. In addition, visitor surveys will be conducted to confirm the extent of visitor impact on the component part, and monitoring will be carried out to identify ongoing changes to the component part.

(2) Conserving and restoring the Sluice Gate and other remains (preserving, reinforcing, and stabilizing materials, substance, and structure)

To maintain constituent elements of Sekiyoshi Sluice Gate of Yoshino Leat contributing to the Outstanding Universal Value, such as the sluice gate of the leat, etc. the City will engage in regular monitoring, and if damaged areas, or areas where damage could potentially occur, are discovered, will undertake systematic restoration in order of priority as determined with reference to the views of experts, etc., to stabilize and strengthen those areas. Restoration of exposed structures will be undertaken with due sensitivity to maintaining the structures and materials used at the time. Underground archaeological remains under the visiting path that have so far been detected will be given a protective earth layer of an appropriate thickness and then maintained in a stable condition underground.

(3) Illustrating industrial systems in Shuseikan Project

Kagoshima City will provide easy-to-understand explanation of (1) the Sekiyoshi Sluice Gate's water intake system, (2) the role of the gate within the industrial systems of the Shuseikan Project, and (3) their relationship to nearby historic sites. The findings of upcoming investigative studies to be undertaken by the City will be actively reflected in the exhibits and descriptions.

(4) Arranging and improving landscape from a scenic perspective

The City, working with the owner of the relevant site, will properly manage the densely growing trees and other greenery on the slopes next to the visiting path to avoid overgrowth, and also carry out arrangement of the sandbags, concrete installations, etc., added in later years. In the buffer zone, measures will be taken to conserve the sluice gate, the forest environment along the Inari River, which serves as the water source, and the pastoral scenery along its downstream watershed.

In case monitoring confirms places with an actual or potential adverse impact on the landscape, the owners of the relevant sites, with support from the City and other relevant administrative institutions, will conduct arrangement and other improvements to prevent or mitigate the impact, taking into account the views of experts, etc.

(5) Implementing projects

The City will set out a clear implementation schedule that delineates short, medium and long-term phases and the various projects to be addressed within those phases to ensure the steady and phased implementation of the Programme.

The owners and managers of the each of the component parts of Area 2 Kagoshima and the related buffer zones will be responsible for managing and operating the each project regarded as necessary for the three phases pursuant to the Programme. In addition to the owners and managers, the Government of Japan and Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other relevant institutions and groups will coordinate at the Shuseikan Conservation Council and the Partnership Council for Modern Industrial Heritage Sites in Kagoshima to ensure steady progress on each of the conservation and restoration projects.

3. Methods

(1) Research and study

The City will undertake following surveys.

(a) Historical document surveys

Studies will attempt to clarify the water utilization systems, such as damming methods, used at the time, by means of comparisons with other water intake dams in Japan of the same period. A comprehensive survey will be made especially of the civil engineering techniques of the Satsuma Clan, which is believed to have accumulated a wealth of experience and knowledge from flood control work at the Kiso River (in the Nobi Plain) and rivers in – its own domain.

(b) Excavation surveys

To clarify the functions of the intake at the time of the Shuseikan Project and the history of modifications in the

Taisho Era, excavation surveys will study the old leat remains buried directly under the current visiting path.

(c) Measurement and ground surveys

Measurement and ground surveys will be conducted as necessary based on the results of the historical document and excavation surveys. The mechanism and functions of waterwheel power will also be investigated.

(d) Visitor surveys

The City will conduct a survey on visitor numbers, as well as observations of visitor behavior and the length of their visits, to ascertain their impact on the state of component part as well as the degree of visitor satisfaction.

(e) Monitoring

Every year City will inspect the component part and the buffer zone and ascertain their current state. Individual data for the component part will comprise detailed records of the parts and materials of each constituent element, while individual data for the buffer zone will comprise records of the landscape from multiple points selected within and outside the component part. Monitoring charts aggregating the above information will also be used..

(2) Conservation and restoration

(a) Target

The City will conserve the sluice gate (Genroku Period, 1688-1704) and other constituent elements of the component part contributing to the Outstanding Universal Value. The location of each of these elements is noted in Figure 2.

(b) Basic concept and methods

Remains of the sluice gate (Genroku Period) and Monument to Water god Suiten

At present there are no elements seen to be in need of urgent repair, but the situation will be monitored and repairs made if damage or deterioration is found.

(3) Presentation of industrial systems in Shuseikan Project

The Sekiyoshi Sluice Gate component part encompasses many elements, concentrated around the Inari River, including the intake and sluice gate that were operated during the time of the Shuseikan Project, remains that were modified in the Taisho Era, and other elements showing the changes that the sluice gate underwent over time. Viewing these many elements as pertaining to one cohesive zone, the City will utilize the site not only as a tourism resource but as a resource that contributes to school education, education of the general public, and community enrichment. The zoning is shown in Figure 4.

(a) Tour routes

Tour routes will be provided from the bus stop approximately 300 meters west of the component part, from the parking lot of the Sekiyoshi Sluice Gate, and from the bus stop approximately 700 meters southwest of the component part, each of them running along the waterway to the site (Figure 5).

(b) Planner markers for presentation of underground archaeological remains and improvement of the environment

The underground archaeological remains of the former leat which lies directly under the path near the sluice gate will be indicated on the paved surface of the path. These indications will reflect the results of planned excavation surveys.

(c) Arranging and improving landscape and planting vegetation

The densely growing trees on the slopes along the visiting path will be properly trimmed and pruned as directed by experts. In so doing, since the bamboo on the hillside is believed to have historical significance, being planted by the Satsuma Clan for stabilizing the embankment at least from the Tempo Era (1830-1844), care will be taken to protect and cultivate it. The sandbags, sluice, concrete walls, and other installations added in later years will undergo arrangement while maintaining the irrigation water function.

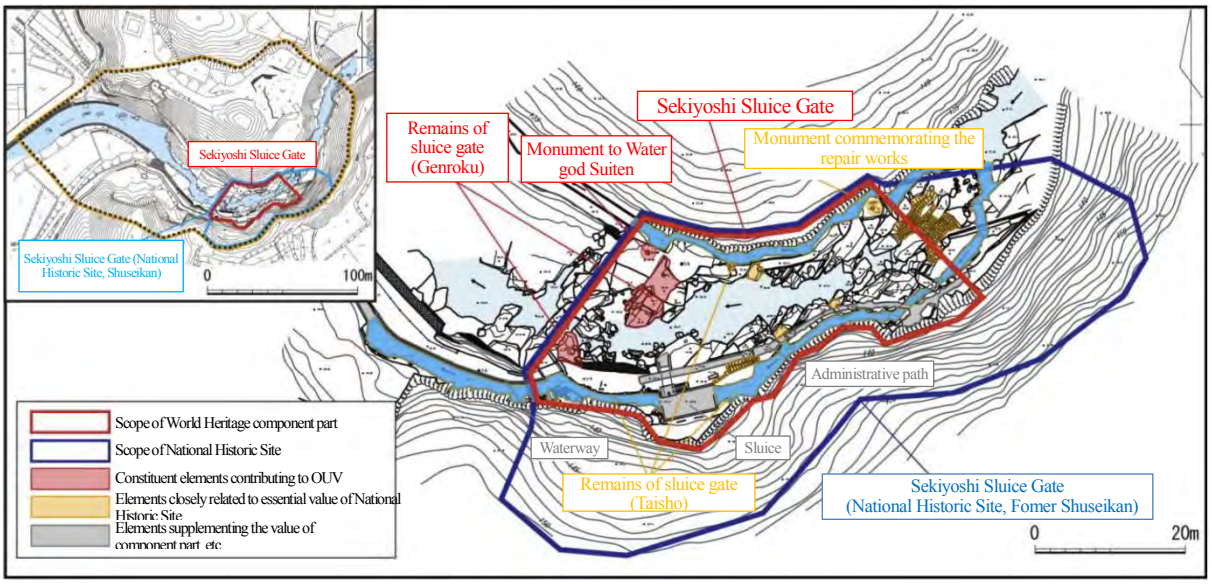


Figure 2. Elements subject to conservation and restoration etc.

(d) Guidance and information boards

A World Heritage Plaque as one of the "Sites of Japan's Meiji Industrial Revolution" will be installed in an open space near the visiting path indicating the Outstanding Universal Value of the World Heritage property as a whole and making clear that the Sekiyoshi Sluice Gate is one of 23 component parts. The results of surveys to be conducted hereafter on damming methods, the state of underground archaeological remains under the visiting path, etc., will be reflected in the information boards.

(e) Administrative facilities

New guardrails will be installed along the visiting path to ensure a safe viewing environment for visitors, while avoiding impact on the underground archaeological remains and maintaining harmony with the landscape.

Considering the expected visitor numbers, parking lots and toilets will be installed in a place closer to the component part than the present location.

(4) Arrangement and improvement of landscape in the buffer zone

The City and the relevant administrative institutions will preserve conserve the excellent local environment and landscape through regulations pursuant to the City Planning Act, Landscape Act, and other laws. Moreover, the City, working with the respective site owners, will preserve the bamboo planted as a traditional means of stabilizing the embankment, and manage the densely growing trees on the slopes to a more appropriate level of greenery on the hillside along the visiting path.

4. Project Implementation

(1) Order of prioriies

The schedule for implementation of those projects which should be undertaken on a priority basis in the each zone will be as in Table 1. Projects which will be given particular priority in the short term phase are as follows:

- Excavation surveys of old leat remains and stone walls under visiting path
- Restoration of sluice gate (Genroku Period) remains and Monument to Water god Suiten
- Establishment of a World Heritage Plaque
- Installation of guardrails

(2) Review of the implementation schedule

The schedule will be reviewed after the medium-term phase (15 years) based on the state of project progress. Where new measures need to be taken, a review will be considered prior to that time.

Category	Project	Short term					Mid term	Long term
		2017	2018	2019	2020	2021	2022-31	2032 onward
(1)Research and study	a. Excavation surveys of old leat remains and stone walls under visiting path							
(2) Conservation and Restoration	b. Restoration of sluice gate remains (Genroku Period) and Monument to Water god Suiten							
(3) Presentation and public utilization in light of industrial system	c. Management of trees growing on hillside							
	d. Plans for parking lots and toilets based on visitor trends, etc.							
	e. Establishment of World Heritage Plaque							
	f. Planar marker of old waterway remains under visiting path							
	g. Installation of guardrails							
	h. Easy-to-understand explanations of damming methods, etc.							
	i. Arrangement for concrete installations							
	j. Research of waterwheel power mechanism and functions							

Table 2. Project schedule

(3) Other

Kagoshima City has carried out conservation and restoration work, etc. for the Shuseikan by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 3 million yen was spent in FY2016 (including the amount spent for historical document survey) and 3 million yen has been budgeted for FY2017 (including the amount earmarked for excavation survey of underground archaeological remains directly under the visiting path and of stone walls), both including costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.



Figure 3 Conceptional drawing after project completion of Sekiyoshi Sluice Gate of Yoshino Leat

5. Basic plans

The Sekiyoshi Sluice Gate basic plan and conceptional drawing after projects completion of the site are shown in Figures 4 and 5.

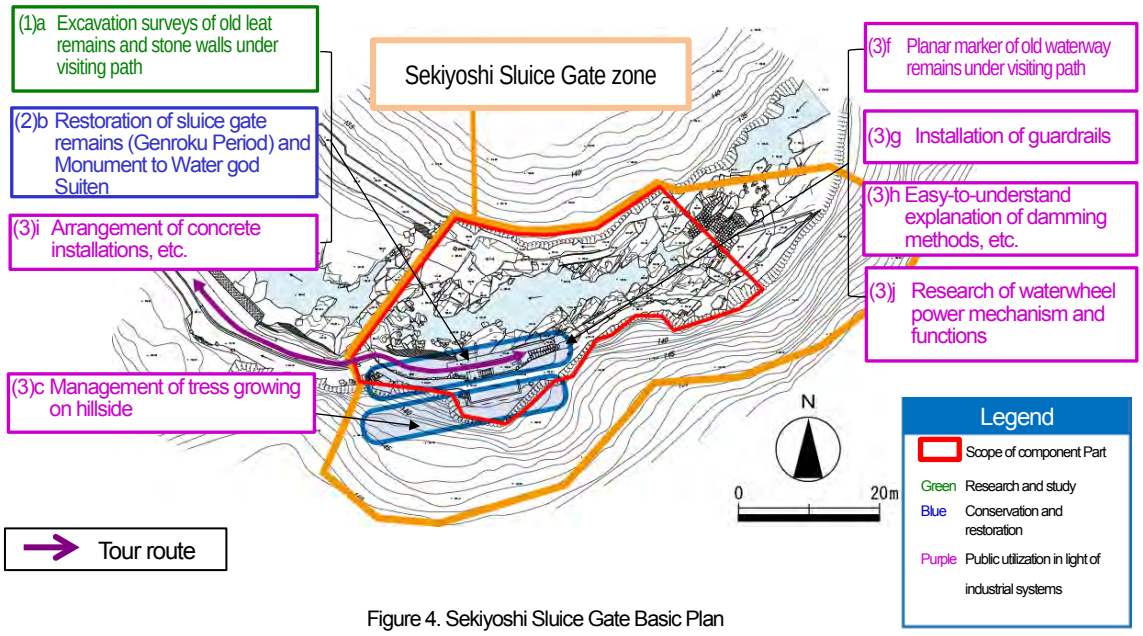


Figure 4. Sekiyoshi Sluice Gate Basic Plan

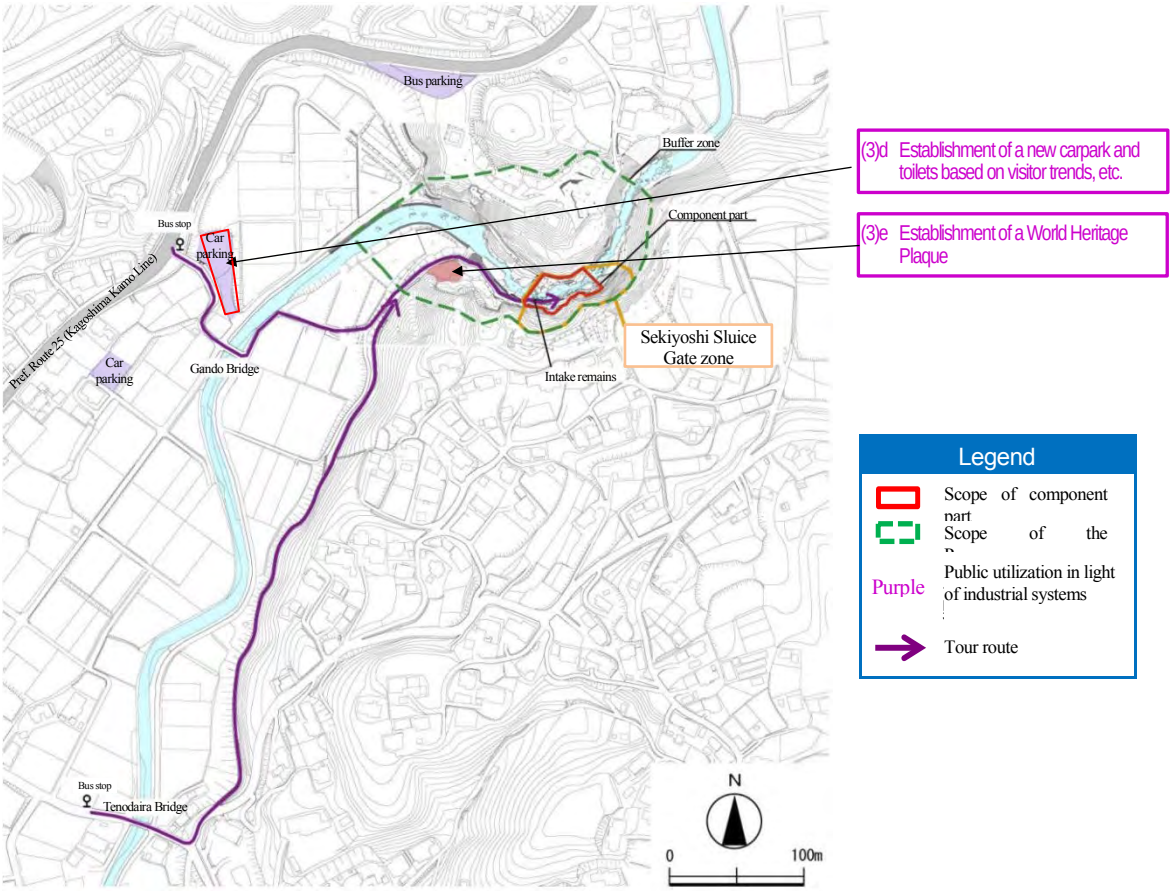


Figure 5. Sekiyoshi Sluice Gate vicinity Basic Plan

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for Sekiyoshi Sluice Gate of Yoshino Leat, which became a source of "Conservation Work Programme and Implementation Programme" is available on Kagoshima City's web site. <http://www.city.kagoshima.lg.jp/kanko/sekaiisan/bunkazai-sekaiisan/syuufuku-koukaikatsuyoukeikaku2.html>

Conservation work programme and implementation programme for Nirayama Reverberatory Furnaces (Area 3 Nirayama/ Component part 3-1)

Izunokuni City drew up a "Conservation Work Programme and Implementation Programme" for Nirayama Reverberatory Furnaces in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").



Figure 1. Location of Area 3 Nirayama

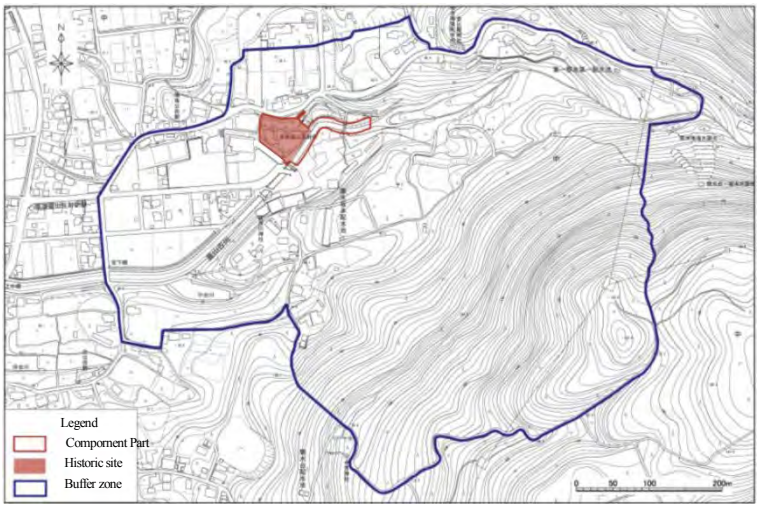


Figure 2. Scope of the Programme

1. Approach to conservation

Izunokuni City envisions Nirayama Reverberatory Furnaces as a space that symbolizes and embodies Japan's quest to introduce modern iron-making technology at the end of the Edo period. To realize this Vision, the city will strengthen preservation, and conduct the conservation work from four perspectives: preserve, inform, enhance and utilize.

Nirayama Reverberatory Furnaces is the component part corresponding to the first of three stages reflecting the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution. This stage extended from the 1850s through the early 1860s, the end of the Edo period. In the Conservation Management Plan for Nirayama Reverberatory Furnaces, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The elements constituting Nirayama Reverberatory Furnaces and their value categories are shown as Table1.

Section	Element	Classified value		
		OUV	National government	Local government
Historic Site	Reverberatory furnace (two twin structures each housing two furnaces)	○	○	○
	Buried cultural properties	○	○	○
	Stone monument			○
River Section	Length: 144m	○	○	○

Table 1: The list of elements constituting Nirayama Reverberatory Furnaces and their value categories

Out of these elements in the Table 1, while the Conservation Work Programme for Nirayama Reververatory Furnaces will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Izunokuni City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following four points.

- **Preserve**: Step up preservation of symbolic reverberatory furnaces and related facilities

  The existing furnaces are a valuable testament to the spread of modern iron-making technology and serve as a symbol representing Nirayama Reverberatory Furnaces. Preserving and reinforcing their materials and structure will therefore be indispensable to realizing the future envisioned for them. To preserve the furnaces for future generations, Izunokuni City will endeavor to maintain their structure, including the steel truss on the wall exterior that was installed during later conservation and restoration work to ensure seismic integrity. For this purpose, the city will study from an authenticity standpoint conservation and restoration methods that accord top priority to preserving the bricks as they were at the time of construction, and factor those findings into the conservation and restoration.

  For facilities and other features around the furnaces that existed at the time of operations, the city will identify and preserve the remains by investigating historical document and other records and by conducting an excavation survey.

- **Disseminate**: Foster an understanding of industrial systems related to cannon manufacturing among visitors by visual means

  Izunokuni City will foster an understanding of industrial systems related to cannon manufacturing by showing how the existing furnaces and related facilities that remain underground were functionally integrated with the river area that supplied water for power (see Figure 4). To that end, vegetation will be thinned and the surrounding environment otherwise improved to allow easy observation of the design and structure of the furnaces. The guidance center (see Figure 5), Egawa Residence[1] and furnaces will also provide information and explanation that complement each other.

- **Enhance**: Maintain and improve the landscape so that people understand how it looked as a cannon factory

  To help visitors picture the facilities as they were during operations and deepen their appreciation of their construction at the current site, Izunokuni City will provide information and explanation on the facilities' environs from multiple vantage points. It will also maintain scenic views and conduct any necessary arrangement and improvement of surrounding landscape with the understanding and support of local residents.

- **Utilize**: Use the site sustainably as a community symbol and center

  Registration of Nirayama Reverberatory Furnaces as the component part of the World Heritage property has given them more attention than ever before. To ensure that this situation continues, however, it is vital that the entire community around the component part understand the Outstanding Universal Value of the World Heritage property including Nirayama Reverberatory Furnaces and deeply appreciate its meaning and importance. Based on that understanding, Izunokuni City will implement measures to sustainably use the component part, not only in terms of its historical and cultural symbolism for the community, but also as a center for promoting the area and disseminating information.

[1] **Egawa Residence**, located 1.7 kilometers directly north of Nirayama Reverberatory Furnaces, belonged to the Egawa family, which served as governors of Nirayama for generations under the Edo Shogunate, including Hidetatsu Egawa, who oversaw the construction of Nirayama Reverberatory Furnaces. The building is therefore important for a deeper understanding of the furnaces.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Conduct exploratory research

Izunokuni City will survey historical document and other records and also do excavation surveys to understand and shed light on industrial systems related to cannon manufacturing. It will also survey visitors to determine their impact on the component part, and conduct monitoring to identify changes over time.

Studies and tests needed to select the appropriate restoration methods for the furnaces, which will require periodic and continual repair, will also be conducted in a systematic manner.

(2) Preserve, reinforce, and stabilize the furnaces and the archaeological remains in terms of material, substance, and structure

Izunokuni City will undertake the necessary repairs based on due consideration for expert opinion, findings from necessary exploratory research, and other factors in accordance with any material degradation and structural instability that monitoring reveals.

(3) Illustrate the industrial systems on cannon manufacturing in the component part and the Area

To foster an understanding of industrial systems related to cannon manufacturing, Izunokuni City will set up appropriate pathways through the component part and its surroundings and provide explanation of the overall system and connections and roles between its individual elements, while also directing visitors to the Egawa Residence.

Efforts will be made to systematize the information provided. Explanatory boards for the component part, including underground archaeological remains, will employ a consistent design and format to more effectively communicate the functions and roles of each constituent element. Explanatory boards that show signs of aging will be replaced.

In addition to improving existing ground displays that indicate site features, the city will also make effective use of the findings of various exploratory studies by displaying or indicating on the ground surface locations and scales of any underground archaeological remains, etc., they reveal.

(4) Arrange and improve the landscape from the standpoint of scenic view

Izunokuni City will maintain and enhance the surrounding landscape, with a focus on areas along the access route (see Figure 5) in the buffer zone, and facilitate appropriate arranging of the landscape on private land.

It will set up vantage points so people can get an overall picture of the area around the reverberatory furnaces and industrial systems related to cannon manufacturing. Monitoring will be conducted at these vantage points to identify changes in the viewing landscape and devise arranging of the surrounding landscape and other measures.

(5) Implement projects

Izunokuni City will undertake conservation, restoration, presentation and public utilization based on shared policies under a unified organizational structure for all of the Sites of Japan's Meiji Industrial Revolution, while executing the program through sufficient cooperation among the relevant city departments.

The city will continually evaluate and revise the program and undertake optimization improvements to ensure that the program proceeds efficiently and effectively.

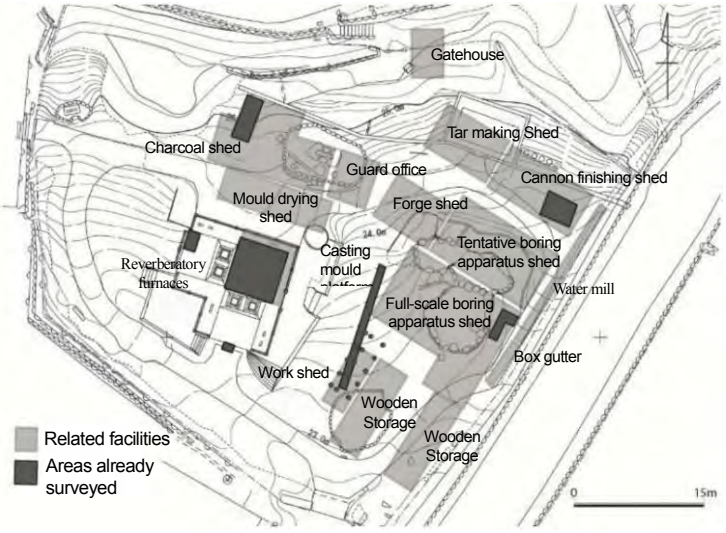


Figure 3. Ground plan showing locations of related facilities created from old pictures and areas excavated in past surveys

3. Methods

(1) Investigative studies

(a) Historical document surveys

Izunokuni City will continue its survey of collections of historical documents, photographs, and pictures related to Nirayama Reverberatory Furnaces. It will publish and widely disseminate research findings in a survey report and incorporate them into future projects for its conservation, restoration, presentation and public utilization.

(b) Excavation surveys

Izunokuni City will conduct excavation surveys to collect information on underground archaeological remains and artifacts to check their locations against the old pictures, as well as to improve understanding of industrial systems related to cannon manufacturing and industrial systems overall. For this purpose, the city will prioritize confirming the surrounding archaeological remnants of the full-scale boring apparatus shed and tentative boring apparatus shed, which played the important roles of hollowing out the cannon barrels in the manufacturing process (see Figure 3).

(c) Studies concerning furnace repairs

Izunokuni City will assess the extent of deterioration of each constituent element through monitoring.

Old photos from the time of construction revealed that the outer wall bricks of the chimney were plaster coated for protection. The necessary verification experiments with samples and other means will be conducted to determine whether plaster coating can be applied when restoring the furnaces in the future.

(d) Visitor surveys

Izunokuni City will conduct surveys to assess the impact of visitors on the component part, their satisfaction with the parking lot (see Figure 5) and conveniences, their level of understanding of the component part and its contribution to the Outstanding Universal Value of the World Heritage property, and the extent to which they venture to other facilities in the city, such as the Egawa Residence.

(e) Monitoring

Izunokuni City will periodically assess the condition of the component part and its buffer zone using monitoring charts that comprehensively and systematically aggregate current information.

The city will present the monitoring results as an annual report to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution following confirmation and agreement from Nirayama Conservation Council.

(2) Conservation and restoration of buildings and archaeological remains

(a) Conservation and Restoration of constituent elements that contribute to the Outstanding Universal Value

(i) Reverberatory furnaces

Based on the extent of current deterioration of the exterior bricks of the chimney, Izunokuni City will conduct and complete within six year conservation and restoration as an urgent measure that prioritizes deteriorated parts.

When undertaking the above urgent conservation and restoration work for outer areas of the chimney where there is considerable deterioration, the city will replace materials to the minimum extent possible by, for example, removing just the deteriorated parts of the brick surface and using methods such as inlaying the cavity with molded new materials. For interior bricks and masonry, it will make repairs as needed after analyzing the results of surveys to date.

The city will undertake the subsequent phases of conservation and restoration work as appropriate based on full consideration of the best approaches to maintaining the structure and conserving the original bricks and in light of survey and research results (including results from trials of plaster coating on the outer brickwork of chimneys) and of the possibility of future improvements in conservation techniques.

(ii) Underground archaeological remains

The archaeological remains of the casting platform, an excavation of which by Izunokuni City (Nirayama Town at the time) in 1988 confirmed the side walls and what was left of the floor surface, were fragile wood of which only a little was left, and should be kept as it is in the ground.

If future excavation surveys confirm underground archaeological remains of facilities expected to have existed at the time of operations based on the historical document, such facilities should be properly conserved, with a planar display of the locations and scales of underground archaeological remains set up on the ground surface.

(iii) River area

Izunokuni City, which manages the nearby river, will conduct appropriate repairs of any damages identified through monitoring.

In the event of major damage from a disaster or for other reasons, the city will undertake restorations with materials and material qualities that are in keeping with the scenery and which ensure that the revetment is strong.

(b) Conservation and restoration of the elements closely related to the constituent elements contributing to the Outstanding Universal Value

Previous surveys have confirmed the structural integrity of the reinforced steel frames outside the reverberatory furnaces and chimney canopies. Given signs of some paint peeling and rust, however, Izunokuni City will perform the required conservation and restoration within six years.

(3) Presentation of the Furnaces emphasizing entire industrial system

The following items, (a) through (g), will generally be performed by Izunokuni City.

(a) Zoning

The city will carry out zoning of the component part (see Figure 4) and its vicinity to foster an understanding of industrial systems related to cannon manufacturing. Methods of presentation suitable to the outline and features of each zone are shown in Table 1.

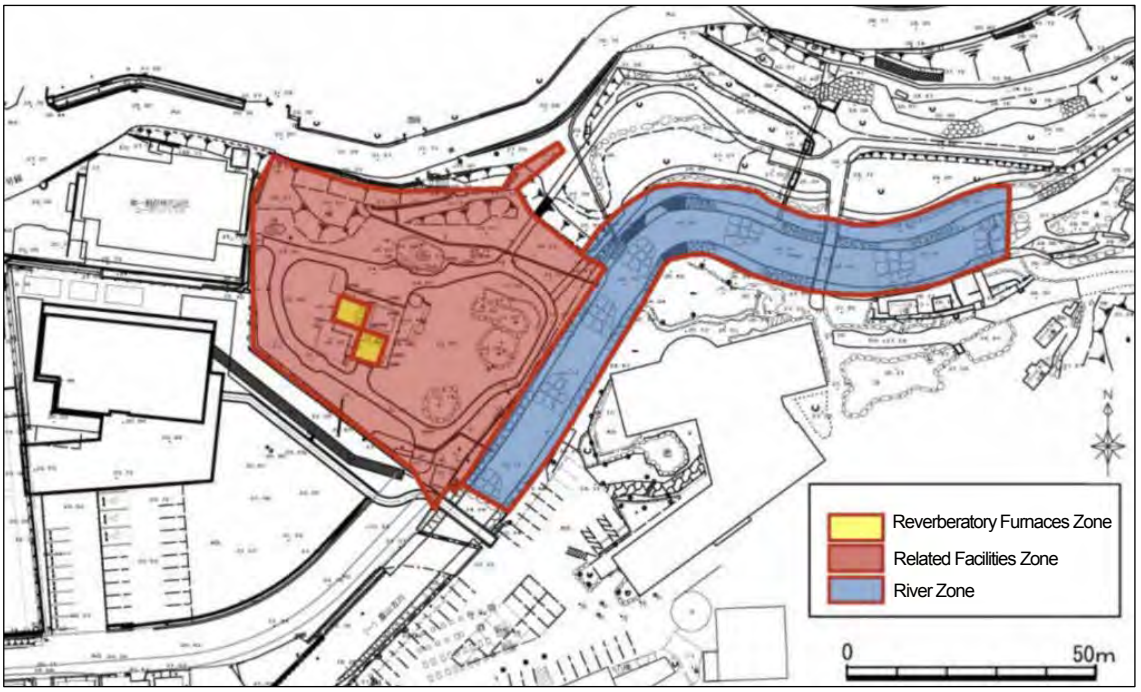


Figure 4. Zoning map

Zone name	Zone outline and features	Methods of presentation etc.
Reverberatory Furnaces Zone	Zone where furnaces are located	Preserve (through maintenance, conservation and restoration) valuable furnace remains, which survive in nearly complete condition. Publicly disclose all surveys, repairs, and other activities to the extent possible. Examples: Implement and disclose surveys and repairs
Related Facilities Zone	Zone where cannon manufacturing-related facilities existed	Build facilities designed to foster visitor understanding and actively undertake improvements of structures, etc., that are incompatible with the constituent elements contributing to the Outstanding Universal Value. Publicly disclose all excavation surveys to the extent possible. Examples: Planar display of the locations and scales of the underground archaeological remains, remove trees and pond
River Zone	Zone that supplied water for turbines to hollow out cannon barrels	Create environment that fosters understanding of role played by the river zone in industrial systems related to cannon manufacturing. Install paths and directional signs to guide visitors to the northeast park where they can see how the position of the river relates to that of the World Heritage component part (designated as a National Historic Site). Examples: Install explanatory and directional signs

Table 2: Outlines and features of zones and methods of presentation etc.

(b) Path planning

To manage visitor entry and effectively facilitate an understanding of the industrial system related to cannon manufacturing, the paths for the traffic of visitors to the component part and environs will be as follows (Figure 5).

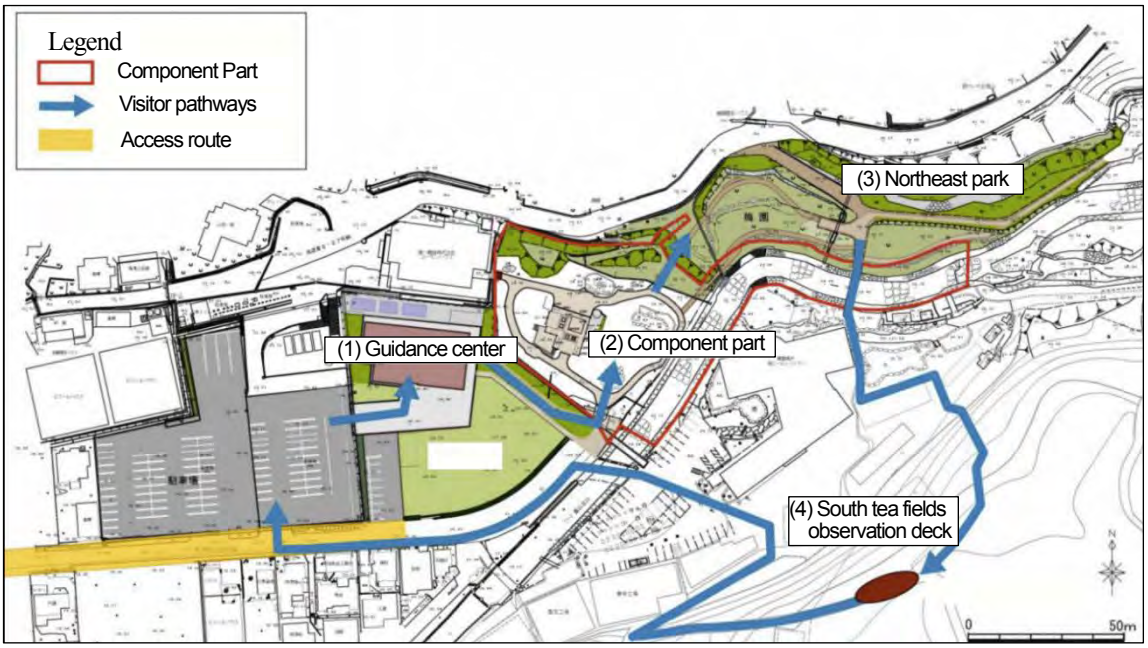


Figure 5. Paths

(1) Guidance center =>(2) Component part area =>(3) Northeast park =>(4) South tea fields observation deck

(c) Topography and environmental improvements

The pond on the east side of the component part did not exist at the time of operation of the industrial systems related to cannon manufacturing and thus bears no connection to them; it will therefore be removed in conjunction with an excavation survey. All other existing topographical features will be preserved, not including minimal changes needed associated with excavation surveys needed for activities of conservation, restoration, presentation and public utilization and with the installation of displays indicating locations and scales of underground archaeological remains.

In principle, existing water supply and drainage facilities will be used under proper maintenance and management.

(d) Arranging landscape and planting vegetation

In principle, there will be no new tree planting.

The city will continue to maintain trees that shield and provide green cover for surrounding artificial structures.

At the same time, trees that compromise the visual wholeness between the National Historical Site and the riverwill be cut down to prevent interference with views of the furnaces from the northeast park, for example.

(e) Guidance and explanatory boards

The city will maintain, manage, repair, and update existing guidance and explanatory boards and exhibits so visitors can move easily along paths and better understand the component part.

Exhibits that display archaeological remains newly revealed by excavations and historical document surveys will be installed by more effective methods on the conditions that such archaeological remains are properly protected.

(f) Management and convenience facilities

The city will review the number and locations of existing benches as needed. There will be no new toilets to augment those in the guidance center.

For the observation space about 1.2 meters above ground near the furnaces, the city will install an enclosure or similar facilities needed to ensure safe and comfortable viewing for visitors.

(4) Arrangement and improvement for the buffer zone from the standpoint of scenic view

Izunokuni City will maintain an attractive landscape and clear views of the component part from the approach road (access route shown in Figure 5) and the parking lot. The city will also encourage local residents to perform arrangement of the landscape such as planting trees and construct, expand, and modify buildings and structures in ways that harmonize with the component part and its environs.

The guidance center, lawn areas, and the northeast park adjacent to the component part also need to be maintained to ensure attractive views, as these lie along the visitor paths.

With regard to private commercial facilities and their premises on the other side of the river southeast of the component part, the city will work through adequate dialogue to build consensus with the owners on appearances, outdoor advertisements, etc., to ensure attractive landscape, and encourage proper installations, maintenance and improvements.

In other parts of the buffer zone, the city will restrict unorderly development and conserve, maintain, and improve the landscape by, for example, encouraging the planting of trees and construction, expansion, and modification of buildings and structures in ways that harmonize with the component part and its environs. Regarding signboards and outdoor advertising, etc., the city will work through adequate dialogue to increase understanding and build consensus with the owners and managers on the purpose and significance of creating an attractive landscape, and encourage them to perform installations, maintenance, and improvements properly according to specific standards.

4. Project implementation

(1) Order of priorities

The schedule for implementing the projects based on the vision and the policy consisting of five items and methods for materializing that vision described in 1 through Section-3 above, as well as the order of priority for such projects, are as follows.

Izunokuni City will designate the 20 years that begin with FY 2017 and end around FY 2036 as the projects implementation period. This period comprises a short term (within six years), medium term (around six years), and a long term (around eight years). The periods and specific schedule of projects to be implemented in each term are described below (Table 3). It should be noted that conservation and restoration of the reverberatory furnaces will be given highest priority among all projects for conservation, restoration, presentation and public utilization within the component part, and this is to be completed in the short term (within six years).

Next on the order of priority is the installation of displays, etc., that aid visual understanding of the industrial system related to cannon manufacturing. All historical document and excavation surveys and installation, etc., of guidance and explanatory facilities will be started in stages in the short term (within six years) and completed in the medium term (within 12 years).

- Short term (within six years): Period for completing conservation and restoration of the reverberatory furnaces, beginning surveys and other projects necessary for the installation of facilities to aid visual understanding of industrial system related to cannon manufacturing, and implementing any other projects that need to be commenced immediately.
- Medium term (around six years): Period for completing surveys and other projects necessary for the installation of facilities to aid visual understanding of industrial system related to cannon manufacturing, and implementing any projects begun in the short term that need to be continued.
- Long term (around eight years): Period for implementing any projects begun in the short and medium terms that need to be continued.

Category	Project	Short term (2017-2022)	Medium term (2023-2028)	Long term (2029-2036)
Investigative studies	Historical document surveys			
	Excavation surveys			
	Studies concerning furnaces' repairs			
	Visitor surveys			
	Monitoring			
Conservation and restoration of structures and ruins	Furnaces' repairs			
	Repair reinforced steel frame and canopy			
Illustration of industrial systems	Pond removal			
	Tree removal			
	Repair and install guidance and explanatory boards			
	Set up planar display indicating the locations and scales of the underground archaeological remains			
Scenic landscaping	Maintain and improve landscape			

(2) Review of the implementation schedule

Izunokuni City will conduct detailed verification and analysis of the state of progress of projects being implemented in each project term at a point when the term is approaching completion. It will then carefully examine projects that are appropriate to extend into the subsequent term and, upon examining said term, will make necessary revisions to the content and procedure of projects in that term.

(3) Implementation structure

Since the implementation schedule laid out in this Programme is integral to conserving and managing Nirayama Reverberatory Furnaces, Izunokuni City will advance the projects through closer collaboration with local residents under the same conservation framework determined in Nirayama Reverberatory Furnaces Conservation and Management Plan that constituted a part of the Nomination Document for World Heritage inscription in 2015 (Figure 6).

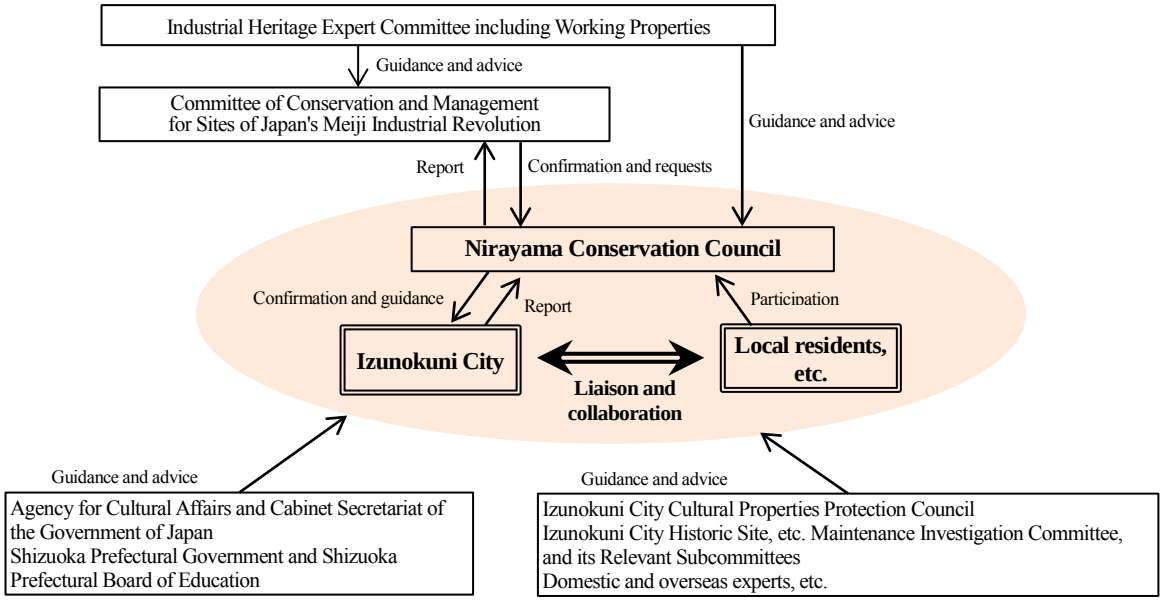


Figure 6. Implementation structure of projects

(4) Other

The city has carried out conservation and restoration work, etc. for the Nirayama Reverberatory Furnaces by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 485 million yen was spent in FY2016 (including the amount spent for establishment of a guidance center) and 18 million yen has been budgeted for FY2017 (including the amount earmarked for plan making), both including costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.



Figure 7. Coceptional drawing of the Component Part and its vicinity at completion of medium term (end of FY 2028)

5. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Nirayama Reverberatory Furnaces, which became a source of "Conservation Work Programme and Implementation Programme" is available on Izunokuni City's web site.
<https://www.city.izunokuni.shizuoka.jp/hansyaro/keikaku/shouroku.html>

Conservation work programme and implementation programme for Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/ Component part 4-1)

Kamaishi City drew up a "Conservation Work Programme and Implementation Programme" for Hashino Iron Mining and Smelting Site in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation, restoration, presentation and public utilization of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

Stably maintain remains in the birthplace of modern steelmaking, and disseminate information regarding the entire system of mining, transportation, and steelmaking.

Hashino Iron Mining and Smelting Site is important in that the following three elements [1] all remain as a consistent system from the dawn of Japan's industrial revolution (1850s–): (i) the Smelting Site, which shows the introduction of blast furnace iron-making (including the river which served as the water source to turn the waterwheel that was the power source for the furnace facility), (ii) the Transportation Site used to carry the iron ore, and (iii) the Iron Mining Site, which carried on traditional techniques from early modern times (Figure 1).

In the Conservation Management Plan for Hashino Iron Minig and Smelting Site, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Hashino Iron Mining and Smelting Site and their value categories are shown as Table 1.

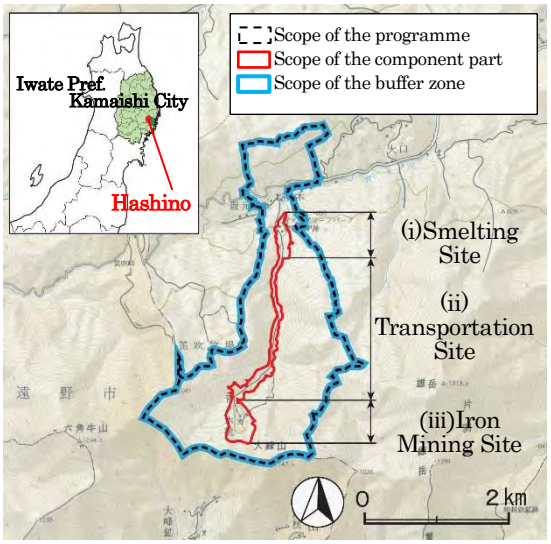


Figure 1 Scope of the Programme

Section	Period	Elements	Value of element		
			OUV	National value	Local value
Iron mining site	Hashino Iron Mine period	Remains of the surface mine workings A	○	○	○
		Remains of the underground mine workings	○	○	○
		Remains of the western flat area	○	○	○
		Remains of the eastern flat area	○	○	○
		The central stone wall	○	○	○
		Remains of the western flat area (including retaining stone wall)	○	○	○
		Remains of the eastern flat area (including retaining stone wall)	○	○	○
		Remains of the surface mine workings B	○	○	○

[1] Considering the steelmaking process, the order should be the Iron Mining Site, Transportation Site, and Smelting Site, but because the Smelting Site are the main subject of the conservation works for the time being, under this programme these are written in the order of (i) Smelting Site, (ii) Transportation Site, and (iii) Iron Mining Site.

		The eastern stone wall	○	○	○
		Remains of excavation	○	○	○
	Tanaka Ironworks period	The shallow underground mine workings			○
	Nittetsu Mining period	Remains of the powder magazine			○
		Remains of the tramroad			○
		Remains of the disposal yard for mullock			○
		Remains of the pithead (1)			○
		Remains of the pithead (2)			○
		Remains of the electric hoist house			○
		Remains of the pithead (3)			○
		Road			○
		Forests			○
Transportation site	Hashino Iron Mine period	Remains of the transportation site	○	○	○
	Tanaka Ironworks period, Nittetsu Mining period	Forest road / Forest maintenance road			○
		Forests			○
Smelting site	Hashino Iron Mine period	The first blast furnace and its associated facilities	○	○	○
		The second blast furnace and its associated facilities	○	○	○
		The third blast furnace and its associated facilities	○	○	○
		Remains of the watercourse	○	○	○
		Remains of the management office	○	○	○
		The foundation stones of the great gate and the shrine gate	○	○	○
		Remains of the shrine of the mountain and mine god	○	○	○
		The grave of Ichinosuke	○	○	○
		The stone monument enshrining the mountain and mine god and the Kannon stone dedicated to cattle and horses	○	○	○
		Remains of the quarry	○	○	○
		The associated buried cultural properties which are considered to have existed	○	○	○
		Futamatasawa River(Futamatasawa)	○	○	○
	Nittetsu Mining period	The wooden entrance gate of the shrine of the mountain and mine god		○	○
		The monument to commemorate the oldest blast furnace in Japan		○	○

Table 1: The elements constituting Hashino Iron Mining and Smelting Site and their value categories

Out of these elements in the Table 1, which the Conservation Work Programme for Hashino Iron Mining and Smelting Site will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Kamaishi City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following four points.

(1) Conservation and restoration – maintaining and enhancing a stable environment for the remains

Kamaishi City conserve the conditions of the remains of the surface mine workings, the stone structures of the blast furnaces, and other facilities of the time that still exist in fragments in a stable condition. While implementing follow-up observations using monitoring charts, the city will conduct repairs or restoration particularly on the stone walls that were the foundation of the construction at that time, the stone structures of the blast furnaces, and other areas where swelling, loosening and falling-off is advancing, while minimizing the impact on the remains, and work to maintain and enhance the stable environment for the remains.

Because much of the underground archaeological remains have not been surveyed, the excavation surveys will be conducted within the minimal range.

(2) Presentation and Public utilization – providing information and explanations of the value of the sites using diverse methods

Kamaishi City will provide information and explanations to fully convey how the multiple remains were mutually related and together constituted an integrated system of mining, transportation and iron-making in the early modern era. In particular, the city will focus on providing information and explanations of how the (i) Smelting Site, (ii) Transportation Site, and (iii) Mining Site changed from the time of the Hashino Iron Mine period through to today. In addition, the city is striving for the conservation and management of the environment of the valley where the remains are located and of the forest that was the source of charcoal, and devising measures to recreate the type of forest that existed when the mine was operating so visitors to the Hashino Iron Mining and Smelting Site can experience a realistic sense of early modern iron manufacturing.

(3) Clarification of the position of the "Hashino Iron Mining and Smelting Site" in the World Cultural Heritage "Sites of Japan's Meiji Industrial Revolution"

Hashino Iron Mining and Smelting Site is an industrial remains representing the initial period of Japan's industrial revolution in the field of iron and steel manufacturing, and it contributes to the Outstanding Universal Value of "Sites of Japan's Meiji Industrial Revolution" as a specific example of the fusion of Western technology and Japanese indigenous traditional techniques. To advance the conservation, restoration, presentation and public utilization of the constituent elements themselves which contribute to the Outstanding Universal Value, and to grasp for deeper relations with other component parts of the property, Kamaishi City will disseminate the findings of the ongoing investigative surveys implemented by each of the cities and other bodies concerned in all Areas.

(4) Clarification of the position of the "Hashino Iron Mining and Smelting Site" as a base for urban development toward the future

Wide-ranging industrial and economic activities have spread in the urban areas of Kamaishi, and the traditions, spirit, arts and culture as a "City of Iron" have become rooted in the lives of the residents. From the perspective of encouraging these activities, Kamaishi City and related companies and organizations concerned will actively disseminate the identity of Kamaishi centered on the Hashino Iron Mining and Smelting Site.

2. Policy

The policy consisting of following five items has been set to approach conservation.

(1) Promoting research and study

With the purposes of reconfirming and further understanding of the Outstanding Universal Value and public utilization of the Hashino Iron Mining and Smelting Site as a resource for study and regional promotion, Kamaishi City is systematically implementing surveys for distribution of remains, measurement of topography, excavation of underground remains and other field surveys, as well as historical document surveys to clarify the mining, transportation and iron-making system.

Regular monitoring is conducted to grasp the state of the component part and buffer zone, applying annual report and monitoring charts. Visitor surveys are also carried out to understand visitor state and their impact on the component part.

(2) Maintaining, reinforcing, and stabilizing the materials, substance, and structure of the installations and historical and archaeological remains and objects

Kamaishi City will work on daily management of the remains while monitoring them with the basic aim of improving the conservation environment so that the historical and archaeological remains and objects are maintained in a stable condition. At the same time, while making comprehensive judgments on the role and state of deterioration of each remains, the City will implement repair or restoration works for reinforcement, stabilization, etc. in a phased manner in order of priorities. In particular, records are being documented and restorations implemented on an urgent, priority basis for those areas that suffered damages from Typhoon No. 10 in August, 2016.

(3) Presenting and explaining of the mining, transportation, and iron-making system in the component part

The characteristics of each constituent elements in the mining, transportation, and iron-making system must emerge based on the differences in the history, location, and how the historical and archaeological remains and objects remain at each of the three sections ((i) Smelting Site, (ii) Transportation Site, and (iii) Iron Mining Site). To those ends, Kamaishi City provides information so that visitors can gain an appropriate understanding of the process of mining (iii) => transportation (ii) => iron-making (i). Furthermore, the city provides information on the entire mining, transportation, and iron-making system including the river which served as the water source to turn the waterwheel that was the power source for the blast furnace and the surrounding forest that was the source of the charcoal.

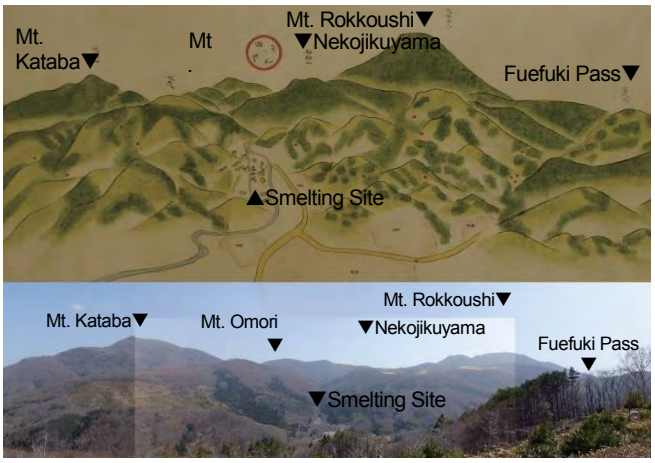


Figure 2: Comparison of Historical drawing and Present Landscape

(4) Arranging and improving the environment from a landscape perspective

Hashino Iron Mining and Smelting Site is important in that the landscape pertaining to modern iron manufacturing still exists today, surrounded forest which was the source of the reducing agent and of the charcoal used as fuel for iron manufacturing. Because the present view toward the Hashino Iron Mining and Smelting Site including the Smelting Site from the prefectural road on the northern side of the component part has a strong resemblance to “Picture map of full view of the Hashino” (Figure 2) in “Picture scroll of the Hashino Iron Mine” (published in the 1860s), while maintaining the present landscape, Kamaishi City is devising improvement measures to approach the past landscape shown on the picture. The City will also take measures to set up a scenic viewpoint so that visitors can compare the present landscape with the historical drawings.

(5) Implementing projects

To ensure the phased and steady execution of the Programme, Kamaishi City sets a project execution schedule and incorporates it into this Programme, including project periods, implementation methods, and project implementation items in each year, necessary expenses, etc.

Also, projects listed in the Programme are clearly stated in the city’s comprehensive plan (presently, “Kamaishi City Reconstruction and Development Master Plan/Implementation Plan”), and sustainable projects are being advanced with the certain securing of budgets, giving consideration to the city’s financial state and the running costs after projects completion.

Moreover, the policies for managing and operating projects for the component part are shared relevant information among the owners and managers, and the sustainable management of the projects shared with the members of the community is being enhanced in collaboration with the Hashino Town Promotion Association, which is normally responsible for management of the projects open to the public and of the Hashino Information Center. In addition, Kamaishi City is promoting mutual ties among the responsible departments such as department of world heritage, cultural properties, and tourism, making improvements as a functional system, and implementing projects for training guides and capacity building of human resources engaged in conservation and restorations, surveys, etc.

3. Methods

(1) Research and study

(a) Field surveys (distribution surveys, measurement surveys, excavation surveys)

While conducting excavation surveys to clarify the functions and mutual relations of each of the remains of the Smelting Site, Kamaishi City is implementing distribution for surveys of remains on a priority basis to grasp the conditions of the transportation Site and Iron Mining Site. Excavation surveys are conducted within the minimum range to conserve the remains best, and remains maps are documented using three-dimensional measurements. Unless otherwise required for restoration from disaster, the excavation surveys are being implemented in the order No. 2 Blast Furnace area => No. 3 Blast Furnace area => No. 1 Blast Furnace area => Iron Mining Site.

(b) Historical documents surveys

Kamaishi City is confirming the locations and state of conservation of the original copies (historical documents) of texts published in “Hashino Blast Furnace Remains Investigation Report” (Kamaishi City, 1956) and “Kamaishi City Magazine Historical Materials Volume 4” (Kamaishi City Magazine Editorial Board, 1963), and preparing a register. After that, the city will also conduct interpretative surveys to clarify the process of historical changes and developments of iron manufacturing in Kamaishi including the history of the Hashino Iron Mining and Smelting Site, as well as the mining, transportation, and iron-making system at that time. The survey subjects include historical documents not only within Kamaishi City, but outside the city as well.

(c) Survey on visitor numbers, behaviors and opinions

To verify project effects, grasp the impact of tourism pressure on conservation, and reflect findings in better ways of public utilizing World Heritage component part, Kamaishi City sets a questionnaire response box at the Hashino Information Center and carries out surveys on visitor numbers, their behaviors, and their understandings and opinions.

(d) Monitoring

In December 2016, Kamaishi City documented monitoring charts that comprehensively and systematically cover the constituent elements included in the component part. From now on, these will be used as the starting point for regularly grasping the conditions of the component parts and buffer zone. The monitoring results are reported to the Kamaishi Conservation Council for their opinion. In cases where a negative impact on the component part is confirmed, the cause is removed or countermeasures are implemented to mitigate the impact, with subsequent inspections and verifications of the effects.

(2) Conservations and restorations

(a) Subjects

The subjects of the conservations and restorations are the constituent elements of the Hashino Iron Mining and Smelting Site that contribute to the Outstanding Universal Value.

(b) Basic concept and methods

(i) Smelting Sites

a. First Blast Furnace

Regarding the multiple stone materials that have fallen and become buried at the northern and western perimeter of the stone works of the First Blast Furnace, because prior surveys have been able to specify the original positions, in the future Kamaishi City will conduct detailed examinations through additional surveys, carry out restoration with dismantling, and work to stabilize the structure of the stone works by restoring the stone materials to their original positions.

b. Second Blast Furnace

The stone materials that were formerly used for the stone works of the Second Blast Furnace were re-used as foundation stone for the management office after the blast furnace operations ended, so Kamaishi City is stably maintaining their present condition by periodic monitoring and daily maintenance management, without pursuing restoration works.

c. Third Blast Furnace

The stone materials of the Third Blast Furnace show cracking and chipping, but the structure is presently stable, and does not require an urgent response. Consequently, while implementing periodic monitoring and daily maintenance management, Kamaishi City is conducting detailed investigations on the necessity of dismantling and restoration, in parallel with systematic excavation surveys and display of the surrounding remains.

d. Watercourse, etc.

The stone walls of the watercourse at the (i) Smelting Site have not been repaired since operations were suspended, so a lot of swelling, loosening and falling of stone materials is visible, but based on visual observations over the past ten years, the conditions do not demand immediate restoration. For that reason, for the time being, Kamaishi City will conduct monitoring through visual inspections in parallel with daily maintenance and management, and grasp the movement of the stone material through fixed point measurement surveys at locations where swelling and loosening is recognized. If the amount of movement increases and a judgment is reached that restoration with dismantling is necessary, trees that are causing harm will be removed and excavation surveys and restoration implemented.

Regarding the stone walls of the watercourse around the Second Blast Furnace where swelling, loosening and falling of stone materials is evident, excavation surveys will be conducted together with the display of the remains around the Second Blast Furnace and detailed examinations carried out on the necessity of restoration with dismantling.

(ii) Transportation Site and Iron Mining Site

a. Stone Walls

Kamaishi City will urgently prepare a record of the current conditions (conduct measurement surveys), and continue monitoring. Stone walls in unstable conditions will be reinforced using sandbags, gabions and other means, and stable conditions maintained. While the parts of the stone walls of the Iron Mining Site that fell from Typhoon No. 10 in August 2016 are presently maintaining stable conditions using sandbags as a temporary measure, survey and restoration works will be implemented in phases after the restoration of forest road and forest maintenance road are completed. Detailed investigations considering the precipitous terrain at the site will also be conducted on the possibility of constructing a new road for management, which would be used to bring in heavy machinery and transport materials for restoration

b. Remains of Transportation Road and Surface Mine Workings

Kamaishi City is conducting periodic monitoring and daily maintenance and management, and maintaining the stable conditions of these remains. Kamaishi City is removing vegetation that impact on the remains following consultation with the owners (Forestry Agency, Nittetsu Mining Co., Ltd.).

(iii) Underground archaeological Remains (entire area of the component part)

The underground archaeological remains detected in excavation surveys are reinforced with river sand

and other materials, and reburied. Thereafter, periodic visual monitoring is conducted so there is no adverse impact on the underground archaeological remains from subsidence of the protective earth layer, etc.

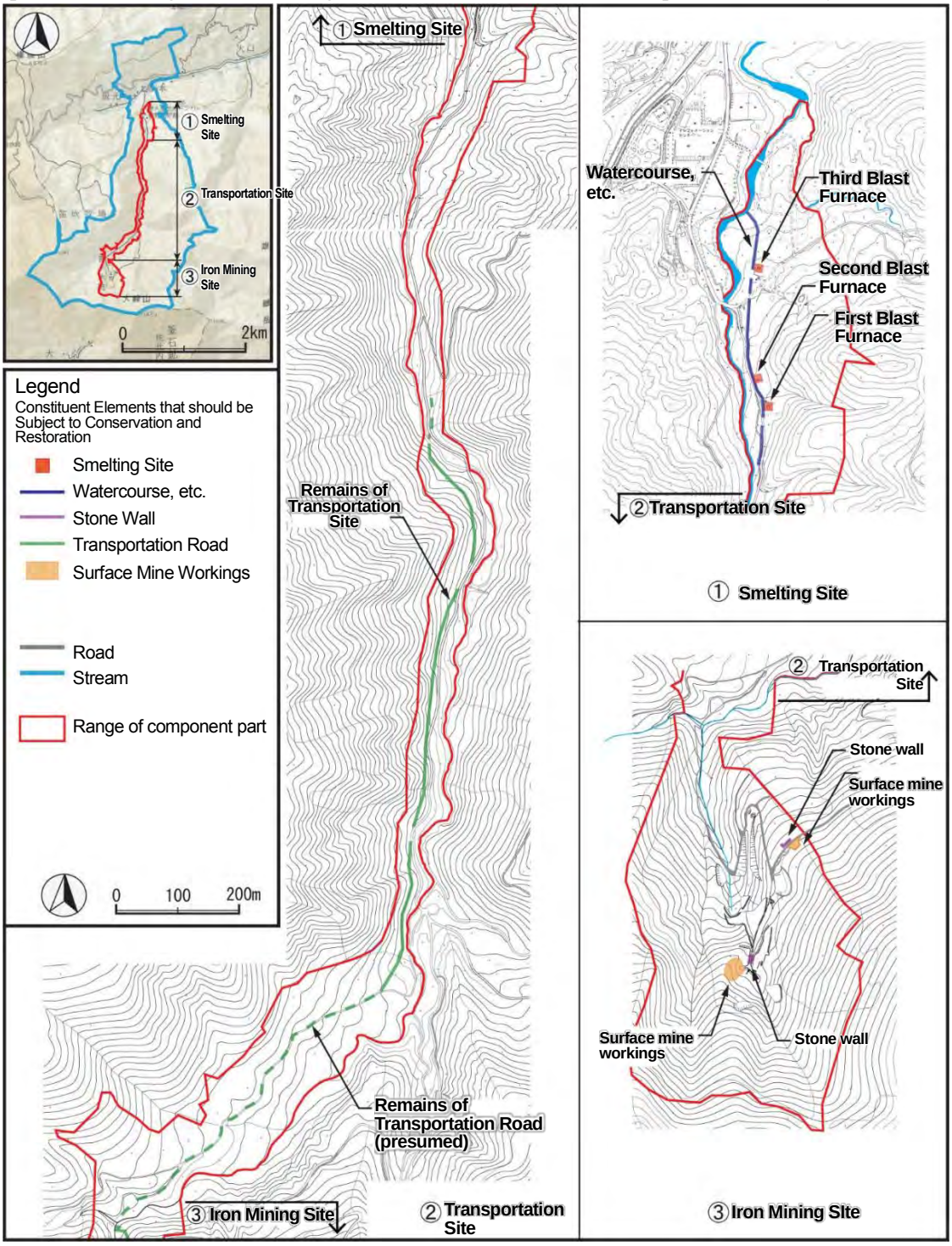


Figure 3: Constituent Elements that Should be Subject to Conservation and Restoration

(3) Presentation and public utilization considering the iron ore mining, transportation, and iron-making system

The sections (i) Smelting Site, (ii) Transportation Site and (iii) Iron Mining Site are set as the Smelting Site zone, Transportation Site zone, and Iron Mining Site zone, respectively, and each zone is divided into multiple blocs based on the policies for survey, conservation, restoration, presentation and public utilization for

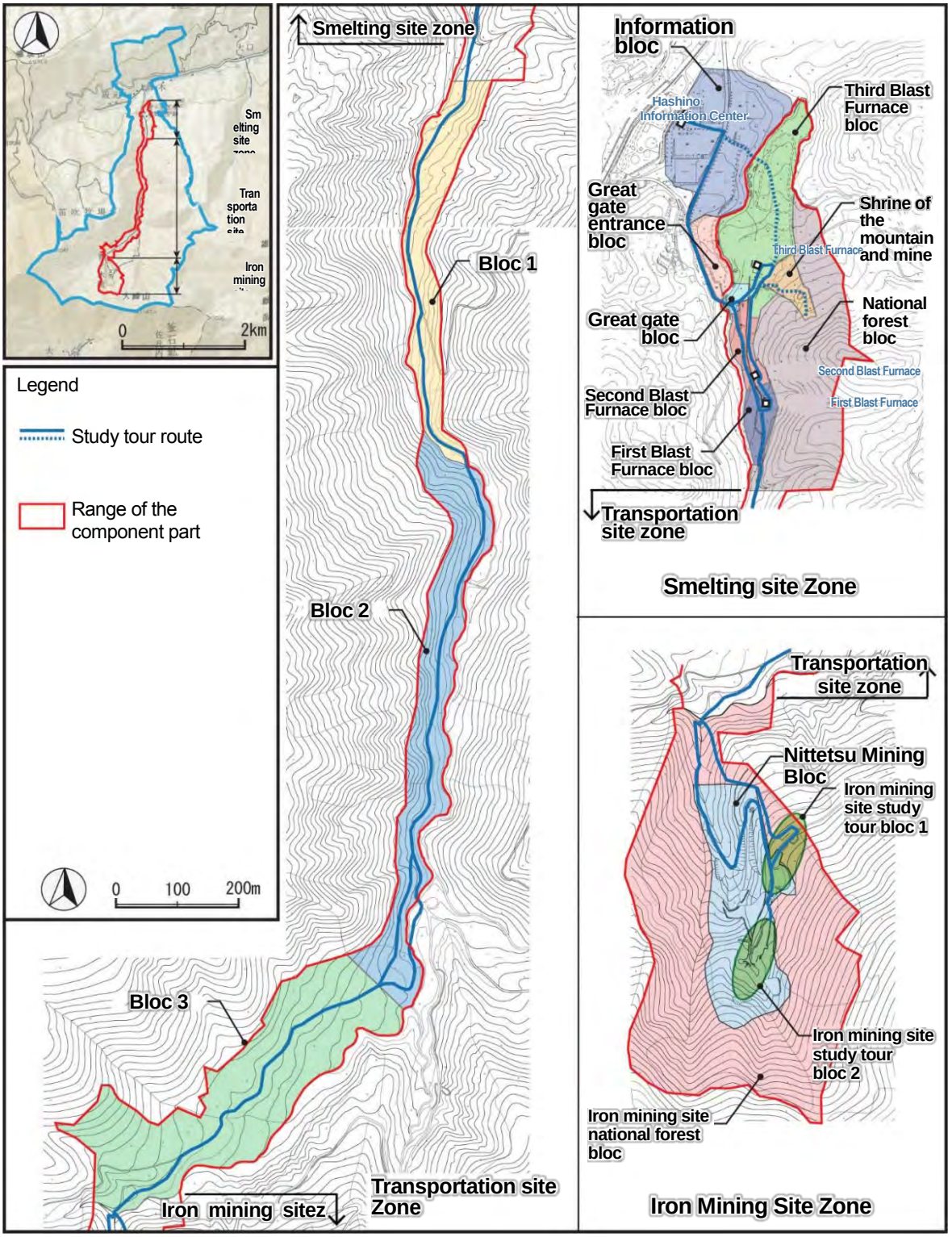


Figure 4: Bloc Divisions and Tour Route in Each Zone

each zone (Figure 4).These blocs are divided by following; in smelting site zone, blocs are divided by the state of land utilization and efficient explanation method for iron making; in the transportation site zone, they are divided by the state of detection of remains; and in the iron mining site zone, they are divided by the state of land utilization (National forest/ Nittetsu Mining). In addition, in iron mining site zone, units are set where utilized publicly by the study tour approximately twice in a year.

Kamaishi City is installing information and explanation facilities, centered on the smelting site zone which

is normally open to the public, so that visitors can make study tours comfortably after understanding the iron ore mining, transportation, and iron-making system, and utilizing these as a venue for school education and social education and as a resource for regional revitalization and tourism.

Regarding the transportation site zone and iron mining site zone, which are not usually open to the public, study tours will be resumed, about twice a year, following the restoration from the damages caused by Typhoon No. 10 in 2016.

In particular, methods of installing facilities for public use in the smelting site zone being advanced by Kamaishi City are as follows.

(a) Study tour routes

Study tour routes are set so that the iron ore mining, transportation, and iron-making system at Hashino Iron Mining and Smelting Site can normally be understood in the area from the Hashino Information Center to the Smelting Site (Figure 4).

Among the study tour routes, Kamaishi City will pave the road that was formerly a forest road after devising drainage methods, considering that the vehicles for management of the component part will pass and to prevent road surface damage from a disaster of the same scale as Typhoon No. 10 of August 2016. A car stop and signs that vehicles are prohibited from entering will be installed near the entrance to prevent entrance by public vehicles. Other study tour routes will be paved using earth-based paving materials, considering the landscape.

(b) Remains display and environment improvements

The smelting site zone is divided into areas where the remains presently exposed are maintained in their present condition, and where they are reburied underground for being preserved.

Regarding the underground archaeological remains that were discovered by excavation surveys, Kamaishi City will display these using other materials on the ground surface so their planar scale in two dimensions can be grasped.

In particular, the digitization for Second Blast Furnace will be started on a priority basis because the shed and earthen floor are drawn in detail in the “Picture Scroll of the Hashino Iron Mine” and after the excavation survey the planar scale of the surrounded remains will be displayed on the ground surface (Figure 7).

(c) Arranging and improving landscape and planting vegetation

Kamaishi City will cut and remove trees that have a adverse impact on both above-ground and underground remains of component part and other trees that affect the ecology such as parasitic plants (mistletoe), as well as trees that are dense and overgrown and have a negative effect on the landscape, using methods that do not impact on the underground archaeological remains. Also, to prevent the apperance of large animals that could harm visitors, mulberry and other trees that provide feed for such animals will be removed if they are nearby study tour routes.

(d) Information and explanation boards

Kamaishi City installs information boards and explanation boards with a consistent design and scale at locations selected considering the landscape.

(e) Management utility facilities

The parking lots near the Hashino Information Center provide sufficient scale and functions as it is at present, so Kamaishi City will maintain the existing parking lots, without expansion. The using of the adjacent vacant land (former tennis court, former skating rink, etc.) will be determined after future surveys on the number of visitors (Figure 5).

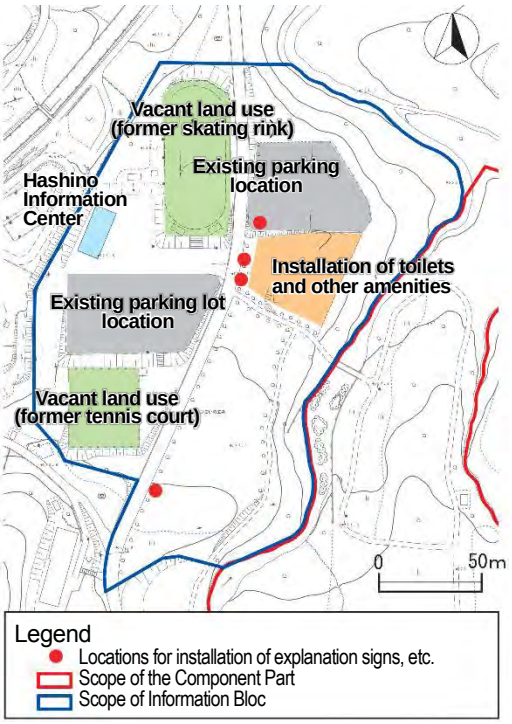


Figure 5: Information Bloc Public Use

The gazebo which is an existing rest facility inside the component part has deteriorated with age, so it will be removed. Rather than building a gazebo as a new rest facility, benches will be installed along study tour routes of the smelting site zone. Also, for the utility of visitors, toilets will be installed in the "Great gate Entrance Bloc" (Figure 4; smelting site zone), with the consent of the landowners.

(4) Improvement of the environment in the buffer zone

In the National forest that makes up the majority of the buffer zone, the Sanriku-Chubu District Forest Office of Forestry Agency is working to recreate, as much as possible, the type of broadleaf (oak) and Japanese red pine forest believed to have been present at the time the Hashino Iron Mining and Smelting Site was operating through repeated, systematic, and thinning under the "Conservation, Management and Utilization Plan for Hometown Forest of the Hashino Iron Mining and Smelting Site" prepared based on "The Kyodo-no-mori (Hometown Forest) Preservation Agreement of the Hashino Iron Mining and Smelting Site" between the Director of the Sanriku-Chubu District Forest Office, Tohoku Regional Forest Office and the Mayor of Kamaishi City.

In the lands owned by the city that extend to the north of the component part, Kamaishi City will install toilets, benches and other utility facilities, while considering the landscape, and create a space where visitors can safely and comfortably rest (Figure 5). Land for a scenic viewpoint will be set along the prefectural road on the north side, and a plaza opened with explanation boards so visitors can readily compare the landscape today and when the site was operating (see Figure 2).

Kamaishi City is promoting understanding of the importance of conserving the landscape in the buffer zone to the private owners of the land to the north of the component part, and encouraging maintenance of the present land use and buildings. In particular, when owners rebuild their houses, etc., or divert agricultural land to other uses, intervention will be made to maintain the relict industrial landscape of the component part.

4. Projects implementation

The projects implementation schedule is as shown in Table 1. The division of periods for the projects and priority of the execution items is as follows.

(1) Projects implementation based on short-term, mid-term, and long-term projects periods

Kamaishi City has prepared a 20-year projects implementation schedule starting from 2018 (Table 1). The works will be implemented in stages, with a five-year period for short-term and mid-term period and a 10-year period for long-term period. Restorations deemed urgent based on the future surveys and monitoring results will be implemented on an ongoing basis.

(2) Priority of implementation items

Regarding the damages from Typhoon No. 10 of FY2016, Kamaishi City made a document in FY2017 and is implementing full-scale restorations in stages from FY2017. A restoration report on (i) Smelting Site (smelting site zone) will be prepared in FY2018.[2] Regarding (ii) Transportation Site (transportation site zone) and (iii) Iron Mining Site (iron mining site zone), restorations will be conducted together with the restoration of the forest road and forest maintenance road, and a report prepared by FY2022.

In particular, in the short term Kamaishi City is giving high priority to projects that effectively combine restorations and the provision of information regarding the mining, transportation, and iron-making system. The city is making a planar display of the Second Blast Furnace and the underground archaeological remains in its surrounding area on the ground surface, and conducting restoration of the watercourses' stone walls with dismantling. Measurement surveys will also be conducted in the short term to belatedly grasp the current conditions of the Transportation Site and the Iron Mining Site, and precedence will be given in particular to measurement surveys of areas damaged by the October 2016 typhoon.

(3) Implementation schedule revisions

With the passage of the mid-term scheduled for FY2027, the implementation schedule will be revised based on the state of projects progress. In cases where new responses become necessary, revisions will be considered without waiting for FY2027.

(4) Other

Kamaishi City has carried out conservation and restoration work, etc. for the Hashino Iron Mining and Smelting Site by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 142 million yen was spent in FY2016 and 123 million yen has been budgeted for FY2017, both including costs incurred or earmarked for the restoration from Typhoon No.10 disaster and for establishment of related facilities for promoting public understanding, but excluding the cost for day-to-day maintenance.

[2] The response to "ICOMOS Technical Review regarding Typhoon Damage to the Hashino Iron Mining and Smelting Site" sent from the UNESCO World Heritage Center dated June 1, 2017 is attached as an appendix to this summary.

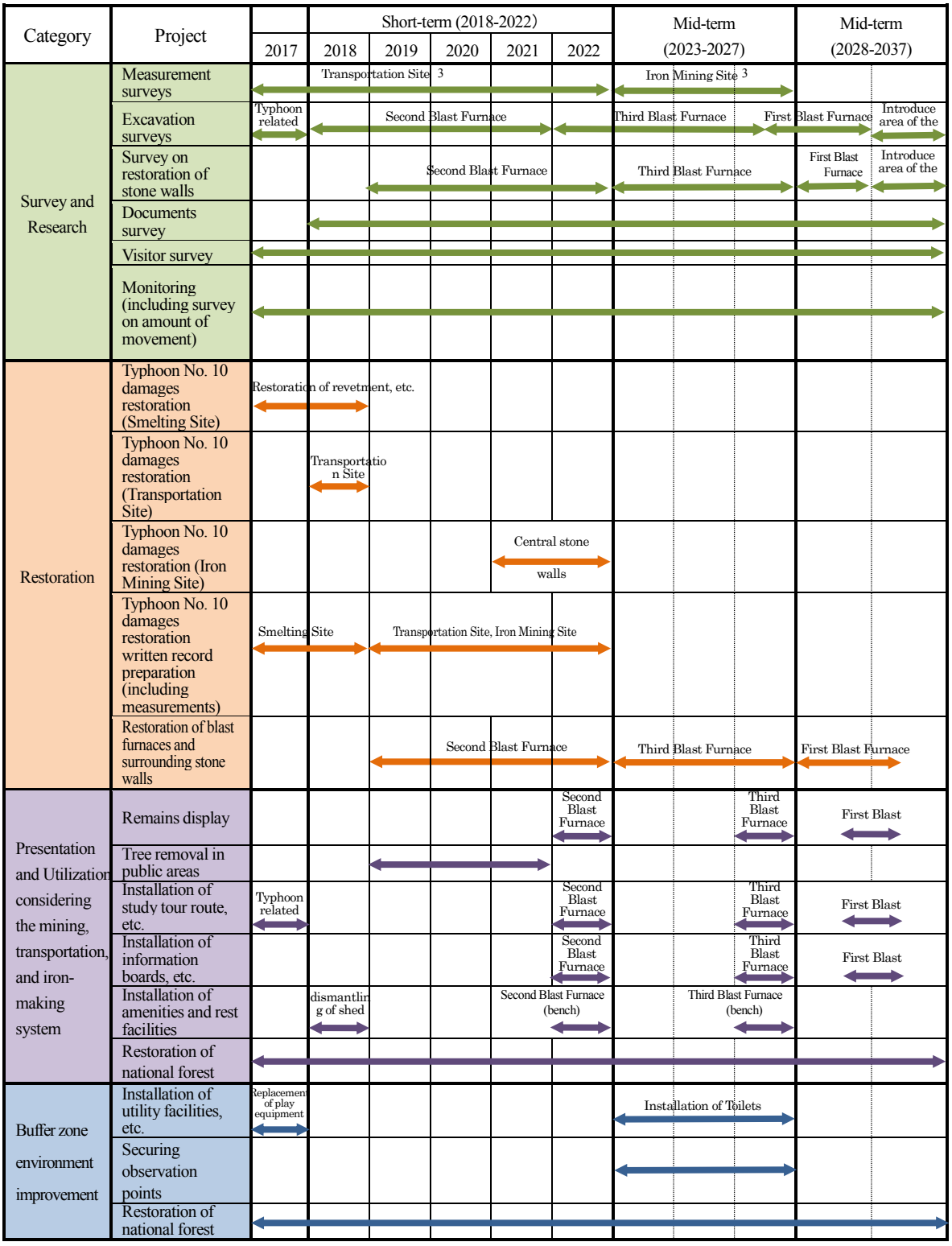


Table 2: Project Execution Schedule[3]

[3] The measurement surveys of the Transportation Site and Iron Mining Site referred at the top of the "Investigative Research" category does not include the urgent measurement survey of the Transportation Site and Iron Mining Site related to recovery from damages caused by Typhoon No. 10. The measurement survey to prepare a record pertaining to recovery from damages caused by Typhoon No. 10 is included in the "Restoration" category, and both are to be executed over the short term.

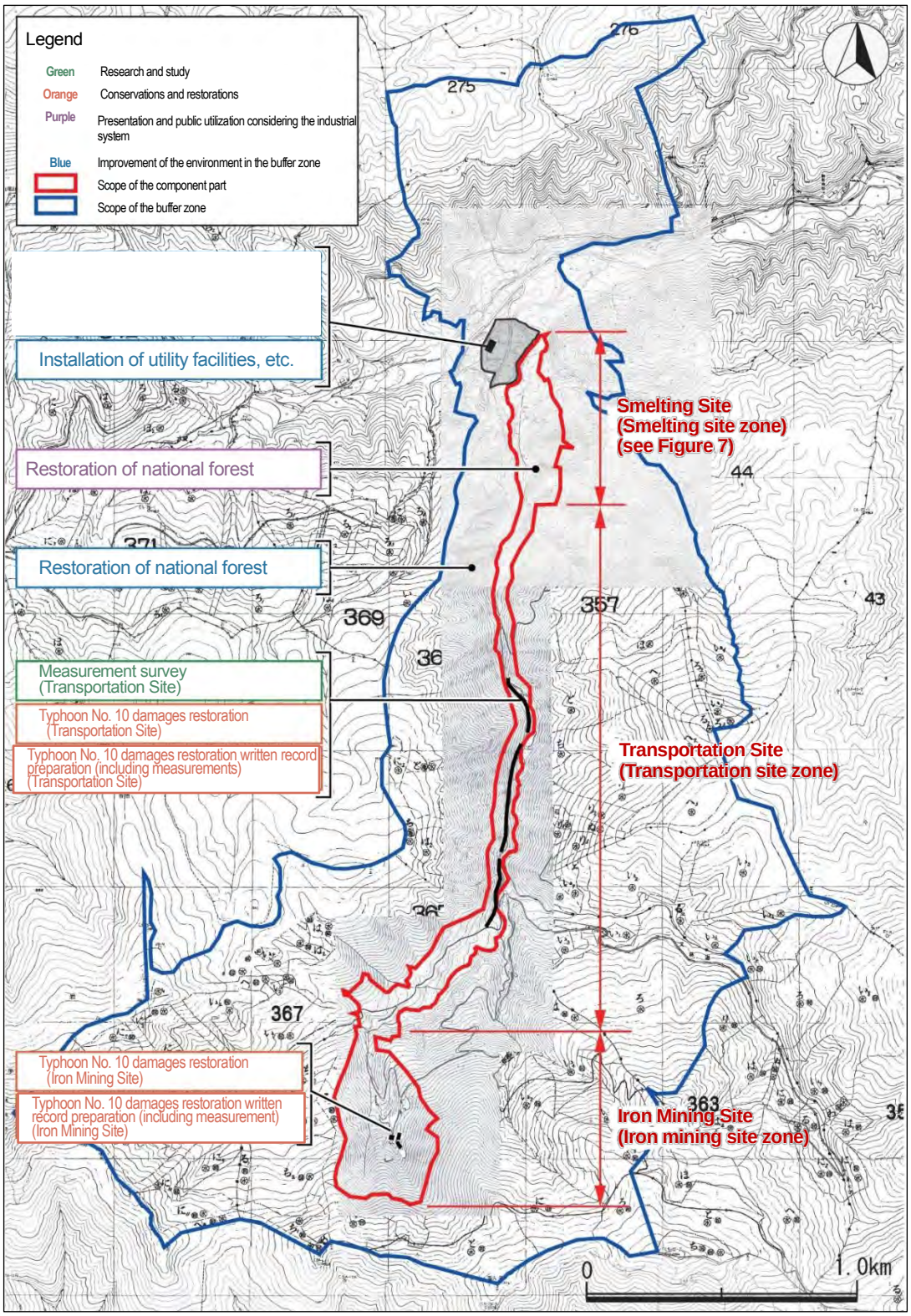


Figure 6: Hashino Iron Mining and Smelting Site Basic Plan Map (Short-term)

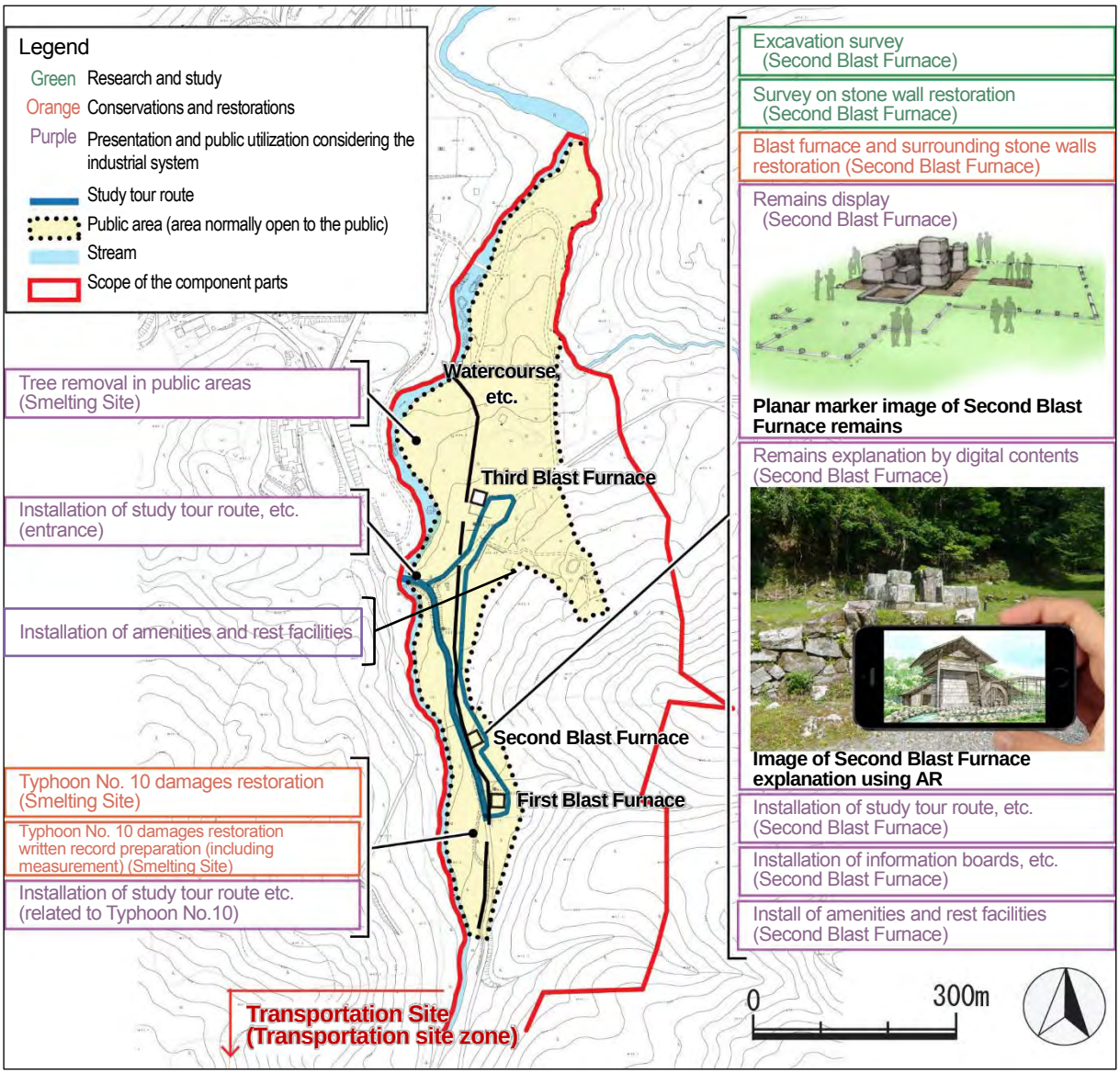


Figure 7 Hashino Iron Mine Basic Plan (Short-term) Transportation Site(Transportation site Zone) Enlarged View

5. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for Hashino Iron Mining and Smelting Site, which became a source of "Conservation Work Programme and Implementation Programme" is available on Kamaishi City's web site.
<http://www.city.kamaishi.iwate.jp/shisei_joho/keikaku_torikumi/detail/1214190_2554.html>

(Annex)

Response to ICOMOS Technical Review on Typhoon Disaster Restoration of Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/ Component part 4-1)

1. Background

On June 1st, 2017, the Government of Japan received the document of ICOMOS technical review via the World Heritage Centre regarding the report of "Information Document Concerning the Damages Caused by Typhoon No.10 on Hashino Iron Mining and Smelting Site (Component Part 4-1/Area 4 Kamaishi) and the Future Measures to Address the Damages" (hereinafter referred to as the "First Report"), which the Government of Japan submitted to the World Heritage Centre on December 22nd, 2016. This report (hereinafter referred to as "Second Report") incorporates responses to the items recommended in said technical review.

2. Recommendations by ICOMOS in its technical review

a. Ensure the damage is adequately documented;
b. Review the Risk Management Plan in response to the disaster and its response;
c. Ensure that the proposed restoration and conservation plan is coordinate with the wider prioritised conservation work programme for the nominated property and its component sites and implementation programme, requested by the Committee at the time of inscription;
d. Provide a progress report on the restoration and conservation works to the World Heritage Center in its December 2017 report.

3. Response to recommendations by ICOMOS

(1) Written record of damages and restoration (Response to 2-a)

Kamaishi City will accurately record the state of damage and restoration. Along with the progress of the restoration, restoration project reports will be published on the smelting site by March 2019 and on the transportation site and iron mining site by March 2023, with detailed diagrams of each remains.

(2) Risk management scheme revision (Response to 2-b)

Iwate Prefectural Government and Kamaishi City each prepared a regional disaster prevention plan in 1969 and 1973, respectively, based on the Basic Act on Disaster Control Measures (Act No. 223 of 1961). Following the damages from Typhoon No. 10 of 2016, Iwate Prefectural Government and Kamaishi City each revised portions of the contents of their regional disaster prevention plans in March 2017 and September 2017, respectively.

The Iwate Prefectural Disaster Management Plan and Kmaishi City Disaster Management Plan were both devised as comprehensive disaster prevention plans for the entire prefecture and the entire city, however they do not include specific disaster prevention plans for individual cultural properties such as Hashino Smelting Site designated as a National Historic Site, or the Hashino Iron Mining and Smelting Site, which is one of the component parts of the World Heritage "Sites of Japan's Meiji Industrial Revolution". For that reason, based on the Kmaishi City Disaster Management Plan, Kamaishi City will revise the Hashino Iron Mining and Smelting Site Conservation Management Plan (CMP) to add disaster prevention policies, method, etc. by FY2018. The revised plan will be promptly sent to the World Heritage Centre.

While future disaster response and prevention will be for the purpose of protecting the remains from disasters, there will not be construction works for large-scale prevention facilities that might have a great impact on the remains' landscape, such as building of Sabo-dams and alteration of water channels. Rather, through the installation of multiple small-scale drainage facilities and other measures, the

response will take a direction expected to achieve a complementary effect. Also, precipitation gauges will be installed on land adjacent to the remains to collect objective data, and by conducting observations of the remains on a periodic basis using monitoring charts, efforts will be made, although visual, at early detection of danger levels. A detailed topographic map of the remains will be prepared so that restorations can be made immediately even in cases where there is a minor impact on the remains.

(3) Relation between the "Conservation, Restoration, Presentation and Public Utilization Plan" and the "Conservation Work Programme and Implementation Programme" (response to 2-c)

The "Conservation, Restoration, Presentation and Public Utilization Plan" mentioned in the First Report as being prepared is the source of the "Conservation Work Programme and Implementation Programme" pursuant to Recommendation b) included in the Decision (39COM 8B.14) of the World Heritage Committee. The disaster restoration works this time are positioned as top priority items under the same Plan and Programme, as shown in Table 1.

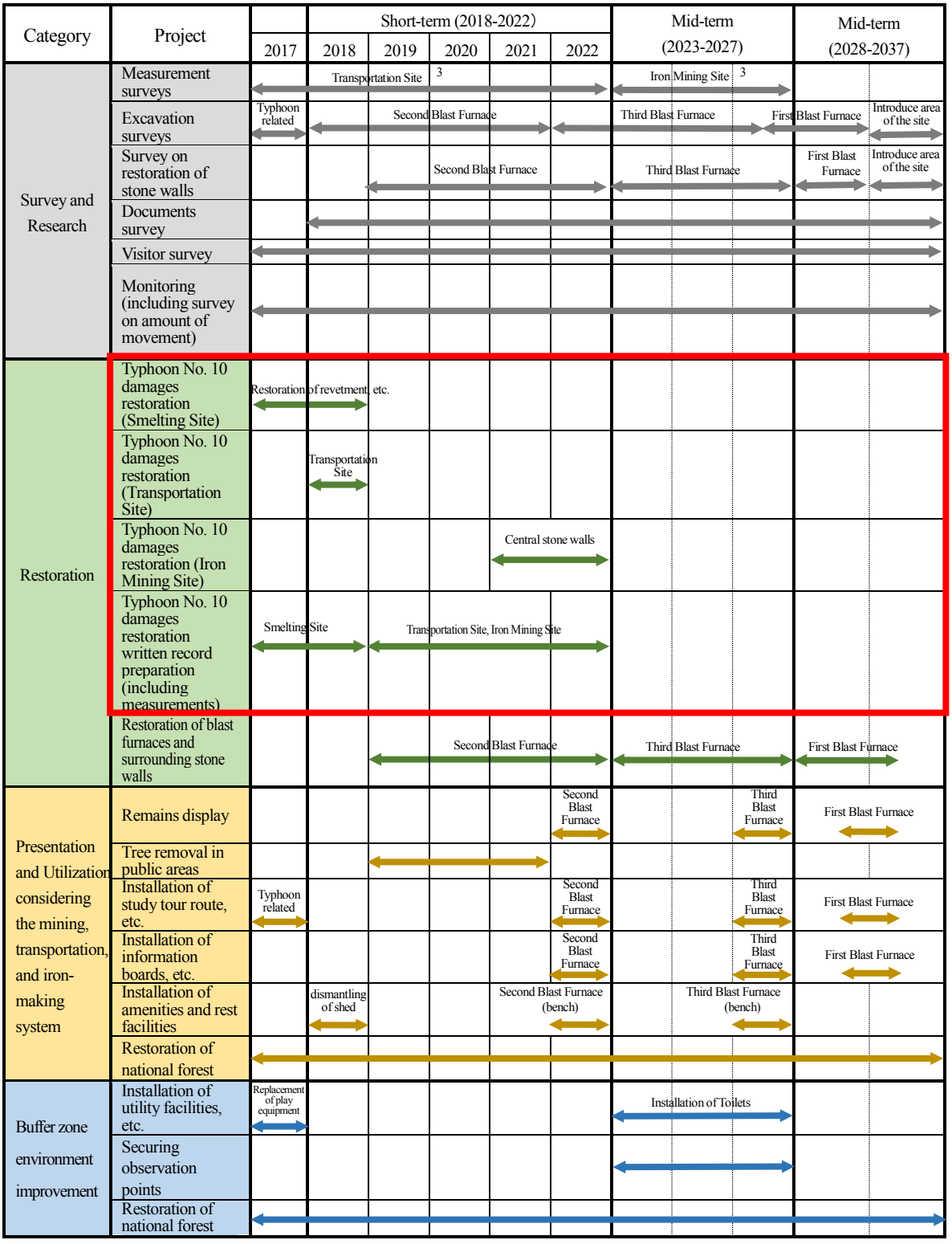


Table 1: Position of the disaster restoration works in the Conservation, Restoration, Presentation and Public Utilization Plan (same as under the Conservation Work Programme and Implementation Programme) (□ indicates restoration works)

(4) Progress state of disaster restoration (Response to 2-d)

The progress status of the disaster restoration works as of December 2017 is as shown in Table 2.

Area	Elements Requiring Restoration	OUV	Damages Conditions	Restoration Response		Progress Status	Completion (Scheduled)
				Urgent Measures	Full-Scale Restoration		
Smelting Site	No. 1 Blast Furnace and associated facilities	○	The sand at the base of bellows was slightly washed away, turning the plain into a wetland.	-	Refilled manually November 2016.	Completed	2016
	No. 3 Blast Furnace and associated facilities	○	Scattered sediment, fallen trees nearby the site.	-	Fallen trees removed April 2017.	Completed	2017
	Remains of the watercourse	○	Scattered gravel and driftwood, exposed bottom surface.	-	Driftwood removed June 2017.	Completed	2017
	Remains of the management office	○	Exposed relic surface and relics, partially damaged stone wall, etc.	Cured with blue tarp October 2016	Implement contents confirmation survey within 2017; confirm the existence of remains and damages; restore by spreading river sand, and returning the topsoil. Regarding the stone wall, because one stone has fallen, return it to its original location by comparing with photographs before Typhoon No. 10 and other materials.	Started	2017
	The foundation stones of the great gate and shrine gate	○	Accumulated sediment and fallen trees nearby the site, exposed water pipe.	-	Remove fallen trees and water pipe together with the forest road and river bank works within 2017.	Started	2017
	Futamatasawa River (Futamatasawa)	○	Collapsed riverbank of Futamatazawa and fallen trees, collapsed retaining wall on the west side of the former campground, fallen fence, scattered sand.	-	Implement restoration works within 2017 (Futamatasawa: Forestry Agency; Futamatasawa River: Kamaishi City).	Started	2017
	Tour route		Runoff about 50cm wide.	Cured with blue tarp October 2016	Pavement works within 2017, after forest road restoration works.	Started	2017
Transportation Site	Remains of the transportation site	○	Slight outflow of the remains of transportation site at the south of Aonoki Bridge, scattered sand and driftwood, blocked road due to collapse of the slope.	-	Manual restoration works scheduled within 2018.	Not yet started	2018
	Forest road and forest maintenance road		Runoff about 1-meter wide (approx. 2 km).	-	Signed contract for disaster survey measurement design works in October 2016. Signed contract and began forest road restoration works in July 2017; scheduled to complete within 2017. Forest maintenance road to be repaired along with forest operations in stages from 2018.	Started	2022
Iron Mining Site	Remains of the surface mining A	○	Partially exposed remains of the surface mine workings, accumulated sediment.	Cured with sandbags to prevent inflow of earth and sand November 2016	Surveys and restoration will be implemented in stages after the completion of the forest road and forest maintenance road restoration. Also, the possibility of newly installing a management road for the purpose of bringing in heavy equipment for restoration and for transport of materials will be carefully investigated giving due consideration to the steep geography; aiming at completion by 2022.	Not yet started	2022
	Remains of the underground mine workings	○	Accumulated sediment.	Cured with sandbags to prevent inflow of earth and sand November 2016		Not yet started	2022
	Remains of central stone wall	○	Collapsed stone wall on the north side.	Cured with sandbags at locations where stone materials spilled out November 2016		Not yet started	2022

Table 2 State of progress of disaster restoration works as of December 2017

Conservation work programme and implementation programme for Mietsu Naval Dock (Area 5 Saga/ Component part 5-1)

Saga City drew up a "Conservation Work Programme and Implementation Programme" for Mietsu Naval Dock in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015, The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

By making the "unseen Mietsu" visible, the idea is to show the world how the Saga Clan in the last years of Edo Period modernized through trial and error. To this end, the city is carrying out projects to conserve and restore the component part, maintaining its value and conveying that value clearly to visitors, while paying attention to the nature of buried archaeological remains.

Mietsu Naval Dock of Area 5 Saga is a set of archeological remains providing evidence of efforts by the Saga Clan to obtain technology related to Western-style ships, through trial and error, technology improvement and diffusion, and human resource development, from the last years of Edo Period to the early Meiji Era. It qualifies as a component part contributing to the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution in that it demonstrates how, in the process of Japan's modernization, Western technology was aggressively introduced and transferred, and was merged with Japan's existing technology.

In the Conservation Management Plan for Mietsu Naval Dock, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage Inscription, The list of elements constituting Mietsu Naval Dock and their value categories are shown as Table 1.

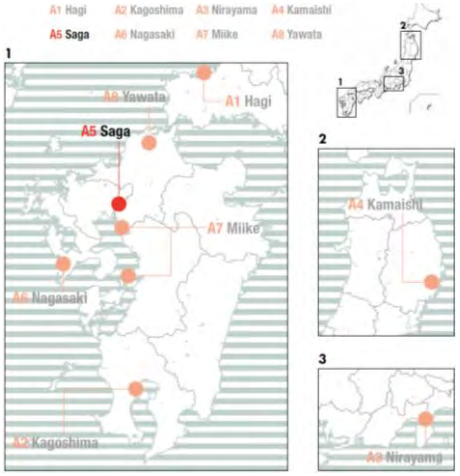


Figure 1: Location of Mietsu Naval Dock

Section	Phase	Element	Classification of value of element		
			OUV	Nation	Regional etc.
Shipbuilding/repair docks and metal works section	Mietsu Naval Facility in operation	Stone remains	○	○	○
		Furnace remains (1•2)	○	○	○
		Ditch remains	○	○	○
		Double–stranded furnace (crucible furnace)	○	○	○
		Scrap pit	○	○	○
		Revetment remains (main dock area)	○	○	○
		Revetment remains (dock entrance area)	○	○	○
		River side revetment remains	○	○	○
		Construction soil	○	○	○
	Saga Maritime Academy	Concrete shipbuilding berth remains			○
		Modern revetment remains			○
Training ground section	Mietsu Naval Facility in operation	Construction soil	○	○	○
		Wooden piles	○	○	○
	Saga Maritime Academy	Stone monument; “Site of Japanese Shipyard”			○
Small boat docks section	Mietsu Naval Facility in operation	Embankment	○	○	○
		Geographical features of inlet	○	○	○

Table 1: The list of elements constituting Mietsu Naval Dock and their value categories

Out of these elements in the Table 1, while the Conservation Work Programme for Mietsu Naval Dock will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Saga City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following three points.

(1) The advantages and disadvantages of being "unseen"

There are many constituent elements clearly showing the nature of the component part, including the underground archaeological remains of the dry dock and of metal works section at Mietsu Naval Dock. At the same time, however, they are covered by protective layers.

For preservation of the archaeological remains, being buried in the ground is the optimal environment. Keeping this "unseen" state, in other words, is considered as of the utmost necessity for the long-term preservation of the archaeological remains.

From the standpoint of efforts to convey the value of these remains, however, maintaining this optimal environment for preservation has the disadvantage of making it difficult to show them directly to visitors.

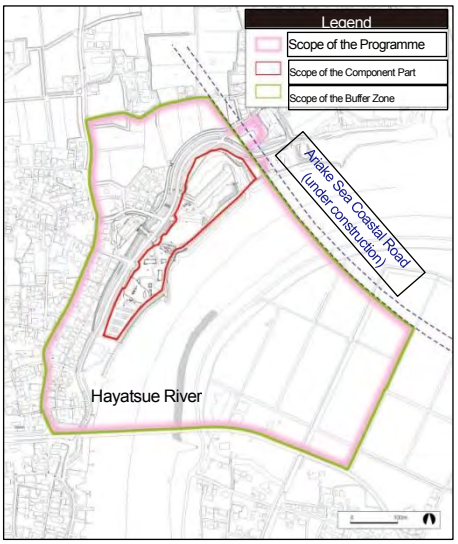


Figure 2:Scope of the Programme

(2) Conveying what is "unseen"

Efforts to overcome the disadvantages for public showing while retaining the advantages of the preservation environment can be thought of as equivalent to the process of solving the issues stemming from the nature of Mietsu Naval Dock archaeological remains. It is necessary to recognize once again the many different causes of being "unseen," such as not physically existing, being buried underground so not visible, being visible but not noticed, or not being noticeable without obtaining information. Moreover, it is important to give careful explanations, including these various causes and reasons, and to provide the basic information for properly understanding the underground archaeological remains. It will be essential also to devise effective means of "visualizing" the remains so they stick in the mind of visitors, from the standpoints of both the landscape at the time as seen from the underground remains and the way the land has been used passed on to today, such as rivers, fishing ports, and nearby villages.

(3) Communicating the significance will make people get involved

Sustainable measures adopting diverse methods are needed for ensuring the component part is passed on to the next generation. The city will therefore create an environment, using various means, enabling people to obtain an accurate understanding of the heritage value and themselves take part in actions for protecting and conveying that value. The city will also go ahead with measures for conservation work of the component part so that the attachment to the heritage resulting from these efforts may help foster pride amongst the local residents.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Conducting investigative studies

The city will continue carrying out excavation surveys and historical document surveys to accumulate basic information for the presentation, public utilization and promotion measures aimed at protecting and conveying the value of the heritage and making it a core of the local community. The city will also conduct investigative studies in such areas as visitor behavior analysis, enhancement of monitoring, and methods of exhibiting and presenting the component part to the public.

(2) Enhancing preservation of constituent elements

The city will conduct monitoring to determine the current state of the component part and the buffer zone, and will work to maintain the state of the safely reburied underground remains. At the same time, the city will devise measures to prevent changes in the underground environment that has protected the remains up to now, and will carry out restoration work if damage is found in the superstructures or terrain.

If new excavation surveys are conducted, adequate measures will be taken to preserve the underground remains when reburying them.

Trees or other plantings that may damage the underground remains will as a rule be removed.

In case of a disaster, after promptly confirming the situation and taking necessary emergency measures, restoration measures will be taken for preservation of the component part.

As one measure, the existing parking facilities in the component part will be transferred off site to enhance protection of the underground remains.

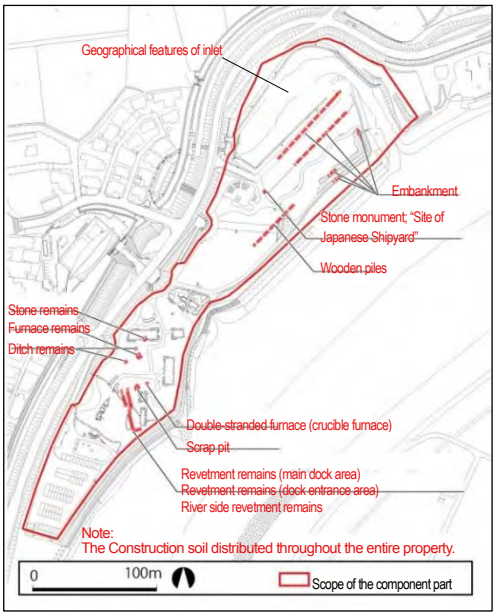


Figure 3: Constituent elements of Mietsu Naval

(3) Presenting systems for shipbuilding and ship-repair

The city plans to avoid exposing the underground remains for viewing, instead choosing to present systems for shipbuilding and ship-repair that treats the exhibits immediately on the underground remains and the exhibits in guidance facilities as an inseparable, integrated exhibit.

(4) Arranging and improving landscape from the standpoint of scenic view

The city, while performing appropriate maintenance, will endeavor to maintain the present state of the superstructures, and the topography of the inlet, etc., which have mostly kept their shape from the period when Mietsu Naval Dock was in operation. As for objects that did not exist when Mietsu Naval Dock was in operation and that obstruct the landscape, these will be removed, moved, or have their appearance improved. In the case, however, of trees, grass and other plantings, so long as they are not likely to damage the underground remains, their current state will be maintained to keep their relaxing function for visitors. Trash and other objects that drift onto the site will be properly removed, endeavoring to maintain the good appearance of the component part and the surroundings.

(5) Implementing projects

The Mietsu World Heritage Division of Saga City will carry out the projects prescribed in this Programme according to a schedule divided into Short Term, Medium Term and Long Term periods, working closely with other related city divisions including the Cultural Promotion Division, the Government of Japan, Saga and Fukuoka Prefectural Governments and other authorities and with local residents. The Short Term period will

be five years starting in FY 2017. The Medium Term period will be the next five years, followed by the Long Term period.

3. Methods

(1) Conducting investigative studies

(a) Excavation surveys and historical document surveys

The city will conduct excavation surveys to determine the structural features of the shipbuilding and ship-repair facilities and how the spaces were used. The surveys will be limited to the minimum extent needed, with all due care taken not to damage the underground archaeological remains in the excavation process. Historical document surveys will be conducted to gather information about the process of building Mietsu Naval Dock, transformation of the Saga Clan navy, steamship repair and building, the role of the naval dock in the last years of Edo Period. Japan, technology exchanges with Nagasaki, the people involved in building the naval dock, and the human resources it produced. The historical document surveys will go along with progress in the excavation surveys.

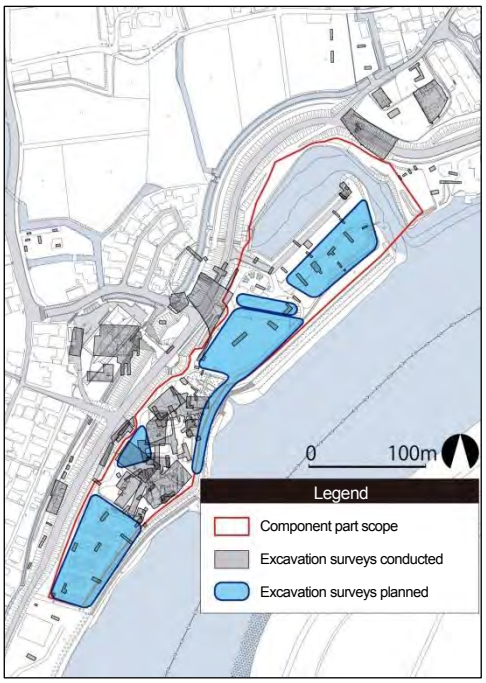


Figure 4:
Places Subject to Excavation Surveys

(b) Survey and analysis of visitor behavior

The city will conduct surveys of visitor behavior and awareness, and analyze the results. The surveys will cover such matters as where the visitors came from, their age group, motivation for coming and means of travel, and their satisfaction with the exhibits and staff. The survey results will be used to improve the project.

(c) Enhancement of monitoring

The city will study highly durable materials for on-site presentation of the underground archaeological remains on the surface of the ground, methods for protecting the underground remains from soil pressure, and methods necessary for enhancing protection of the remains. The results of these studies will be reflected in conservation projects. Monitoring charts will be created for comprehensively and systematically bringing together information on constituent elements. These will be used for periodic monitoring of the state of and changes to the component part and the buffer zone through observations over time. Regular monitoring of the underground water levels and quality (dissolved oxygen, etc.), necessary for determining the preservation state of underground wooden structures will be carried out as needed at the future stage of site conservation and restoration, based on sufficient studies of effective and efficient methods.

(2) Enhancing preservation of constituent elements

(a) Maintenance, conservation and restoration of constituent elements

The underground archaeological remains need to be preserved in their buried state and continually maintained in good condition. The city will periodically observe the remains looking for changes in the shape of the soil surface such as unevenness or subsidence, and will assess the state of protective layer covering the remains. In case adverse impact on the underground remains is foreseen, an excavation survey will be considered for checking the situation. Fragile objects of wood or metal unearthed in the excavation process will be properly preserved as the situation warrants.

The city will continue endeavoring to maintain in stable condition terrain left over from when Mietsu Naval Dock was in operation, and will make use of monitoring charts to visually keep track of changes in the shape of the soil surface. If extensive damage is confirmed as in a disaster, the city will restore the part in question using the same materials as before the damage, in consultation with the Chikugo River Office in the Kyushu Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in

charge of river management, the Saga City Southern Area Construction Office responsible for parks management, the Saga City Fisheries Promotion Division managing fishing ports, and other organizations.

(b) Moving of parking facilities

For the sake of stably maintaining the underground archaeological remains, the city will move the present parking lot to a location outside the component part, to reduce compacting of the soil by vehicles and to make the scenery more suitable to the historical heritage site.

(3) Presenting the systems for shipbuilding and ship-repair

The component part will be divided into three Zones based on how the naval dock was used: the Shipyard Zone, Training Institute Zone, and Ship-Repair Dock Zone. The buffer zone will be divided into an Agricultural Land Zone, River Zone, and Village Zone for the purpose of maintaining the landscape and land use. In addition to these Zones, a Guidance Zone will be established in the northern part of the buffer zone, as an area of the facilities for guidance of the component part and for providing facilities for the convenience of visitors.

The city will implement each of the following based on the above zoning plan.

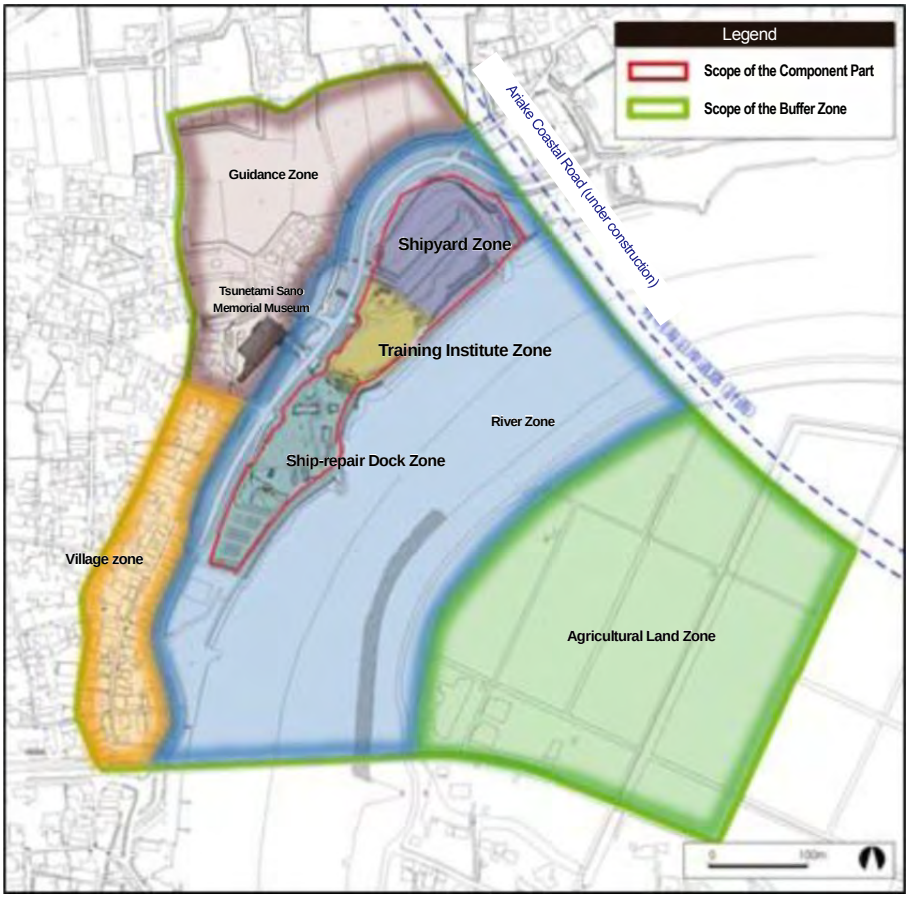


Figure 5: Zoning plan for Mietsu Naval Dock

(a) Setting visitors flow lines

To provide clear explanations of the value of Mietsu Naval Dock and the shipbuilding and ship-repair systems, and to enable handling large numbers of visitors, visitors flow lines will be set from the Guidance Zone parking lot to the indoor exhibits in the guidance facilities, and from there to each of the outdoor exhibits in the Shipyard Zone, Training Institute Zone, and Ship-Repair Dock Zone inside the component part.

(b) Modifying Terrain

The existing topography of the riverbed will be retained, without land filling or other terrain modification.

(c) Presenting above-ground displays indicating buried remains

Two-dimensional and three-dimensional displays on the ground surface will indicate the locations and scales of the remains of metalworking remains, earthen embankments, wooden piles, and other underground archaeological remains. For aspects that are difficult to show, such as the actual three-dimensional appearance of the remains and the roles of each of the remains in the shipbuilding and ship-repair systems, digital technologies will be used to present images on tablets or other information devices.

(d) Arranging and improving landscape and planting vegetation

Arranging and improving landscape and planting vegetation inside and around the component part will be carried out so as not to obstruct the image of the operating naval dock, with its flat work spaces. Plantings that are the cause of such obstruction will therefore be removed or trimmed. While no new planting is planned, trees not likely to adversely damage the underground remains or obstruct the image of the operating naval dock will be retained as much as possible, to provide shade and resting places to visitors.

(e) Installing guidance and explanatory boards

The boards newly installed in and around the component part will have a simple, uniform shape and design in harmony with the landscape.

(f) Installing administrative and utility facilities

The parking lot inside the component part will be removed, to be replaced with a parking area in the new Guidance Zone with an appropriate number of parking spaces. Protective fences will be installed on the riverbanks near the component part to prevent falling, and nets or the like will be used to keep out drifting objects during high tides. If toilets need to be upgraded or moved, the location will be considered consulting with concerned parties, including the option of moving them outside the component part. Additionally, utility facilities in the park will as a rule be upgraded selecting suitable locations. Simple shapes and designs will be used, in harmony with the landscape inside the component part. They should not be wrongly identified as the "outdoor exhibits" of the underground archaeological remains displayed on the surface of the earth layer covering underground archaeological remains.

(g) Installing guidance facilities

The "indoor exhibits," set up in the guidance facilities in the Guidance Zone, will be tied in with the "outdoor exhibits" of the remains covered with the earth layer to further understanding.

(4) Arranging and improving landscape from the standpoint of scenic view

(a) Arranging and improving landscape inside the component part

The city will move, remove, or upgrade the facilities deemed not suitable for location inside the component part, such as the parking lot and the above-ground display facilities based on drawings from the Taisho Era (1912-1926). The habitat of the reed beds along the river, reminiscent of the waterside landscape when Mietsu Naval Dock was in operation, will be maintained while keeping down overgrowth. Trees will be removed if they threaten the underground remains, while those trees that function as scenic beauty and shade along the riverbank will be kept, and grass will be planted in open areas. Trash and other objects that drift onto the site will be properly removed, to maintain the good appearance of the component part and surroundings.

(b) Arranging and improving landscape of the buffer zone

The terrain and land usage of the Agricultural Land Zone, River Zone, and Village Zone in the buffer zone

have been largely retained from the time Mietsu Naval Dock was in operation, and will continue to be maintained by Saga City and Okawa City (Fukuoka Prefecture) in accordance with the applicable laws, including the Act Concerning Establishment of Agricultural Promotion Areas and the Landscape Act. A viewing point will be established on the third-story terrace of the Tsunetami Sano Memorial Museum that exists in the Guidance Zone, with an overall view, enabling visitors to imagine the environment around the naval dock when it was in operation.

4. Projects implementation

(1) Order of priorities

The city has set projects implementation periods starting from 2017, consisting of a Short Term period of five years, a Medium Term period lasting the next five years, and a Long Term period following thereafter.

In the Short Term period, integrated exhibits will be carried out linking the "indoor exhibits" in the guidance facilities with the "outdoor exhibits" inside the component part. While conducting excavation and historical document surveys, and moving the parking lot, the indoor exhibits in the guidance facilities will be completed, and work will start on the outdoor exhibits, including displays of the underground remains in the component part.

In the Medium Term period, the progress of projects in the Short Term will be checked, and the work on outdoor exhibits in the component part started in the Short Term period will be completed.

In the Long Term period, visitor surveys and monitoring will be continued along with maintenance and conservation of the constituent elements, and arranging and improving landscape inside and outside the component part. Activities tied to related modern-era remains will also be carried out.

The following items will be carried out with high priority.

- Academic information will be collected, and excavation and historical document surveys will be continued to further the value.
- The parking lot inside the component part will be removed, and replaced with a new parking area in the Guidance Zone.
- The guidance facilities will be established, and after completion of excavation surveys in the component part, outdoor exhibits, including displays of the underground remains on the surface of the earth layer, will be finished.

(2) Review of implementation schedule

Around 2026, the final year of the Medium Term period, a thorough review will be made of the projects conducted in the Short Term and Medium Term periods, and if issues needing remediation are found, the schedule will be revised.

(3) Other

The city has carried out conservation and restoration work, etc. for the Mietsu Naval Dock by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* As for Saga Prefectural Government and Saga City, approximately 149 million yen was spent in FY2016 (including the amount spent for plan making, surveys and public utilization of the component part) and 184 million yen has been budgeted for FY2017 (including the amounts earmarked for plan making, surveys, relocation of parking lots and public utilization of the component part), both excluding the cost for day-to-day maintenance.

Categories	Details	Short Term					Medium Term	Long Term
		2017	2018	2019	2020	2021	2022-2026	2027 and after
Conducting investigative studies	Excavation surveys							
	Historical document survey							
	Survey and analysis of visitor behavior							
	Enhancement of monitoring							
Preservation and strengthening of constituent elements	Maintenance, conservation and restoration of constituent elements							
	Moving of parking facilities							
Presenting systems for shipbuilding and ship-repair	Setting visitors flow lines							
	Presenting above-ground displays indicating buried remains							
	Arranging and improving landscape and planting vegetation							Outdoor exhibits
	Installing guidance and explanatory boards							
	Installing administrative and convenience facilities							
	Installing facilities for guidance							Indoor exhibits
Arrangement and improvement of landscape from the standpoint of scenic view	Arranging and improving landscape inside the component part							
	Arranging and improving landscape in the buffer zone							

Table 2: Project Implementation Schedule

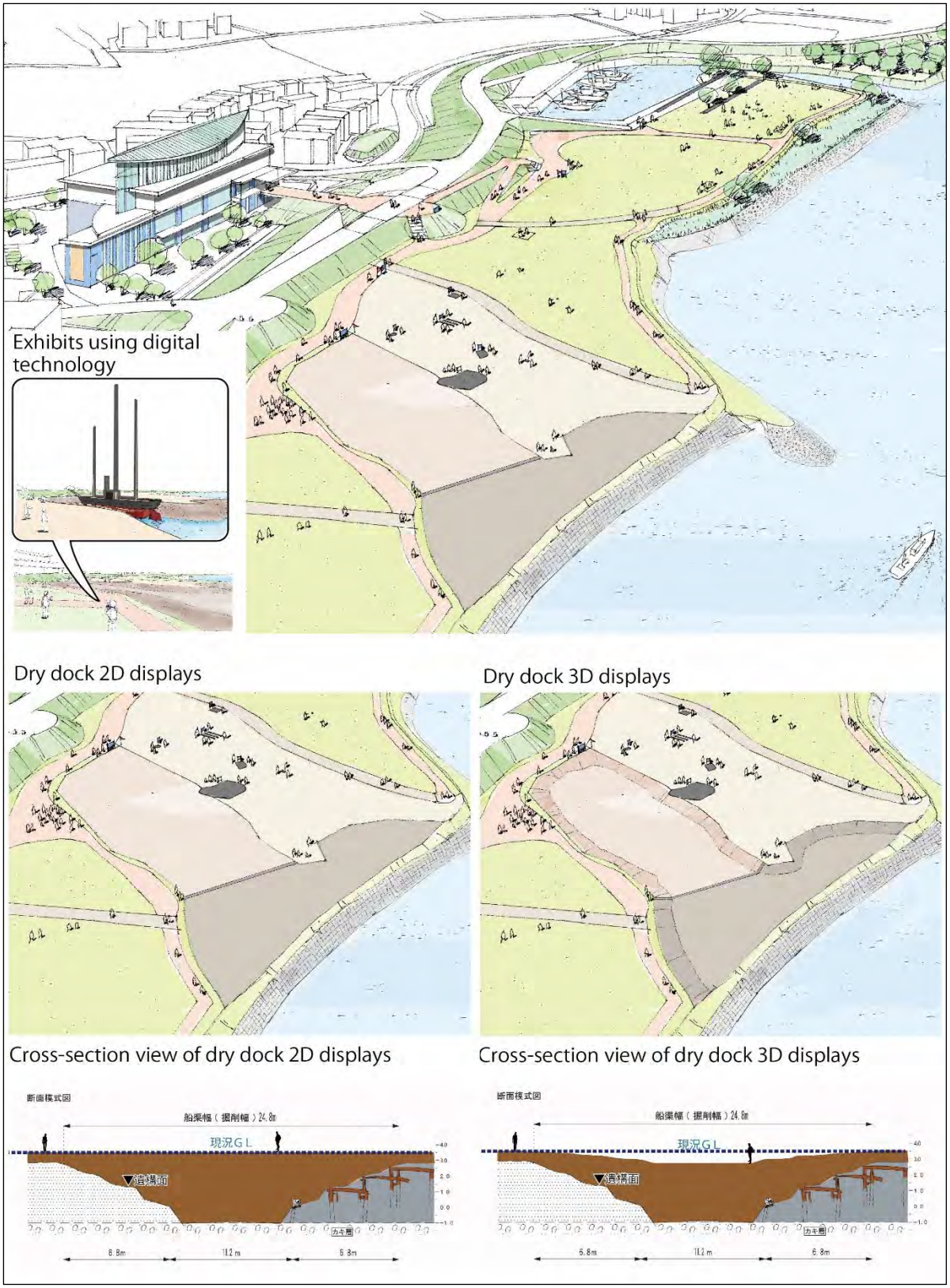


Figure 6: Envisioned State of Completion at End of Medium Term

5. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Mietsu Naval Dock, which became a source of "Conservation Work Programme and Implementation Programme" is available on Saga City's web site. <https://www.city.saga.lg.jp/main/42997.html>

Conservation work programme and implementation programme for Kosuge Slip Dock (Area 6 Nagasaki/ Component part 6-1)

Nagasaki City and the Mitsubishi Heavy Industries Nagasaki Shipyard (MHI Nagasaki Shipyard) drew up a "Conservation Work Programme and Implementation Programme" for Kosuge Slip Dock in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by attached to the decision of the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

When Japan was establishing itself as an industrial power, Kosuge Slip Dock contributed to this process in the shipbuilding field, merging traditional techniques with Western shipbuilding and repair technology. The buildings and remains characteristic of these accomplishments will be conserved, while taking considerations for the environment where they are located.

The eight component parts included in Area 6 Nagasaki of the Sites of Japan's Meiji Industrial Revolution are industrial heritages representative of the shipbuilding and coal industries after the ban on building of large ships was lifted in 1853. They testify to the process of rapid industrialization in heavy industries in Japan. Their special importance is in helping to understand the connections of the two eras in the two industrial fields of shipbuilding and coal mining, namely, the period of directly introducing Western techniques and the period of establishing industrialization.

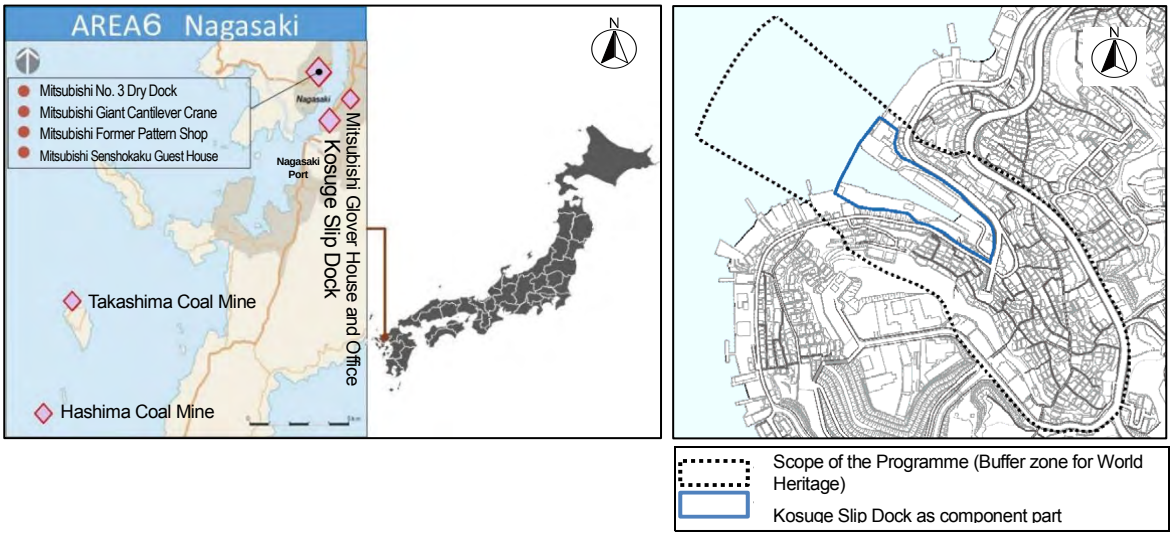


Figure 1: Location of the component part and scope of the Programme

Kosuge Slip Dock is a set of remains demonstrating how Japan's traditional techniques came to be merged with Western industrial technology, and in a very short time industrialization in this field progressed to completion. Central to the component part is the modern Western-type slip dock itself, the first in Japan to be driven by a steam engine, as Western technology was being introduced into Japan. It consists of a hauling hut building that is the oldest brick building remaining in Japan, stone masonry bank protections, and other remains characteristic of the Meiji Era when the dock was in operation.

In the Conservation Management Plan for Kosuge Slip Dock, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Kosuge Slip Dock and their value categories are shown as Table 1.

Section	Period	Element	Value types of elements		
			OUV	Central government	Region, etc.
Slip dock	Meiji Era (1868-1912)	Rail (one rail in the middle)	○	○	○
		Rail (one rail on each side)	○	○	○
	Showa Era (1937-1953)	Rail (two rails on each side, for small ships)		○	○
		Bogie		○	○
Hauling machinery	Meiji Era (1868-1912)	Boiler (renewed in 1901)	○	○	○
		Hauling machine (including grooves for machine installation)	○	○	○
		Chain	○	○	○
	Showa Era (1937-1953)	Rolling winch		○	○
		Rolling winch housing		○	○
Hauling hut	Meiji Era (1868-1912)	Hauling hut	○	○	○
		Stack pedestal	○	○	○
Masonry work remains	Meiji Era (1868-1912)	Stone masonry bank protection	○	○	○
		Stone stairway and remains of the stone wall of the administration building	○	○	○
Left bank	Meiji Era (1868-1912)	Landform	○	○	○
		Stone stairways (2)	○	○	○
Right bank	Meiji Era (1868-1912)	Landform	○	○	○
		Stone masonry of waterway (including arch stone masonry)	○	○	○

Table 1: The list of elements constituting Kosuge Slip Dock and their value categories

Out of these elements in the Table 1, while the Conservation Work Programme for Kosuge Slip Dock will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Nagasaki City and MHI Nagasaki Shipyard will firmly conduct projects for passing down those elements to the next generation in as good condition as possible, with a reciprocal cooperation with a central focus on the following two points.

(1) Conservation and restoration based on characteristics and the present state of Kosuge Slip Dock

Since Kosuge Slip Dock represents the starting point of the shipbuilding industry history, Nagasaki City and MHI Nagasaki Shipyard will faithfully maintain the remains from the initial operation in the Meiji Era, as a component part contributing to the Outstanding Universal Value. At the same time, from the standpoint of the process of historical changes and developments relating to the Kosuge Slip Dock, remains not just from the Meiji Era but those from the Showa Era, during which operation was continued as a boat factory, to the present day, will be conserved based on their individual nature and the history of their transformation.

The first steps will be to determine the current issues and take measures to slow deterioration of each of the remains, for maintaining them in good condition to the extent possible. From the period when the facility was first established to the Meiji operating period, Showa operating period, and the time thereafter, many aspects have not yet been clarified, such as the characteristics in each period and the changes they underwent. These aspects will therefore be investigated. In parallel with these studies, Nagasaki City and MHI Nagasaki Shipyard will start the work for conservation and restoration in cooperation, giving priority to those parts showing notable

deterioration.

(2) Indicating systems for shipbuilding and ship-repair based on the characteristics of Area 6 Nagasaki

At the Kosuge Slip Dock, under the cooperation with MHI Nagasaki Shipyard, Nagasaki City will provide information focusing on the constituent elements contributing to Outstanding Universal Value, including Japan's oldest surviving brick building, created by merging traditional Japanese techniques with industrial technology imported from the West, and the modern Western-style slip dock itself, powered by Japan's first steam engine. The city will also provide information on operation of the facilities continuing into the Showa Era. These aspects will be provided with a close focus on actual objects. Indications of the component part will therefore show the role of the Kosuge Slip Dock in the Outstanding Universal Value, as well as aiming for understanding of the roles played by the hauling hut, the hauling machinery, and the slip dock rails in the hauling process, and the roles of the foundation,[4] stone masonry bank protections, and other remains, while showing the objects themselves.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Conducting investigative studies

To confirm anew the contribution of the component part to Outstanding Universal Value of the World Heritage property, Nagasaki City will carry out excavation surveys and surveys of relevant historical documents to find out more details about the situation during the Meiji operating period and the functions of and changes to each of the elements of the Slip Dock.

In addition, using monitoring charts prepared for the purpose, Nagasaki City and MHI Nagasaki Shipyard will monitor the site and conduct surveys to determine the state of metal deterioration and look for looseness or swelling of the stone masonry. The visitor situation will also be reflected in measures for proper preservation and for presentation, public utilization and promotion.

(2) Preserving, reinforcing, and stabilizing the architectural elements and archaeological remains of the slip dock in terms of materials, substance, and structure

Nagasaki City and MHI Nagasaki Shipyard will maintain and conserve the remains of Kosuge Slip Dock, and improve their environment, with a reciprocal cooperation, to enable harmonious information provision of the nature of the architectural elements and archaeological remains, focusing on the Meiji operating period from the standpoint of Outstanding Universal Value, but including the Showa operating period during which the component part was still in use. The hauling hut, in particular, will be maintained and conserved with due attention paid to its being Japan's oldest surviving brick building, and to the hauling machinery being the first in Japan to be driven by a steam engine, as Japan's first modern Western-style slip dock. From a similar standpoint, the rails and stone masonry remains making up the slip dock from the Meiji operating period will be maintained and conserved. Specific steps will include reinforcement of the bricks, aseismic reinforcement of the brick building, rainwater drainage and groundwater measures, and rustproofing measures. The optimal combination of approaches for these steps will be chosen with due attention to the interworking between methods.

(3) Indicating systems for shipbuilding and ship-repair

To enable understanding of the hauling mechanism, Nagasaki City and MHI Nagasaki Shipyard will set up tour routes in the component part, and indicate the workings of the boiler and gears and how ships were hauled at the slip dock. The cherry trees, azalea, and other plantings around the hauling hut will be trimmed or removed to avoid adverse impact on the building and stone walls, and to improve the scenery, safety, and comfort.

(4) Arranging and improving the landscape from the standpoint of scenic view

[4] The base built under the slip dock for accommodating the rails

The Kosuge Slip Dock is situated on an inlet going to Nagasaki Port. It was created by altering the river channel while making use of the delta topography impacted on both sides by hilly terrain. This surrounding terrain has been retained to this day as a unified part of the slip dock constituent elements, such as the rails and their foundation, the stone masonry bank protections, and the hauling hut; and because of the significance of making visitors aware of both as an integrated landscape, with a reciprocal cooperation, Nagasaki City and MHI Nagasaki Shipyard will improve elements that obstruct this landscape.

The entire Kosuge Slip Dock, situated on the delta terrain, can be seen from the sea inside Nagasaki Port in the buffer zone and from high vantage points in the background. Accordingly, the foreground landscape will be cleaned up to enable easy visibility from ships bound for tours of the Takashima Coal Mine (Component part 6-6) and Hashima Coal Mine (Component part 6-7).

(5) Implementing projects

The MHI Nagasaki Shipyard as owner of the component part, Nagasaki City, experts, and citizens will jointly establish a system for management and project implementation and conserve and restore of the building and remains.

3. Methods

(1) Investigative studies

(a) Excavation surveys

Excavation surveys of the Kosuge Slip Dock have not been carried out up to now. Such surveys will be necessary, however, in the case of constituent elements giving evidence that it was the first modern Western-style slip dock driven by a steam engine. These elements include the Lancashire boiler from the beginning of the Meiji operating period, the chimney base, and other underground remains. It will further be necessary to clarify the nature of the slip dock rail (one rail on each side) of Meiji Era, which are currently only partially exposed and the masonry work remains on both banks of the slip dock. The results of the studies will then be used to conserve, restore, and reinforce these elements. These above surveys will be conducted by Nagasaki City under the cooperation with MHI Nagasaki Shipyard.

(b) Historical document surveys

Under the cooperation with MHI Nagasaki Shipyard, Nagasaki City will survey historical documents relevant to the remains to gather basic information necessary for clarifying the nature of each of the remains and methods for conservation, restoration, presentation and public utilization of the component part. The systematic collection of data can hardly be called adequate at this point, as only a few materials including old photographs have been confirmed. Accordingly, along with the existing study results, the collection of data will also cover not-yet-confirmed research results in related fields such as industrial history, architectural history, and industrial machinery.

(c) Detailed surveys of current state

While there are topographical maps of the current state, detailed drawings have not yet been made of the individual constituent elements, namely, the hauling hut, hauling machinery, slip dock, and masonry work remains. Records have therefore not been collected of the current state of deterioration and problem locations. Nagasaki City and MHI Nagasaki Shipyard will implement creating detailed drawings of current state of remains and recording of problems of the individual constituent elements.

(d) Monitoring

Nagasaki City and MHI Nagasaki Shipyard will create monitoring charts for comprehensively and systematically collecting information on constituent elements, and use them to keep track of the state of and changes to the component part. The results will be analyzed yearly based on monitoring indicators, and annual report will be made to the Nagasaki Conservation Council (for non-working properties) asking for its views. The results will also be reflected in the phased conservation, restoration, presentation and public

utilization methods for each constituent element. The monitoring results from monitoring charts will be designed to be useful in particular when renovating the building and remains, with the instruction and advice of experts.

(2) Conservation and restoration

(a) Scope

Under the cooperation with Nagasaki City, MHI Nagasaki Shipyard will implement conservation and restoration (maintenance, repair and renovation) focusing on constituent elements from the Meiji operating period that contribute to the Outstanding Universal Value. Methods for conservation and restoration of constituent elements from the Showa operating period will also be studied in detail based on survey results.

(b) Basic concept and methods

➢ **Hauling hut**

The environmental conditions in the area around the hauling hut, where deterioration of the wall bricks is advanced, will be listed and measures will be taken especially to prevent water permeation and inflow from outside into the bricks and building. Bricks that have deteriorated due to water permeation will be repaired, drainage measures will be taken to collect and drain rainwater and groundwater seeping into the building, and aseismic reinforcement of the building itself will be implemented.

➢ **Hauling machinery**

Machinery in the hauling hut remaining from the Meiji operating period, including the boiler, steam engine, gears, and chains, will be maintained and repaired. Particular attention will be paid to improving the situation whereby rainwater and groundwater collect in the pit and overflow in rainy weather.

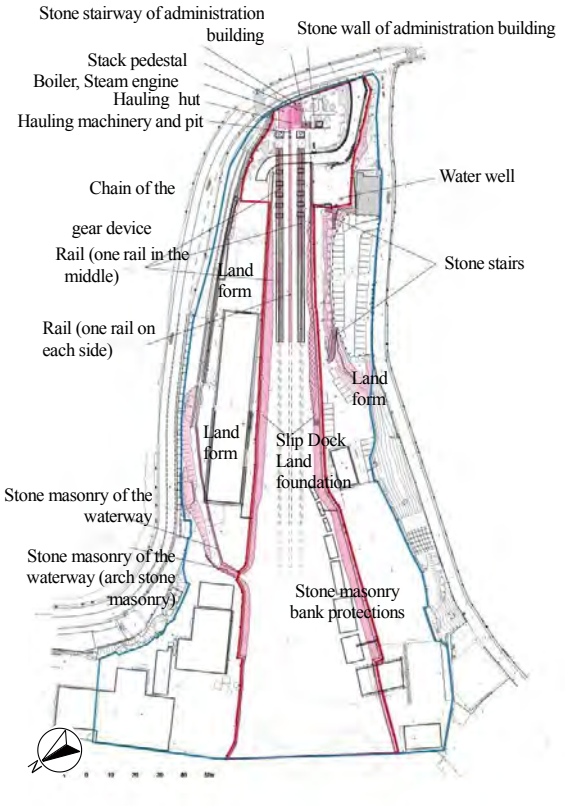


Figure 2: Constituent elements of Kosuge Slip Dock

➢ **Slip dock**

In determining priorities in repairs, the following factors are to be considered: value classified as belonging to the Meiji or Showa operating periods; environmental conditions classified as belonging to non-inundation or inundation areas; the state of deterioration of steel objects due to rust (surface rusting, surface flaking or layer flaking, overall swelling). Having considered these factors, priority will be given to places belonging to the Meiji operating period, showing surface rust and/or surface flaking, and located in non-inundation areas.

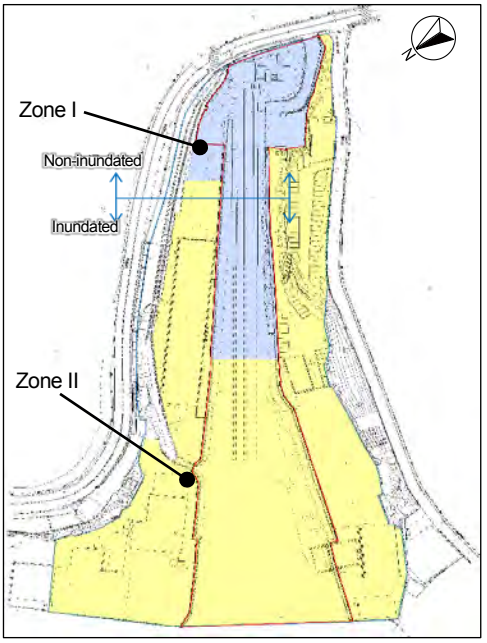
➢ **Stone masonry**

Focusing mainly on the stone masonry bank protections and stone stairs involved in both the Meiji and Showa operating periods, changes up to now will be clarified, and regular monitoring will be conducted to check for changes in the state of stone masonry (looking for swelling, loosening, stone cracks, missing stones, shifting of position, etc.). For cases requiring urgency, a minimum extent will be defined and the stone structure will be restored with dismantling.

(3) Indicating systems for shipbuilding and ship-repair

Dividing into the following two zones, under the reciprocal cooperation, MHI Nagasaki Shipyard and Nagasaki City will carry out designing visitor flow lines for the purpose of indicating the Kosuge Slip Dock remains in the shipbuilding and repair systems.

Zone I is defined as the area where remains from the Meiji operating period are still to be found, and consisting of land areas that can be toured by visitors. Zone II is the area where remains are to be surveyed to clarify the full picture, and where special ingenuity will be needed for showing and explaining the remains to visitors.



Zone I	Land areas that can be toured by visitors
Zone II	Area where remains are to be surveyed to clarify the full picture, and where special ingenuity will be needed for showing and explaining the remains to visitors

Figure 3: Zoning of component part and surrounding area

(i) Flow lines

At this component part, part of a site where corporate activity is taking place will be opened to the public. Since crossing of visitor movement with this corporate activity cannot be avoided, flow lines will be designed that enable corporate actors to readily predict the movement of visitors (see Figure 4).

(ii) Terrain modification/environment improvement

No new terrain modification will be carried out, as the existing terrain and pavement will be used. However, paths will be set as visitor flow lines and fences showing deterioration will be removed.

(iii) Arranging and improving landscape and planting vegetation

The main focus of explanations to visitors will be the slip dock rails, stone masonry bank protections, and the hauling hut and hauling machinery itself. To prevent obstruction of the view of the slip dock and hauling hut, not only on the site but from ships in Nagasaki Port, cherry trees impacting the building will be delimbed and azaleas and other plantings will be trimmed back.

(iv) Installation of guidance and explanatory boards

The City of Nagasaki will install signposts in appropriate spots to guide visitors along the flow lines described in (i) above so that they can receive explanations and have a good look at the site as they take the tour. It will also set up information boards showing how the dock looked when it was in operation in comparison with how it looks today, using illustrations and photos..

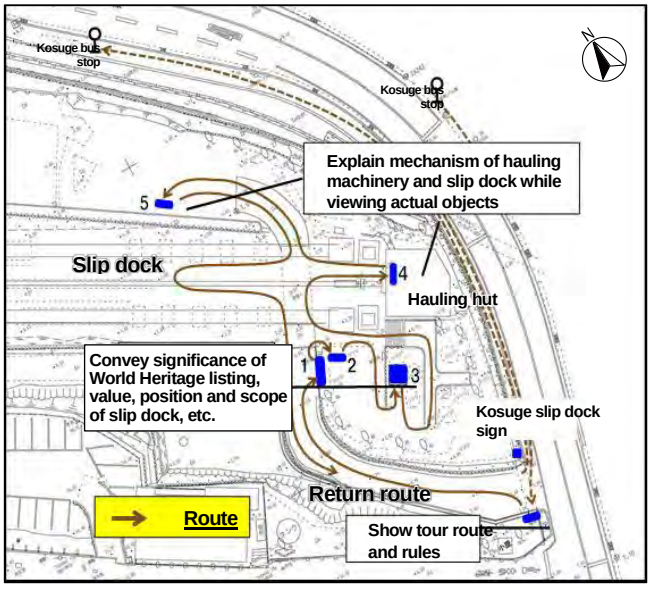


Figure 4: Tour route

(v) Administrative and utility facilities

Visitor surveys up to now have pointed to such issues as the relatively short time spent on the tour of the component part, and concerns about getting in the way of corporate activity inside the component part. According to the former issue, rest facilities etc. for visitors will not be provided for the time being.

(4) Arrangement and improvement for the buffer zone from the standpoint of scenic view

Buffer zone with radius of 500 meters has been set northwest of the component part, to prevent the erection of structures that might obstruct the view of the hauling hut from the sea. The land area of the buffer zone is protected by the Nagasaki City Landscape Plan (general area) formulated based on the Landscape Act, while the harbor area and sea portion are protected by the Ports and Harbor Act, as Nagasaki City and Nagasaki Prefecture are cooperating appropriately in conservation and restoration of the component part. Moreover, since the overall Kosuge Slip Dock terrain and the slip dock as part of the landscape can be visually recognized from the sea, MHI Nagasaki Shipyard will trim or remove trees and other plantings that might obstruct the view from ships headed for tours of Takashima Coal Mine and Hashima Coal Mine.

4. Project implementation

(1) Order of priorities

The projects implementation schedule is as shown in Table 2. Dividing the projects implementation period into a Short Term (first 5 years) and Medium to Long Term (6th to 10th years) periods, conservation, restoration, presentation and public utilization and promotion will take place in phases.

The following items will be given priority in the Short Term period.

- Measures to conserve hauling hut from rainwater and groundwater seepage; brick preservation measures
- Aseismic reinforcement of hauling hut
- Installation of pit drainage facility
- Hauling machinery conservation measures
- Slip dock rail and ship cradle rust-prevention treatment, etc.
- Creating detailed drawings of current state of masonry work remains and making repairs as needed
- Installing guidance and explanatory boards and route markers, and replacing entrance signs
- Trimming/removal of trees

In the Medium to Long Term period, excavation surveys will be carried out to seek possibilities for furthering the value of the heritage.

(2) Review of implementation schedule

After around ten years, the implementation schedule will be reviewed based on project progress to date. If the need arises for new action, revisions will be considered without waiting for ten years to pass.

Constituent element	Main methods	I (2017-2021)	II (2022-2026)
Hauling hut	Rainwater and groundwater seepage	■	
	Brick conservation	■	
	Aseismic reinforcement	■	
	Guidance and explanation facilities	■	
Hauling machinery	Pit drainage facility	■	
	Hauling machinery protection	■	
Slip dock	Rust-proofing of rails and ship cradle	■	
Stone remains	Creating detailed drawings of current state and making repairs as needed	■	■
Showing and promotion	Explanatory boards, route markers, entrance sign replacement	■	
Trees and plantings	Trimming/removal	■	
Left bank	Investigation of stone stairs, survey of related historical documents		■
Right bank	Tree trimming/removal		■

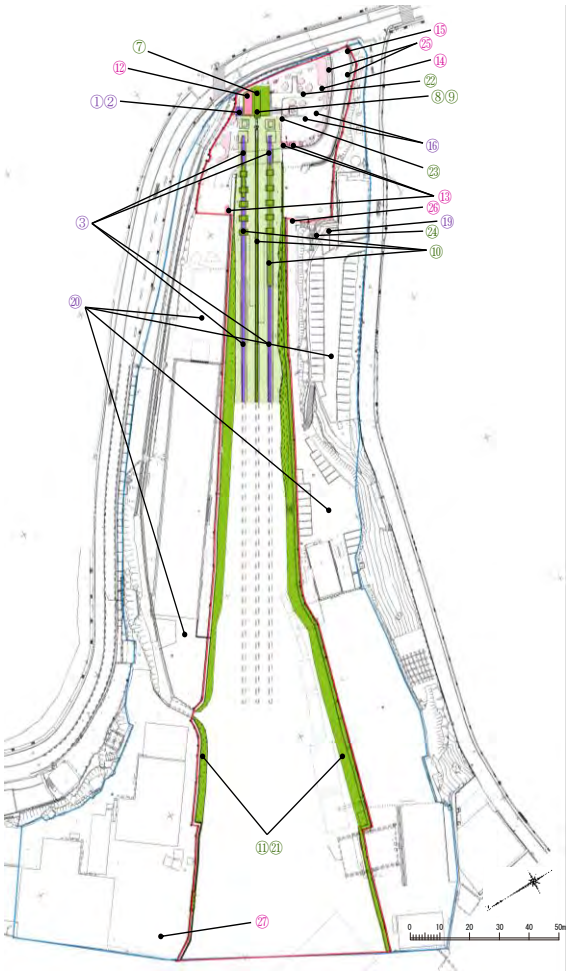
(3) Other

MHI Nagasaki Shipyard and Nagasaki city has carried out conservation and restoration work, etc. for the Kosuge Slip Dock by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 5 million yen was spent in FY2016 (including the amount spent for plan making) and 3 million yen has been budgeted for FY2017, both including the costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

5. Basic Plan

The basic plans for Kosuge Slip Dock project implementation items is as shown in Figure 5.



Short Term (1st to 5th years)

Investigative studies	(1) Excavation survey of original stack pedestal (2) Excavation survey of original Lancashire boiler remains (3) Excavation survey of slip dock secondary rail (4) Survey of historical documents relating to hauling hut (5) Survey of historical documents relating to hauling machinery (6) Survey of historical documents relating to slip dock
Conservationof buildings and remains	(7) Measures to conserve hauling hut from rainwater and groundwater seepage, rainwater measures, brick preservation measures, aseismic reinforcement, fire prevention measures (8) Hauling machinery conservation measures (9) Pit drainage measures (10) Slip dock rail conservation measures, ship cradle conservation measures, slip dock ground conservation measures (11) Stone masonry bank protection conservation measures (guidelines for renovation)
Component part presentation and promotion	(12) Hauling hut exhibits and promotion (13) Putting up explanatory boards (14) Trimming/removal of trees around hauling hut (15) Replacement of entrance signs

Medium to Long Term (6th to 10th years)

Investigative studies	(16) Excavation surveys of government office remains, stone stairs, and stone walls (17) Survey of historical documents relating to well and brick remains (18) Survey of historical documents relating to signpost and brick remains (19) Investigation of remains including area around east stone stairs (20) Excavation surveys of underground remains
Conservation of buildings and remains	(21) Measures for conserving stone remains, and repairs based on urgency (22) Conservation of government building (23) Conservation of stone stairs and walls (24) Restoration including area around stone stairs
Component part presentation and promotion	(25) Replacement of existing fences (26) Removal of concrete-block wall, gate, and rails (27) Tree trimming and removal so as not to obstruct view from sea

Figure 5: Basic plan (phased conservation, restoration, presentation and public utilization)

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Kosuge Slip Dock, which became a source of "Conservation Work Programme and Implementation Programme" is available on Nagasaki City's web site. <http://www.city.nagasaki.lg.jp/kanko/840000/843000/index.html>

Conservation work programme and implementation programme for Takashima Coal Mine (Area 6 Nagasaki/ Component part 6-6)

Nagasaki City drew up a "Conservation Work Programme and Implementation Programme" for Takashima Coal Mine in FY 2015 to 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

By investigating, conserving and restoring the mine shaft and other archaeological remains and arranging and improving the landscape that recall the past when the modern coal industry was born in this place, the component part will be utilized as a resource for learning, for community promotion, and for researching.

The Nagasaki Area where the Takashima Coal Mine is located is home to eight of the 23 component parts. It has a special role that sets it apart from other Areas, in helping to understand the two eras in the three industrial fields of iron and steel, shipbuilding, and coal mining, namely, the period of directly introducing Western techniques and the period of establishing industrialization, as well as the interrelationship of these three fields.

The Takashima Coal Mine is the first mine in Japan to introduce modern coal extraction techniques. Along with the Hashima Coal Mine (Component part 6-7) where the techniques were carried on, it played an important role in providing fuel for steamships and coking coal for iron and steel making, and as the founding place for the modern coal industry.

In the Conservation Management Plan for Takashima Coal Mine, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Takashima Coal Mine and their value categories are shown as Table 1.

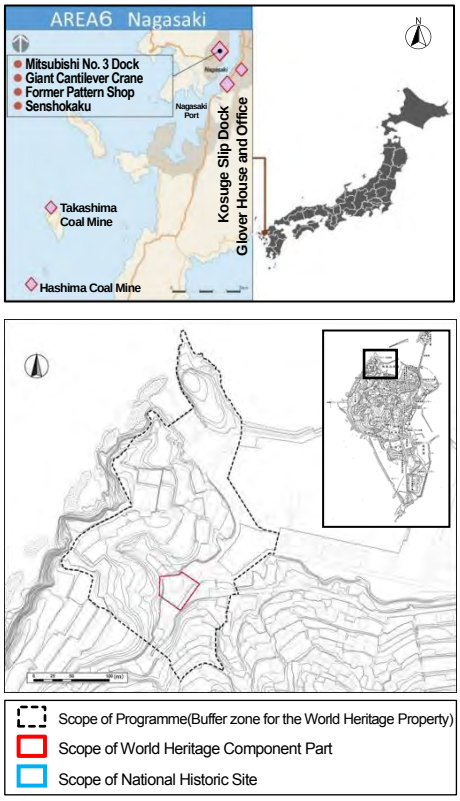


Figure 1: Location of the Site and Scope of Programme

Component parts	Period		Element	Value Types of Element		
				OUV	Nat'l	Local/Other
Takashima Coal Mine	Meiji	Initial Period	Hokkei Pit remains	○	○	○
			Facility remains around Hokkei Pit	○	○	○

Table 1: The list of elements constituting Takashima Coal Mine and their value categories

Out of these elements in the Table 1, while the Conservation Work Programme for Takashima Coal Mine will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and

others in view of the process of historical changes and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Nagasaki City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points

In Area 6 Nagasaki, the Takashima Coal Mine and Hashima Coal Mine can be regarded as an integrated site for experiencing the history of coal mining. Considering the process of historical changes and developments of Takashima Coal Mine, conservation, restoration, presentation, public utilization, and provision of information to visitors, will be carried out focusing on the functions and links of the remains that enable understanding of the entire coal production system, including coal extraction and transport.

(1) Conservation based on the characteristics of the remains and the current state

Most of the archaeological remains are buried under ground, and other than the mine shaft, many aspects have not yet been investigated. Excavation surveys will therefore be carried out regarding the underground archaeological remains other than the shaft, to the minimum necessary extent.

To avoid adverse impacts on the remains, day-to-day maintenance will be conducted, including small repairs, basically to improve and stabilize the mine shaft and surrounding environment.

(2) Public utilization by diverse methods

Given the lack of compelling communication regarding the contribution of the Takashima Coal Mine to the World Heritage Outstanding Universal Value, and of its role as the starting place of the modern coal industry, the component part will be exploited as a resource for learning and community promotion. For this purpose, old photographs showing the state in the past when the mine was operating and explanatory boards will be placed, and facilities will be installed to introduce the results of excavation surveys. Provision will further be made of a view between the Takashima Coal Mine and former coal loading port, and guidance signs and routes will be set up to the second house of Thomas Glover and the former coal loading port, distant from the component part. In such ways, visitors will be able to envision the entire coal production system including coal extracting and transport.

To improve access to the component part on the island, ship and bus schedules will be revised, rental cycles and the like will be made available, and integrated tours of the entirety of Takashima Island and Hashima Island will be made possible, in such ways aiming to increase the number of visitors.

2. Policy

The policy consisting of following five items has been set to approach conservation:

(1) Conducting investigative studies

Nagasaki City will seek to further awareness of the Outstanding Universal Value by continuing with surveys, including (1) field investigations and excavation surveys of the remains, (2) historical document surveys for clarifying the coal production system including extraction and transport, (3) landscape surveys of the World Heritage and surrounding area, and (4) surveys of visitors and their impact on the component part. One purpose for surveys of underground archaeological remains and ongoing historical document surveys is to clarify the individual functions and interrelationship of the Takashima Coal Mine and other mines located on Takashima.

In addition, the City of Nagasaki will conduct regular monitoring, using monitoring charts, to determine the state of the component part and its buffer zone, and will reflect the results in the annual report.

(2) Maintaining, strengthening, and stabilizing the remains in terms of the material, substance and structure

The city will conduct day-to-day maintenance, along with monitoring, mainly to improve the preservation environment so the remains can be kept in stable state. Phased reinforcement, stabilization and other conservation work will also be carried out, assigning priorities, based on an overall assessment of the role and deterioration state of each of the remains. Along with day-to-day maintenance of the mine shaft, future measures will be taken to prevent sand accumulation and to prevent collapse of the west steep slope.

(3) Showing the coal production system including extraction and transport

It will be necessary to foster understanding of not only the coal industry but also the interrelationship among three industries that are iron-making, steel-making and shipbuilding industries whose advances were made possible by coal. To this end, the city will convey to visitors the nature of the Takashima Coal Mine in the early days of Japan's coal industry development, making integrated use of the site including surrounding facilities. Among the means to be used are (1) posting of explanatory boards, (2) providing flat displays on the surface of the underground archaeological remains, (3) showing the locations of rail remains for coal loading, and (4) providing views of the former coal loading port.

(4) Arrangement and improvement of the buffer zone from the standpoint of scenic view

Visitors will need to be able to recognize visually the broad expanse of the land on which the coal mining facilities were located in the past, centering on the mine shaft. To aid visitors in picturing the coal production system at the time, from coal extraction to transport and loading on ships, while comparing the site with old photographs, the city will ensure a view of the area between the Takashima Coal Mine and the former coal loading port north of it. For this purpose, plantings around the remaining mine shaft will be trimmed, and in the future, the wastewater treatment facility serving residents adjacent to the component part will be removed.

In the buffer zone, appropriate guidance will be provided regarding the appearance of dwellings and protective fences, etc. in consideration of the component part landscape.

(5) Implementing projects

The city will draw up a project implementation schedule for ensuring each of the projects is carried out in phases and on time. It will include such matters as project deadlines, methods for implementing the project in phases, items to be carried out in each fiscal year.

At appropriate times, the city will review the schedule, while ensuring communication with the owners and managers of the land involved in the project, and confirming the project progress each year. As the body with overall responsibility for managing and operating projects as a whole, the city will coordinate with parties and organizations concerned, including advertising, holding of events, and working with stakeholders.

3. Methods

Specific methods for conservation, restoration, presentation and public utilization are indicated below. The city has the main responsibility for each of these items.

(1) Investigative studies

(a) Excavation surveys and on-site investigations

Excavation surveys will be continued for coal mining facilities including the underground archaeological remains around the mine shaft and the coal loading rail remains. In the future, all or part of the wastewater treatment facility now in operation for the adjacent community will be removed, and the entire coal production system from extraction to transport and loading will be made clear.

(b) Historical document surveys

After the Takashima Coal Mine was closed, many tunnels were developed on the island making use of and advancing the mining technology. The history of Takashima when it was thriving as a coal island will be investigated based on historical documents on the Takashima Coal Mine held by research institutions, house organs of labor unions, and newspapers from the time. The historical document surveys will provide the role of the Takashima Coal Mine, covering such aspects as the significance of Takashima mines, including the Hashima Coal Mine, for the history of technology, the relation to steelmaking and other industries, and the relation to other coal mines in Japan.

(c) Surveys of visitor numbers and behavior

Surveys will be conducted to verify the effectiveness of the project and determine the impact of visitors on the state of the remains on and under the ground. The results will be reflected in better ways of utilizing the

component part of the World Heritage property. Visitor numbers and behavior will be surveyed as part of this effort.

(d) Monitoring

Monitoring charts have been created for comprehensively and systematically collecting information on the constituent elements, and will be used to keep track of the state of the component part and the buffer zone. The results will be reported to the Nagasaki Conservation Council, in accordance with the World Heritage operational framework, asking for its views. If any negative effects are detected and verified, measures will be taken to remove the causes or lessen the impact. The effectiveness of the measures will then be verified by conducting inspections.

(2) Conservation and restoration of buildings and archaeological remains

(a) Scope

Conservation (maintenance, repair and restoration) applies to the constituent elements of the component part contributing to the Outstanding Universal Value (Figure 2).

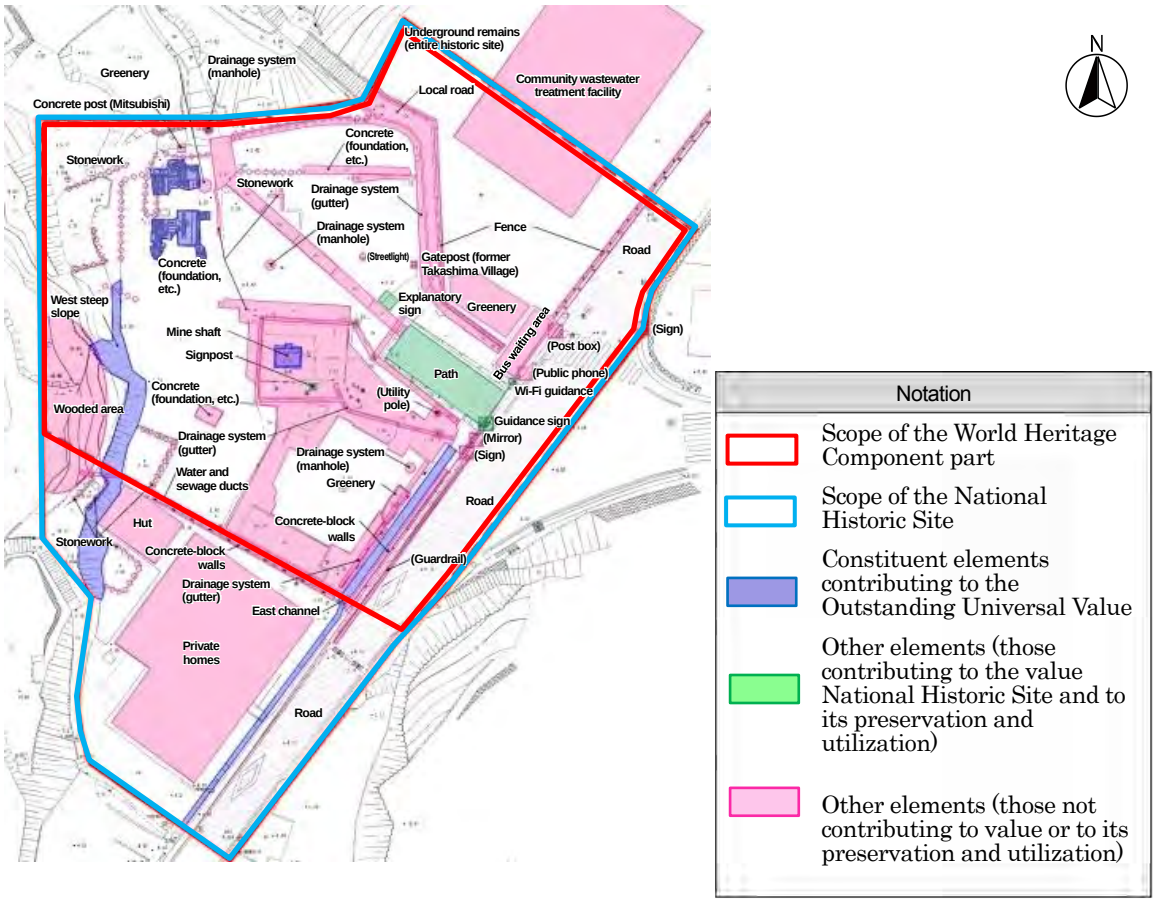


Figure 2: Constituent elements subject to conservation and restoration

(b) Basic concept and methods

- **Mine shaft**

For the time being, day-to-day maintenance including minor repairs will be carried out to prevent deterioration and keep the remains in stable condition. After the mine was closed, the mine shaft came to be used as a well and alterations were made to the frame and other parts exposed above ground. Materials that were clearly added later and that diminish the value of the mine shaft remains will be removed. To prevent sand accumulation in the mine shaft, measures will be taken to stop the inflow of rainwater, etc.

- **West steep slope**

The situation will be monitored regularly and records will be kept of the results. Day-to-day management of the steep slope will be carried out and trees affecting collapse will be trimmed, to ensure the remains are maintained in stable condition (Figure 5).

- **East water channel**

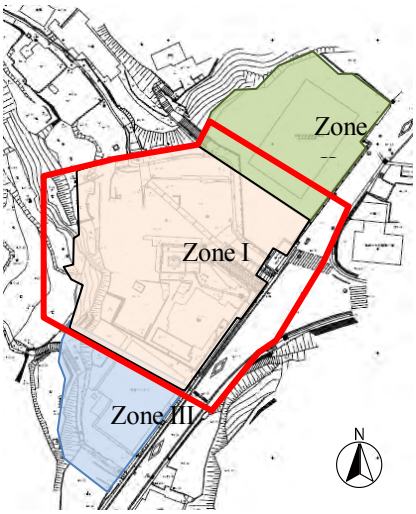
This channel remains as a concrete underground drain. For the time being, records of the current state will be kept and monitoring will be continued. If investigations make clear the original state, restoration will be carried out at that point in time (Figure 5).

- **Underground remains (entire area of the component part)**

The remains reburied after excavation surveys, such as the brick structures including chimney, the stone remains, and earthen remains, will be left in their buried state to prevent damage. The remains unearthed in excavation surveys of Takashima Coal Mine to be conducted hereafter will likewise be reburied, covered with protective earth layers of appropriate thickness, and preserved underground.

(3) Presentation the coal production system including extraction and transport

While expanding the scope for public utilization in phases, from Zone I to Zone III, utilization will be made as a resource contributing to school education and education of the public as well as for tourism.



Zone I	Scope currently open to the public
Zone II	Scope reusable after removal of the community wastewater treatment facility to the north
Zone III	Scope making use of private land

Scope of the Component part

Figure 3: Zoning of the component part and surrounding area

(a) Visitors' flow lines

Visitors' flow lines will be set up in the component part linking learning points and other places where remains are displayed, etc., and it will guide visitors in stages to the former coal loading port in the north. Visitors' flow lines will also be set up connecting the Takashima Coal Mine to the former coal loading port and Glover's second house (Figure 6).

(b) Terrain modification/environment improvement

Outdoor paths will be paved with earthen material or other materials appropriate to the landscape. A slope will be installed at the entrance to the component part.

(c) Arranging the landscape and planting vegetation

Trees near the west steep slope (Figure 5) will be trimmed and the slope will be stabilized. The water supply and drain pipes on the surface of the concrete block walls bordering the private land on the south will be obscured by shrub plants or by board fencing with a design like that seen in old photographs. Trees that threaten the preservation of the remains will be trimmed as needed, and no new trees will be planted.

(d) Guidance and explanatory facilities

Guidance and explanatory boards will be placed inside the component part and in the surrounding areas. The boards will have a uniform design and size befitting the landscape, and will include support for disabled visitors and multiple languages. As the scope of public utilization is expanded in phases from Zone I to Zone III, guidance and explanatory boards and guide markers leading to surrounding facilities will be installed. Guide markers will show the flow lines on the surface of paved walkways.

(e) Administrative and utility facilities

As the scope of public utilization is expanded in stages, an observation space will be installed on the site where the community wastewater treatment facility is currently located, north of the component part. Diorama models, explanatory boards and other facilities with guidance functions will also be set up (Figure 5).

Rest facilities will be installed in the park near Glover's second house, to the north of the component part, and visitor parking areas for cars and bicycles will be provided, as well as toilets and benches (Figure 6).

(4) Arrangement and improvement for the buffer zone from the standpoint of scenic view

In the buffer zone, electric wires, utility poles, protective fences, the community wastewater treatment facility, dwellings and other objects detrimental to the landscape will be arranged and improved, and a view will be provided between the Takashima Coal Mine and former coal loading port.

4. Projects implementation

(1) Order of priorities

The city will draw up a 30-year projects implementation schedule starting from the year 2018. The Programme is divided into three phases of ten years each. The priorities and overall Programme are subject to revision based on such factors as the results of investigations and monitoring and progress in purchasing up private land on the south side. Urgently needed conservation and restoration work will be carried out whenever necessary.

The city will proceed with conservation and restoration work in the following order: (1) the scope currently open to public utilization (Zone I), (2) the scope that will become reusable after removal of the community wastewater treatment facility (Zone II), and (3) the scope of the land where the community wastewater treatment facility existed and of usable private land (Zone III). The following items will be given priority in Phase I.

- Removal of unnecessary facilities harming the Outstanding Universal Value
- Trimming of trees on the west steep slope that may lead to collapse of the slope, etc.
- Setting up observation space and explanatory boards that convey value and promote proper understanding

(2) Review of implementation schedule

Around the time Phase I has completed (10 years), the implementation schedule will be reviewed based on project progress to date. If the need arises for new action, revisions will be considered without waiting for ten years to pass.

(3) Other

The city has carried out conservation and restoration work, etc. for the Takashima Coal Mine by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the

project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 27 million yen was spent in FY2016 and 14 million yen has been budgeted for FY2017, both including the costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

Category	Project implementation items	Phase I (1st to 10th year)		Phase II (11th to 20th year)		Phase III (21st to 30th year)
		1st half		2nd half		
Conservation	(1) Ongoing survey of underground remains	←		←	→	→
	(2) Reburying following excavation surveys	←		←	→	→
	(3) Removal of facilities diminishing the Outstanding Universal Value	←		←	→	→
	(4) Measures for maintaining state of west steep slope	←		←	→	→
	(5) Measures for preventing sand accumulation in the mine shaft			←	→	
Presentation and public utilization	(6) Installation of communication facilities	←		←	→	→
	(7) Placing of guidance signs and route markers leading to former coal loading port, and environment improvement	←	→			
	(8) Recording and classification of archaeological remains and relics	←		←	→	→
	(9) Communication of classification results	←		←	→	→

Table 1: Project implementation schedule

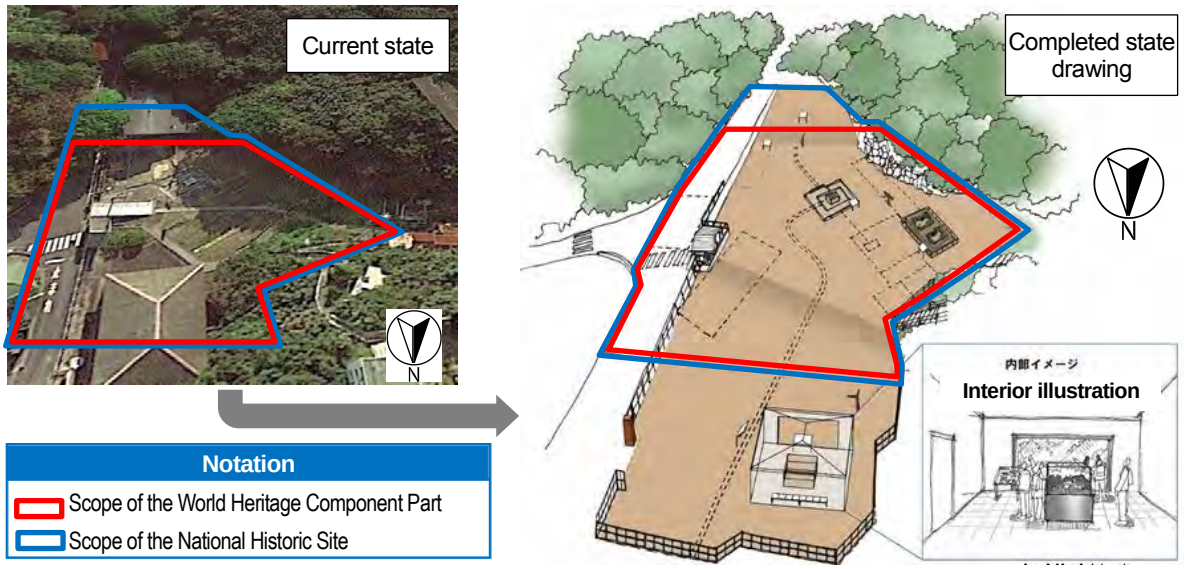


Figure 4: Conceptional drawing of Takashima Coal Mine conservation, restoration, presentation and public utilization

5. Basic Plans

The basic plan showing Takashima Coal Mine projects implementation is given in Figures 5 and 6.

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Takashima Coal Mine, which became a source of "Conservation Work Programme and Implementation Programme" is available on Nagasaki City's web site. <http://www.city.nagasaki.lg.jp/kanko/840000/843000/index.html>

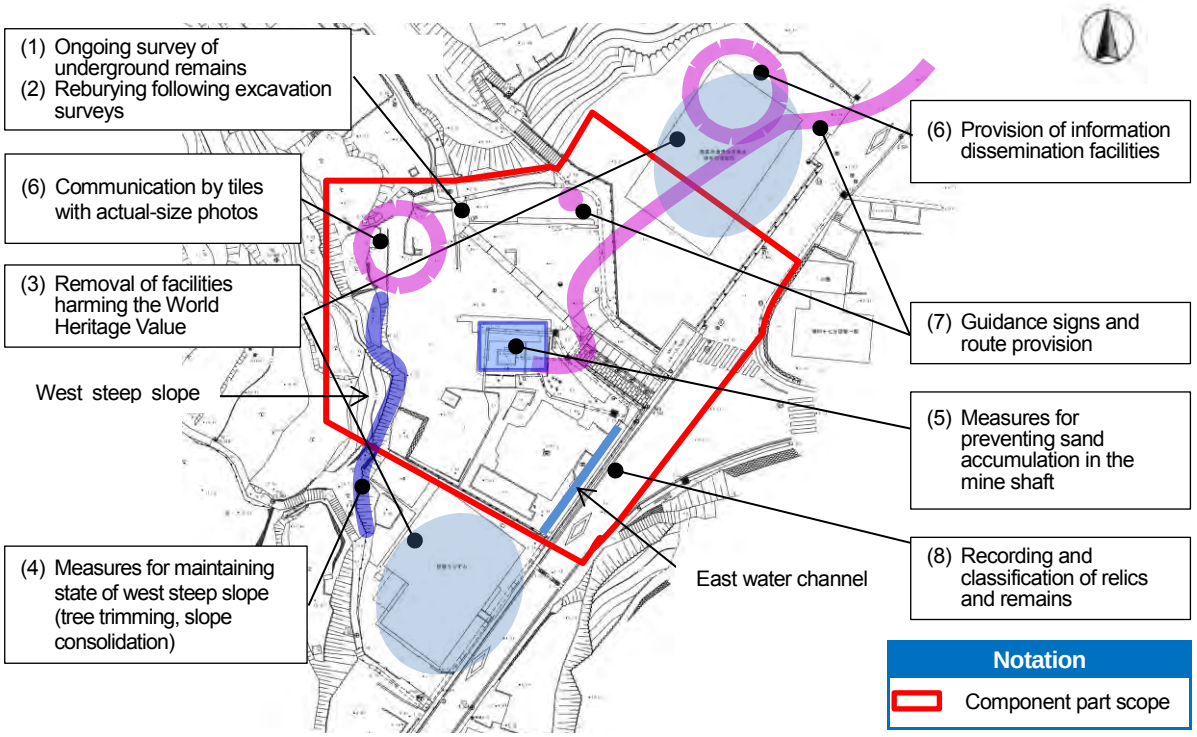


Figure 5: Takashima Coal Mine Plan (numbers correspond to Table 1)

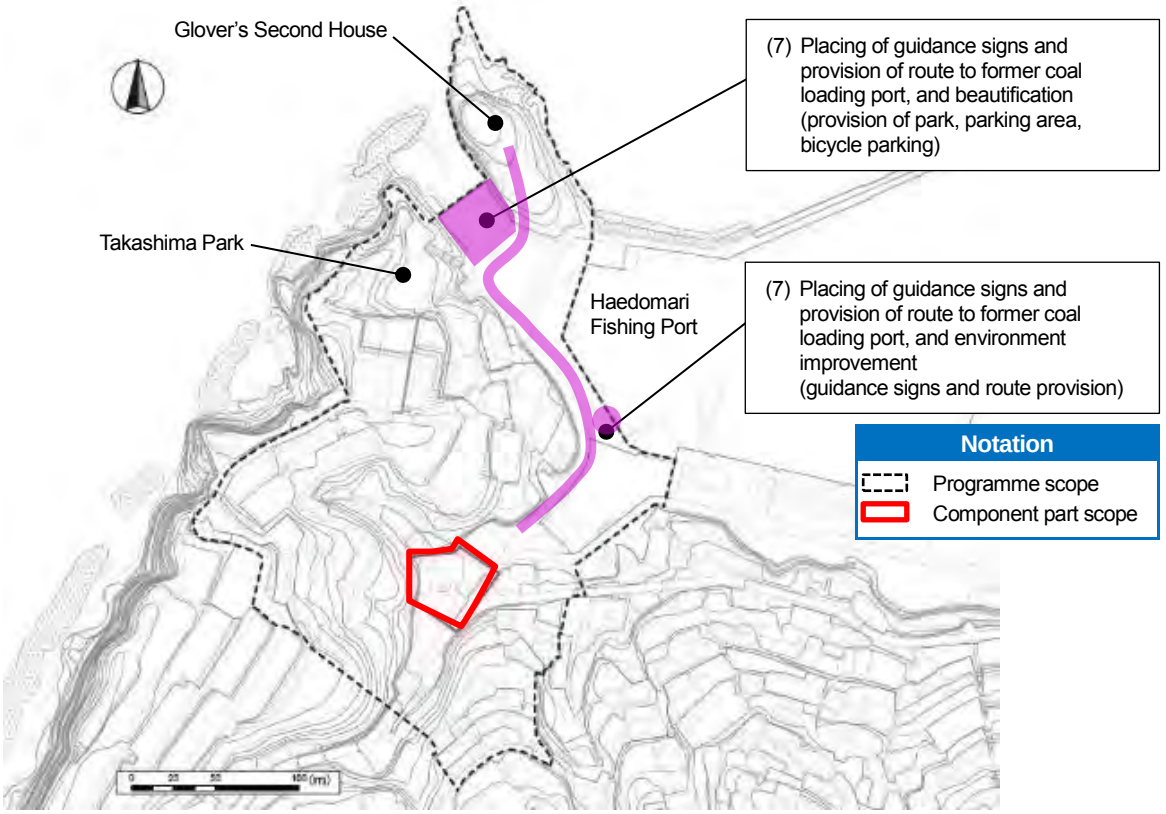


Figure 6: Takashima Coal Mine Periphery Plan (numbers correspond to Table 1)

Conservation work programme and implementation programme for Glover House and Office (Area 6 Nagasaki/ Component part 6-8)

Nagasaki City drew up a "Conservation Work Programme and Implementation Programme" for Glover House and Office in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

Restore the deteriorated sections of the house in which Thomas B. Glover resided and did business to inherit them for future generations his role in the industrial revolution of Japan during the Meiji Era and the overall value of Nagasaki's foreign settlement, including this house, as a stage for introducing Western technology to the nation.

Area 6 Nagasaki of the "Sites of Japan's Meiji Industrial Revolution" constitutes eight of the 23 component parts, including Glover House and Office. The Area is unique for encompassing the stages of the direct importation of Western technology and of the full-blown industrialization of Japan, and is uniquely positioned to provide an understanding of the mutual connections between the iron and steel, shipbuilding, and coal industries.

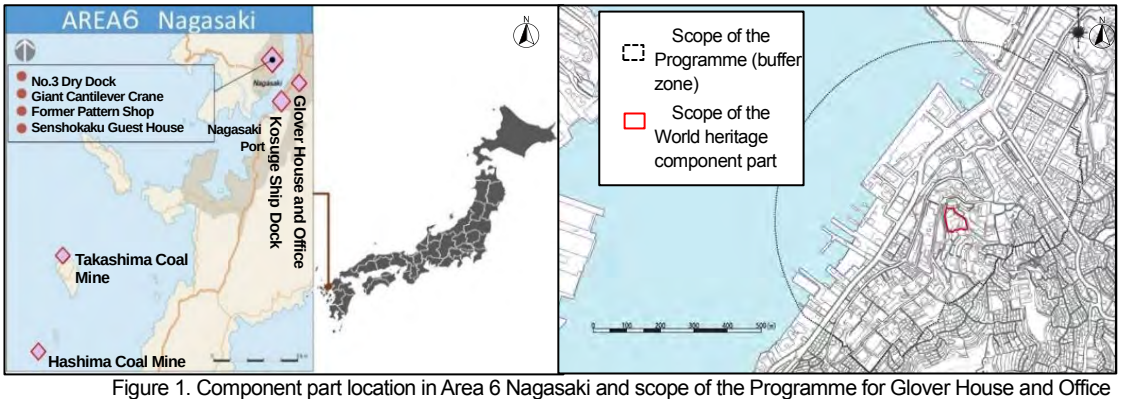


Figure 1. Component part location in Area 6 Nagasaki and scope of the Programme for Glover House and Office

Thomas B. Glover, a Scottish merchant, brought Western technology to Japan and cultivated human resources by helping Japanese nationals to study abroad. He played a pivotal role in Japan's industrial revolution during a short period of about half a century of from the end of the Edo period through the Meiji Era. Glover House and Office was his residence and a place of commerce, on a top of hill overlooking Nagasaki shipyard within a foreign settlement created when the port opened to Western trade at the end of the Edo period. It is the oldest surviving Western-style wooden house in Japan.

In the Conservation Management Plan for Glover House and Office, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Glover House and Office, and their value categories are shown as Table 1.

Component element		Details	Values of component element		
			OUV	National	Regional
Glover period	Main building	Drawing room, bedroom, guest room, storeroom (for small tools,etc.), study (room for storing important documents), greenhouse,dining hall, dining room, liquor storage room, pantry, entrance hall, child's room, workshop, toilet, verandah, corridor, corridor connecting with the annex	○	○	○
	Annex	Kitchen, furnace, chimney, coal storage, water storage facility, sink, Konnyaku bricks of the floor, Mrs. Glover's room (North), Mrs.Glover's room (East), servant's room (North), servant's room (West), servant's room (South), corridor, verandah	○	○	○
	Garden	Cliff (to the south of the Glover House), pond, stone masonry (to the northwest and northeast of the Glover House) , Flower beds (to the south and northwest of the Glover House, Stone pavement of the garden path, flowerbeds, monuments, trees	○	○	○
Administration periodother than Glover	Barn	Barn		○	
	Stable	Stable, natural storeroom		○	
	Other elements within the scope of the component part of the Property	Stairs			○

Table 1: The list of elements constituting Glover House and Office and their value categories

Out of these elements in Table 1, while the Conservation Work Programme for Glover House and Office will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical change and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Nagasaki City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points.

The townscape and views of Glover House and Office and the Nagasaki foreign settlement that ushered in Western technology are still intact. Nagasaki City will preserve the district for future generations as an important tourist destination in company with residents.

(1) Conservation and restoration of Glover House and Office based on its characteristics and current state

The house served as a residence and base for the trading and cultural activities of Glover, who shaped the development of Japan's coal and shipbuilding industries. Nagasaki City will improve the present state addressing the causes of deterioration, while the city will restore building to its original design during the Meiji Era. Another goal is to have the masonry, cliff, and other elements of the landscape look as they would have when Glover lived at the house.

(2) Promotion by diverse methods about Glover House and Office

The city will endeavor to provide a new information delivery measures so people can compare the contemporary landscape with how it looked in old photos. The city will disseminate information focusing on the architectural historical value of Glover House and Office and the relationship between component parts of the Sites of Japan's Meiji Industrial Revolution and Glover himself. In the Glover Garden, as well as this residence, there are national important cultural properties Ringer House and Alt House, and other Meiji Era historic buildings relocated to Glover Garden. The city will update information to clearly present differences in the historical backdrops and value of these buildings.

2. Policy

The policy consisting of following five items has been set to approach conservation.

(1) Conducting investigative studies

Nagasaki City will explore the historical documents to clarify the original usage of Glover House and Office and assess current rainwater drainage channels around the house. It will investigate visitor numbers and behavior to evaluate the current state of visitors and the impact on the component part. The city will also evaluate the conditions of the constituent elements of the component part and the buffer zone by periodically conducting follow-up observations through monitoring charts, reflecting the findings in the annual report.

(2) Preserving, reinforcing, and stabilizing the buildings and remains in terms of material, substance, and structure

Based on the results of aseismic assessment of Glover House and Office in FY 2016, Nagasaki City will undertake restore and earthquake resistance measures in FY 2018. Degradation of the walls, floors, wallpaper, and other parts of the building has progressed since the building became constantly open to the public as a tourism resource. After restoration, the city will endeavor to stabilize the building's stable condition through appropriate cleaning and other ongoing daily maintenance and mitigating the cause of the deterioration by installing air conditioners to enhance the indoor environment. It will also alleviate the impact of visitors' tread pressure on the facility by managing visitor flows in a given direction.

(3) Indicating contributions of the component part to the industrial revolution

Glover House and Office embodies two eras defined under the concept of the Outstanding Universal Value of the property. The first was that of the direct importation of Western science and technology and the second was that of the full-blown industrialization. To inform visitors properly the fact that Glover has direct ties with the coal and shipbuilding industries, notably through the development of the Takashima Coal Mine and construction of the Kosuge Ship Dock, and that he had great achievement toward Japan's industrialization, Nagasaki City will put up information boards and other installations.

(4) Arranging and improving the buffer zone from the standpoint of scenic view

The city aims to reproduce views of Nagasaki Port and the Nagasaki Shipyard of Mitsubishi Heavy Industries on the opposite site reminiscent of the time between the end of the Edo Period and the Meiji Era, when Glover flourished. It will recreate the garden below the northwest of the house at that time based on the results of studies of historical photos. While the construction dates of the barn and stable adjacent to the house are unknown, the city will repair degraded parts and open the interiors to the public. The city will endeavor to maintain the masonry, cliffs, and other elements of the settlement terrain, logging, removing, and pruning trees, and keeping the views tastefully integrating with buildings in the Glover Garden.

(5) Implementing projects

The city will ensure a carefully phased implementation of this Programme by formulating a projects implementation schedule that encompasses the project term, staged projects implementation method, and annual project agenda. The city will confirm projects progress every year while communicating with relevant managers and stakeholders to the scope of the Programme, review the projects implementation schedule at the appropriate times. In its supervising role for operating the progress of the projects for the component part, including for public relations, events, and stakeholder coordination, the city will liaise with stakeholders and related organizations.

3. Methods

(1) Investigative studies

(a) Document surveys

Surveys comprise the items as follows: comprehending the process of historical changes and developments of the buildings and the compound of Glover House and Office, the determining the scope

of the residential compound owned by Glover and the location of the main gate and approaching route to it at that time, identifying external facilities including the garden at that time based on old photographs, assessing the tree impacts on the masonry and other aspects of the environs for their pruning and cutting, identifying the course of rainwater drainage channels around Glover House and Office and their extents at that time, exploring the history of the furniture currently on display inside the buildings, determining the time when the barn and stable were constructed, and studying the activities in Japan of Glover himself, including in terms of the relationship between him and component parts of the Sites of Japan's Meiji Industrial Revolution.

(b) Surveys of visitor numbers and behavior

As well as assessing the effectiveness of the projects implemented, the city will study visitor numbers and behavior to identify the negative impact made by the visitors on the buildings and compound and reflect the findings in better utilization of this component part of the World Heritage property.

(c) Monitoring

The city will produce monitoring charts that comprehensively and systematically consolidate information on the state of constituent elements within the component part and regularly assess the condition of the component part and the buffer zone. The monitoring results will reflect in an annual report, submitting it to the Nagasaki Conservation Council based on the management structure of this World Heritage property and seek opinions from that body.

(2) Conservation and restoration

(a) Scope

Scope for conservation and restoration work will focus on the constituent elements of the Glover House and Office that contribute to the Outstanding Universal Value of the World Heritage property.

Constituent elements	
Main building	Drawing room, bedroom, guest room, storeroom (for small tools, etc.), study room (for storing important documents), greenhouse, dining hall, dining room, liquor storage room, pantry, entrance hall, child's room, workshop, toilet, verandah, corridor, corridor connecting with the annex
Annex	Kitchen (furnace, chimney, coal storage, water storage facility, sink, Konnyaku bricks of the floor), Mrs. Glover's room (East), Mrs. Glover's room (West), servant's room (North), servant's room (South), corridor, and verandah
Garden	Exterior (south, west, north, and east of building (front of stable), Japanese garden 1, Japanese garden 2, and masonry)

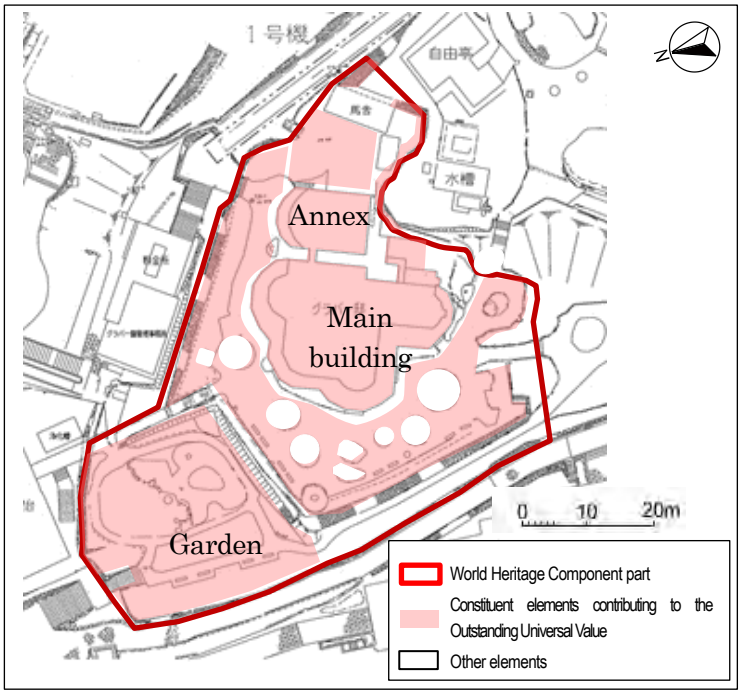


Figure 2. Constituent elements subject to conservation and restoration

(b) Basic concept and methods for conservation and restoration of Glover Garden as a whole

Maintenance and management will entail restoring ceiling paper, exterior wall plaster, and exterior paint, periodically cleaning the gutter and roof, and cutting and pruning trees that are not vital to the landscape. In line with aseismic reinforcement and restoration after FY 2018, the city will review and update the disaster preparedness equipment and revise indoor exhibits. The barn and stable will be opened after restoration. The city will assess and study old photographs of the Japanese garden around Glover House and Office and restore the garden to how it looked in the age set for restoring the main and attached buildings.

(3) Visitor management

(a) Zoning

The city will properly inform visitors of Glover's great contributions to Japan's industrialization as well as use Glover Garden overall to disseminate information about the Sites of Japan's Meiji Industrial Revolution by dividing Glover Garden into A, B, and C zones (see Figure 3) and improving the environment and arranging the views for each zone.

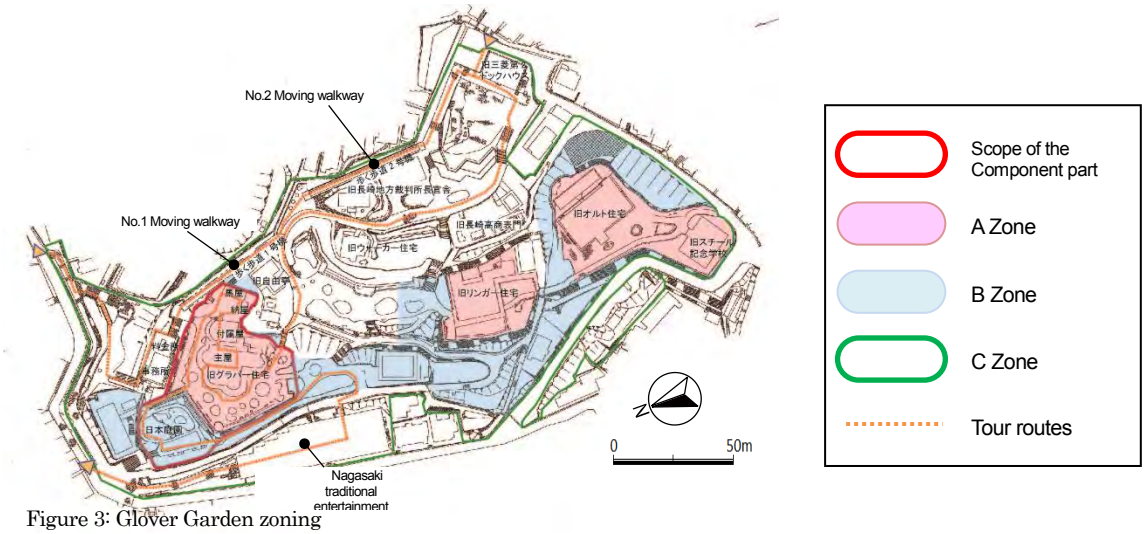


Figure 3: Glover Garden zoning

(b) Tour routes

Once inside Glover Garden, visitors will be guided to the Former Mitsubishi No. 2 Dock House at the top of the park to be informed about the Outstanding Universal Value of the World Heritage property consisting of 23 component parts and the positioning of the Glover House and Office in that. Visitors will thereafter be guided to Glover House and Office through viewpoints overlooking Nagasaki Port and the Nagasaki Shipyard of Mitsubishi Heavy Industries on the opposite side (Figure 3). Inside Glover House and Office, there will be a tour route guiding visitors from the entrance to private areas through the public space (Figure 4).

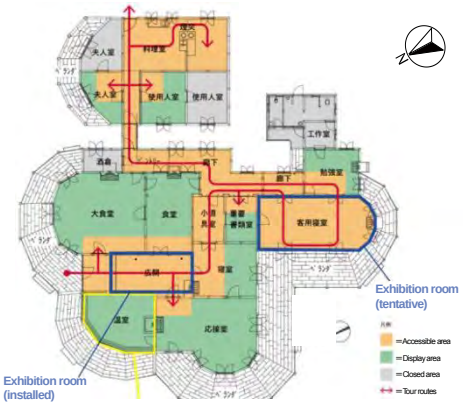


Figure 4: Tour route inside Glover House

Note: Visitor management approach regarding site utilization

Nagasaki city will formulate the following visitor management rules in opening the interior of Glover House and Office to the public while properly preserving structures.

(i) Entry and exit will be through one location each.

(ii) It will set up tour courses and post guidance signage indoors (Figure 4).

(iii) It will install air-conditioning facilities in appropriate locations.

(iv) It will regularly close the house or certain rooms to the public in some periods for repairs and

cleaning.

(c) Terrain correction and environmental improvements

It has been confirmed that some of the masonry on the east of Glover House and Office is swollen, and repairs and restoration will be made as determined necessary through ongoing monitoring. No masonry in B or C Zones currently require restoration.

(d) Arranging and improving landscape and planting vegetation

Trees would be cut, replanted, or pruned to return the compound to its condition when Glover resided there where:

(i) Having negative impact upon building maintenance
(ii) Being significantly different from those in the garden when Glover was there
(iii) Detracting from viewing the appearance of Glover House and Office
(iv) Blocking the view of Nagasaki Port from the front garden of Glover House and Office

(e) Guidance and explanatory boards

The Glover House and Office hall will be made the exhibition room, with commentary panels and digital imaging equipment showcasing Glover's activities and lifestyle. Based on future surveys and research findings, furniture that is contemporary with when Glover resided on the premises will be installed to transform the room appearance. The interior of the house and front garden will feature panels and replicas of old pictures and photographs and historical documents on the settlement. A consistent design and presentation approach will ensure that explanatory boards and guidance signs will not mar the landscape.

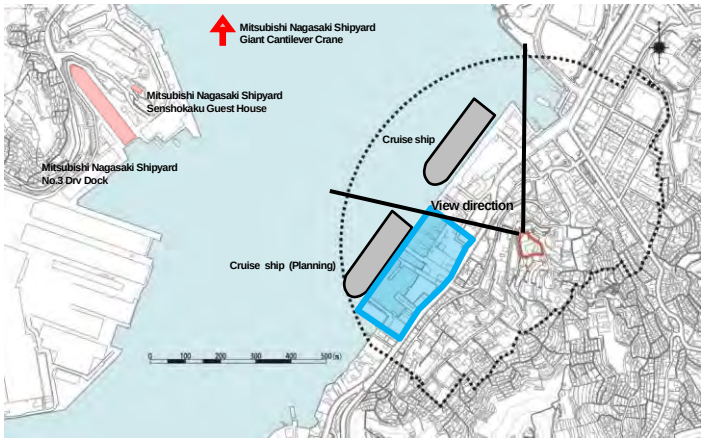
(f) Administrative and convenience facilities

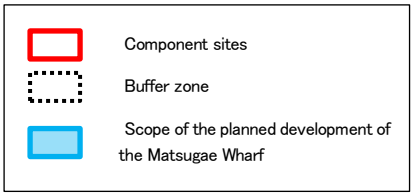
For such structures as the tollgate, toilets, and Nagasaki traditional entertainment hall (Figure 3) in Glover Garden (C zone), and water storage tank, pump rooms, and other facilities, the city will undertake conservation and restoration in forms and colors fitting in the landscape of the former Nagasaki foreign settlement. At the same time, it will maintain and repair No. 1 and 2 moving walkways (Figure 3) in their current setup. As well as continuing to use the Former Mitsubishi No. 2 Dock House to provide information to visitors, the city will also employ other buildings designated as Important Cultural Properties and buildings selected as Historic Buildings in Glover Garden (Figure 3) as information and rest facilities.

(4) Arrangement and improvement of the landscape in the buffer zone

To the extent permitted under existing laws and regulations, the city prunes and cuts trees that detract from the landscape of the buffer zone.

Nagasaki Prefecture's plan for the development, utilization, and preservation of Nagasaki Port (Nagasaki Port Plan) calls for constructing a new quay wall southwest of the existing quay wall of the Matsugae Wharf, located in the northwest of the Glover House and Office, enabling the wharf to accommodate two cruise ships (Figure 5). Due consideration will be given to the view of the port and its vicinity as the plan states as follows: "In order to conserve the historical and cultural value of Nagasaki Port to so that it deserves its designation as a World Heritage Site based on its contribution to the modernization of Japan, consideration shall be given to ensure the appropriate conservation of industrial remains that constitute a component part of the World Heritage Site in developing and utilizing the port." The construction of the new quay wall will enhance the view from the Glover House and Office overlooking the Nagasaki Shipyard of Mitsubishi Heavy Industries, Ltd. by allowing a cruise ship to be berthed at the new quay wall (Figure 6). The construction of a new passenger terminal or any other facility in the area behind the newly constructed quay wall, whether on existing or reclaimed land, would also enhance the view, because due consideration would be given to the form and design of any such facility pursuant to the criteria for landscape formation under the Landscape Act. Nagasaki Prefecture will proceed with the planned development of the Matsugae Wharf after ensuring, in consultation with the Nagasaki Local Conservation Council and other concerned parties, that the plan will not negatively impact the Glover House and Office.





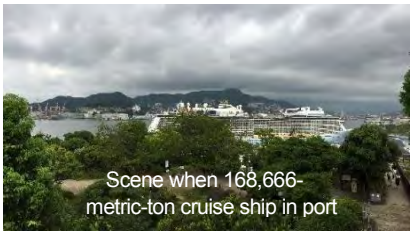






Figure 6: Simulation of view after Matsugae Wharf construction

4. Projects Implementation

(1) Order of priorities

Including for projects that are ongoing, Nagasaki city will determine a projects implementation schedule encompassing three phases over a total of 11 years. Phase I covers FY 2016 to 2020. Phase II will be FY 2021 to 2023, and Phase III will be FY 2024 to 2026 (Table 1). In three years from FY 2018, seismic reinforcement implementation design and reinforcement work will be concurrently conducted. Conservation and restoration of Glover House and Office is scheduled for completion during Phase I. Priority work during that phase would be as follows:

- Undertake conservation and restoration (external and interior finishes and exteriors) and aseismic reinforcement work for main building and annex
- Survey and elucidate site boundaries (including through marker installations)
- Repair existing drains and construct new drainage channels
- Take chronological measurements of masonry and install explanatory boards
- Prune trees
- Install explanatory boards and digital video equipment

(2) Revision of implementation schedule

The implementation schedule will be revised in line with projects' progress after 10 years. If new measures are necessary, the city will consider reviews without waiting for that time to elapse.

(3) Others

The city has carried out conservation and restoration work, etc. for the Glover House and Office by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 24 million yen was spent in FY2016 and 13 million yen has been budgeted for FY2017, both including costs incurred or earmarked for the presentation and public utilization of the component part, but excluding the cost for day-to-day maintenance.

Project items				Phase I (2016 to 2020)	Phase II (2021 to 2023)	Phase III (2024 to 2026)
A. Conservation and restoration	Buildings	Constituent elements	**A1. Conservation of degradation**			
			Design of conservation			
			Repair conservation			
			A2. Seismic reinforcement			
			Seismic assessment and seismic reinforcement estimate plan			
			Seismic reinforcement implementation design			
			Seismic reinforcement work			
		Other	**A3. Barn and stable restoration**			
			Seismic assessment of natural store in the stable, and barn and stable restoration design			
			Seismic reinforcement of barn and stable, and repairs to damage			
	Environment		**A4. Clarification of Glover House and Office site**			
			Survey and elucidation of site boundaries	Surve		
			A5. Rainwater drainage upgrades			
			Repair of existing drains and construction of new drainage channels	Surve		
B. Visitor Management	Tour routs		**B1. Establish route inside Glover House and Office**			
			Establish tour route by considering original entrance		Survey and study	
			B2. Establish route in Glover Garden			
			Establish tour route			
			Segment surface finishes of B and C zones			
	Vegetation		**B3. Pruning of trees and arranging of Japanese garden**			
			Prune trees that detract from assets and landscape	Trees detracting from assets	Trees detracting from	
			Restoration of a terrace in front of the building and Japanese garden on the lower terrace based on old photos		Survey and study	
	Guidance and explanation		**B4. Exhibits in conservation area**			
			Install furnishings matching to the Meiji era	Survey and study		
			Disseminate information utilizing old photos inside and outside exhibition room		Interior Exterior	
			Reproduce conditions at the time and display cannon models, and other items			
			B5. Install outdoor signs with uniform designs			
			Install information boards and building explanatory boards			
	Facilities		**B6. Set up administrative and convenience facilities**			
			Exhibit interiors of traditional structures and install furniture			
	Public presentat		**B7. Maintaining masonry**			
			Survey masonry period and install explanatory board	Survey		

Table 2: Projects implementation schedule

5. Basic Plan

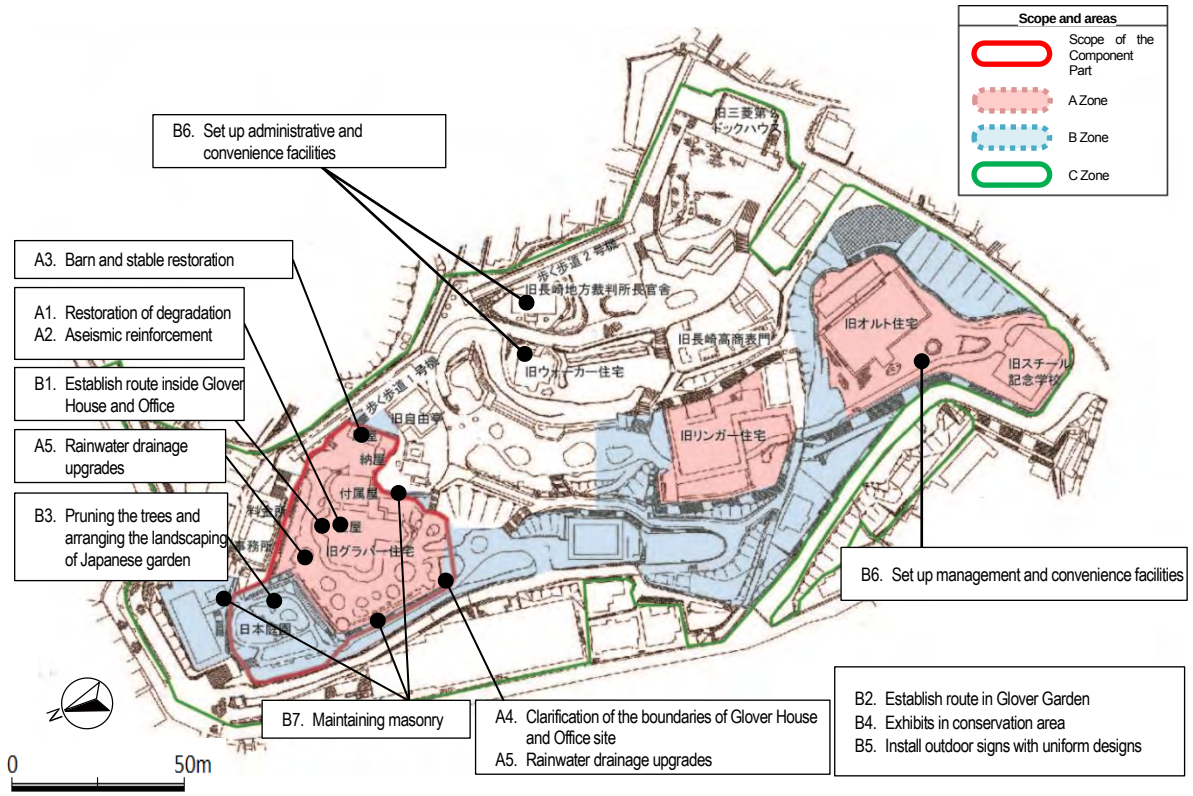


Figure 7: Basic plan for Glover House and Office site

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Glover House and Office, which became a source of "Conservation Work Programme and Implementation Programme" is available on Nagasaki City's web site. <http://www.city.nagasaki.lg.jp/kanko/840000/843000/index.html>

Conservation work programme and implementation programme for Miike Coal Mine (Area 7 Miike/ Component part 7-1)

Omuta City and Arao City drew up "Conservation Work Programme and Implementation Programme" for Miike Coal Mine in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprise detail measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution")

The Fukuoka Prefectural Government drew up a separate Conservation, Restoration, Presentation and Public Utilization Plan for Miike Port, for which an abstract is provided separately.

Kyushu　　South of Fukuoka and North of Kumamoto　　Omuta City and Arao City



Figure 1: Location maps of Omuta City and Arao City

1. Approach to conservation

Conserve for future generations the system and role of coal mining and transportation in Miike Coal Mine as an energy producer for the industrial revolution during the Meiji Era. as well as the scale of the histories overlapping with the spread of the coal industrial landscape, and promote public utilization of this historic asset so as to develop the cities.

The Sites of Japan's Meiji Industrial Revolution, comprising 23 component parts in Iron and Steel, Shipbuilding and Coal Mining, testify to the first successful transfer of Western industrialization to a non-Western nation and offer Outstanding Universal Value. Area 7 Miike comprises two component parts engaged in the coal industry. They are Miike Coal Mine and Miike Port (7-1) and Misumi West Port (7-2).

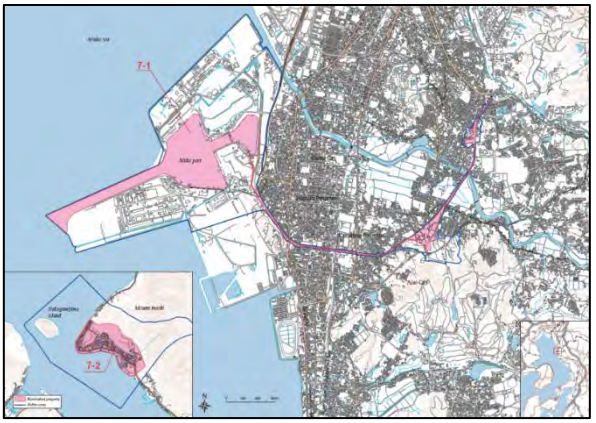


Figure 2: Scope of Area 7 Miike component parts and the buffer zone

Of the three stages reflecting the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, the Misumi West Port is the component part showcasing the second phase of the introduction of Western technology. The Meiji government built the port in 1887 to stockpile coal as production

at the Miike Coal Mine increased and load coal onto large ships. Coal had been mainly shipped from Miike in small vessels, so there was a need for greater transportation efficiency.

"Miike Coal Mine and Miike Port" is the single component part testifying to the third phase of the establishment of industrial infrastructure. Here was Japan's second location for modernized coal mining technology after the Takashima Coal Mine in Nagasaki, with mining efficiency being improved with the deployment of advanced machinery and a centrally managed mine drainage system. After acquisitions by Mitsui Mining & Smelting, Miyanohara Pit and Manda Pit were excavated in 1888 and 1898, respectively, further increasing coal output. There was further development of infrastructure and coal transportation through wholly electric Miike Coal Railway. This was a very early electric railway application in Japan. Leveraging modern civil engineering to build Miike Port in 1908 brought success through massive and efficient domestic and overseas shipments of Miike coal through large vessels that docked at the port.

In the Conservation Management Plan for Miike Coal Mine, which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Miike Coal Mine, and their value categories are shown as Table 1.

Elements	Period	Attribute	Value Category of Attribute		
			OUV	Country	Region
Miyanohara Pit	Pit opening – pit closing (1898 – 1931)	Number 2 Shaft ruin	○	○	○
		Number 2 Shaft headframe	○	○	○
		Number 2 Shaft winding-engine house	○	○	○
		Davey pump house exterior wall	○	○	○
		Drainage pipe	○	○	○
		Drainage canal	○	○	○
		Boiler house chimney foundation		○	○
		Connecting line remains	○	○	○
		Connecting line abutment	○	○	○
		Electric power substation		○	○
	Pit closing – Miike Coal Mine closing (1931 – 1997)	Staff room			○
		Storage house			○
		Worker residence			○
		Fence			○
Manda Pit	Pit opening – pit closing (1902 – 1951)	Number 2 Shaft winding-engine house	○	○	○
		Number 2 Shaft headframe	○	○	○
		Number 2 Shaft pithead	○	○	○
		Storage and pump house	○	○	○
		Safety lamp and bathing house	○	○	○
		Office (former fan house)	○	○	○
		Yamanokami shrine facilities	○	○	○
		Number 1 Shaft pithead	○	○	○
		Number 1 Shaft headframe foundation	○	○	○
		Inner shaft tramway	○	○	○
		Coal dressing plant and tunnel	○	○	○
		Davey pump house foundation	○	○	○
		Boiler house ruin	○	○	○

		Power substation (electric power substation)	○	○	○
		Main entrance	○	○	○
		Foundations, etc. of facilities associated with Number 1 Shaft	○	○	○
		Boiler house chimney foundation		○	○
		Sediment basin	○	○	○
		Water tank ruin	○	○	○
		Water canal	○	○	○
		Guard house ruin		○	○
		Concrete electricity poles (4 locations)		○	○
		Oil storage (2 buildings)		○	○
		Old entrance		○	○
		Paint storage & worksite storage		○	○
		Worksite		○	○
		Carpentry storage		○	○
		Boiler house connecting line	○	○	○
		Water tank for guide wood		○	○
		Boiler house & tank		○	○
		Storage & lavatory		○	○
		Support post and rail of the hoist crane		○	○
		Sakura-machi tunnel		○	○
		Water tank		○	○
		Brick buildings		○	○
		Concrete foundations		○	○
		Old main entrance, gatepost		○	○
		Remains of an outdoor electrical power substation		○	○
		Manda booster pump location	○	○	○
		Transmission line tower			○
	Pit closing – Miike Coal Mine closing (1951 – 1997)	Water and gas pipes			○
		Former Asonitto sewing factory			○
		Former Asonitto No. 5 factory			○
		Former Asonitto boutique			○
		Former Asonitto cafeteria			○
		Former Asonitto guard house			○
Coal Railway	Opening – Miike Coal Mine closing (1878 – 1997)	Railroad bed	○	○	○
		Cut & raised earth	○	○	○
		Structures other than earth structures	○	○	○
		Other works		○	○
		Electric power cables, steel towers			○
		Bridge over railway			○
		Other structures		○	○
	Operation period – present (early Showa period to present)	Above-ground pipes			○
		Underground pipes			○

Table 1: The list of elements constituting Miike Coal Mine and their value categories
※In drawing up this programme, constituent elements stated in CMP are partly reviewed.

Out of these elements in Table 1, while the Conservation Work Programme for Miike Coal Mine will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical change and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Omuta City and Arao City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following two points.

The development of coal industry technology at Miike Coal Mine thereafter leaded Japan's coal industry, and continuously layered the history of industrial activities. Although the facility closed in 1997, evidence of efforts to streamline and systemize coal industry logistics has been still preserved.

To conserve the Miike Coal Mine, which contributes to the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, it is vital to maintain buildings and remains that form evidence of coal mining and transportation systems from the pitheads to the railway and port by understanding the historical process of changes and developments of Miike Coal Mine from establishing the foundation of the coal industry to the mine shutdown while focusing on coal mining in the Meiji era. It is also important to provide explanations and information on their value to visitors. The cities will therefore undertake the required conservation and restoration to materialize the ideal future form of the Miike Coal Mine from the following two perspectives.

(1) Preserve the mine as it was upon shutdown

The Miike Coal Mine has been maintained as it was when it closed in 1997. Primarily with the physical evidence of the establishment phase for the nation's coal industry, which is one aspect of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, the site holistically showcases coal mine's functional and technological progress in line with changing industrial activities and social landscape from the end of the 19th century. Proper maintenance of the site as it was when it closed will preserve constituent elements of the Outstanding Universal Value for the future. Properly preserve the mine as it was shutdown can ensure to deliver the component parts contributing to the Outstanding Universal Value to the future. While pushing ahead with ongoing maintenance and managements, the cities will thus comprehensively and systematically assess the preservation of the Miike Coal Mine through regular monitoring, undertaking planned conservation and restoration to reinforce and stabilize them in terms of material, substance and structure of buildings and remains based on findings from periodical monitoring.

(2) Present the Miike Coal Mine conveying the historical process of changes and developments and spatial spread of industrial landscape in the Area

The following two elements of Miike Coal Mine's historical features are to be preserved and conveyed.

(i) The historical process of changes and developments of the coal industry continuously layered from the establishment of the industrial infrastructure in the Meiji era (late 19th century) through the end of the 20th century, when the mine closed

(ii) Spatial spread of the coal mining industrial landscape, including the chemical complex and corporate housing, centered on modernized coal mining and transportation system covering the pithead, railway, and port

The cities will accordingly emphasize the conveyance of these two historical features to visitors in making the sites available to the public.

As well as guiding by guidance and explanatory boards and providing information at guidance facilities, the cities will convey the Outstanding Universal Value of the World Heritage property as an entity by publishing survey and research results, holding open and public lectures, conducting public events, and training more guides to foster understanding among local residents and visitors. By positioning the World Heritage component part of the “Miike Coal Mine and Miike Port” as cultural resource and hubs for information dissemination in the Area, the cities will cooperate and interact with communities to enhance civic pride.

2. Policy

The policy consisting of following six items has been set to approach conservation.

(1) Conducting investigative studies

The cities will make the positioning of Miike Coal Mine in the Outstanding Universal Value apparent and improve its state of conservation, conducting field surveys (including excavations) of the Miike Coal Mine and studying historical documents and other materials on Mitsui Group.

Buildings and remains as constituent elements will be periodically monitored for permanent stabilization through maintenance and restoration.

The cities will evaluate visitor satisfaction through surveys of visitor behavior and employ findings in measures to improve safety and comfort.

(2) Preserving, strengthening, and stabilizing the buildings and remains in terms of material, substance, and structure

As well as monitoring buildings and remains, the cities will stabilize them through weeding, cleaning, and other daily maintenance.

The cities will scrutinize any instabilities that monitoring reveals by leveraging expert opinions and findings from studies, undertaking systematically restoration for reinforcement and stabilization.

(3) Indicating the coal mining and transportation systems

The cities will set routes, install explanatory boards, update and set up display relics, and install viewpoints. At the same time, they will explain Area 7 Miike, comprising the two component parts of "Miike Coal Mine and Miike Port" and "Misumi West Port", constitute a series of coal industry systems.

(4) Arranging and improving landscape from the standpoint of scenic view

In the component parts, material and substance of bricks, iron, concrete, and others used in shafts underscore the nature of the coal industry at Miike, and the cities will restore scenery that makes the atmosphere and landscape distinctive.

Because component part as a whole can be seen from a distance, one can see distinctive landscape that links the constituent elements of the component part and the related sites. Appropriate viewpoints include locations where railway site and Miyanohara Pit and Manda Pit can be seen, where railway pipelines are visible, and where brick structures for infrastructure can be seen. To preserve the industrial landscapes from such viewpoints, building heights, materials, and colors will be controlled.

(5) Implementing projects

Required spending would be allocated in order of priority to undertake scheduled tasks under the project implementation. The cities would confirm work progress and review Programme at the right timing to move the project ahead.

3. Methods

(1) Investigative studies

(a) Excavation and field surveys

At Miyanohara Pit and Manda Pit, excavation surveys would compare the old drawings with the current conditions of buildings and remains, confirm and interpret coal mining and transportation systems, and further enhance communications to deepen visitor understanding.

The following excavation work at Miyanohara Pit would be prioritized to check on conditions of remains. The work would encompass the Davey pump room site, which was crucial for water drainage, the adjacent masonry water drainage area, the steam engine boiler stack and auxiliary, and the Miike State Prison.

At Manda pit, test excavations at the following facilities to a minimum to avoid harm for preservation would confirm the extent of underground remains. They would include the boiler house, the No. 1 shaft facilities, and

the Davey pump room.

For the coal railway site, there would be excavation surveys of the railway bed, filling and cutting locations and other areas to confirm and analyze the basic structure of the railway.

(b) Surveys of building restoration

Periodic monitoring would assess the progress of deterioration with each constituent element. Techniques for seismically reinforcing the brick winch chamber of Miyanohara Pit would be scrutinized.

(c) Historical documents and other materials surveys

There would be ongoing study and research of historical documents and other materials (historical documents, photographs, and maps) owned by relevant organizations and research institutes of Mitsui Group, as well as citizens and other parties.

(d) Surveys of visitor numbers and behavior

Changes in visitor traffic would be assessed to evaluate negative impacts on the component parts, with the results being employed in countermeasures. A visitor dynamics survey would confirm visitor understanding of the World Heritage and its component part and gauging visitor satisfaction.

(e) Monitoring

Monitoring charts would be produced, with follow-up monitoring to comprehensively understand the deterioration of buildings and remains and landscape transformations with the component part and the buffer zone. If negative impacts are identified, steps would be taken to eliminate causes or reduce impacts, followed by verification of the effectiveness of measures taken.

Findings from follow-up monitoring would be compiled in an annual report. The Miike Local Conservation Council setup under the World Heritage management structure would discuss measures. Reports would be submitted to the National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution.

(2) Conservation and restoration of buildings and remains

Observation of the current situation revealed that unstable buildings are (1) Number 2 Shaft winding-engine house, (2) Number 2 Shaft headframe, and (3) other buildings and structures in this order of priority. Reinforcements mainly for seismic strengthening of the buildings for (1), steel corrosion prevention for (2), and restacking fallen masonry structures for (3) would be undertaken.

(a) Conservation and restoration of constituent elements in the component part that contribute to the Outstanding Universal Value

➢ **Miyanohara Pit**

Observation of the current situation revealed that unstable structures are (1) Number 2 Shaft winding-engine house, (2) Number 2 Shaft headframe, and (3) other buildings and structures. Reinforcements would be mainly for (1) seismic strengthening for the structure, (2) steel corrosion prevention, and (3) restacking fallen stones.

- Number 2 Shaft winding-engine house

  The brick structure would be seismically reinforced in view of a preliminary survey that highlighted seismic issues. Improvements would encompass (1) vertical steel reinforcement, (2) brick joint repairs and reinforcement, and (3) horizontal steel reinforcements of the upper structure.

- Number 2 Shaft headframe

  The tower's steel material would be restored as corrosion in visible. The steps would be to (1) assess materials to identify where they were produced, (2) repair and reinforce the corroded materials, and (3) paint and rustproof.

- Other buildings and structures

  There would be seismic reinforcements and other restoration in view of seismic strength issues with the brick wall of Davey pump room. The steps would be to (1) undertake vertical repairs with steel

materials, and (2) repair and strengthen brick joints. Masonry drainage parts that have collapsed would be restacked. Existing materials would be reused as far as possible, with replacements with similar new materials as necessary. Where ongoing monitoring identifies other areas at risk of collapse, the deterioration would first be scrutinized, followed by restoration after decisions on techniques that may include reinforcing masonry and strengthening back-filling.

- Underground archeological remains and relics

  Conservation to stably maintain underground archaeological remains and relics after the excavation survey would include putting sand or other cushioning materials right above remains and relics when filling in. There would then be regular monitoring to check for unevenness and depressions from the ground surface to identify and resolve causes of instability in the underground remains and relics.

  Regular monitoring from the ground surface of unexcavated areas would identify and resolve causes of instability in underground remains and relics.

➢ **Manda Pit**

For the brick buildings of Manda Pit, a constituent element that contributes to the Outstanding Universal Value, the steps would be to restore (1) Storage & pump house, (2) Safety lamp house & bathing house, and (3) the office. As earthquake vulnerabilities have been identified for all of these areas, restoration would include seismic reinforcements.

- Storage & pump house (former fan house)

  Cracks are evident in the exhaust tower of the brick structure, which would very likely collapse. The structure would thus be restored and seismically reinforced. It was originally built as a fan room, but later renovated as a Storage & pump house. A new explanatory board and other visuals would help visitors understand that this was once a fan house.

- Safety lamp house & bathing house (former fan house)

  This brick building comprises a lamp room, bathroom, dressing room, and drying room. As parts of the roofs have deteriorated over the years, there will be repairs and seismic reinforcements. This area was originally a fan and machine room but was later renovated as a lamp room and bathroom. A new explanatory board and other visuals would help visitors understand that this was once a fan house.

- Office (former fan house)

  This brick building consists of an office, restroom, an administrative room, a changing room, toilets, kitchen, and staircase. Given visible cracks and other damage on parts of the outer wall and interior wall plaster peeling and falling off, the structure would be restored and seismically reinforced. It was originally built as a fan room, but was later renovated. Provide information to help visitors to understand that it was once a fan house.

- Number 2 Shaft headframe

  Restoration of the steel shaft tower of Manda Pit was completed in 2010. The focus now is primarily on daily maintenance. After assessing deterioration found through regular monitoring, deteriorated areas would be partially repaired.

- Other buildings

  In principle, there would be ongoing maintenance, with partial restoration of deteriorated areas identified through regular monitoring. Restoration would use existing bricks as much as possible.

- Underground archeological remains and relics

  Conservation to stably maintain underground remains and relics after the excavation survey would include putting sand layer for cushioning right above remains and relics when filling in. There would then be regular monitoring to check for unevenness and depressions from the ground surface to identify and resolve causes of instability in the remains and relics.

  Regular monitoring from the ground surface of unexcavated areas would identify and resolve causes

of instability in underground remains and relics.

➢ **Coal Railway**

The cities regularly monitor the Coal Railway remains, and have identified no unstable locations requiring immediate steps. That said, the remains are soil structure constructed more than a century ago and seems inherently likely to destabilize. The cities have therefore determined the following policy for the future.

Regular monitoring will reveal deterioration of the railway bed. If some instability is identified, the structure would be stabilized after the causes are identified. There would be measures to enhance understanding of the railway remains by restoring them to the original condition, including by exposing buried remains.

It will be a priority to keep railway embankments and cuttings configuring slopes in good shape. If monitoring reveals instabilities they would be remediated for structural stability. Specific steps will include weeding, cleaning and maintaining and repairing rainwater drainage facilities on a daily basis. Restoration techniques would be based on findings from monitoring and excavation surveys. Efforts would be taken to keep true to existing materials, material qualities and construction techniques as far as possible to retain the character of the railway.

Brick railway bridges at interchanges they intersect with roads would basically maintain their looks and be repaired and structurally reinforced where instable in view of deterioration identified through regular monitoring.

(b) Repair of elements closely related to constituent elements of the component part that contribute to Outstanding Universal Value

Previous surveys confirmed the structural soundness of underground sections of pithead of the second shaft at Miyanohara Pit. In view of some concrete cracks in some parts, however, there would be necessary repairs over the medium term schedule in view of the extent of deterioration found through monitoring.

(3) Presentation to foster overall understanding of the coal mining and transportation system

(a) Zoning

To promote presentation and public utilization that fosters a consistent and comprehensive understanding of the coal mining and transportation system extending broadly from the pitheads (Miyanohara Pit and Manda Pit) and the railway (Miike Coal Railway) to the port (Miike Port), each component part would be zoned, with clearly indicated methods of presentation and public utilization commensurate with outline and characteristics of each constituent element.

Zone	Public use policy
Miyanohara pit zone	Many buildings performed key functions for Miyanohara Pit are here as symbolic of Miyanohara mine remains. From the overall perspective of the Mitsui Miike Coal Mine site, presentation and public utilization would foster understanding of functions of drainage facilities and water flows at the second shaft which played an important role even after closure. For existing buildings and machinery, routes shall be constructed and explanatory boards installed.
Manda pit zone	Many buildings performed key functions for Manda Pit are here as symbolic of Manda mine remains. Presentation and public utilization would foster visitors' understanding for movements of people and coal from the extraction of coal through shipment by coal railway. For existing buildings and machinery, routes will be constructed and explanatory boards installed.
Coal Railway zone	Here, people can understand the significance and history of the links between the pithead and port and the efficiently transportation of mass-produced coal to Miike Port. Presentation and public utilization would foster understanding of the logistics system by installing a trail and others through utilizing the topography in which peaks and valleys were transformed to flat land so as to provide for the railway.

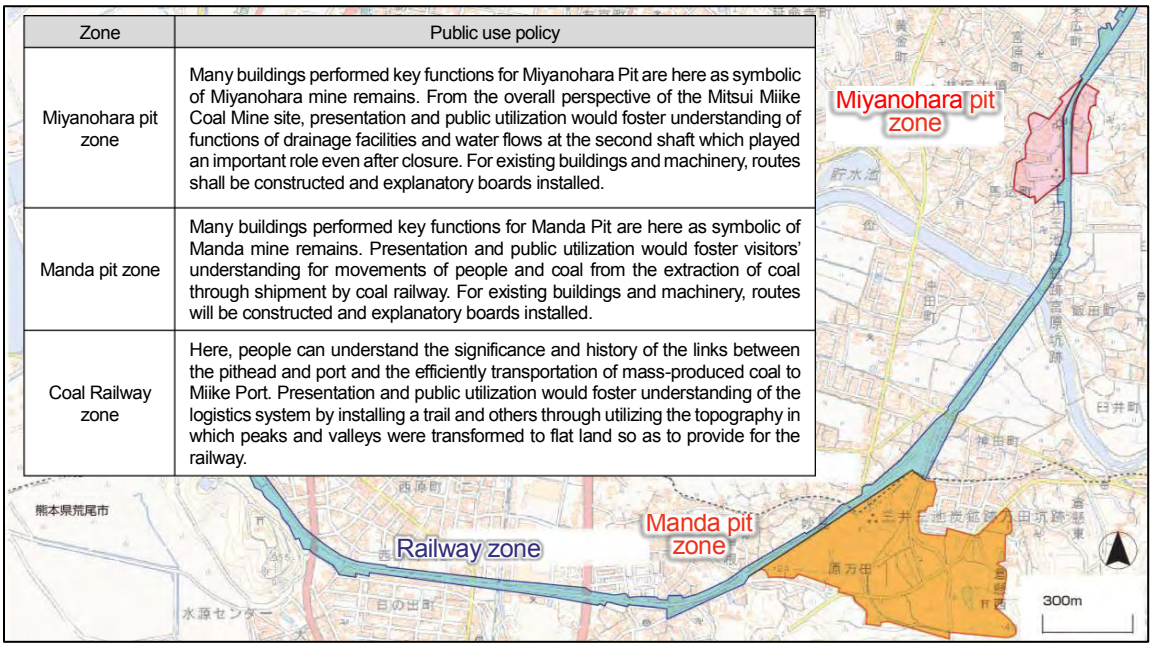


Figure 3: Zoning and presentation and public utilization policies by zone

(b) Tour route planning

➢ **Miyanohara Pit**

To streamline visitor entry management and improving understanding of the coal mining and transportation systems at the pithead, the cities will set up routes along the component parts and surroundings as follows.

(1) Guidance facility → (2) Davey pump room and boiler facility → (3) Pithead facility → (4) Drainage → (5) Prison and other facilities

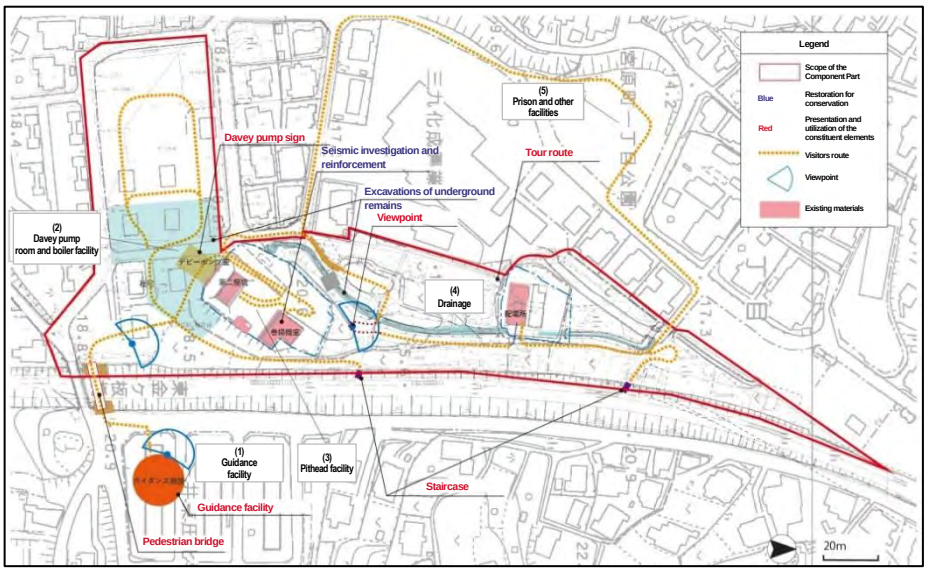


Figure 4: Miyanohara Pit presentation and public utilization plan

➢ **Manda Pit**

The cities will enable allow visitors to sense conditions in around 1939, the heyday of coal mining, by setting up two routes. One would be for understanding flows of employees and miners at Manda Pit. The other would be for following the flow of coal. People flows are as follows.

(1) Yamanokami shrine → (2) Storage & pump house (former fan house)→ (3) Office (former fan house) → (4) Safety lamp house & bathing house (former fan house) → (5) Number 2 Shaft headframe → (6) Number 2 Shaft winding-engine house → Flow of coal: (7) Number 1 Shaft headframe foundations → (8) Remains of the coal dressing plant (coal railway) → (9) Remains of the Davey pump house → (10) Power substation (electrical power substation) → (11) Remains of the boiler house

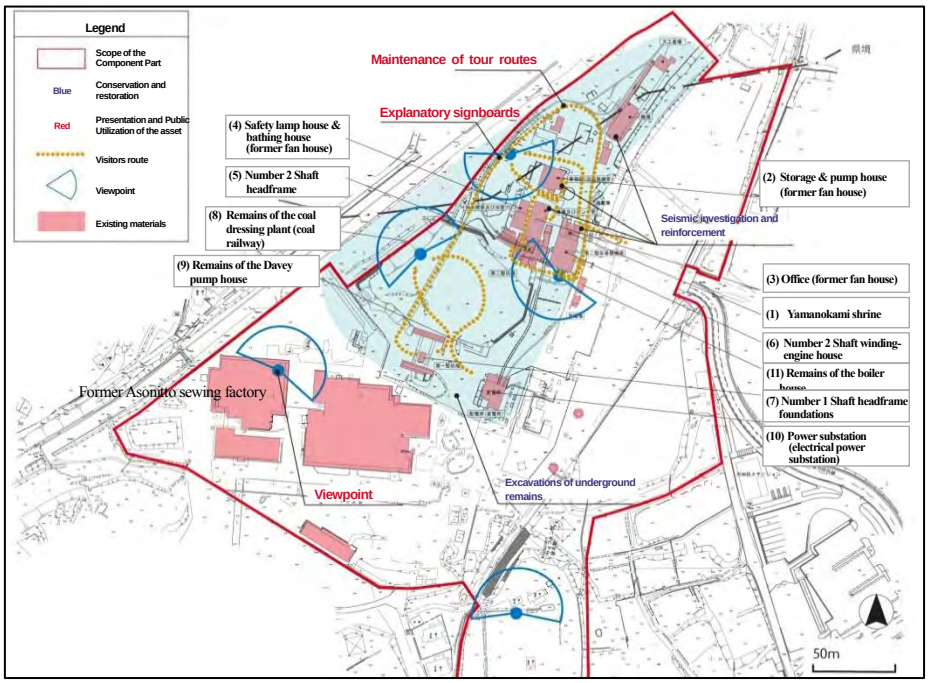


Figure 5. Manda Pit presentation and public utilization plan

➢ **Miike coal railway**

The cities established the following route for the component part and surroundings. This is both to foster visitor understanding of the railway role in logistics system but also to show the continuity of functions between the Miyanohara and Manda pitheads and railway.

(From north) (1) Northern district of Miyanohara Pit → (2) Adjacent district to Miyanohara Pit→ (3) Area around Suwa River Bridge→ (4) Northern district of Manda Pit → (5) Adjacent district to Manda Pit

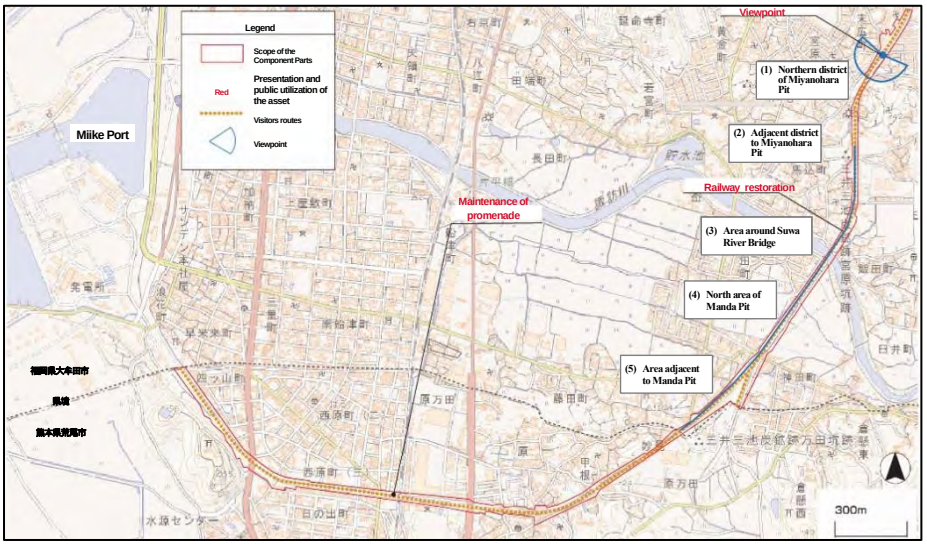


Figure 6: Railroad site Pit public use plan

(c) Topography and environmental improvements

The current topography and environment would be maintained, except for minimal changes needed for restorations, presentation and public utilization.

A trail would be constructed so visitors can sense the coal railway site continuity. A walkway between the railways and the pitheads (Miyanohara Pit and Manda Pit) would also be set up to foster understanding of

continuity and connections between them.

(d) Arrangement of landscape and planting vegetation

In principle, there will be no new tree planting. Trees that impede understanding the coal mining and transportation system within the component parts will be cut down. Trees that provide shade at viewpoints and rest sites will be retained.

The scenic nature of Miike's coal industry in materials and material qualities of bricks, irons, and concrete used in shafts would be identified and reflected in the materials and material qualities of new fences and walkways.

(e) Guidance and explanatory facilities

The cities will install information and guidance boards along routes. The designs and presentations of the boards would be consistent, and the boards will be few and compact so they are not distracting during tours.

At Miyanohara Pit, archaeological remains and relics recently discovered through the excavation surveys would be displayed and clearly explained to visitors, with the remains and relics being securely maintained underground.

On the eastern end of Manda Pit are factory buildings of Asonit that were constructed to employ families of victims of a coal dust explosion accident in 1963 (Figure 5). Prior to that, there were facilities related to the first shaft. While explaining the history and significance to visitors, the cities will set out to open factory buildings roofs as viewpoints and use indoor spaces to house materials for restoration of Manda Pit.

(f) Administrative and convenience facilities

In providing essential convenience facilities for visitors, locations and designs will be chosen that do not spoil the landscape. Existing facilities would be used for toilets, and new ones would not be built. Facilities from when coal mining was ongoing would be used as much as possible, with railway platform sites being harnessed for resting and other convenience facilities.

(4) Arrangement and improvement of landscape in the buffer zone

Buffer zone around Miyanohara and Manda pits are designated as landscape development areas under the Ordinance on Landscape of Omuta City and Arao City, requiring positive landscapes through regulations of structural heights and colors.

For lookout on railway sites and Miyanohara and Manda pits, observation points for railway pipelines, observation points for brick structures intersecting with roads and other infrastructure, and viewpoints for each component part, building heights and materials and colors will be controlled so visitors can better apprise themselves of the scenic natures of Miike's coal industry.

4. Projects implementation

(1) Priority of implementation projects

Omuta City and Arao City will prepare a schedule for projects implemented over 20 years from 2018. The schedule will comprise three six-year phases, Phase I is 2018 to 2023. Phase II is 2024 to 2029. Phase III is 2030 to 2035. Projects will be in accordance with priorities. Conservation works for Miyanohara and Manda pits, which have function as pithead and many brick buildings remains, are deemed a prime priority, and they will be covered in Phase I. Thereafter, the work for the Coal Railway will be in Phase II.

Projects assigned the highest priorities in Phase I are as follows:

- Restoration of Number 2 Shaft winding-engine house of Miyanohara Pit
- Restoration of such Manda Pit buildings as the fan house

(2) Revision of implementation schedule

The schedule was based on a prevailing view of the ideal outlook for the component part ant the buffer zone. After the Phase II is complete, the cities will review the schedule based on progress and contemporary social situation.

Zone	Project item	Phase I 2018 to 2023	Phase II 2024 to 2029	Phase III 2030 to 2035
Miyanohara Pit	1. Excavation survey and study			
	2. Preservation and restoration of winding-engine house and other			
	3. Install routes and explanatory boards to foster visitor understanding			
Manda Pit	1. Excavation survey and study			
	2. Preservation and restoration of fan house and other structures			
	3. Install routes and explanatory boards to foster visitor understanding			
Coal Railway remains	1. Excavation survey and study			
	2. Install routes and explanatory boards to foster visitor understanding			

Table 2: Projects implementation schedule

(3) Others

Omuta city and Arao city has carried out conservation and restoration work, etc. for the Miike Coal Mine by securing necessary funds* making use of various subsidy programs available in FY2016 and FY2017, the first two years following inscription of the property on the World Heritage List. To ensure the smooth implementation of the project, it plans to continue such efforts to secure necessary funds in partnership with relevant institutions.

* Approximately 14 million yen was spent in FY2016 and 25 million yen has been budgeted for FY2017 (including the amount earmarked for plan making, presentation and public utilization of the component part), both excluding the cost for day-to-day maintenance.



Figure 7: Conceptional drawing of Miyanohara Pit at Miike Coal Mine once restored and open to the public



Figure 8: Conceptional drawing of Manda Pit at Miike Coal mine once restored and open to the public

5. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Miike Coal Mine, which became a source of "Conservation Work Programme and Implementation Programme" is available on Omuta City's and Arao City's web site. <http://www.city.omuta.lg.jp/hpkiji/pub/Detail.aspx?c_id=5&id=10743>, <http://www.city.arao.lg.jp/q/list/393.html>

Conservation work programme and implementation programme for Miike Port (Area 7 Miike/ Component part 7-1)

Executive Summary

The major conservation issue with Miike Port is the conservation of the north groin. The work program has been developed to address its problems, and it is being implemented. The work started in fiscal year 2009 and is still continuing. Further details can be found in Section 2-1) below. Otherwise, the only anticipated works relate to ongoing minor repairs and maintenance.

Introduction

Fukuoka Prefecture (the Port Authority), Omuta City, and the Miike Port Logistics Corporation developed the Miike Port conservation work program in fiscal years 2016-2017 in close collaboration with the State Party including the Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, and the Cabinet Secretariat, under the guidance of heritage experts, in response to Recommendation b) attached to the decision of the World Heritage Committee (39COM 8B.14). Note that a separate conservation work program has been prepared for Miike Coal Mine, a summary of which is also presented.

This Work Program represents an action plan that is in keeping with the policy aims of both the Miike Port Plan and the Conservation Management Plan, setting out concrete measures for more effectively achieving the aims of both plans. The Port Plan is the instrument through which management of the operating port is implemented. This Conservation Work Program is based on the concept of the Port Plan, but is fully informed by the Conservation Management Plan, and heritage advice from Japan and abroad, based on proper heritage assessment in achieving the protection of World Heritage values.

Introduction of new protection mechanisms and processes for Miike Port through the port management system is endorsed by the newly revised Port Plan under the jurisdiction of Article 3-3 of the Port and Harbour Act, with clear reference to protection of Industrial Heritage in the Port Plan to protect the heritage value of Miike Port. Following the revision of the plan, the Port Authority and Miike Port Logistics share an understanding of the attributes contributing to Outstanding Universal Value, and abide by the Port Plan which will control development that may affect the heritage value of Miike Port. Any conflicts related to the heritage assessment or the management of the property would be properly resolved through the Conservation Management Plan process, in addition through dialogue in the local conservation council (Figure 1 below).

All stakeholders in Miike Port industrial district as well as the port users and community, as a private-public partnership, unanimously recognise that the significance of the Miike Port contributes to the Outstanding Universal Value of the “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining”, as testimony to the rapid industrial transformation of Meiji Japan in coal distribution and western engineering skills. Conservation management policies were established as the basis for Miike Port and the Port Area’s protection and management of the World Heritage values, in parallel with their ongoing industrial operation, and legal and contractual arrangements will apply to that protection and management. The limits of change are described in the Conservation Management Plan of Miike Port. Based on the shared understanding of the Conservation Management Plan submitted to UNESCO, all the stakeholders in Miike Port have endorsed this work program through the local conservation council, a conservation mechanism developed under the strategic management framework.

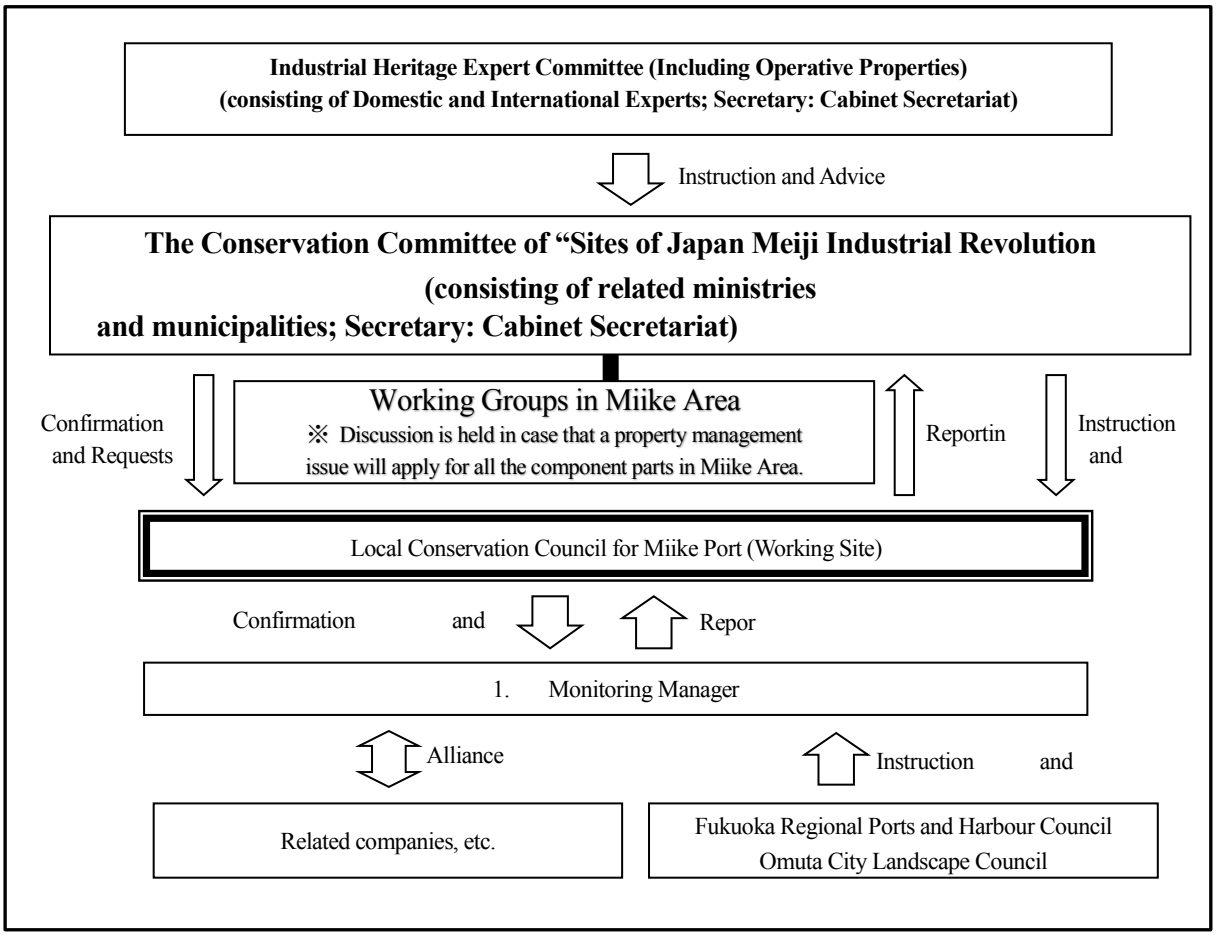


Figure 1. Concept of Conservation Management Structure for Miike Port

1. GENERAL

This summary describes the specific works being planned or foreshadowed in the current period. The approach taken to these works is consistent with the Conservation Management Plan prepared for Miike Port and provided as part of the nomination dossier.

2. WORK PROGRAM

➢ Improvement of north groin

The Port Authority has drafted the Miike Port conservation work program in fiscal year 2016-2017 giving priority to the conservation work of the North Groin, an attribute of World Heritage value. The work started in fiscal year 2009 and is still continuing. Given the notable deterioration and damage to the north groin, this threatens to diminish World Heritage values and also is an issue for operation of Miike Port. There is only very little original Meiji fabric in the north groin due to repeated repairs because of damage caused by natural disasters, and it is not clear where the original fabric is. As conservation work is undertaken, original fabric will be identified and recorded. However, the original lineal form and general appearance of the north groin has been respected. Accordingly, the conservation work program for the north groin was developed with special attention to minimizing impacts, and retaining current fabric and design features, which includes repairs of the harbour walls, and reinforcing and augmenting the structure of the breakwater to withstand typhoon weather conditions, based on the conservation management policy described in the Conservation Management Plan. Currently, 80% of the North Groin has been conserved. (Figure 2 below)

Regarding the process of determining the repair work method and finish, the Port authority and State Party have asked for the input and advice from World Heritage experts in order to seek for the best feasible conservation method to conserve the attributes that convey Outstanding Universal Value.

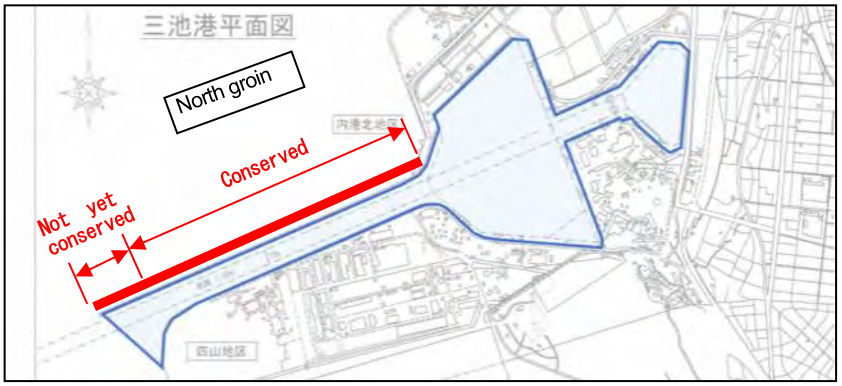


Figure 2. Conservation of North Groin

a) Condition of North groin

Conservation work program continued from fiscal year 2009 was based on two Surveys of North Groin Condition conducted by Port Authority in fiscal year 2008 and by Port Bureau of Ministry of Land, Infrastructure, Transport and Tourism in fiscal year 2011. As for the survey's result, please see Figure 3.

In summary of the survey, although the top portion of the north groin was raised by concrete, it retains its original features. A concrete coating has been partially applied to the masonry surface. Among those places with masonry remains, some are in "Good" condition, others are in "Fair" condition which need observation, and those in "Poor" condition which need urgent repair and reinforcement by increasing the weight of stone materials to help them remain stable given the wave action generated by ships in the channel.



Current state photos	Current state	Expected deterioration	Urgency
TYPE 1 	Surface of coating stones is fully covered with concrete. This can often be found on the north sediment control groin, inside of the south harbour wall as well as the tip of the south wall.	As can be seen on the similar concrete-covered parts in the surrounding area, damage due to ageing (in the near-to-midterm) deterioration is expected. <Thinning due to ablation → cracks → exfoliation → omission of small armor stones → long shore drift → settlement → collapse>	Although the abovementioned damage due to ageing (near- to-midterm) deterioration is expected, this can be addressed by regular upkeep because armor stones on the rear face are currently retained thanks to concrete covering. Medium
TYPE 2 	This is covered from bottom to top with square armor stones that meet the weight requirements. This can be seen on part of the north sediment control groin.	No deterioration in the near-to-mid-term as this meets the required weight against the target waves (ship generated waves, penetrating waves).	No near-to-midterm deterioration. Low
TYPE 3 	This type is most commonly found on both the north sediment control groin and the south harbour wall. The top of the groin is covered with square blocks of about 3.9 t within the range of 1.0- 1.5 m from the top, while the bottom is covered with the mixture of small and large armor stones.	It is expected that the bottom coating stones that do not meet the required weight against the target waves (ship generated waves, penetrating waves) will fall off, which will then cause the sand on the rear face to be removed and thus result in settlement and collapse like TYPE6.	Urgently need to be addressed due to the increase in the size of ships and the tendency that very small armor stones are frequently found. High
TYPE 4 	Some of the smaller stones are visible; however as a whole they are covered by the larger stones. Visible from the offshore side of the north groin and the south harbor wall.	The larger stones can function (against trail waves, penetrating waves) as they are heavier, and there is no problem of deterioration in the medium term. Part of the smaller stones are visible, however they are sandwiched between the larger stones, and acute deterioration is not expected.	Most of the blanket stones are heavy enough so there is no problem, however attention should be paid to gaps that occurred. Routine check is necessary. Medium
TYPE 5 	The deteriorating blanket stones are covered by the front finishing blocks. Many can be seen from offshore side of the south revetment.	As can be seen in the same blocked section nearby, damage due to deterioration over the years (near-to-midterm) is expected. Each block weighs less than 100kg, which is not sufficient, so drop or loosening is expected. **<** Drop, loosening → scouring → Sink as a whole, slide **>**	Damage as mentioned above in coming years (near- to-midterm) is expected, however currently the rear blanket stones are there as a result of the finishing block, so it can be handled by routine check. Medium
TYPE 6 	The current blanket stones have been dropping and loosening.	Due to scouring, damage starts to progress which may affect the adjacent span.	Damage is progressing, and it may affect the adjacent span, so it is urgent. High

Figure 3. North groin condition before conservation works started

The north groin's condition is classified according to 6 types according to structure and deterioration, state of the existing revetment, and by which the urgency of repair and reinforcement has been judged. Since the western end has significant structural problems, the necessity of repair and improvement is obvious and no type-judgement has been conducted.

Repair and reinforcement work will be conducted for sections in "Poor" condition - TYPE 3, TYPE 6 and the western end part.

b) Considerations

1) Refurbishment and repairs are necessary for maintaining both the form of the groin as a World Heritage attribute, and the function of the north groin in maintaining the port channel.
2) The current lineal form and appearance of the north groin will be respected.
3) Retain the original fabric of the current north groin as much as possible, keeping the repairs to the minimum necessary.
4) The extent of necessary repairs will continue to be based on a clear grasp of the current state of the north groin over time, and the environmental threats to it.
5) Repair materials are being chosen that harmonize with the current appearance of the north groin.

c) Reinforcement method

Based on the above considerations and the deterioration, the policy of repair and reinforcement is as below.

- "Poor" condition of TYPE 3, TYPE 6 and the western end part which require urgent repair and reinforcement are considered a high priority. For other types, monitoring will be undertaken.
- In some sections, there is different stone material used on the upper and lower parts which has different weight, and therefore resistance to wave action, and there is also different deterioration. Repair and reinforcement should be limited to only those parts needing repair or reinforcement within the same section.
- The stone masonry has been repaired on many occasions since the port was constructed, and there is original and later masonry existing. New masonry will match the finish of the masonry to be replaced, whether original or later.

The conservation method is shown at Figure 4 below.

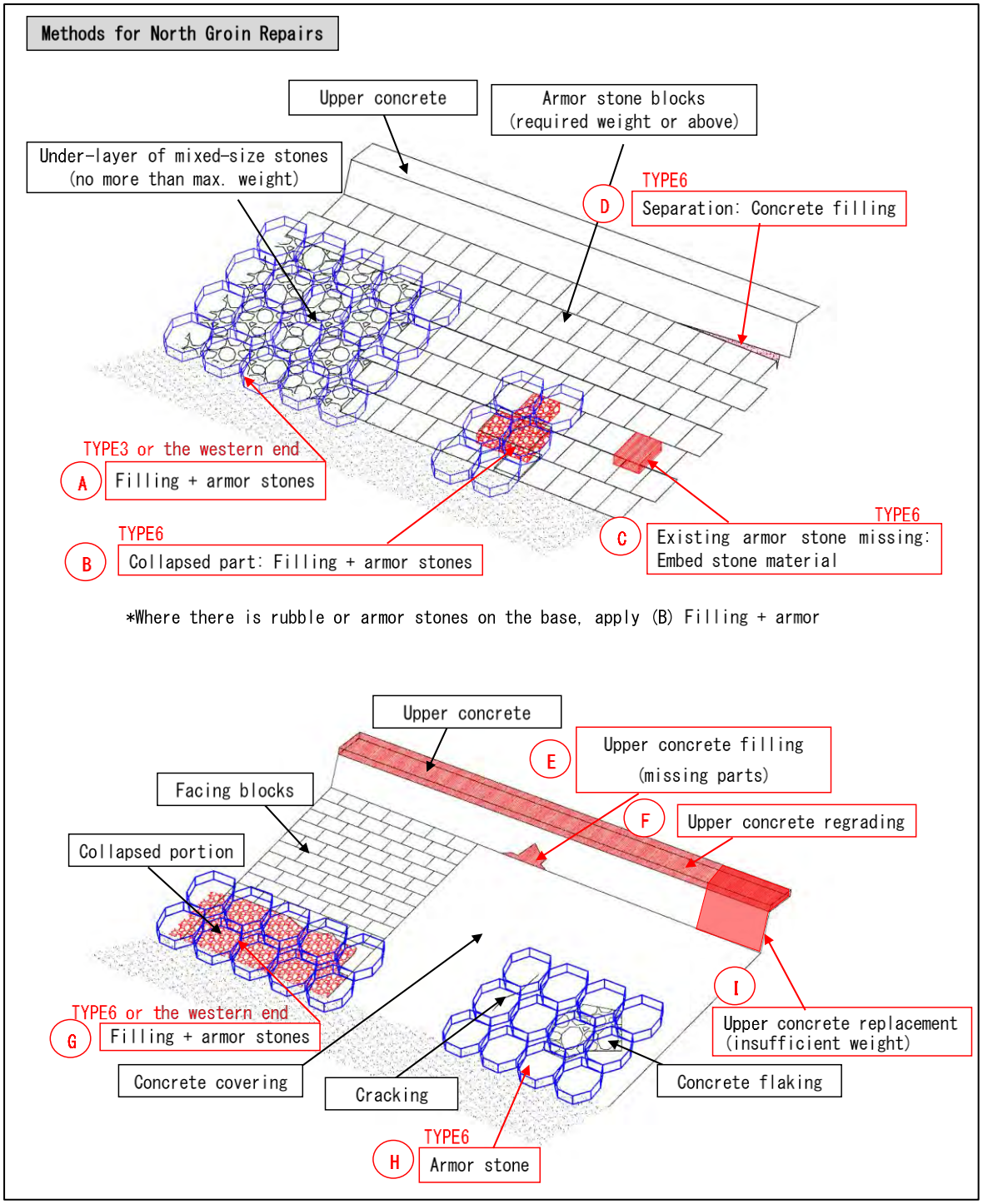


Figure 4. North Groin Refurbishment and Repairs
(Note: red and blue elements are new repairs or reinforcement work)

d) Current situation

Conservation work on most of the groin has been conducted as indicated in Figure 2 above. For the next stage, reinforcement of the western end (Method A, G and I) will be conducted.

3. OTHER WORKS

(1) Development of the Ariake Sea coastal highway

The Ariake Sea coastal highway is a major infrastructure project to provide high volume road access parallel to the Ariake sea shore. The road is already completed to a point adjacent to the eastern side of the buffer zone around Miike Port, and this was reported in the Nomination and Conservation Management Plan.

The planned extension of the route of the Ariake Sea coastal Road continues along the eastern edge of the buffer zone, and is proposed to cross the buffer zone and railway easement linking Miike Port to the Miike Coalmine Railway, which is a World Heritage element that runs inland to the coal mines. The Ariake Sea coastal highway, where it runs along the edge of the buffer zone, is located on the elevated alignment of the former coal mine railway and coal yards servicing the Port. Where it is proposed to cross the World Heritage railway component, the proposal is to continue the raised embankment and create a bridge over the railway alignment. This is designed to provide sufficient space and elevation to allow for future possible use of the railway alignment as a transportation route for visitors between the port and the mines. The engineering and heritage considerations of this design for the road have been under investigation through studies by World Heritage experts and discussions with the road management authority (Ministry of Land, Infrastructure, Transport and Tourism) and heritage managers (Omuta City, Arao City) since before the World Heritage inscription, and have been indicated previously to the World Heritage Center. Discussions continue on minimizing the visual impacts of the bridge and embankment, and this is not considered to be a development with adverse effects on the World Heritage property.

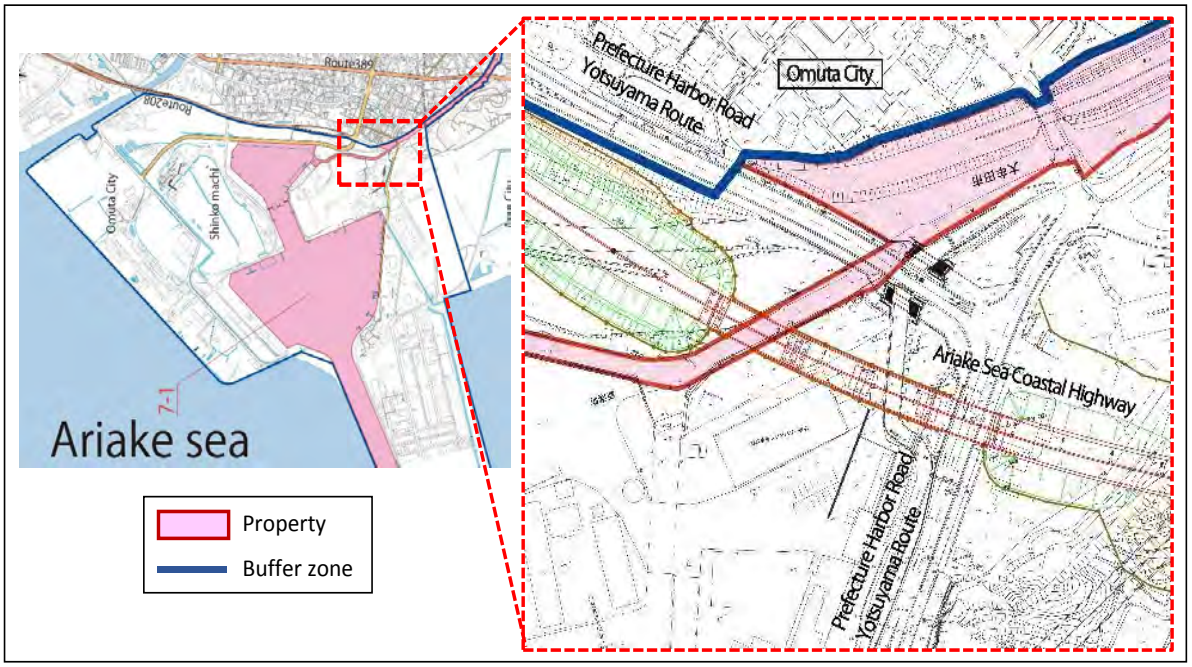


Figure 5. Ariake Sea Coastal Highway (Fukuoka Prefecture Area)

(2) Viewing point provision

An observation point with an overview of the lock gates is under construction in the landscaped area next to the parking lot for the high-speed ship. The aim is to enhance communication of Outstanding Universal Value to visitors, while ensuring safety and without hindering port activities.

Work on this will be carried out in fiscal year 2017.

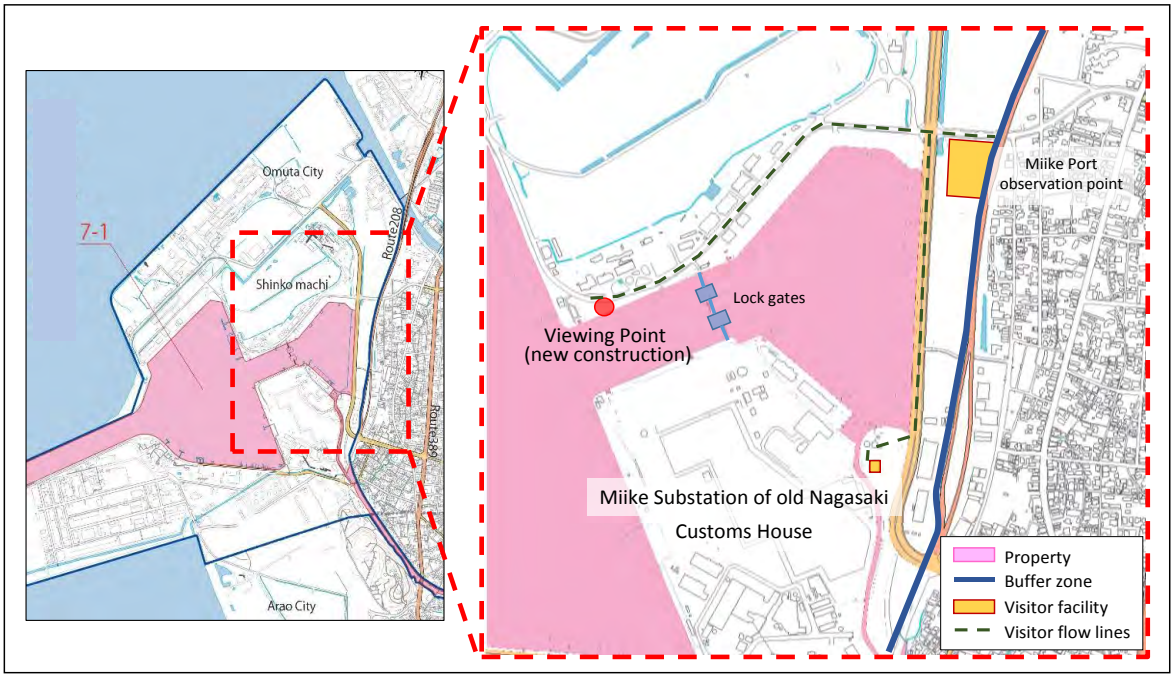


Figure 6. Miike Port Visitor Reception Facilities

4. WHAT IS NOT INCLUDED IN THIS WORK PROGRAM

Proposals that are not included in this Work Program include a proposed new small boat harbour and a new quay development. These projects have not yet reached a point where details can be provided. However, the obligation to report such projects under the Operational Guidelines is noted.

Conservation work programme and implementation programme for Misumi West Port (Area 7 Miike/ Component part 7-2)

Uki City drew up a "Conservation Work Programme and Implementation Programme" for Misumi West Port in FY 2016 and 2017, pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Programme comprises detailed measures for the conservation and restoration of the component part of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" (hereinafter referred to as "Sites of Japan's Meiji Industrial Revolution").

1. Approach to conservation

Restore the masonry and other constituent elements to maintain the design and structure of Misumi West Port, which was built in the Meiji Period. Promote the conservation work of the facility as a port that recalls its past while being cultivated amid modernization as part of the living landscape of Misumiura in keeping with community development endeavors for next generations.

Area 7 Miike, one of the Areas of Sites of Japan's Meiji Industrial Revolution, comprises two component parts. One is Miike Coal Mine and Miike Port (Component Part 7-1) and Misumi West Port (Component Part 7-2). These component parts mutually played major roles in the development of the coal industry, which achieved Japan's industrialization through the improvement from the early stages of the direct introduction of Western technologies.

Since antiquity, the waters of Misumi West Port have remained a hub for transporting goods and people between the Amakusa region and the Shimabara Peninsula with the Plains of Kumamoto and Yatsushiro. As the volumes of coal shipped from Miike Coal Mine increased, Dutch engineer Rouwenhorst Mulder designed Misumi West Port to provide access to large ships. Completed in 1887, the facility combined Mulder's design and the techniques of stonemasons from the Amakusa region. This location was not just a harbor but also a city with a drainage channel (system). The large parcel of land and wide roads reflected advanced Dutch urban planning concepts that were revolutionary for Japan. The drainage channel and other urban infrastructure continues to support community life in both form and function.



Figure 1: Locations of Area 7 Miike and Misumi West Port (Component Part No. 7-2)

At Misumi West Port, which incorporates masonry techniques, it took immense manpower to load coal on steamboats. However, at Miike Port (in Omuta City, Fukuoka Prefecture), which opened just 20 years after completion of Misumi West Port, the deployment of machinery dramatically enhanced transportation efficiency improved. A comparison of both ports reveals Misumi West Port as a component part of the rapid development of heavy industry in Japan through rising coal exports.

In the Conservation Management Plan for Misumi West Port which was prepared for nomination of "Sites of Japan's Meiji Industrial Revolution" for World Heritage inscription. The list of elements constituting Misumi West Port and their value categories are shown as Table 1.

Component	Value Category of the Component			
	OUV	Nation	Region	Local
Quay	○	○	○	
West-end drainage channel	○	○	○	
West drainage channel	○	○	○	
East drainage channel	○	○	○	
Ichinohashi	○	○	○	
Ninohashi	○	○	○	
Sannohashi	○	○	○	
Nakanohashi	○	○	○	
Rear water channel	○	○	○	
Old Misumi Marine Transportation Warehouse	○		○	
Old Takada Shipping Office	○		○	
Old Uto County Office			○	
Ryujyokan			○	
Old Misumi Summary Court			○	
Old County Office			○	
Official Residence of the Chief of Police			○	
Town layout	○	○	○	
Road gutters	○	○	○	
Wells	○	○	○	
Water god				○
Local deity				○
Hinterland	○	○	○	
Shrine				○
Private houses				○
Tide station				○

Table 1: The list of elements constituting Misumi West Port and their value categories

※In drawing up this programme, constituent elements stated in CMP are partly reviewed.

Out of these elements in Table 1, while the Conservation Work Programme for Misumi West Port will mainly focus on the constituent elements that contribute to the Outstanding Universal Value, due attention will also be given to the elements that represent the value categorized as national and/or regional respectively, and others in view of the process of historical change and developments of the component part.

Based on the approach for conservation and categorized value of elements mentioned above, Uki City will firmly conduct projects for conservation, restoration and presentation of the component part with a central focus on the following three points

(1) Comprehensive preservation and inheritance of the landscape of Misumi West Port and surroundings

To safeguard and inherit the landscape of when Misumi West Port was built, Uki City will maintain the constituent elements, (i) designs and forms of the quay, drainage channel, the town layout, wells and other constituent elements, and (ii) topography of the hinterland, and at the same time, the city will conserve the surrounding landscape by restricting development and other activities.



Figure 2: Scope of the program

(2) Sharing value focused on the process of historical changes and developments of Misumi West Port

It is important to understand the value of Misumi West Port from the perspectives of its process of historical changes and developments, which is still alive in many corners of the landscape. That value encompasses not only the course of the harbor construction in light of its geographical features and the originality of the water supply system, including the still functioning drainage channel but also the significance of former judicial, public administration, and maritime trade functions, the scale of a city with landfill, and the continuation of the urban infrastructure. Uki City exhibits and explains to ensure both visitors and local residents immerse themselves in the both roles that Misumi West Port played in the development of the coal industry in the Meiji Period and in the after period by touring the town.

(3) Sustainability of local living

One prerequisite in preserving and inherit Misumi West Port and its landscape is to maintain and invigorate local livelihoods. In the Misumi West Port area, where the birthrate is falling and the population is aging, Uki City will endeavor to create new jobs by promoting agriculture and fisheries and developing tourism and branding the town, as well as strive to foster community enthusiasm for the locale, including surrounding areas by promoting community development and measures on community-lead tourism.

2. Policy

The policy consisting of following six items has been set to approach conservation

(1) Conducting investigative studies to assess the current state of the constituent elements and clarify the process of historical changes and developments of the component part

To properly maintain stone masonry, such as for the quayside and drainage channel, Uki City will monitor the degradation of materials by seawater, wind and rain, and other causes as well as damage from the growth of trees and other vegetation.

The city will survey visitor numbers and behavior and other aspects, including the actual state of tourism and disaster awareness at the aim of understanding sustainability of the community.

The city will look into deepening understanding of the process of historical changes and developments of Misumi West Port including verifying routes for storing and transporting coal, and the locations of each facility as well as investigating unexamined related sources within the area and study historical documents and other materials.

(2) Maintaining and restoring stone masonry for the quay and drainage channel etc.

While monitoring stone masonry of the quay and drainage channel etc., the city will conduct daily maintenances and repairs. In addition, the city will conduct restoration with dismantling if severe damage or potential collapses are detected. Particularly, the city will cut down or transplant trees where their roots cause bulge or looseness in masonry.

As the landscape as a whole, including the port city function, indirectly affects the preservation of stone masonry structures, the city will make consideration for its maintenance and management.

(3) Maintaining hinterland landscape and natural forest, including in the buffer zone

The hinterland of Misumi West Port is a source of earth and sand for coastal landfill, and is important to understanding how the landscape was created when the port was built by comparing to the filled ground of the settlement.

While maintaining the hinterland slope covered with a natural forest, the city will therefore take various steps to create a good landscape for the current settlement. It will manage the currently maintained view and viewpoints in the hinterland and on the opposite shore and ensure that the condition is always recognizable. While fixing the landscape of buildings and other installation in collaboration with local residents to maintain good views of the current settlement, the city will deploy a framework to preserve the landscape, including through cleaning initiatives that involve visitors.

(4) Present displays about systems at Misumi West Port

The city will efficiently and comprehensively inform visitors, focusing on the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning of Misumi West Port in that, including about the historical roles of each facility as elements of the harbor city.

(5) Sustainably promote community-based projects and build related structure

The city will undertake measures to ensure safety and security. It will share awareness and promote cooperation between residents, visitors, and relevant parties by continuing to conduct regular workshops and support daily cleanups by residents and other cleaning initiatives by local organizations and volunteers.

Leveraging its World Heritage Exchange Headquarters, the city will promote the project through collaboration between relevant departments. In particular, it will bolster its management and contact system to ensure swift responses to disasters and other emergencies.

3. Methods

(1) Investigative studies

(a) Investigative studies to ensure preservation of Misumi West Port

The city will continue monitoring with producing monitoring charts for the entire landscape including the buffer zone, matched to the features of each element, including individual constituent elements of the component part, such as quay, drainage channel, and port hinterland, etc. The city will conduct an annual follow-up to scrutinize repair techniques and timing according to the extent of damage.

For the extent showing significant bulge or looseness on the masonry of the quay, drainage channel, or other structures, the city will assess the extent of such movement and prepare for major restoration with dismantling based on the results of analysis. As well as investigating the causes of masonry instability, the city will explore the causes of masonry deterioration and weathering, assess sources of stones were supplied, and look into seismic retrofitting for buildings, especially the Old Misumi Marine Transportation Warehouse.

(b) Investigative studies into local community sustainability as underpinning of Misumi West Port

The city will conduct surveys of household and others to understand the social dynamics of the local community, the future underpinning of Misumi West Port. The city will also conduct surveys of the number of visitors, considering a possibility to set an upper limit for the acceptable number of visitors to the community while surveying the number of visitors to evaluate a structure to cater to future visitors to the community.

(c) Investigative studies to clarify the process of changes and developments of the Misumi West Port

To clarify Misumi West Port's role in the development of the coal industry in the Meiji Period, the city will collect historical documents and other materials regarding coal mining, transportation, and exports from the Miike Coal Mine. It will clarify the process of changes and developments of Misumi West Port, not only by focusing on the port and settlement structure during the Meiji Period, but also conducting research from in view of the role in distribution and traffic before and after the Meiji Period.

(2) Conservation and restoration of quay, drainage channel, and other structures

(a) Prioritizing based on monitoring results

If identifying damage or other issues in the course of regular observations based on monitoring records or if there is damage or other problems due to disasters or other incidents, or if surveys of stone movement identify dangers, the city will commission detailed expert survey and make the appropriate conservation and restoration measures based on priorities according to four damage stages as shown in Table 1.

Priority ranking		Damage or other problem	Response policy
A	Requiring urgent measures	・Damage in the component part.	・Take immediate measures, including restoration.
B	Follow-up observations needed	・Some visible impact on the component part, but no damage yet. ・Adjacent to the component part and could suffer damage in future.	・Conduct follow-up observations by monitoring (bulges of masonry, growth of tree and other developments). If deeming high probability of damage to the component part, take measures, including restoration.
C	Low potential of causing damage to the component part.	・Unlikely to have an affect in view of distance from the component part and etc..	・Continue follow-up observations through monitoring.
Others	Requiring regular management.	・Affecting preservation of the component part in terms of maintenance and management, such as through overgrowth of grasses in drainage channel.	・Undertake maintenance works, such as by regularly weeding drainage channel.

Table 2: Setting priorities

(b) Coservation and restoration techniques and other measures

If follow-up observations identify damage to the masonry of the quay or drainage channel, the city will conduct major restoration with dismantling and resetting masonry based on drawings and photographs. If masonry bulge or looseness is found, such as because of tree growth, the city will cut down or transplant them to prevent problems from expand, and remediate after removals.

At the same time, the city will conduct restoration for building damage and deterioration, mainly for the Old Misumi Marine Transportation Warehouse. Where possible, original materials and techniques will be maintained in restoration.

The area of the World Heritage component part is designated as part of the Misumi West Port Cultural Landscape area under the city's Landscape Plan, with no parts requiring specific restoration. The city will safeguard the existing town layout by continuing to limit development and other actions beyond the scale of current buildings within the area and maintain the skyline of the hinterland when viewed from the quay.

(3) Arrangement and improvement of landscape

(a) Adjustments among parties and sharing awareness about arrangement and improvement of landscape

Development is restricted in the scope of the component part and buffer zone that is selected as an Important Cultural Landscape namely “Misumiura Cultural Landscape” under the Law for the Protection of Cultural Properties and designated as the “Misumi West Port Cultural Landscape Area” based on the city's Landscape Plan as well. To enhance the viability, the city will set up a place to share understanding among relevant departments in the city, the Government of Japan and Kumamoto Prefectural Government, and local residents to share the desired landscape approach and to ensure the right notifications for certain activities.

(b) Utilization of system to promote landscape leading

The city's Landscape Plan has a landscape advisor system to assist the city government and citizens in undertaking public or private works in how to create landscapes. The city invites the landscape advisors and conducts regular discussions with them on sharing information and in triparty communications. Based on assessments of historic buildings and other structures still not designated as cultural properties, the city endeavors to preserve them by designating them as important buildings to the landscape under the Landscape

Act. The city has designated National Road 57, as an important constituent element of the Important Cultural Landscape based on the Law for the Protection of Cultural Properties, as the Public Facility of Landscape Importance based on the Landscape Act, and strives to improve the landscape, including by eliminating utility poles.

To ensure the safety of school routes and routes for visitors, the Ministry of Land, Infrastructure, Transport and Tourism will expand the existent footpaths by cutting a small portion of the slope of hinterland. The area is further east of the east edge of the scope inscribed on the World Heritage List. The ministry will alter landscape to match the surroundings.

(c) Management of trees

The high ground of the hinterland oversees Misumi West Port. The city has thus built a viewpoint to oversee the quay and marine area in the hinterland (Figure 3) and uses signboards to guide visitors there. If follow-up observations (monitoring) reveal that the view might be blocked, the city will cut and trim trees accordingly.

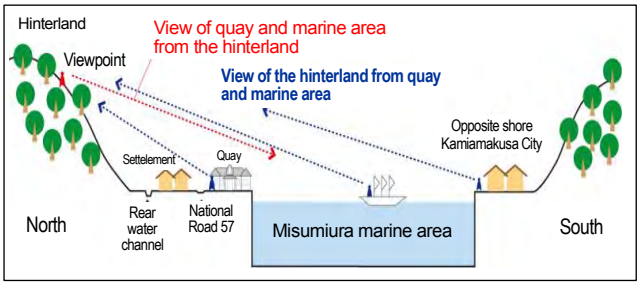


Figure 3: Approach to viewpoint and views

The landscape of Misumi West Port and hinterland as seen on a regular liner or from the village and road on the opposite shore has an important impact on understanding how the landscape was created when the port was built. The city thus accords attention to maintaining the landscape in terms of the features of the hinterland, natural forest and settlement. .

(d) Creating landscapes through arrangement and other efforts

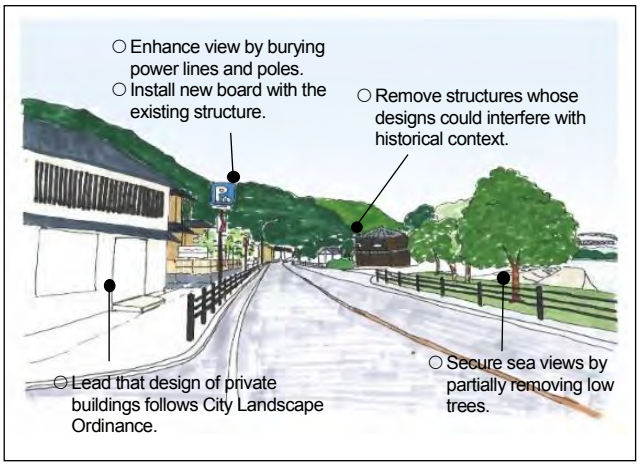


Figure 4: Impression of beautification

In areas that many visitors frequent, notably as along the national road and rear water channel, the city will try to create dignified landscapes that are befitting of World Heritage component part while ensuring the safety of local residents and visitors. The city and other relevant institutions will improve the views of surrounding areas, including the hinterland and sea by burying utility poles and lines underground and ensuring installation of new outdoor board with the existing structure, endeavoring to maintain the continuity of streetscapes by planting trees in vacant lots and to use better quality pavements (Figure 4).

(4) Presentation

(a) Zoning

Based on explaining the value of Misumi West Port, the distribution of constituent elements representing that value, the current state of the scope of the Programme, and other factors, the city will divide the whole scope into six zones and define public usage for each zone in line with its features (Figure 5).



Figure 5: Zonings

(b) Tour route planning

The city will encourage visitors coming by car to use car parks around JR Misumi Station around 2.5 km southeast of Misumi West Port and car parks around Misumi East Port, or to use private loop buses. As the view from sea helps to understand how the landscape was created by the construction of the port through comparing Misumi West Port and the hinterland, Kumamoto Prefectural Govenment will use the floating pier at the east end of the car park to provide a ship route for visitors.

The city will build a route for visitors to walk around the Harbor Walk Zone and the Guidance Zone within component part. On the route, visitors would be promoted to visit the drainage channel at the back of the residential area and a hill viewpoint (Figure 6) by tour guides at a guidance center inside the Guidance Zone.

The tour guide route will focus on such facilities as the quay and drainage channel that have contributed to the Outstanding Universal Value, and will based on the distribution of buildings constituting the harbor settlement, with zonings being a consideration.

(c) Arrangement and improvement of landscape and planting vegetation

The city will maintain important trees that contribute to good landscape of Misumi West Port, including with trees for views and shades, ensuring that they do not adversely affect such constituent elements as masonry and other buildings or the lives of local residents.

(d) Guidance and explanatory boards

To navigate and inform visitors on the guide route set through tour route planning, the city will install comprehensive guideboards as well as explanatory panels and name boards for each element, guidance and reminder signs, and other installations at appropriate locations. Future updates to guideboard, explanatory panels, signs, or other installations will be in Japanese, English, Chinese and Korean.

(e) Administrative and utility facilities

After regularly checking the state of utilizing existent toilets and benches, resting areas, and other visitor facilities, as well as the whole of Misumi West Port, the city will upgrade or remove existing facilities as needed. If finding through a visitor survey that utility facilities are not sufficient for the better state of utilization, the city would consider constructing new facilities.

To address a lack of car parking space during some events and to encourage access from the floating pier on east of the buffer zone to Misumi West Port, Kumamoto Prefecture will undertake the Green Plaza Construction Project (see **Annex**) that include car parks alongside of the National Road 57 adjacent to the east-end of Misumi West Port.

The city will use existing facilities for exhibition and information dissemination and will not build a new

facility. Where reusing existing facilities, the city will clarify the division of roles of exhibit and explanation between each facility under a set theme that includes a cultural landscape perspective through the entire Misumiura, focused on the World Heritage concept and positioning of Misumi West Port in it. (Figure 6).

4. Projects Implementation

(1) Order of priorities

Table 3 shows the specific projects and implementation schedules for conservation work programme and implementation programme. Over the short term, between 2017 and 2022, the city will undertake projects to resolve urgent issues, including repairing deteriorated and damaged such constituent elements as the quay and drainage and ensuring safety and convenience for local residents' lives. To establish and reinforce future administration system, the city's World Heritage Exchange Headquarters will conduct regular hearings on requests and other information at the regional representative liaison meetings (West Port Meetings) organized by area representatives, managers, businesses and other parties. The goal is to ensure close collaboration between relevant departments and to implement the projects effectively.

(2) Revision of implementation schedule

In medium term of ten years after short-term projects are completed, the city will start projects that could not be completed in the short term as well as undertake conservation and restoration and other work for damaged and deteriorated areas identified through regular monitoring.

In long term of 16 years after making the projects, the city will review project processes and operations as needed based on progress to date.

As well as dealing with short through long term projects, the city will continue to maintain and manage facilities and monitor damage and other issues with the constituent elements of the component part. It will monitor annually and scrutinize techniques for conservation and restoration and timing according to the extent of damage and other issues before undertaking work.

(3) Others

Fundamentally, owners and managers as well as individuals, organizations, and public institutions that run projects by borrowing facilities will secure their own funding to match their project. Subsidies would be used in cultural properties preservation to conserve and restore the constituent elements, and various other subsidies would be utilized for other projects depending on the contents.

Approximately 11 million yen was spent in FY2016 (including the amount spent to cover costs incurred for plan making, the renovation design of the Old Uto County Office, the dredging of the rear water channel and east drainage channel, and the presentation and public utilization of the site), and 28 million yen has been budgeted for FY2017 (including the amounts earmarked for plan making, renovation work for the Old Uto County Office, dredging of the rear water channel, conservation work for the rear water channel, installation of world heritage plaque, and the presentation and public utilization of the site), both excluding the cost of day-to-day management and maintenance.

Category	Item	Short term						Medium term	Long term
		2017	2018	2019	2020	2021	2022	Six to 15 years after plan made	From 16 years after plan made
Investigative studies	Monitoring								
	Collect and study relevant historical document and materials								
	Collect relevant historical document and materials on exports of Miike coal and research relevant facilities								
	Survey households in Misumi West Port area								
	Survey visitors								
Repairs	Damage repairs and other works								
Facility improvement	Upgrade guidance, explanation, and other facilities								
	Maintain and manage administrative and utility facilities								
	Maintain and manage car parks								
	Install routes								
Construction of preservation management system	Establish organizations within the settlement								
	Build confirmation system for development activities								
	Establish local resident organizations								
	Other activities, including local cleanups								
	Conduct local round-table meetings								
	Collaborate with educational institutions and holding local events								
Buffer zone and wider area	Green Plaza Construction Project and maintenance and management								

New Continued

Table 3: Project implementation schedule

5. Basic Plan

The basic plan for Misumi West Port is as shown in the Figure 6.

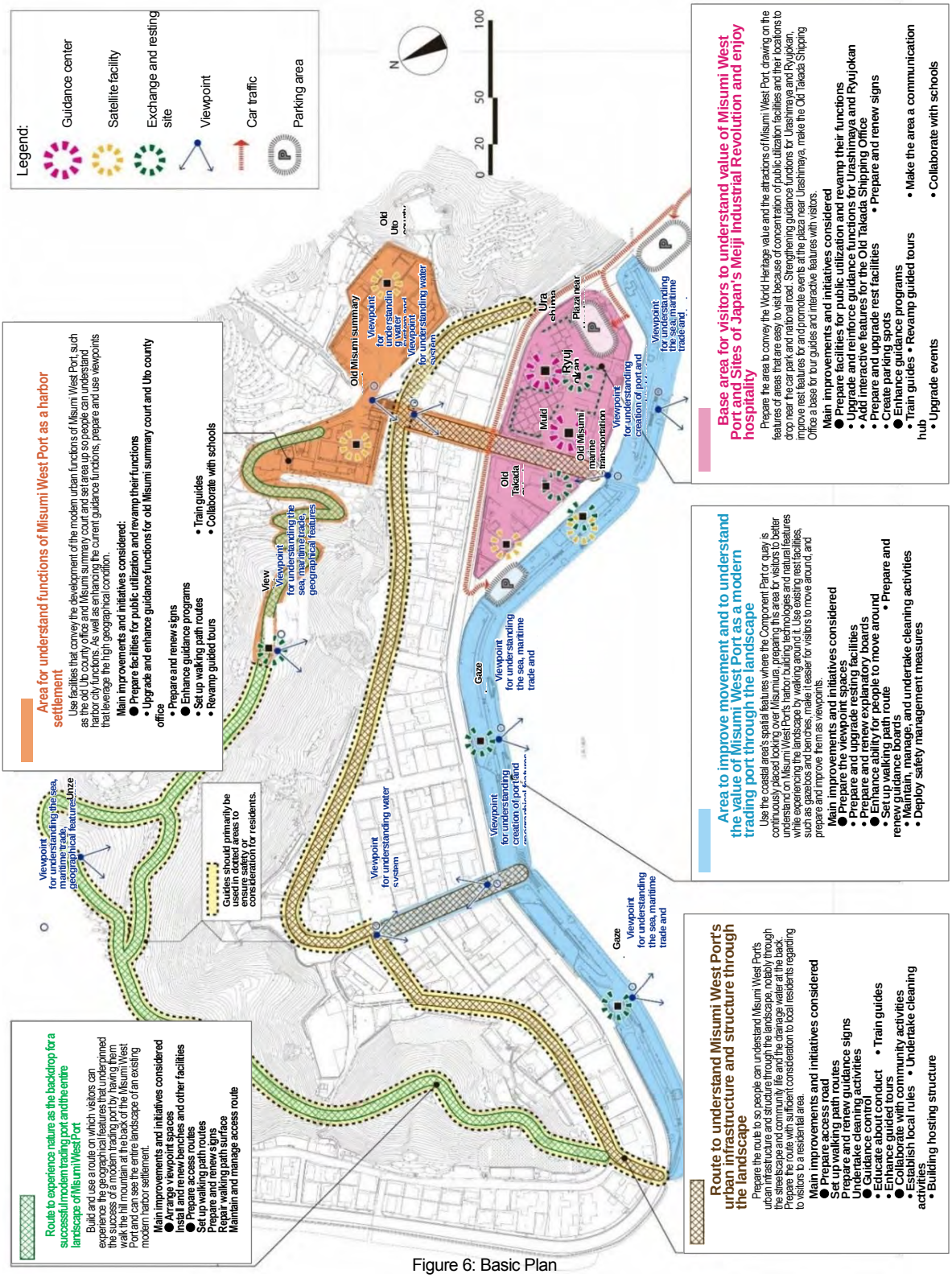


Figure 6: Basic Plan

6. Others

The Conservation, Restoration, Presentation and Public Utilization Plan for the Misumi West Port, which became a source of "Conservation Work Programme and Implementation Programme" is available on Uki City's web site. <http://www.city.uki.kumamoto.jp/q/aview/390/10010.html>

(Annex)

Outline of Misumi West Port Greenery Plaza Improvement Project and Impact on the Outstanding Universal Value

1. Project

(1) Implementing Body

Kumamoto Prefectural Government

(2) Subject Location

The subject location is adjacent to the eastern edge of the area of "Misumi West Port", one of the World Heritage component parts of "Sites of Japan's Meiji Industrial Revolution". It is a narrow area between National Road 57 and the sea, with a total length of approximately 160 m from the eastern edge of the component part to the floating pier (completed February 2013) and an area of approximately 3,130 m^2. Roughly the western half of the subject location (length approximately 80 m, area approximately 1,470 m^2) is included in the buffer zone of Misumi West Port (Figure 2).

(3) Execution Period

2018 (scheduled to begin construction) – 2019 (scheduled to complete construction)

(4) Objectives

a. Secure a route for visitors connecting the floating pier with Misumi West Port.
b. Enhance the safety and convenience of local residents and visitors.
c. Resolve the shortage of parking spaces during events.

(5) Contents

a. Construct a plaza with a view of Misumi West Port and the Misumi-no-Seto Strait sea area, which lies beyond the port.
b. Construct a route that leads visitors from the floating pier and parking lot to Misumi West Port.
c. Construct a parking lot for 27 passenger vehicles.

2. Project examination process

This project was decided subsequent to the following examination process. The contents reflect the opinions expressed during the examination process.

- Kumamoto Prefectural Government established a working group comprised of persons of learning and experience, which met 17 times between October 2012 and July 2017 and examined the details of the project proposal
- Kumamoto Prefectural Government also broadly listened to opinions from Uki City and other concerned administrative organs and from local residents between May 2013 and July 2017.
- Uki City established a "Misumi West Port World Heritage Restoration, Maintenance and Utilization Committee" to devise the policies and methods for the conservation, restoration, presentation and utilization of Misumi West Port targeting at the World Heritage component part and its buffer zone, as well as the selected scope of Important Cultural Landscape under the Law for the Protection of Cultural Properties (Figure 3), and conducted reports and hearings regarding this project.
- Also at the "Miike Conservation Council" established based on the "General Principles and Strategic Frameworks for Conservation and Management of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining," consensus was sought among the concerned parties at discussions held on May 8, 2017.

3. Impact of the project on the World Heritage component part

- While giving consideration to the fact that this project is in an area adjacent to the World Heritage component part, the project intends to newly create a space where local residents and visitors can both enjoy the scenic attraction of the subject location and to improve the setting of Misumi West Port.
- This project meets all current legal regulations, and reflecting opinions expressed during the examination process presented in 2 above, it enhances maintaining continuity of the component part, with measures including the use of materials consistent with the component part and the maintenance of the existing stone walls and trees in the project area.
- As explained above, this project has no negative impact on the component part, and conversely contributes to the improvement of the setting that is unified with the component part. For future project execution, Kumamoto Prefectural Govenment will continue to fully share information and hold discussions with the Government of Japan (the Cabinet Secretariat and Agency for Cultural Affairs), Uki City, and other concerned parties.

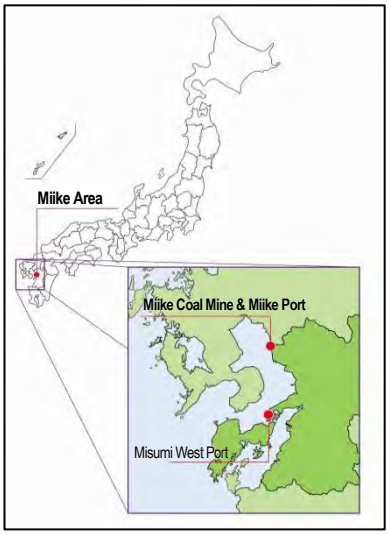


Figure 1: Location map of Misumi West Port (Component Part 7-2)

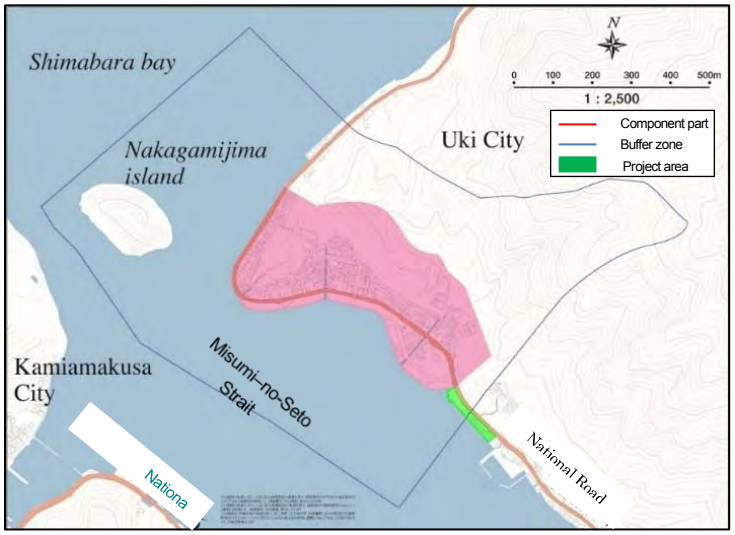


Figure 2: Location map of project area

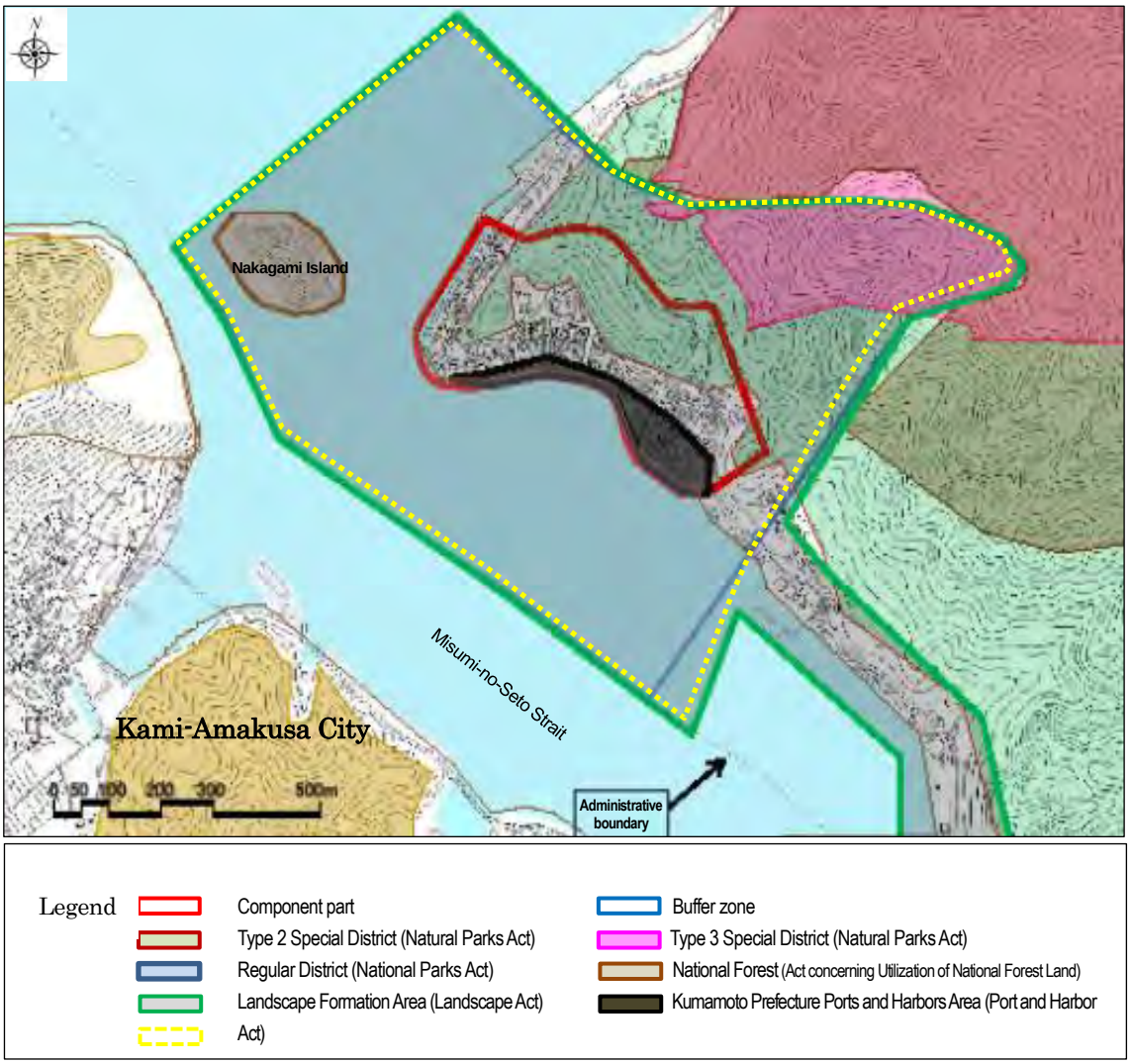


Figure 3: Map indicating legal regulations concerning the component part and buffer zone (including table)

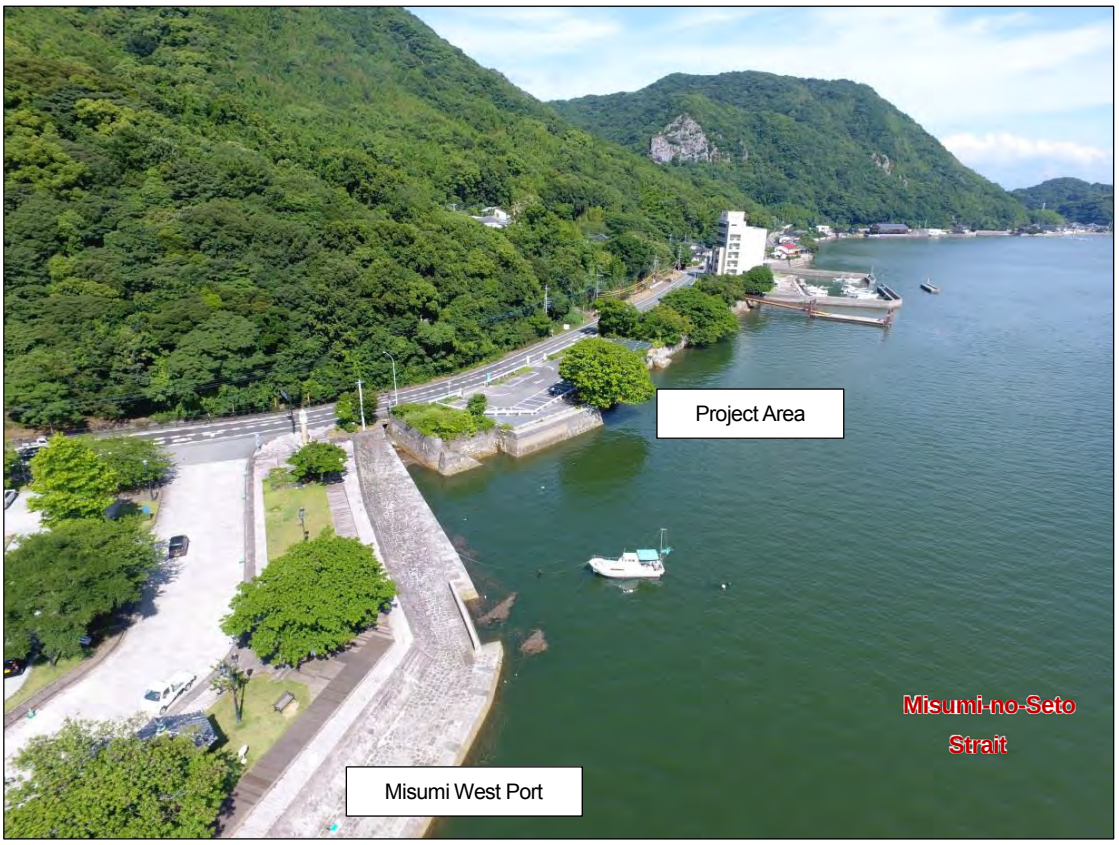


Figure 4: Present state of project area (aerial view of the buffer zone and floating pier from above the component part)

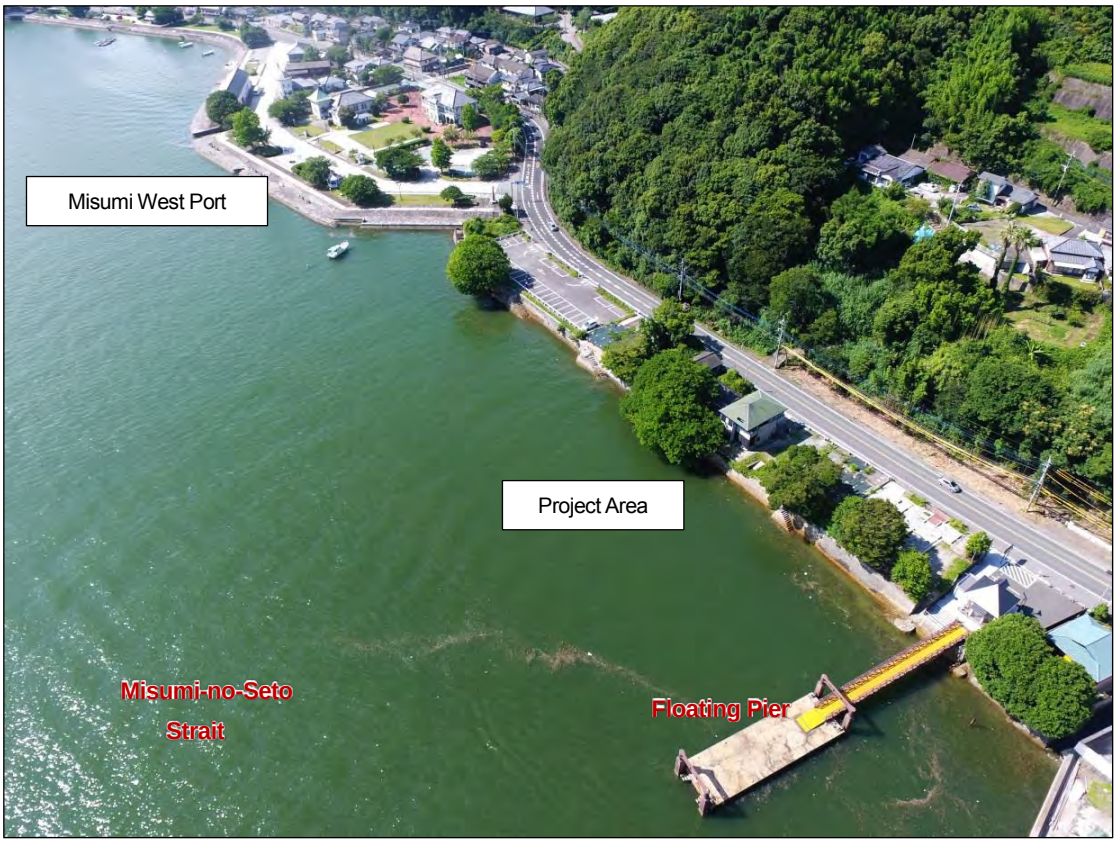


Figure 5: Present state of project area (aerial view of the buffer zone and Misumi West Port from above the floating pier)

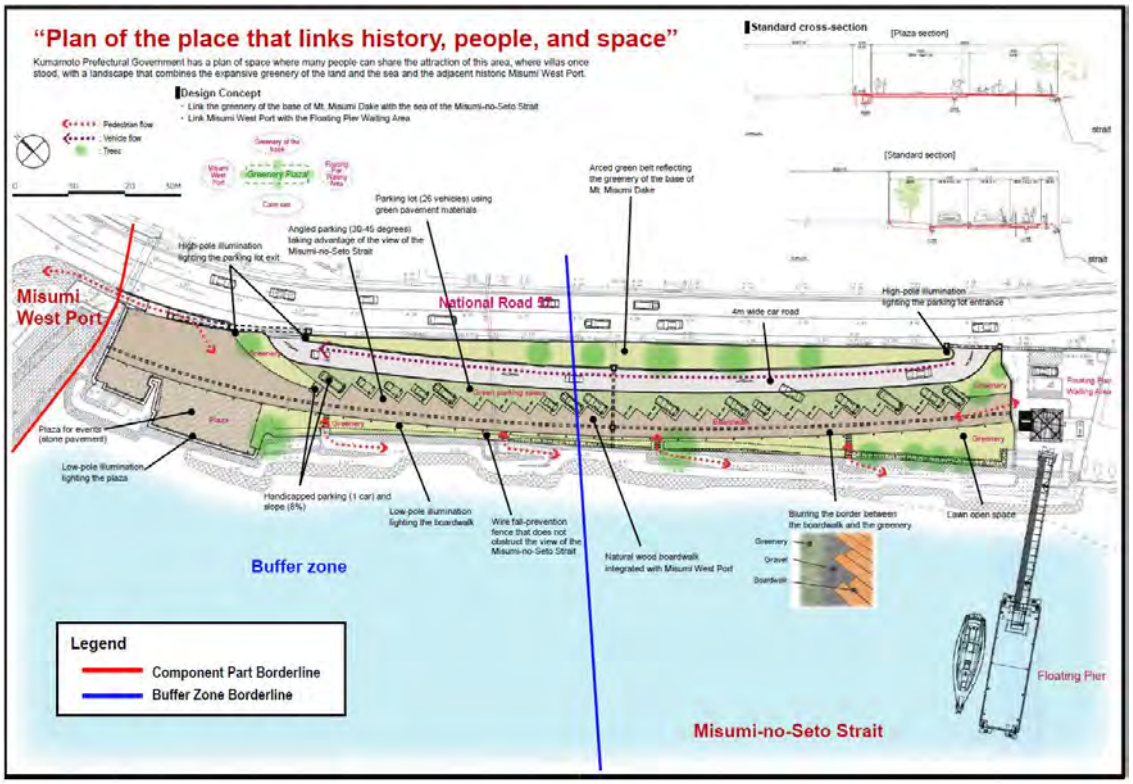


Figure 6: Map indicating Misumi West Port Greenery Plaza improvement project

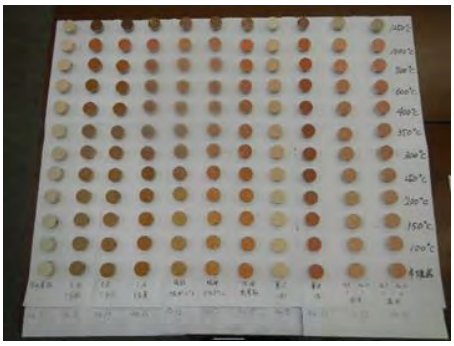
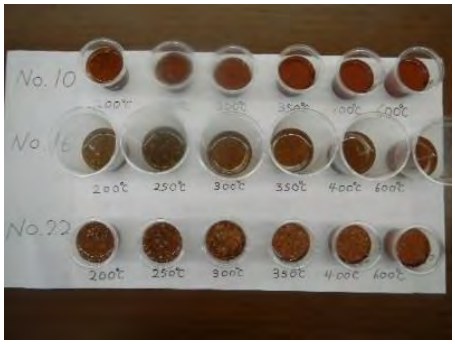


Figure 7: Completed project image (aerial view of buffer zone and Misumi West Port from above the floating pier)

Conservation measures currently being implemented on a priority basis at component parts

Conservation work (including presentation and utilization) currently being implemented on a priority basis at each of the component parts of the property are as follows.

Area 1 Hagi/Hagi Reverberatory Furnace (Component Part 1-1)

Project	Timing	Project outline
Surveys needed for conservation, restoration, presentation and utilization of buildings	FY 2016 onward	Prior to restoration of the upper part of the furnace consisting of bricks, an ingredient analysis of the original bricks and a study on the brick firing method is being conducted. Based on the results, brick-making and other empirical experiments are being undertaken, along with various types of tests in relation to brick strength and deterioration. These results will also be reflected in the conservation and restoration work, etc.
Ingredient analysis of bricks and study on firing method	FY 2016 onward	A ingredient analysis of the original bricks, loss on ignition tests, and compressive strength tests are being conducted. To determine the specifications for creating the experimental bricks needed for the various types of tests prior to creating new bricks for replacement of those deteriorated at the upper part of the furnace, ingredient analyses of the raw materials, etc., are being undertaken, test pieces created, and water dissolution experiments conducted on these.  

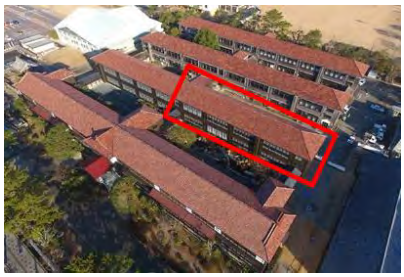
Area 1 Hagi/Ebisugahana Shipyard (Component Part 1-2)

Project	Timing	Project outline
Excavation surveys	FY 2009 onward	Excavation surveys toward specification of underground archaeological remains were conducted over FY 2009, 2010 and 2012. From FY 2015, further excavation surveys will be undertaken of the various workshop remains based on survey plans in order to install planar markers indicating the locations and scales of underground remains on the immediate surface of protective earth layer. Survey work is expected to be completed in FY 2022.
Excavation surveys aiming at designation as a National Historic Site	FY 2009-12	   Left: FY 2009 excavation survey on probable builders' residence site Center: FY 2010 excavation survey on probable forge site Right: FY 2012 excavation survey on probable Koshinmaru shipbuilding site
Excavation surveys aiming at installing planar markers over remains	FY 2015-16	  Left: FY 2015 excavation survey on probable Heishinmaru and Koshinmaru shipbuilding site (left rear) and dovetailing shed site (front right) Right: FY 2016 excavation survey on probable Heishinmaru and Koshinmaru shipbuilding site (rear center) and dovetailing shed site (front left)

Area 1 Hagi/Ohitayama Tatara Iron Works (Component Part 1-3)

<table>
<tr><th colspan="2">Project</th><th>Timing</th><th colspan="2">Project outline</th></tr>
<tr><td colspan="2">Development of Ohitayama Tatara Iron Works surrounds</td><td>FY 2014 onward</td><td colspan="2">World Heritage inscription is expected to attract more visitors, but the existing rest facility was small and the attached toilets old, so construction of the necessary new toilets was addressed first, starting in March 2015. The rest facility, which will have display reflecting the Outstanding Universal Value, etc., was completed in March 2017. As the component part was close to the rear of the original rest facility, the original facility was removed for the sake of the scenery. As the new rest/interpretation facility was built at the site of the old parking spot for two microbuses, new parking was secured for the two buses in a nearby public space.</td></tr>
<tr><td></td><td>Installation of toilets</td><td>FY 2014</td><td> 
Before: Toilets (one closet bowl, one urinal) comprise 6 m^2 of the old rest facility</td><td> 
After: Men’s toilets (one closet bowl, one urinal) and women’s toilets (one Western-style, one Japanese-style)</td></tr>
<tr><td></td><td>Installation of a rest/ interpretation facility</td><td>FY 2016</td><td> 
Before: Interpretation space comprises 12 m^2 of the rest facility.</td><td> 
After: The new 93.5 m^2 facility has interpretation, rest and training functions.</td></tr>
<tr><td></td><td>Installation of microbus parking</td><td>FY 2016</td><td> 
Before: Used as a public space</td><td> 
After: Renovated into parking for two microbuses</td></tr>
</table>

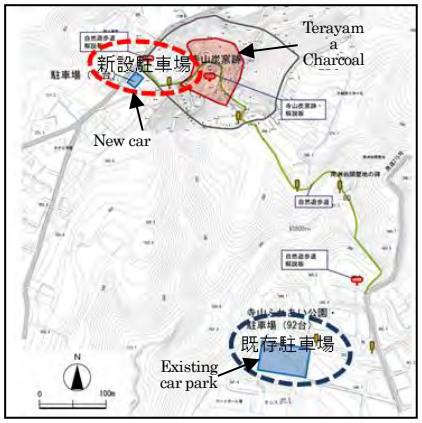
Area 1 Hagi/Hagi Castle Town (Component Part 1-4)

Project	Timing	Project outline
Construction of a visitor center	FY 2014-16	➢ The Visitor Center was built to more properly disseminate information on the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning and features of the five component parts of Area 1 Hagi in terms of Outstanding Universal Value. ➢ The Visitor Center was opened on March 4, 2017 as part of the Hagi Meiringakusha facility as the first place that visitors go to obtain information on Hagi City tourism, history, and culture. ➢ Hagi Meiringakusha is located within the grounds of the historical remains of the Hagi City Meirinkan. A wooden building originally part of Hagi City Elementary School, which opened in 1885, the restored facility now has exhibits set up in the former classrooms. ➢ The building, which was originally built in 1935, comprises four two-floor blocks. Two of those blocks have been restored. In addition to restoring the building to its original appearance, seismic resistance was improved and the appearance of the buildings including compound refurbished. A car park was built in the old elementary school sports ground. ➢ Of the two restored blocks, the main block at the front of the building was turned into a tourist information center, a Hagi Domain School Meirinkan exhibition room, a Meirin Elementary School exhibition room, a recreated classroom, and the Geopark Center. The old school building comprising the second block (Building 2) contains the World Heritage Visitor Center in the east wing and the Bakumatsu (late Edo period) Museum in the west. The Bakkumatsu Museum presents historical materials and science and technology history materials, including devices related to medicine, astronomy, and tricks, as well as cannons and guns, etc., from the end of the Edo period to the Meiji Restoration. It is intended to explain the historical background to the five component parts belonging to Area 1 Hagi. ➢ An outline of the Visitor Center is as follows: ・ Structure: Two-floor wooden building ・ Building area: 913.38m^2; Floor area: 1,770.32m^2 ・ Facilities: Exhibition rooms, waiting room, toilets ・ Cost: Restoration of two blocks: JPY731.49 million (JPY135.57 million for the World Heritage Visitor Center) ・ Development period: FY2014-16  Front of Hagi Meiringakusha (from the southeast)  Hagi Meiringakusha (seen from above to the southeast; section marked in red is the Visitor Center)

Area 2 Kagoshima/Shuseikan (Component Part 2-1)

<table>
<tr><th>Project</th><th>Timing</th><th>Project outline</th></tr>
<tr><td>Installation of signage and explanation boards within Shuseikan</td><td>FY 2014-15</td><td colspan="2">To enhance signage directing visitors from the nearby national road and car park to the component part and improve on-site explanatory signage and explanation boards in Area 2 Kagoshima were produced and installed with a unified design.
Before:
・ Varied designs and specs
・ Insufficient explanation of component part
 
After:
・ Unified Area 2 Kagoshima design and format
・ Better component part explanations
  </td></tr>
<tr><td>Updating of interpretation at the Former Foreign Engineer’s Residence</td><td>FY 2015</td><td colspan="2">To promote visitor understanding toward World Heritage inscription, the Outstanding Universal Value of the Sites of Japan’s Meiji Industrial Revolution was explained, exhibits and pictures, etc., relating to Area 2 Kagoshima created and displayed, and guidance functions enhanced at the Former Foreign Engineer’s Residence.
Before:
・ Exhibit explanations of relation between Foreign Engineer’s Residence and the Shuseikan Project
 
After:
・ Addition of information on Sites of Japan’s Meiji Industrial Revolution, etc.
  </td></tr>
<tr><td>Public purchase of private land around the Former Foreign Engineer’s Residence</td><td>FY 2014-15</td><td colspan="2">Private land around Former Foreign Engineer’s Residence was purchased for the purpose of coherent presentation/promotion of Former Foreign Engineer’s Residence.
Before:
・ Difficult to feel the original historic atmosphere
 
Underway:
・ Purchase of 4,364.86 m^2 of land from private companies and individuals
  </td></tr>
<tr><td>Stabilization for hillside of Sengan-en Garden</td><td>FY2015-19</td><td colspan="2">After rockfall from the hills to the north of Sengan-en, the hill is being stabilized to ensure visitor safety, etc.
Before:
・ Rockfall from hillside in FY 2014
 
Underway:
・ Hillside stabilization underway using nets, etc., to prevent rockfall and slippage
  </td></tr>
<tr><td>Renovation of Sengan-en reception block</td><td>FY 2017</td><td colspan="2">Sengan-en reception block functions have been improved for greater visitor convenience.
Before:
・ Individual visitor and group lines cross between the car park and bus stop.
・ Aging toilet facilities
 
After:
・ Reception window for groups and individuals swapped
・ Toilet facilities updated
・ Rest/guidance facility installed
  </td></tr>
</table>

Area 2 Kagoshima/Terayama Charcoal Kiln (Component Part 2-2)

<table>
<tr><th>Project</th><th>Timing</th><th>Project outline</th></tr>
<tr><td rowspan="2">Installation of signage and explanation boards within Shuseikan</td><td rowspan="2">FY 2014-15</td><td colspan="2">To enhance signage directing visitors from the nearby highway and car park to the component part and improve on-site explanatory signage and explanation boards in Area 2 Kagoshima were produced and installed with a unified design.</td></tr>
<tr><td>Before:
・ Varied designs and specs
・ Insufficient explanation of the component part
  </td><td>After:
・ Unified Area 2 Kagoshima design and format
・ Better component part explanations
  </td></tr>
<tr><td rowspan="2">Fixed-point monitoring of Terayama Charcoal Kiln</td><td rowspan="2">FY 2015 onward</td><td colspan="2">Stonework displacement measurement is being conducted to preserve the kiln remains.</td></tr>
<tr><td>Before:
・ Unclear to what extent stonework has loosened or swollen
  </td><td>Underway:
・ Fixed-point monitoring using laser beams
  </td></tr>
<tr><td rowspan="2">Improvement of surface on access route</td><td rowspan="2">FY 2016</td><td colspan="2">The surface of the nature trail which is the access route from the car park to the kiln was improved to ensure a safe viewing environment for visitors.</td></tr>
<tr><td>Before:
・ Surface soil washed away by rain
  </td><td>After:
・ Roller compaction of soil mixed with cement to maintain harmony with the surrounding scenery (two spots)
  </td></tr>
<tr><td rowspan="2">Installation of a temporary car park</td><td rowspan="2">FY 2017</td><td colspan="2">A small temporary car park was installed close to the Terayama Charcoal Kiln primarily for elderly visitors and other visitors who have difficulty walking.</td></tr>
<tr><td>Before:
・ Distance of approx. 800 m from existing car park of the Terayama Fureai Park and the kiln
 
</td><td>After:
・ Parking spot for six cars and one small microbus installed approx. 100 m from the kiln
・ Parking lines and 2 car park signs installed
  </td></tr>
</table>

Area 2 Kagoshima/Sekiyoshi Sluice Gate of Yoshino Leat (Component Part 2-3)

Project	Timing	Project outline
Installation of signage and explanation boards within Shuseikan	FY 2014-15	To enhance signage directing visitors from the nearby prefectural road and car park to the component part and improve on-site explanatory signage and explanation boards in Area 2 Kagoshima were produced and installed with a unified design. Before: ・ Varied designs and specs ・ Insufficient explanation of component part  After: ・ Unified Area 2 Kagoshima design and format ・ Better component part explanations 
Installation of temporary fences along viewing route to prevent visitors from falling	FY 2016	Temporary fences were installed to ensure a safe viewing environment for visitors and prevent them from falling. Before: ・ Issues in ensuring visitors' safety  After: ・ Temporary wood and rope fences installed to prevent visitors' falling 
Excavation survey to confirm remains below viewing route	FY 2017	An excavation survey is underway to confirm underground remains immediately below the viewing route prior to refurbishing the viewing route in a manner that preserves the underground remains and the scenery. Before: ・ Temporary wood and rope fences installed to prevent visitors falling  Underway: ・ Consideration of how to refurbish the viewing route based on the state of underground remains 
Installation of a parking lot for tourist buses	FY 2016	A parking lot has been installed close to the sluice gate remains to cope with increased visitor numbers following the World Heritage inscription. Before: ・ No nearby space to park large tourist buses  After: ・ Parking space for two large tourist buses installed on prefectural road ・ One signboard installed 

Area 3 Nirayama/Nirayama Reverberatory Furnaces (Component Part 3-1)

<table>
<tr><th>Project</th><th>Timing</th><th colspan="2">Project outline</th></tr>
<tr><td>Refurbishment of furnace surrounds</td><td>FY 2013-16</td><td colspan="2">The land adjoining the furnaces to the northeast and from the south to the west was formerly privately owned. Izunokuni City decided that the land needed to be municipalized to ensure the conservation of the component part, and consulted with the owners, with municipalization completed in August 2014. The land to the northeast was then refurbished as a park so that visitors can look at the river which forms part of the component part, and this was opened in March 2016. The land from the south to the west was earmarked for a guidance center and a grassy area as means of promoting visitor understanding, etc. These were both completed in/by November 2016 and opened in December. Izunokuni City has also leased all the land to the west of the guidance center, refurbishing it as a car park and opening it for use in March 2016.</td></tr>
<tr><td>Installation of a park to the northeast</td><td>FY 2013-15</td><td>Before:
・ As this was private land used as a plum grove and there were no paths through it, it was not open to visitors.
  </td><td>After:
・ Refurbished as a park after municipalization. Now open to visitors, who can see the whole river area.
  </td></tr>
<tr><td>Installation of a car park and refurbishment</td><td>FY 2014-15</td><td>Before:
・ The parking lot was spread over three lots, with some leased by Izunokuni City and used for parking, but others left unused with broken fences, detracting from the scenery.
  </td><td>After:
・ Izunokuni leased all the land and refurbished it as a unit, making it more convenient as a car park and also greatly improving the scenery.
  </td></tr>
</table>

Area 4 Kamaishi/Hashino Iron Mining and Smelting Site (Component Part 4-1)

<table>
<tr><th>Project</th><th>Timing</th><th>Project outline</th></tr>
<tr><td>Typhoon No.10 damages restorations</td><td>FY 2016-</td><td>For a constituent element (Smelting Site, etc.) which had damaged by Typhoon No.10 in August 2016, steps have been taken for the restoration following urgent measures such as removal of sediments accumulated, driftwoods, and fallen trees, and recovering scattered sediments.
<table>
<tr><td>First Blast Furnace and associated facilities</td><td>The sand at the base of bellows was slightly washed away, turning the plain into a wetland.</td><td>→</td><td>Refilled manually. (Completed in November 2016)</td></tr>
<tr><td>Third Blast Furnace and associated facilities</td><td>Scattered sediment, fallen trees nearby the site.</td><td>→</td><td>Fallen trees removed. (Completed in 2017)</td></tr>
<tr><td>Remains of the watercourse</td><td>Scattered gravel and driftwood, exposed bottom surface</td><td>→</td><td>Driftwood removed and recover exposed bottom surface. (Completed in June 2017)</td></tr>
</table>
Before: Transportation site
 
After: Transportation site
  </td></tr>
</table>

Area 5 Saga/Mietsu Naval Dock (Component Part 5-1)

Project	Timing	Project outline
Survey of Mietsu Naval Dock	FY 2009 onward	With the Mietsu Naval Dock survey still underway, a lot has yet to be discovered. As there is currently insufficient information on the fishermen's lodging area and the training area, excavation surveys, etc. will be continued in both areas until around FY 2020. (The below pictures show an FY 2016 excavation survey.)  
Excavation surveys	FY 2009 onward	A survey was conducted as of FY 2009 to confirm underground remains aiming at designation as a National Historic Site. Since this designation was achieved in FY 2012, excavation surveys have been underway to obtain basic materials for conservation, restoration and presentation of the remains. Excavation surveys will continue until around FY 2020 with a focus on points other than the dry dock surrounds.
Historical Document surveys	FY 2009 onward	Historical Document surveys have been underway since FY 2009 on the process of the construction of the Mietsu Naval Dock, the transformation of the Saga Clan Navy, and steamship restoration and construction, etc. In addition to these surveys, other survey work will also be continued until around FY 2020 on the state of the Mietsu Naval Dock in late Edo period, technological exchange with Nagasaki, the people involved in dock construction, and personnel originally trained at the dock, also bearing in mind the expansion of relevant historical materials.
Transfer of Mietsu Naval Dock car park	FY 2017 onward	There is a car park in the Sano Memorial Park, which includes Mietsu Naval Dock World Heritage component part. However, as this is not a desirable facility in terms of the conservation of underground remains of the Mietsu Naval Dock, the car park will be transferred outside the component part.
Construction of Mietsu Naval Dock guidance center	FY 2017 onward	Interpretation facilities in relation to the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution and the positioning, etc., of the Mietsu Naval Dock in that will be enhanced. To supplement the presentation of the component part, a guidance facility will be established that provides the appropriate scale and environment for inside and outside interpretation to function cohesively and supplement the presentation of the component part.
Creation of basic design for guidance center	FY 2017 onward	Creation of a basic design for the guidance center was begun in FY 2017 toward opening the guidance center in FY 2021, with note to those guidance center issues, etc. considered in FY 2016.

Area 6 Nagasaki/Takashima Coal Mine (Component Part 6-6)

<table>
<tr><th>Project</th><th>Timing</th><th colspan="2">Project outline</th></tr>
<tr><td>Repair of Takashima Coal Mine facilities</td><td>FY 2015-17</td><td colspan="2">After the Takashima Coal Mine was closed in the Meiji era, buildings other than mine facilities were constructed within the site for other uses. When these too went out of use, they were removed, but the concrete floor, blocks, slab, and rubble from the foundation remains were left in place. With urgent preparations needing to be made to welcome visitors following World Heritage inscription, work was begun in FY 2015 to restore and present the Takashima Hokkei Pit (Takashima Coal Mine) remains and surrounds, including the establishment of explanation boards for appropriately conveying the value of the coal mine remains to visitors.</td></tr>
<tr><td>Removal of unnecessary items</td><td>FY 2015</td><td>Before:
・ A concrete slab and blocks remained within the component part of Takashima Hokkei Pit (Takashima Coal Mine), as well as vegetation planted post-operation.
 
</td><td>After:
・ Unnecessary items were removed (completed in FY 2015).
  </td></tr>
<tr><td>Installation of a ceramic panel marking underground remains</td><td>FY 2016</td><td>Before:
・ The underground remains of coal mine facilities including steam engines and building foundations were appropriately conserved by installing an earth layer with appropriate thickness.</td><td>After:
・ To convey to visitors the state and scale of the underground remains, actual-size portrait-style photos of the underground remains were baked into a ceramic plate installed on the ground immediately above the remains. A board explaining the underground remains was also installed (completed in FY 2016).
  </td></tr>
<tr><td>Installation of explanation board</td><td>FY 2016</td><td>Before:
・ Insufficient explanation boards to convey the World Heritage Outstanding Universal Value and the positioning of the component part, etc in that..</td><td>After:
・ A board was installed that explains the mine remains and underground remains in four languages (Japanese, Chinese, English and Korean; completed in FY 2016).
  </td></tr>
</table>

	Installation of georama model and viewing space	FY 2016	Before: ・ As the remain of mining pit is the only part of the mine facilities that can be seen above round, an easily-understood explanation was needed of how the mine looked during operation.	Underway: ・ A georama based on old photos was temporarily installed to help visitors envisage the coal mining process from production to shipment (completed in FY 2016). ・ Since FY 2017, a viewing space was installed in a spot from which the component part can be observed from the same direction as the only remaining old photo of the mine when it was operational, with the georama too transferred to that space. 
	Creation of a park over the remains of the old Takashima Town-operated pool	FY 2016	Before: ・ An old town-operated pool no longer in use remained on the route from the remain of Takashima Hokkei Pit (Takashima Coal Mine) to the related site of Second Glover House. 	Underway: ・ The old pool was removed and the ground cleared and measured (completed in FY 2016) to create a park with car and bike parking. ・ The park will be designed in FY 2017 and the park constructed in FY2018. 

Area 6 Nagasaki/Hashima Coal Mine (Component Part 6-7)

Project	Timing	Project outline	
Emergency work	FY 2014 onward	No conservation, restoration and presentation work was conducted since the Hashima Coal Mine closed in 1974, except for post-disaster reconstruction of the seawall revetment and installation of viewing routes for visitors. As a result, the various remains deteriorated and became very dangerous, including the collapse of the following facilities, which would have a great impact in terms of site conservation. Structural maintenance measures have therefore been instituted in order of priority since FY 2014 as emergency steps.	
Repair of seawall revetment remains (revetment on western coast of Building No. 31)	FY 2014-15	Before: ・ The rear of the seawall revetment had been scoured out and caved in substantially. ・ Unaddressed, the caved-in area was highly likely to widen, destabilizing the seawall revetment, and causing collapse. 	After: ・ The western sea opening was blocked with concrete in 2014 (completed in Nov. 2014). ・ The caved-in area was filled with concrete in 2015 (completed in Sept. 2015). 

	Repair of seawall revetment remains (revetment on western coast of Building No. 51)	FY 2014-15	Before: ・ The rear of the seawall revetment was scoured out by the July 2014 typhoon, caving in substantially. ・ Unaddressed, the caved-in area was highly likely to widen, destabilizing the seawall revetment and Building No. 51, and causing them to collapse. 	After: ・ The western sea opening was blocked with concrete in 2014 (completed in Nov. 2014). ・ The caved-in area was filled with concrete in 2015 (completed in Sept. 2015). 
	Repair of production facility remains (remains of Pit No. 3 Winding machine room)	FY 2015-16	Before: ・ Only one wall remained standing, rendering the structure unstable. ・ Cracks and missing bricks were apparent across the wall, with the collapse of the arch crown highly likely to lead to the collapse of bricks in the crown and the section above the crown. 	Underway: ・ New bricks were added in FY 2015 to replace those missing in the arch crown (completed March 2016). ・ Reinforcing was undertaken in FY 2016 (initial response; completed March 2017). ・ Reinforcing will be undertaken as of 2017 (secondary response, structural stabilization). 
	Repair of production facility remains (pithead pier)	FY 2015-16	Before: ・ The truss-style steel frame that supported the stair passage had corroded away, leaving only the concrete structure. ・ The whole structure had bent, with the steel fulcrum showing marked deterioration. ・ The whole structure was highly likely to collapse at once. 	Underway: ・ Reinforcing was undertaken in FY 2016 (initial response; completed in March 2017). ・ Reinforcing will be undertaken as of 2017, following a structural survey, basic and implementation designs, and discussion at the expert committee, etc. (secondary response, structural stabilization). 
	Repair of accommodation facility remains (lower part of Building No. 70)	FY 2017-18	Before: ・ When the 1991 typhoon caused the seawall revetment to break, scouring created a major cavity. ・ The concrete pile foundations were exposed, with several piles also lost. ・ The building has lost support from the pile foundations and has become unstable. ・ If the building collapses, this is highly likely to impact on the seawall revetment. 	Underway: ・ In FY 2016, an implementation plan was drawn up and discussion conducted at the expert committee, etc. ・ Scoured areas will be filled over FY 2017 and 2018.

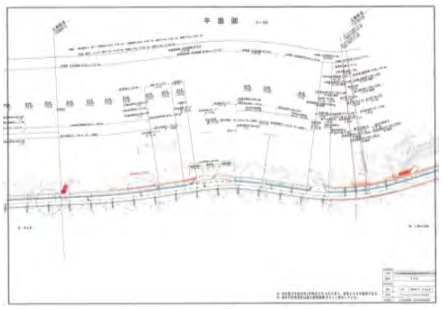
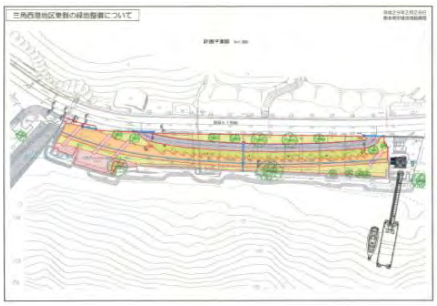
Area 6 Nagasaki/Glover House and Office (Component Part 6-8)

<table>
<tr><th>Project</th><th>Timing</th><th colspan="2">Project outline</th></tr>
<tr><td>Improvement of seismic resistance</td><td>FY2015-16</td><td colspan="2">As approximately 50 years have passed since the 1966-68 restorations and walls, floors and furniture have all been found to be deteriorating, total restoration needs to be undertaken for the main buildings and sub-buildings. Seismic analysis has been underway since FY 2015, and systematic conservation work undertaken. A Sites of Japan's Meiji Industrial Revolution guidance facility for Nagasaki City has been installed within the Glover Garden and is open to visitors.</td></tr>
<tr><td>Seismic strengthening and restoration</td><td>FY 2016</td><td>Before:
・ With the interior and exterior of the main and sub-buildings deteriorating, systematic restoration of the entire facility needed to be undertaken.</td><td>Underway:
・ The following surveys were undertaken in FY 2016-17 for seismic analysis purposes.
(1) Visual survey of state of damage
(2) Infrared structural survey
(3) Ground and boring surveys
(4) Wall survey with dismantling
・ As a result of these surveys, it was decided that structurally weak areas need to be strengthened, including chimneys, spandrel walls, and the footings of veranda pillars, etc.
・ Seismic strengthening, restoration, updating of disaster prevention equipment, and updating of interpretation will be undertaken in FY2018-20.
  </td></tr>
<tr><td>Installation of a guidance center</td><td>FY 2015-16</td><td>Before:
・ Facilities for visitors to Sites of Japan's Meiji Industrial Revolution were inadequate.</td><td>After:
・ With the World Heritage inscription of Sites of Japan's Meiji Industrial Revolution, a guidance center was installed on the first floor of the Former Mitsubishi No. 2 Dock House within the Glover Garden (refurbishment completed in FY 2016).
・ Interpretation content will be revised to convey appropriately to visitors the World Heritage Outstanding Universal Value and the history of the component part in line with the Japanese government's interpretation strategy (to be completed in FY 2019).
  </td></tr>
</table>

Miike Coal Mine Manda Pit (Area 7 Miike/Component Part 7-1)

Project	Timing	Project outline	
Building restoration	FY 2016	Among those brick buildings which are constituent elements contributing to Outstanding Universal Value, restoration will be undertaken with priority on the particularly deteriorated storage & pump house, safety-lamp house & bathing house, and office building. Surveys will be undertaken in FY 2016-17, with restoration undertaken in FY 2018.	
Storage & pump house (former fan house)	FY 2016-2018	There are structural cracks in the brick framework, which, if they advance, could lead to partial collapse. Major damage is also visible to part of the gable roof, and there are also multiple places where wooden roofing boards and roof trusses are rotting as tiles have shifted and the damaged portion widened, letting water inside.	
Safety-lamp house & bathing house (former fan house)	FY 2016-2018	While there is a monitor roof for ventilation on the roof of the upper part of the bathing house, strong winds have damaged some of the roof cladding and wooden louvres. Roof tile damage is spreading, and some of the roof has collapsed. The gutters in the gaps between the annex eaves and the storage & pump house walls have filled up with soil and cannot drain.	

Area 7 Miike/Misumi West Port (Component Part 7-2)

Project	Timing	Project outline	
Installation of the Misumiura Pedestrian Path next to National Road 57	FY 2017 onward	There is a lot of traffic on National Road 57, large trucks included, and the current pedestrian path which is the route to the local school is very narrow, prompting a call from local residents and school authorities of Misumi West Port for it to be widened. Creating a pedestrian path requires purchasing land on the northeastern side of the existing path along National Road 57 and securing funds, so it will take several years to complete. In FY 2017, a path will be installed on the southern side of National Road 57, which sits outside the buffer zone on the southeast side. If the land is purchased and the funds found, the path could be extended even further along National Road 57 within the buffer zone through to the southeastern edge of the component part. (Ministry of Land, Infrastructure, Transport and Tourism project)	
Installation of Misumi West Port greenery plaza on the eastern side of the component part	FY2017-2019	Misumi West Port greenery plaza including parking space will be created on the southern side of National Road 57 between the floating pier built in February 2014 outside the buffer zone and the southeastern edge of the component part, including the temporary parking lot built within the buffer zone on the southeastern side of the component part. The Plaza will include an open area which looks out over the Misuminoseto channel, a path connecting the floating pier, Misumi West Port, and a parking lot. As creating this plaza will require purchasing land and securing funds, it is expected to take several years to complete. Work will begin in FY 2017 with installation of a barrier to prevent people from falling. (by Kumamoto Prefectural Government)	
Seismic analysis, refurbishment design, and refurbishment of the former Uto government offices (Kyushu Maritime Institute Main Building)	FY 2015-17	The former Uto government office building within the component part was built in 1902 (refurbished in 1987), so it is now 115 years old. A detailed seismic analysis in FY 2015 revealed that the building had insufficient seismic resistance, and a plan to strengthen this was developed the same year, with the strengthening work, ant extermination, and creation of a refurbishment design all undertaken in FY 2016. Refurbishment will take place in FY 2017. (Uki City project)	

Area 8 Yawata/The Imperial Steel Works, Japan (Component Part 8-1)

Project	Timing	Project outline	
Visitor measures	FY 2015	As the Imperial Steel Works, Japan lies within the active Yawata Steel Works, only limited areas are open to the public. A viewing area was therefore set up within the site from which visitors can see the First Head Office.	
Installation of First Head Office viewing area	FY 2015	Before: ・ Visitors do not have free access to the site, so facilities related to the Imperial Steel Works, Japan cannot be viewed. 	After: ・ A viewing area was set up within the site from which visitors can see the First Head Office. A board explaining World Heritage property as a whole and the positioning of the component part in that, was installed along with a World Heritage Plaque. 

Area 8 Yawata/Onga River Pumping Station (Component Part 8-2)

Project	Timing	Project outline	
Partial removal of ivy from outside walls	FY 2016	Before: ・ Walls were entirely covered with ivy. ・ There was a risk that the ivy could enter through joins and cracks in the bricks and cause the bricks to deteriorate. 	After: ・ Ivy was removed from the east wall in FY 2016. ・ Checks will now be conducted to ensure that no new shoots appear with the removal of the old ivy, and ivy will be removed from the north, south, and west walls when the whole building is restored. 
Visitor measures	FY 2015 onward	As the Onga River Pumping Station lies within an working site, visitors do not have free access to the site. A viewing area was therefore set up where visitors can see the Pumping Station from outside the site.	
Installation of a viewing area	FY 2016	Before: ・ A temporary viewing area was set up next to the road outside the site. 	After: ・ A viewing space congruent with the scenery was completed, and a World Heritage Plaque and information and explanation boards using the common logo were installed. 

Survey report on visitor numbers (interim report)

1. Overview of Visitor Surveys

In FY 2015-2016, quantitative surveys were conducted for all component parts, and qualitative surveys were conducted initially for three component parts, with the aim of mitigating adverse impacts on the component parts from increases in number of visitors. Then in FY 2017, both quantitative and qualitative surveys were conducted for all component parts, as well as visitor satisfaction surveys.

The following is an interim report on surveys to determine the current state at each component part.

1) Overview of quantitative surveys

The number of visitors per day to each component part and the fluctuation in visitor levels were determined. Record was also made of any noteworthy impact on a component part.

The methods for determining visitor numbers were chosen for each component part as appropriate to the scale, nature, and location of each component part as well as such factors as the staffing requirements for visitor control.

2) Overview of qualitative surveys

Component parts with large numbers of visitors -Glover House and Office (Area 6 Nagasaki/ Component Part 6-8), Former Shuseikan Machinery Factory (a part of Area 2 Kagoshima/ Component Part 2-1), and Sengan-en (a part of Area 2 Kagoshima/ Component Part 2-2) - were chosen for the initial qualitative surveys, which consisted of observing and recording how changes in daily visitor levels affected the safety, security, and comfort of visitors to the site. The amount of time spent by visitors at each component part was also determined.

Similar qualitative surveys will be conducted for all the remaining component parts during FY 2017. By analyzing the results of these surveys, indicators will be determined for visitor control that will be positive for the component parts and visitor understanding and that will have an effect on improved satisfaction. Then target levels will be set based also on the results of satisfaction surveys to be carried out in parallel.

3) Overview of visitor satisfaction surveys

Visitors to each component part were asked to respond to a questionnaire, to determine their level of satisfaction and any problems or requests they had. The survey was conducted starting in May 2017. Questionnaires were collected from visitors mainly during the Golden Week holidays in May, and in August during summer vacation, when there is heavy turnout.

2. Survey results (interim report)

1) Results of quantitative surveys

The number of daily visitors to each component part varies widely between weekdays and holidays, and also depending on the vacation and whether special events are being held.

With the exception of event days, the maximum levels of visitors ranged from around 100 to 9,000 per day. No noteworthy impact on a component part was reported.

A side-by-side comparison of the visitor levels at each component part showed that in gauging impacts

on each component part and on visitor safety, security, and comfort, attention should be paid to visitor levels of 2,000 per day or more, and the frequency of such levels. It was therefore decided to conduct survey design (frequency of surveys and sample size) for qualitative surveys and satisfaction surveys to be carried out in FY 2017.

- Regarding trends in daily visitor levels, each component part has wide seasonal variation, and in many cases the levels peak during Golden Week (early May), summer vacation (August), or Silver Week (September). At some component parts, large increases in visitors from normal levels are observed when events are held, suggesting that individual measures may need to be studied and implemented.
- The highest visitor levels varied from one component part to another. Specifically, the smallest level observed was 112 visitors and the largest was 9,410 visitors, a nearly 90-fold difference. Worthy of note is that, of the 26 locations surveyed this time (Sengan-en, Former Foreign Engineers' Residence, and Miike Coal Mine [Manda Pit and Miyanohara Pit] were counted separately), 11 had peak visitor levels above 2,000.
- Considering also the varying nature of each component part, it seems unlikely that all component parts currently face the same degree of burden. Detailed qualitative surveys are therefore seen necessary only for those component parts having visitors above a certain level.

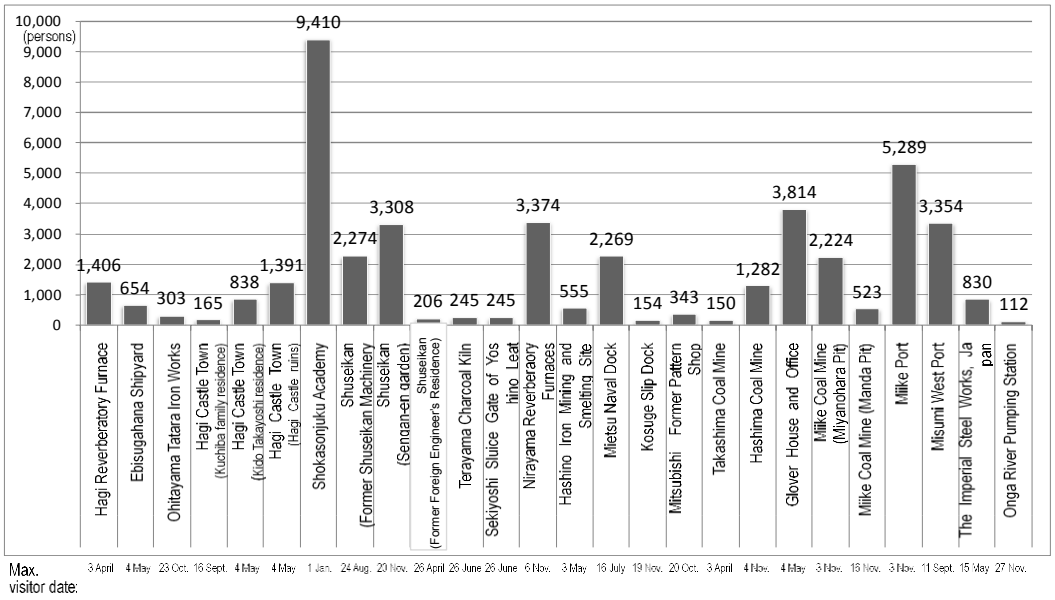


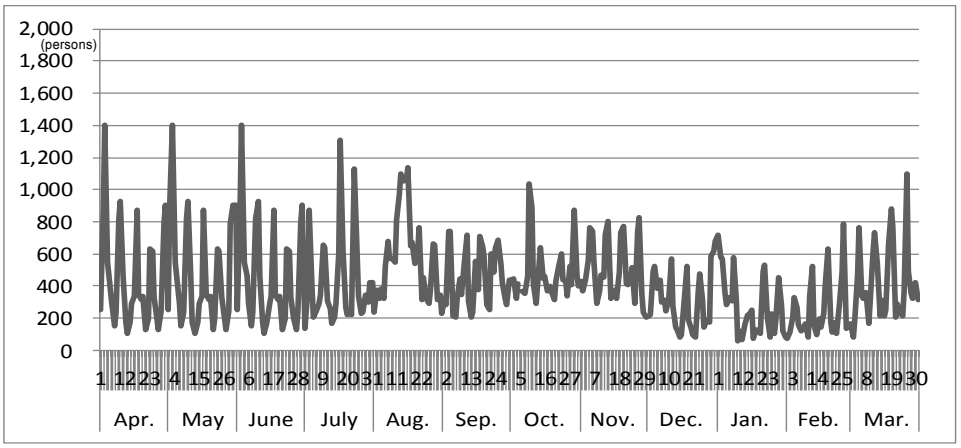
Figure 1. Maximum scale of daily visitors outside event days

Component parts		Max. no. of visitors (people/day)	No. of days with >2,000 visitors/day
Kagoshima	Shuseikan (Former Shuseikan Machinery Factory)	2,274	5
Nagasaki	Glover House and Office	3,814	33
Hagi	Shokasonjuku Academy	6,148	41
Kagoshima	Shuseikan (Sengan-en garden)	3,308	20
Nirayama	Nirayama Reverberatory Furnaces	3,374	27
Saga	Mietsu Naval Dock	2,269	1
Miike	Miike Coal Mine (Miyanohara Pit)	2,224	1
Miike	Miike Coal Mine (Manda Pit)	9,000	1 (event day)
Miike	Miike Port	5,289	1
Miike	Misumi West Port	3,354	22
Yawata	Onga River Pumping Station	2,000	1 (event day)

Table 1. Component Parts receiving 2,000 or visitors/day and number of such days

(a) Hagi Reverberatory Furnace

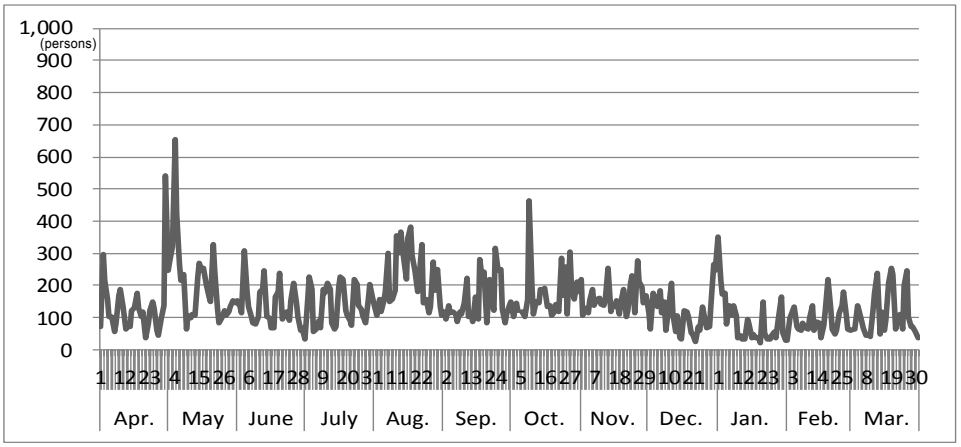
[Trend in daily visitors]



Note: In this and the following graphs, the numbers along the horizontal axis just above the months indicate the time (afternoon) and days when visitors were observed.

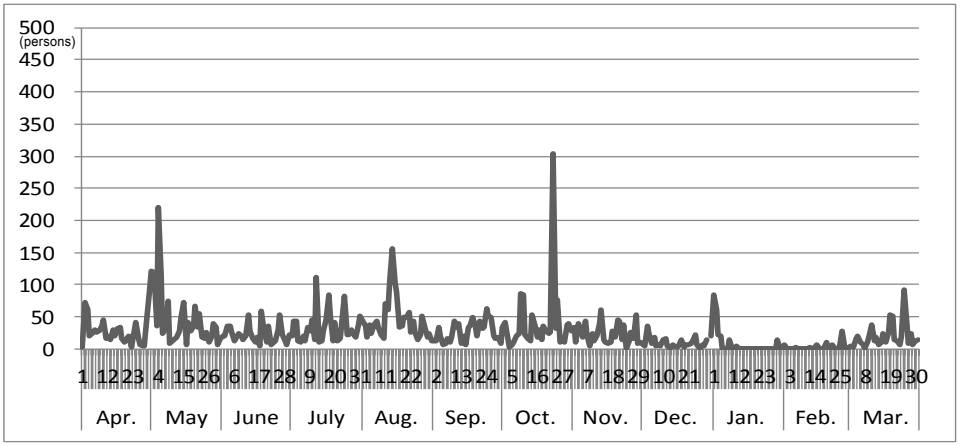
(b) Ebisugahana Shipyard

[Trend in daily visitors]



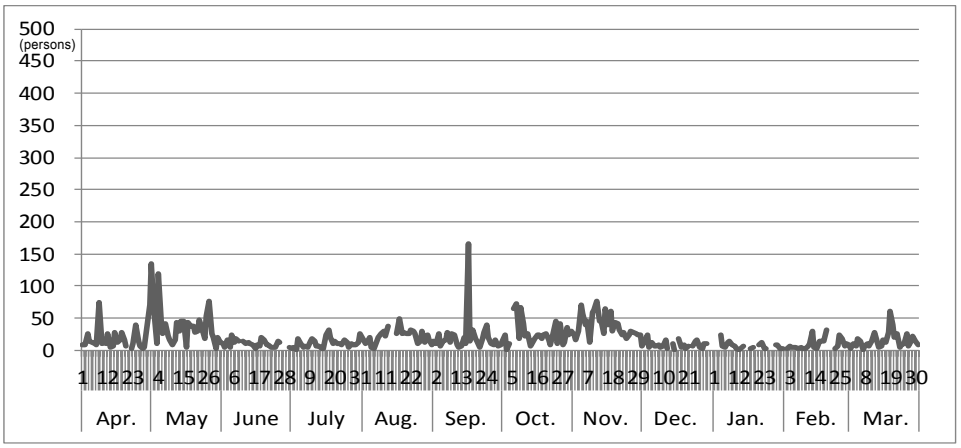
(c) Ohitayama Tatara Iron Works

[Trend in daily visitors]



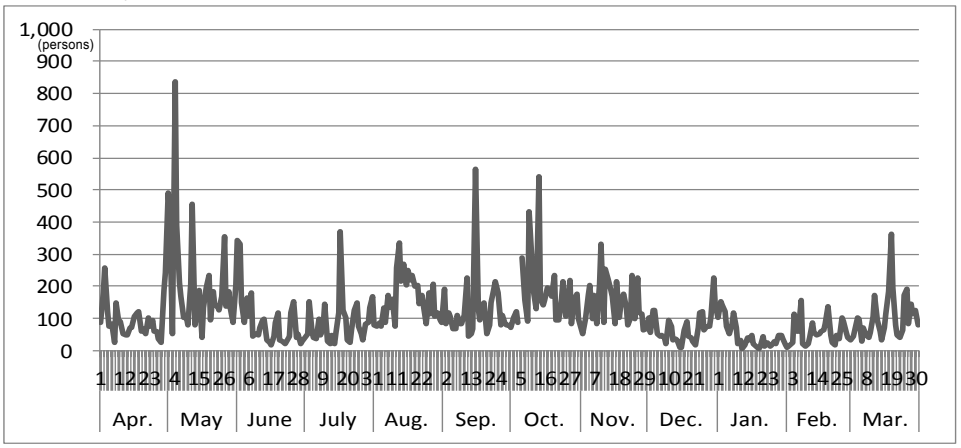
(d) Hagi Castle Town (Kuchiba Residence)

[Trend in daily visitors]



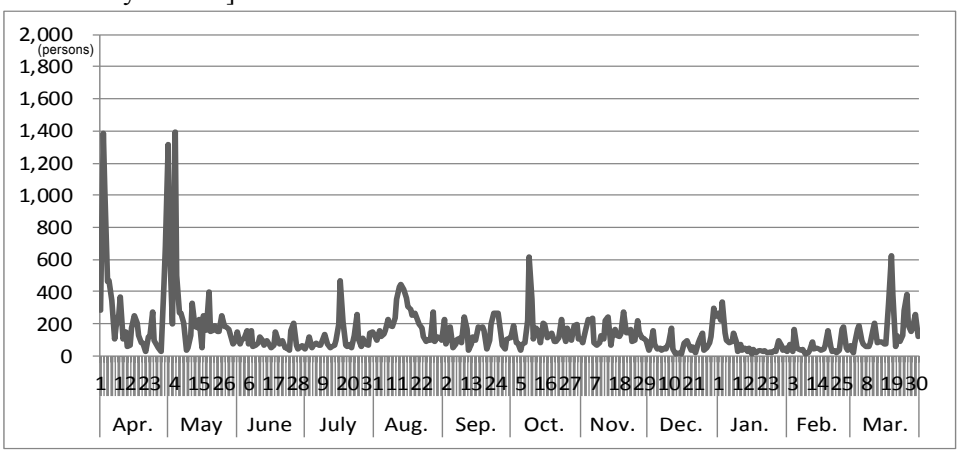
(e) Hagi Castle Town (Kido Takayoshi Residence)

[Trend in daily visitors]



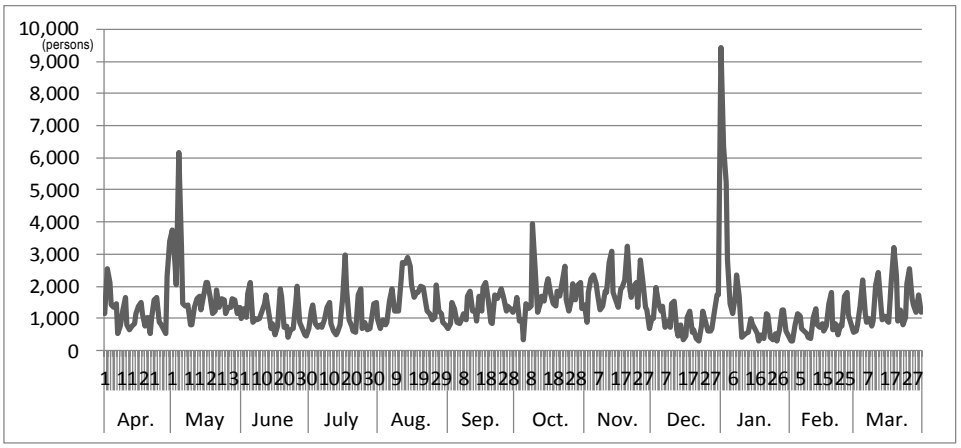
(f) Hagi Castle Town (Hagi Castle remains)

[Trend in daily visitors]



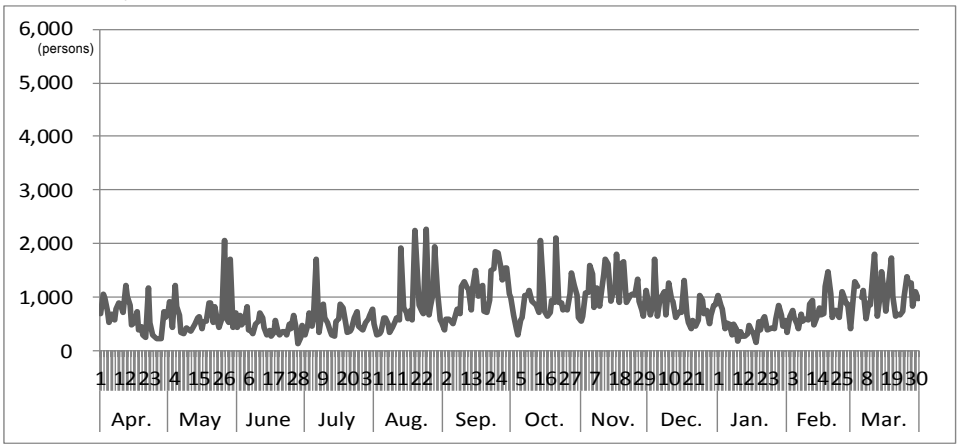
(g) Shokasonjuku Academy

[Trend in daily visitors]



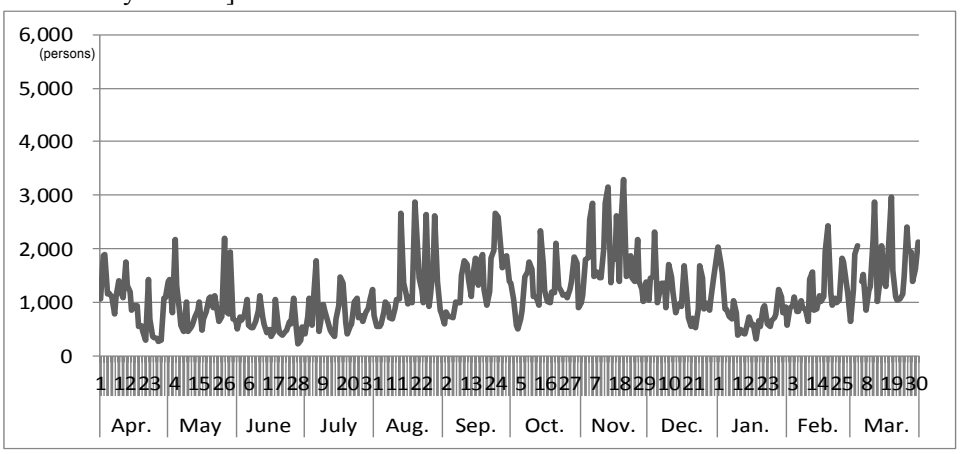
(h) Shuseikan (Former Shuseikan Machinery Factory)

[Trend in daily visitors]



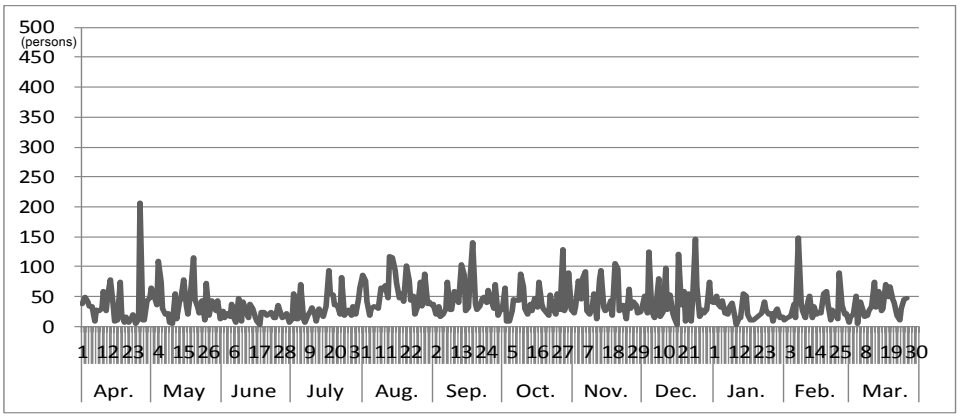
(i) Shuseikan (Sengan-en garden)

[Trend in daily visitors]



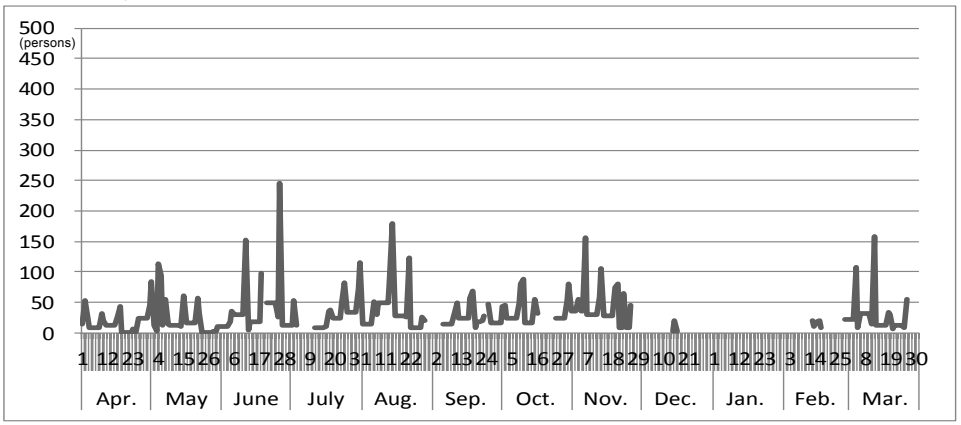
(j) Shuseikan (Former Foreign Engineer's Residence)

[Trend in daily visitors]



(k) Terayama Charcoal Kiln

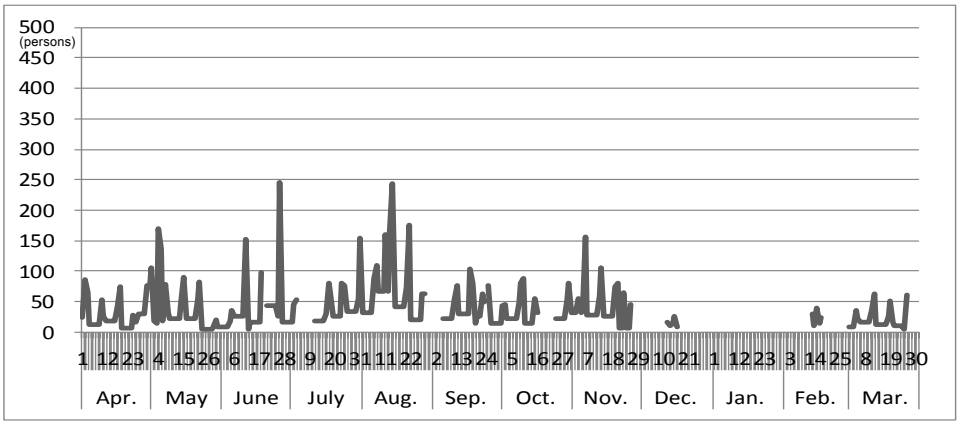
[Trend in daily visitors]



Note: Average daily visitors are estimated based on week-long sampling.
Aggregate data are not available for weekends and holidays from December to February because volunteer guides could not be assigned.

(l) Sekiyoshi Sluice Gate of Yoshino Leat

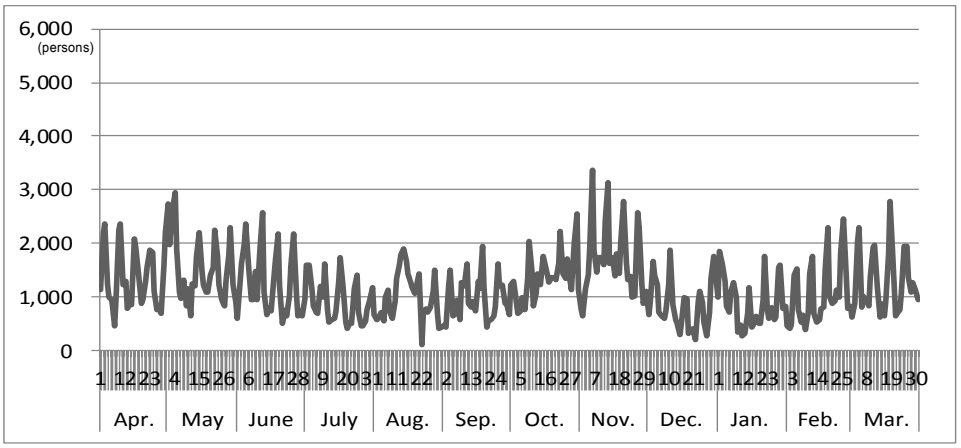
[Trend in daily visitors]



Note: Visitors on weekdays are estimated based on week-long sampling.
Aggregate data are not available for weekends and holidays from December to February because volunteer guides could not be assigned.

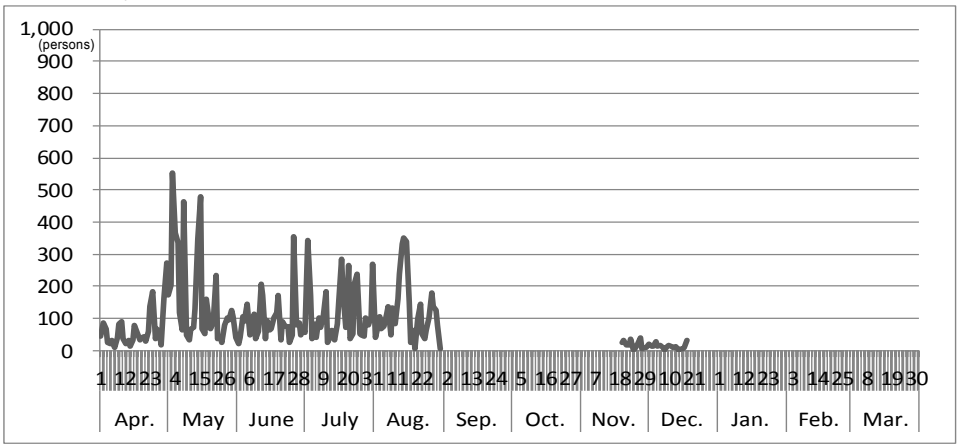
(m) Nirayama Reverberatory Furnaces

[Trend in daily visitors]



(n) Hashino Iron Mining and Smelting Site

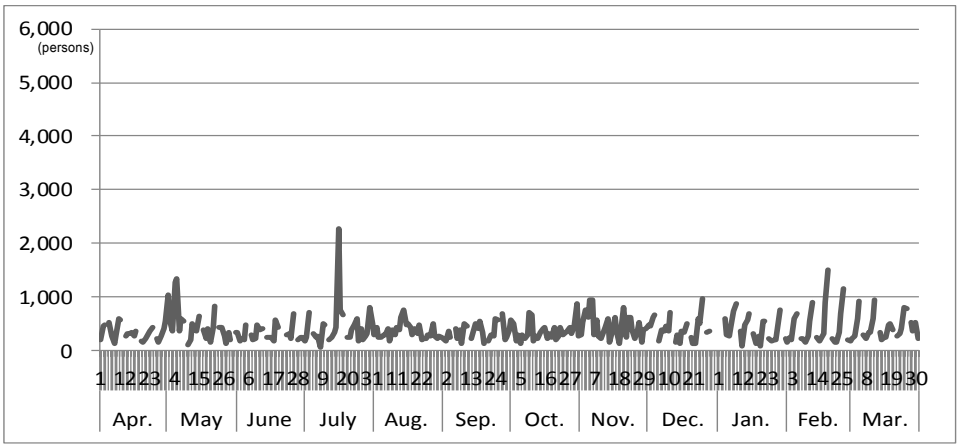
[Trend in daily visitors]



Note: The component part was closed from August 30 to November 18 due to typhoon damage.
The component part was closed for winter from December 19 to March 31.

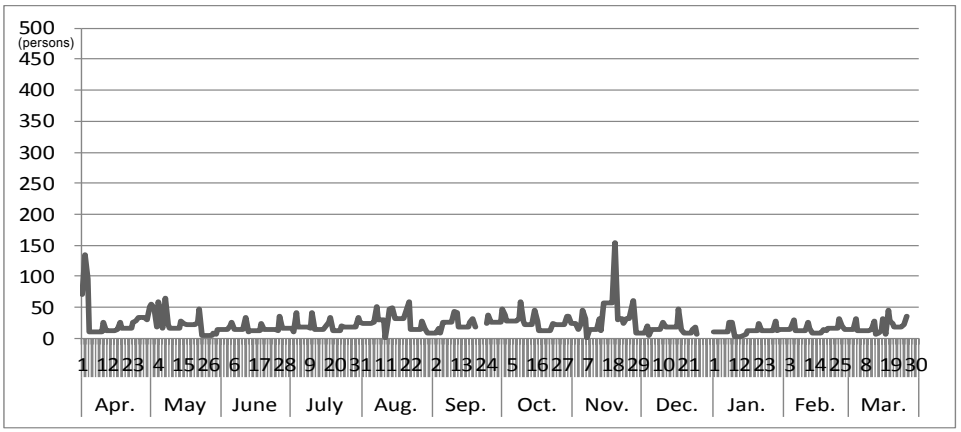
(o) Mietsu Naval Dock

[Trend in daily visitors]



(p) Kosuge Slip Dock

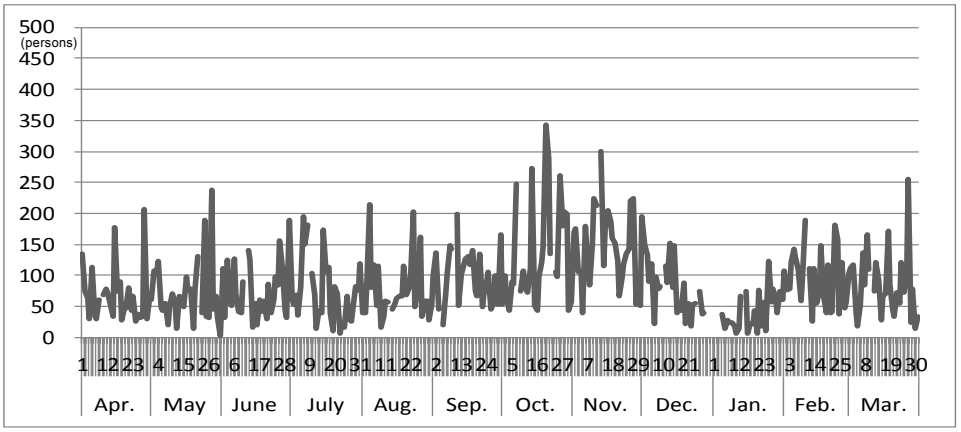
[Trend in daily visitors]



Note: Visitors on weekdays are estimated based on week-long sampling.

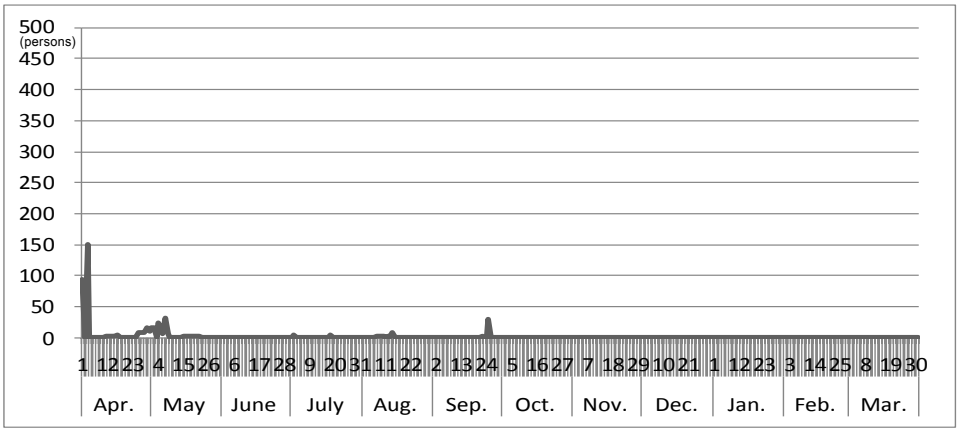
(q) Mitsubishi Former Pattern Shop

[Trend in daily visitors]



(r) Takashima Coal Mine

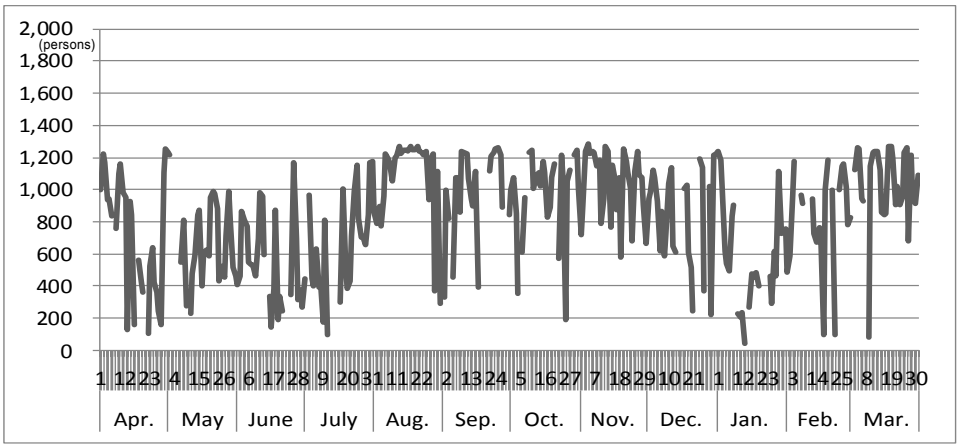
[Trend in daily visitors]



Note: Visitors on weekdays are estimated based on week-long sampling.
Aggregate data for 3Q and 4Q is pending.

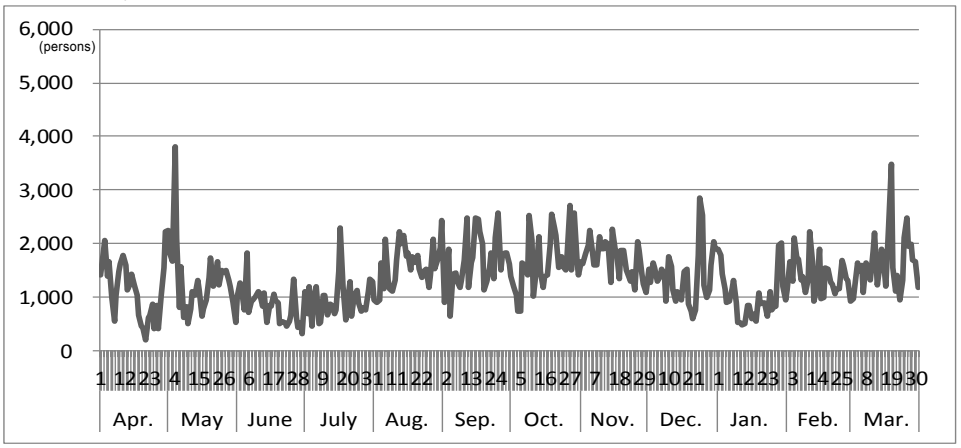
(s) Hashima Coal Mine

[Trend in daily visitors]



(t) Glover House and Office

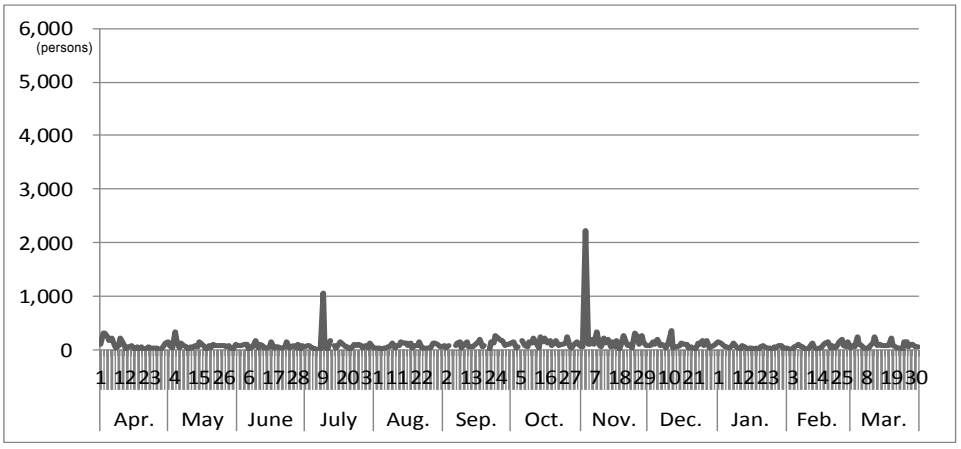
[Trend in daily visitors]



Note: Estimates were made based on comparative sampling data for Glover Garden and Glover House and Office.

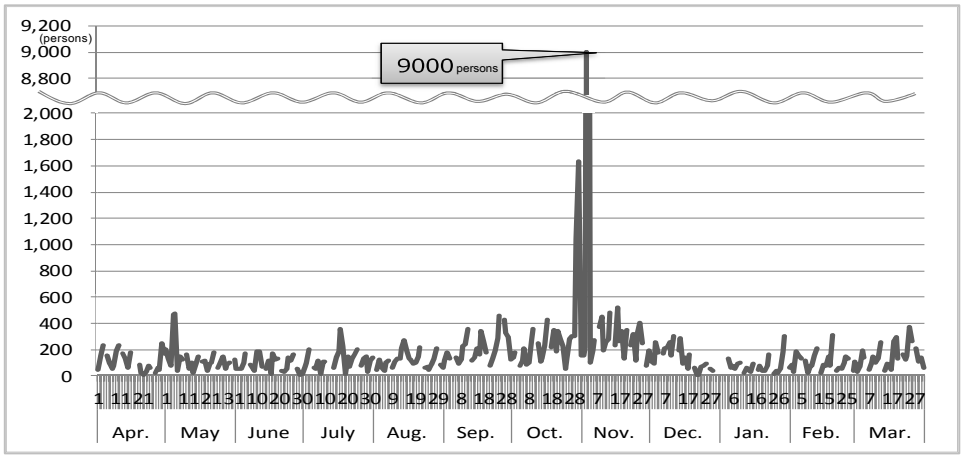
(u) Miike Coal Mine (Miyanohara Pit)

[Trend in daily visitors]



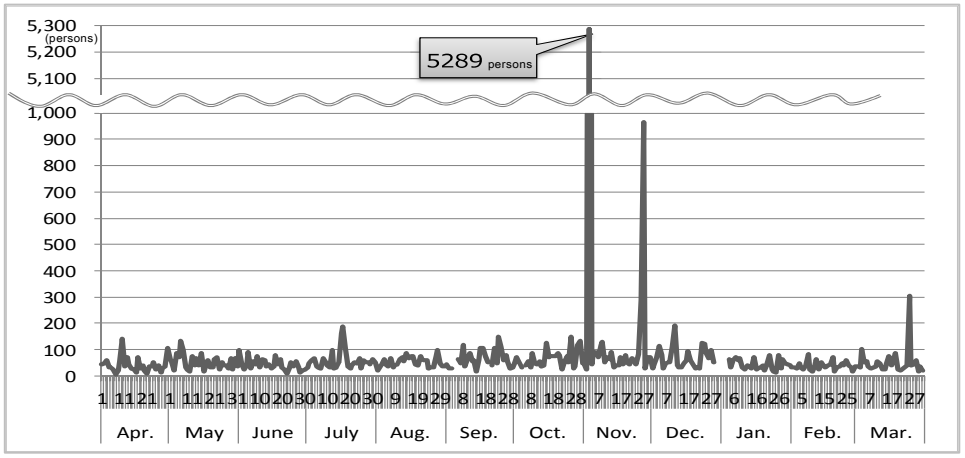
(v) Miike Coal Mine (Manda Pit)

[Trend in daily visitors]



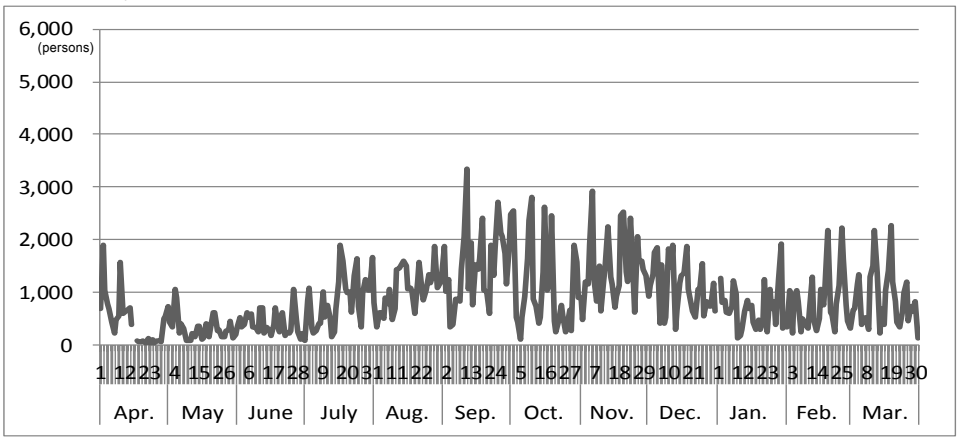
(w) Miike Port

[Trend in daily visitors]



(x) Misumi West Port

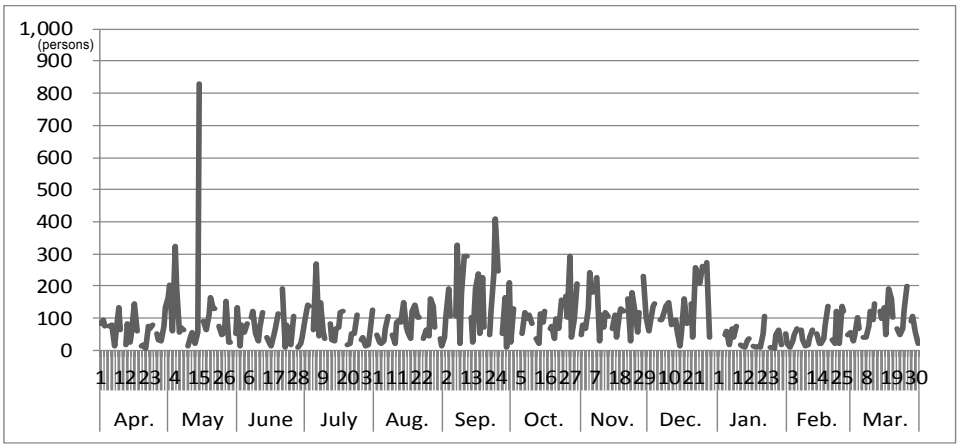
[Trend in daily visitors]



Note: The number of daily visitors was estimated to be six times the number of persons who passed through the Ryujokan cash counter.

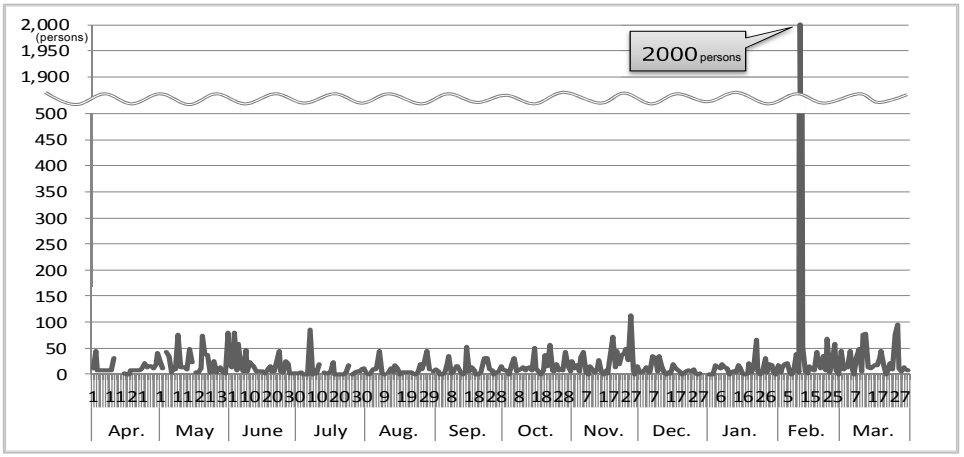
(y) The Imperial Steel Works, Japan

[Trend in daily visitors]



(z) Onga River Pumping Station

[Trend in daily visitors]



Note: Average daily visitors for April to June are estimated based on week-long sampling.

2) Results of qualitative surveys

- **Impact of changes in daily visitor levels on the component parts and on visitor safety, security and comfort**

At Glover House and Office, a situation observed that might impact the component part or visitor comfort and satisfaction is congestion of visitors at the entrance. This situation was not observed at the Former Shuseikan Machinery Factory or Sengan-en sites.

At Glover House and Office, during certain times on days of high visitor turnout, crowding at the entrance results in such impacts as people not entering the house, stumbling, or not being able to locate exhibits of interest to them, and congestion when trying to take shelter from rain. These are seen as likely to impact visitor comfort and satisfaction. Note that this kind of situation arises when there are concentrations of school outings and other group tours.

At the two component parts other than Glover House and Office (Former Shuseikan Machinery Factory and Sengan-en), even on days with high visitor turnout, no situations were observed that might impact the component part or visitor comfort and satisfaction.

From the results of these initial qualitative surveys, it was determined that in the case of component parts where visitors go indoors, an impact occurs when the number of visitors reaches a level, as in group tours, such that visitors cannot move smoothly at the entrance or other places. Note that it is possible to eliminate such situations by properly designing people flow, and by appropriately controlling the number of group tours or visitors admitted at the same time.

Time	Visitors	Weather	Situation at site
8:00 - 9:00 am	73	Rain → cloudy	· Many people entering from entrance reserved for wheelchairs. · Confused about entrance location. · Crowded, so walking outside viewing at leisurely pace.
9:00 - 10:00 am	115	Cloudy	· Confused about entrance location. · Not crowded. · Some visitors stumbled at entrance.
10:00 - 11:00 am	323	Cloudy, occasional light rain	· Disappointed that not cool inside house. · Confusion at entrance. · Tour groups increased. · Stumbling. · Sometimes a little crowded near entrance.
11:00 - 12:00 noon	345	Rain	· People gathering under eaves to escape rain. · Crowded. · Many visitors feel hot (high humidity).
12:00 noon - 1:00 pm	401	Rain → cloudy	· Severe crowding around entrance between people entering house and those entering or leaving cafeteria. · Many people holding drinks in hand.
1:00 - 2:00 pm	315	Cloudy	· Rain has stopped and wind has picked up, easing mugginess. · Drop-off in visitors between 1:00 and 1:30. · Many Japanese tourists.
2:00 - 3:00 pm	385	Cloudy	· Crowding around entrance has eased. · Three requests for directions. · Two tour groups (around 40 and 30 people).
3:00 - 4:00 pm	471	Cloudy, occasional light rain	· Many people asking for toilet location. · Stumbling.
4:00 - 5:00 pm	301	Light rain	· Stream of people entering between 4:10 and 4:20. Entrance crowded. · Surprising number of visitors for this time.
5:00 - 6:00 pm	214	Cloudy	· Almost no group tourists arriving.
6:00 - 7:00 pm	71	Cloudy	· Occasional visitors arriving. · Walking around slowly. · No one taking pictures; quiet.
7:00 - 8:00 pm	28	Cloudy	· No new visitors. Occasional visitors. · Has cooled down. · Few visitors to Glover Garden. · Some people going for a walk without entering house.
8:00 - 9:00 pm	12	Light rain → cloudy	· Quiet, with no one around. · Some people going for a walk without entering house.
9:00 - 9:30 pm	8	Cloudy	· Even people going for walk have dwindled to almost none. · Those entering house are viewing hurriedly.
Total	3062		

Table2. Glover House and Office behavior survey results (September 18 [high turnout day])

Time	Visitors	Weather	Situation at site
8:00 - 9:00 am	79	Fair	· Many Chinese tourists. Entered individually, so numbers on survey card and counter differ. · Walking around at leisurely pace. · Chinese visitors coming to entrance.
9:00 - 10:00 am	173	Fair	· Chinese visitors removing red “no entry” tape. · Japanese tourists increasing. · · People stumbling on mat at entrance.
10:00 - 11:00 am	330	Fair	· Many visitors coming in twos or threes. · Many Japanese. · Slope at entrance has steep incline.
11:00 - 12:00 noon	382	Fair	· Stumbling. · Tour groups stopping near entrance to listen to explanation. · Inconvenient for wheelchairs. · Many people taking pictures in front of house and in front of sago palms. · Asked for location of Heart Stone. · Few people visiting kitchen due to presence of survey-taker.
12:00 noon - 1:00 pm	316	Fair	· Many people stumbling. · Number of visitors has dropped. · Some tour groups. · Occasional new visitors.
1:00 - 2:00 pm	314	Fair	· Occasional Korean visitors. · No tour groups at present. · Increase in visitors from 1:30. · A few groups wearing rented costumes between 11:00 am and 4:30 pm.
2:00 - 3:00 pm	470	Fair	· Sudden increase in visitors. · Rush from 2:00 to 2:15. · Increase in Chinese visitors.· · Some people at exit feeling the heat.
3:00 - 4:00 pm	263	Fair	· Mostly Japanese tourists. · Several looking for Heart Stone. · Two or three groups left via entrance.
4:00 - 5:00 pm	306	Fair	· Stumbling. · Cool breeze but hot under the sun. · Sometimes asked to take picture. · Seems a bit uncomfortably hot in house. · Small Japanese group.
5:00 - 6:00 pm	183	Fair	· Number of visitors has started to drop off. · Lots of foreign tourists today. · As crowding eases, people are touring slowly and taking pictures.
6:00 - 7:00 pm	67	Fair	· Ship leaving port at Matsugae from 6:00 pm. People watching from Glover Garden. · Entered house after the event.
7:00 - 8:00 pm	49	Fair	· People stumbling at entrance. · Quiet, can tour at leisure.
8:00 - 9:00 pm	23	Fair	· Few foreign tourists remaining. · Asked to take pictures. · One visitor has been here more than 20 times.
9:00 - 9:30 pm	9	Fair	· More people than I expected. · Able to tour at leisure.
Total	2964		

Table3. Glover House and Office behavior survey results (September 24 [high turnout day])

- **Time spent by visitors at component parts**

While it is preferable to have visitors spend a long time at component parts to raise their understanding of the component part, on days of high visitor turnout it is possible they will not be able to stay long enough to experience the component part and interpretation adequately.

A trend observed at Glover House and Office was that the more visitors there are in a day, the shorter their staying time (time spent inside the component part). At the Former Shuseikan Machinery Factory, an increase in daily visitors resulted in shorter staying time due to crowding.

Unlike sites such as Glover House and Office or Former Shuseikan Machinery Factory, where visitors spend time indoors, Sengan-en is a site consisting of gardens and other extensive open spaces, requiring a long time to traverse. For this reason, no consistent correlation was seen between changes in visitor numbers and time spent at the site; instead, time spent was seen to be impacted by season (staying time tended to be longer during seasons conducive to spending time outdoors).

Based on the above results, it was decided to design the FY 2017 qualitative surveys and satisfaction surveys (frequency and sample size of the surveys) based on whether a component part was one where visitors spend time indoors.

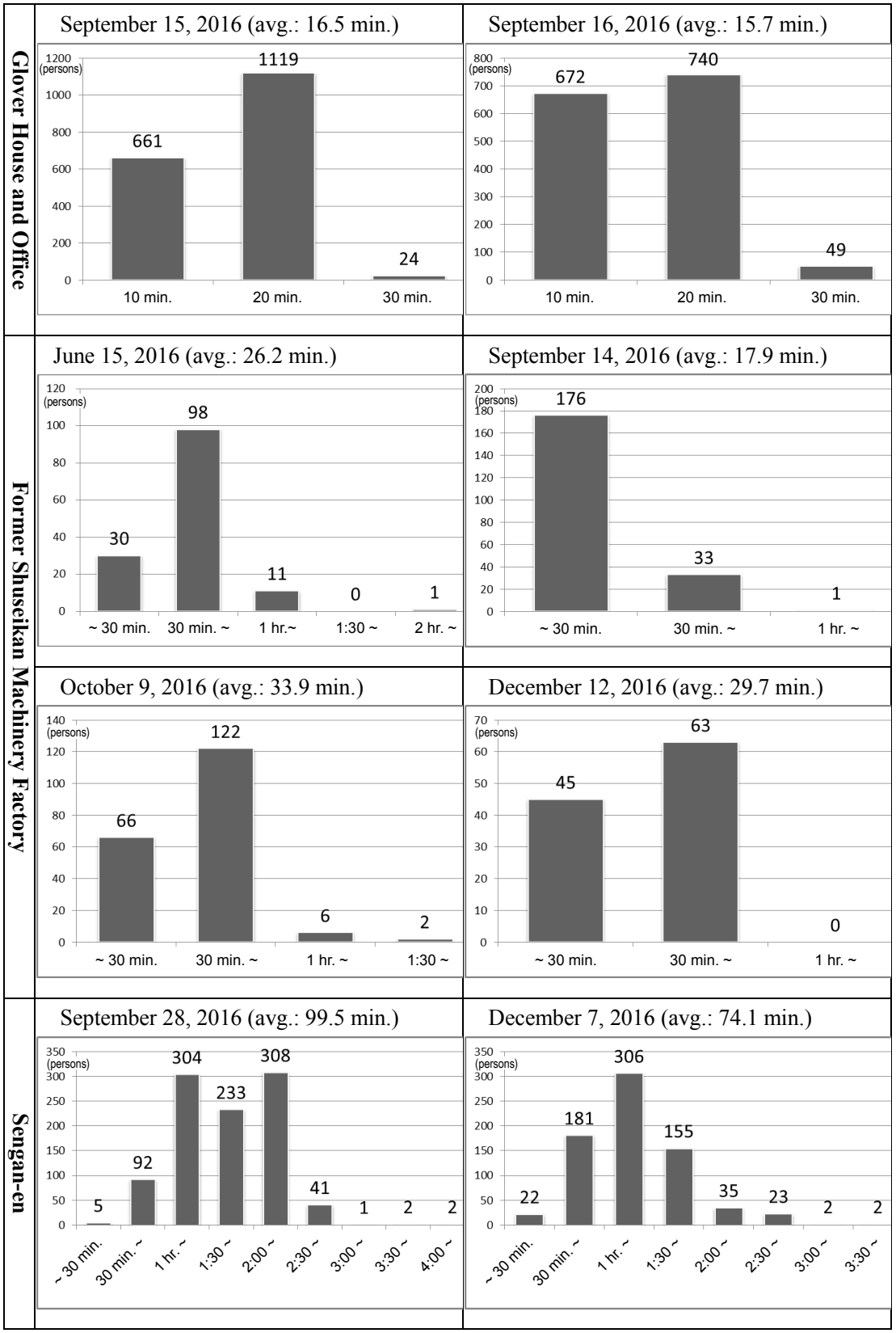


Figure2. Time spent at component parts (on days with average visitor levels)

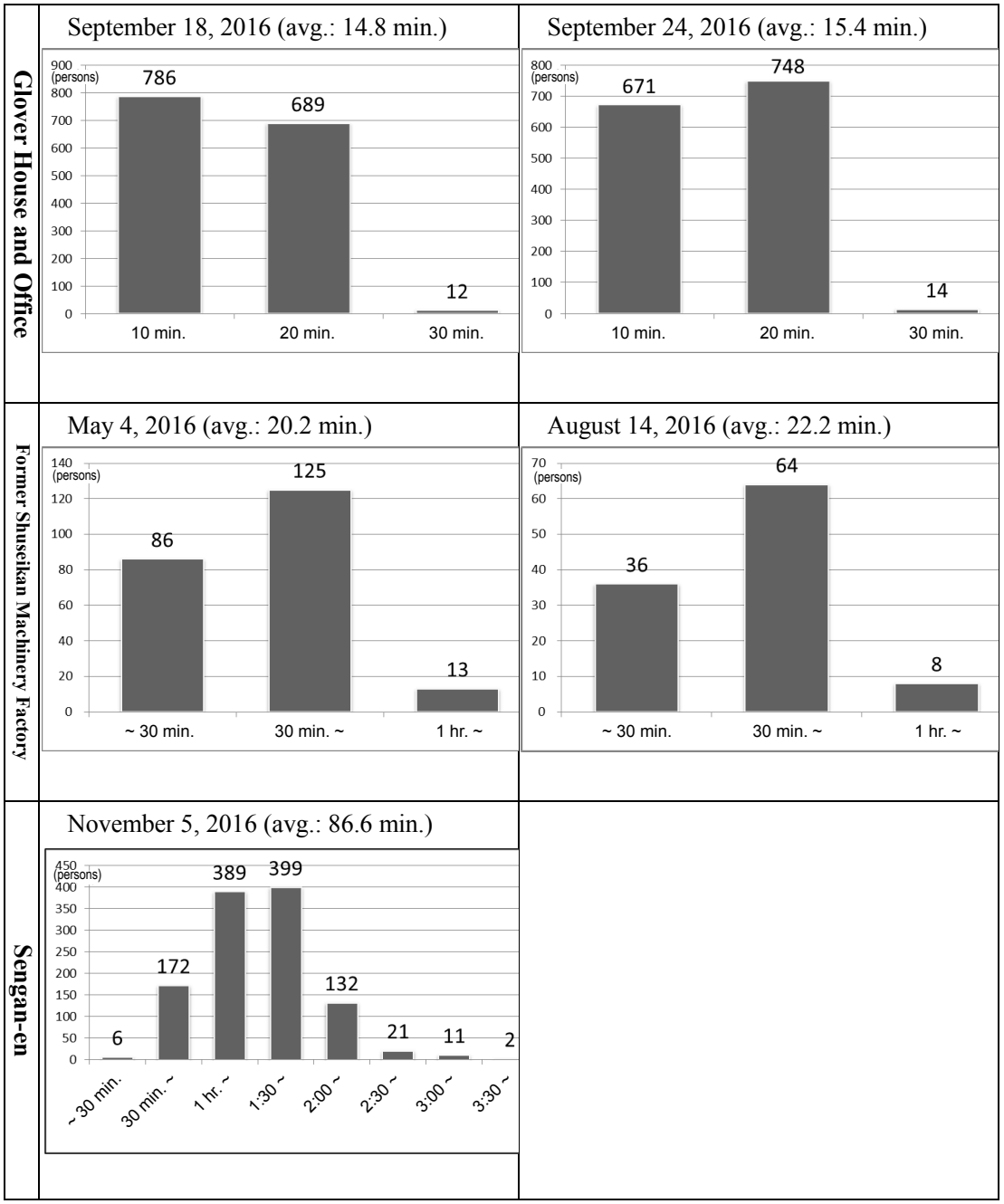


Figure3. Time spent at component parts (on days with high visitor levels)

Area	Component Part		Quantitative surveys		Qualitative surveys
Hagi	Hagi Reverberatory Furnace		From April 2016		
	Ebisugahana Shipyard		From April 2016		
	Ohitayama Tatara Iron Works		From April 2016		
	Hagi Castle Town	Hagi Castle remains	From April 2016		
		Hagi Castle Town	From April 2016	3 sites with entrance fees only	
	Shokasonjuku Academy		From April 2016		
Kagoshima	Shuseikan	Former Shuseikan Machinery Factory	From April 2016		From April 2016
		Former Foreign Engineer's Residence	From April 2016		
		Sengan-en	From April 2016		From April 2016
	Terayama Charcoal Kiln		From April 2016	Weekends and holidays only	
	Sekiyoshi Sluice Gate of Yoshino Leat		From April 2016	Weekends and holidays only	
Nirayama	Nirayama Reverberatory Furnaces		From April 2016		
Kamaishi	Hashino Iron Mining and Smelting Site		From April 2016		
Saga	Mietsu Naval Dock		From April 2016	Memorial museum + overall value determination	
Nagasaki	Kosuge Slip Dock		From April 2016		
	Mitsubishi Former Pattern Shop (Nagasaki Shipyard)		From April 2016		
	Takashima Coal Mine		From April 2016	Weekends and holidays only	
	Hashima Coal Mine		From April 2016		
	Glover House and Office		From April 2016	Counted at entrance to residence	From April 2016
Miike	Miike Coal Mine/ Miike Port	Miike Coal Mine (Miyanohara Pit)	From April 2016		
		Miike Coal Mine (Manda Pit)	From April 2016		
		Miike Port	From April 2016		
	Misumi West Port		From April 2016	Guide + overall value determination	
Yawata	The Imperial Steel Works, Japan		From April 2016		
	Onga River Pumping Station		From April 2016	Weekends and holidays only	

Note 1. When not otherwise noted under "Remarks," as a general rule, quantitative surveys were conducted daily.

Table4. Sites covered in visitor surveys and implementation schedule (result)

3) Results of visitor satisfaction surveys (for questionnaires collected as of September 8th, 2017)

- **Visitor attributes**

Nearly all visitors were from Japan (99%). The largest age group was people in their 40s (26%), and 59% of visitors were 40 years old or above.

Component parts in order of the most repeat visitors were Glover House and Office (64%), Shuseikan (35%), and Shokasonjuku Academy (30%).

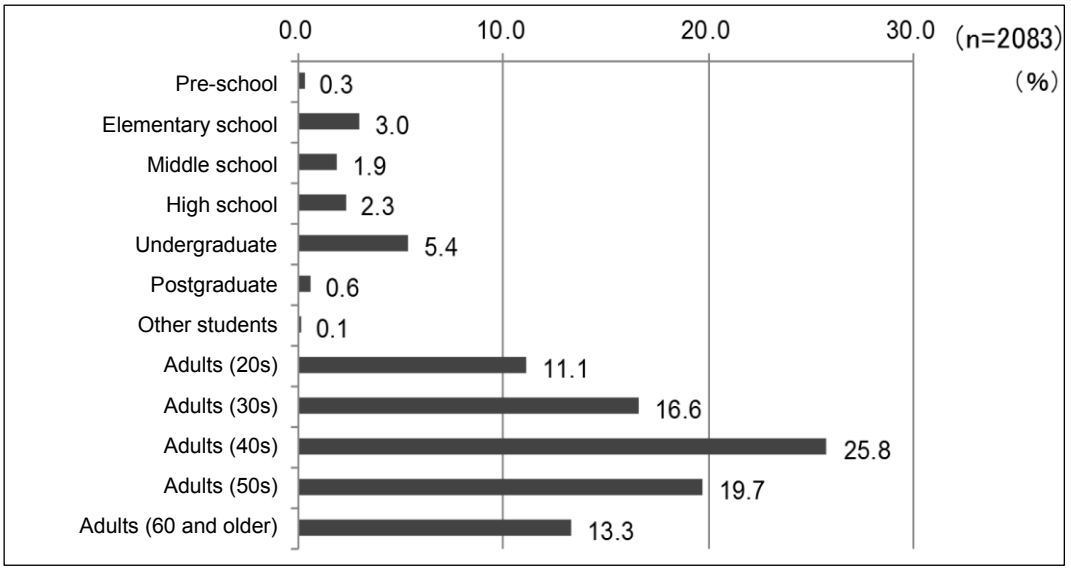


Figure4. Respondents by age group

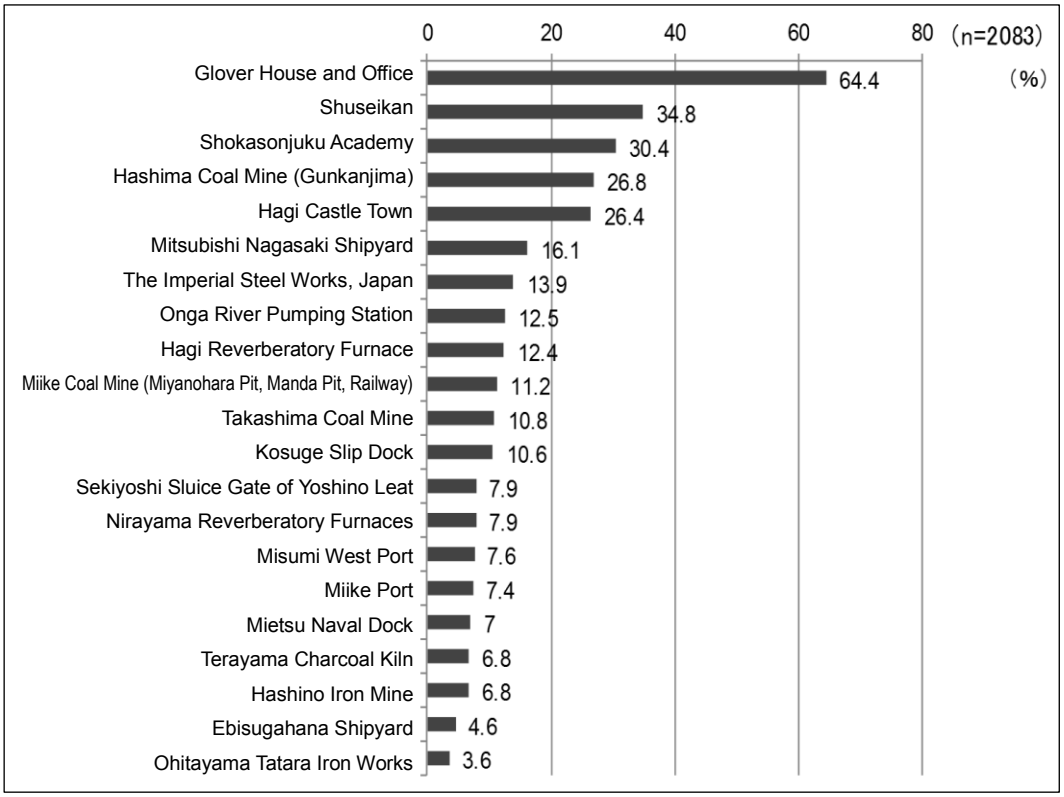


Figure5. Visits to each component part

➢ **Visitor behavior**

Nearly all visitors (90%) arranged for the visit on their own; only 6% made use of group tours (tour agencies, workplace or school tours, etc.). Some 70% of the visitors were accompanied by a spouse or partner, or other family members or relatives.

The largest number of visitors (33.5%) spent between 30 minutes to an hour at the site, followed by 29.1% who stayed for 15 to 30 minutes. Altogether, around 60% spent at least 30 minutes at the site.

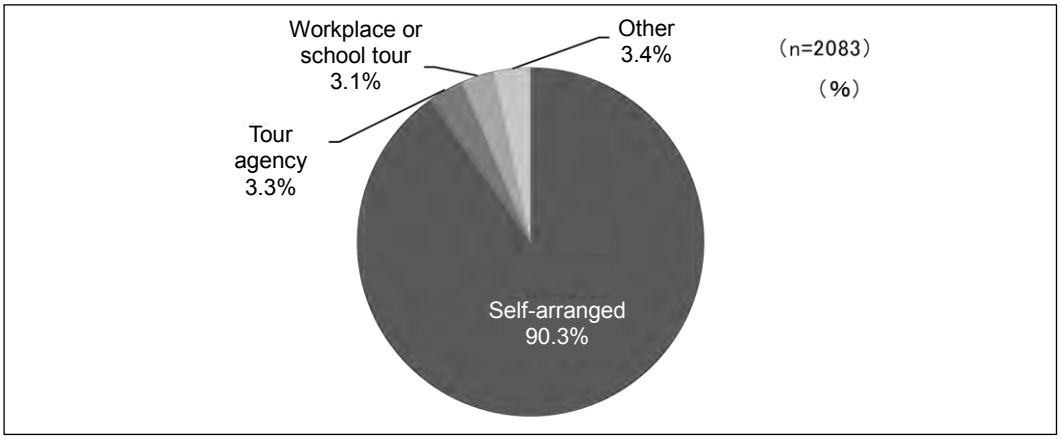


Figure6. How visits were arranged

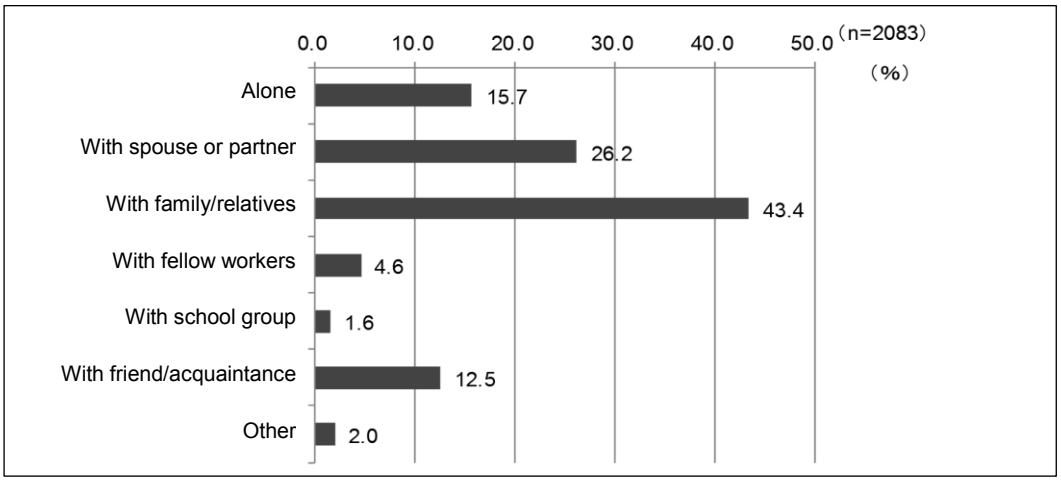


Figure7. Persons accompanying visitors

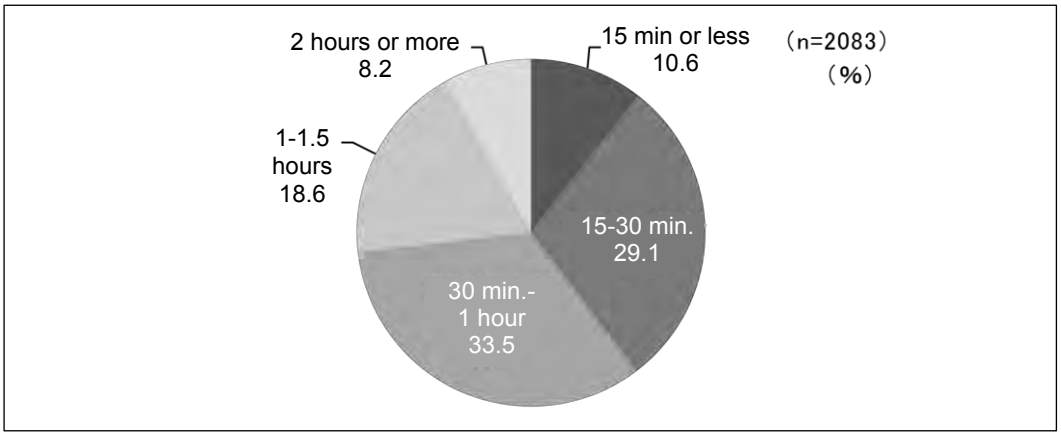


Figure8. Time spent at the site

➢ **Relation of satisfaction to time spent by visitors at a component part**

Looking at the satisfaction levels of visitors in relation to the time they spent at the Component Parts, the percentage who were "Very satisfied" was relatively high for those spending 15 minutes or longer, and especially high for those spending at least two hours.

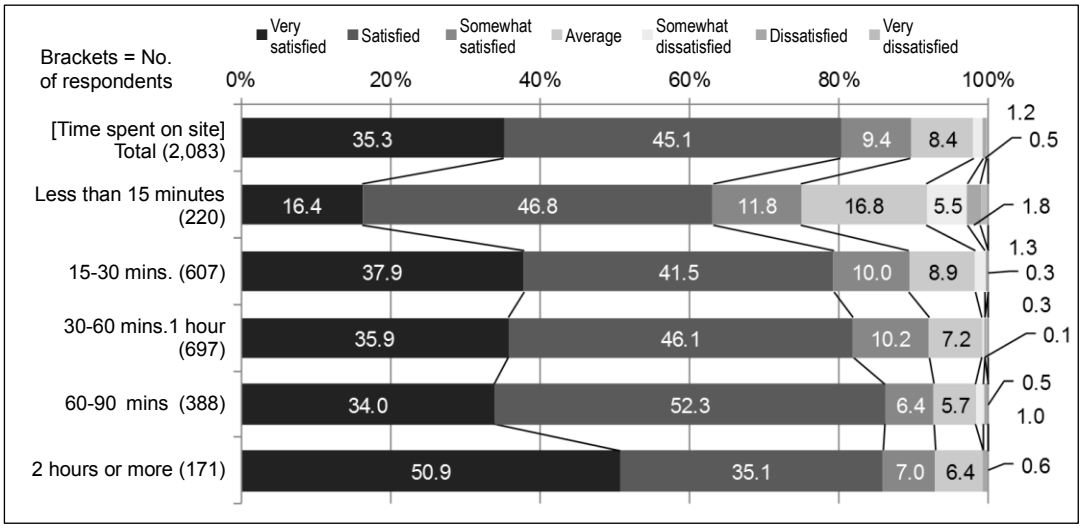


Figure9. Satisfaction with component part relative to time spent at the site

➢ **Interpretation substance and satisfaction level**

Nearly half of visitors (47%) made use of some kind of guide service (tour guide 18%, local guide 27%, audio guide 2%). Satisfaction with the guide services was high, with 53% of users reporting being "Very satisfied" and 38% "Satisfied." Comparing guide satisfaction rates with Component Part satisfaction, a relatively high percentage of visitors who reported being "Very satisfied" with the guide services were also "Very satisfied" with the Component Part.

In response to questions about how they came to understand the reason for the Sites of Japan's Meiji Industrial Revolution becoming a World Heritage, and how they came to understand the reason for the component part they visited becoming a World Heritage, the numbers of respondents answering, "I heard it from the guide" or "Using Sites of Japan's Meiji Industrial Revolution application" were relatively high.

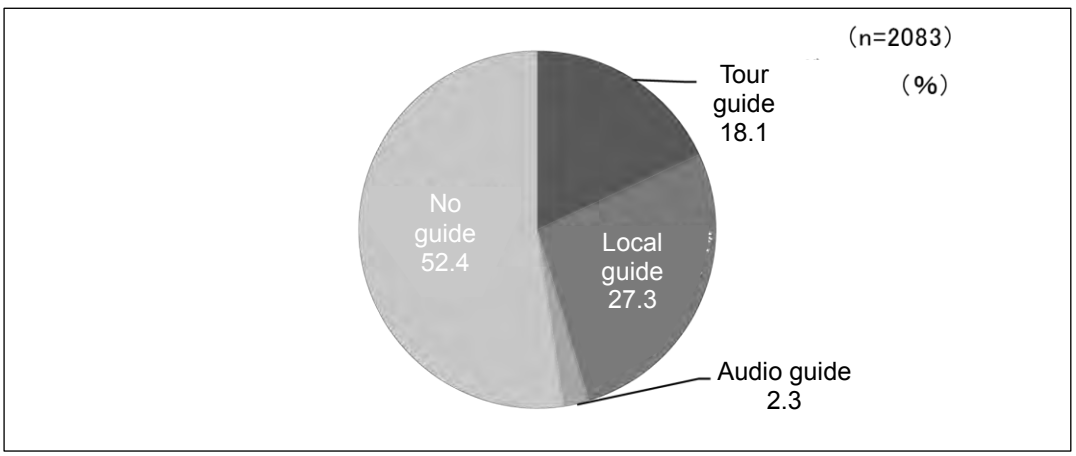


Figure10. Use of component part guide services

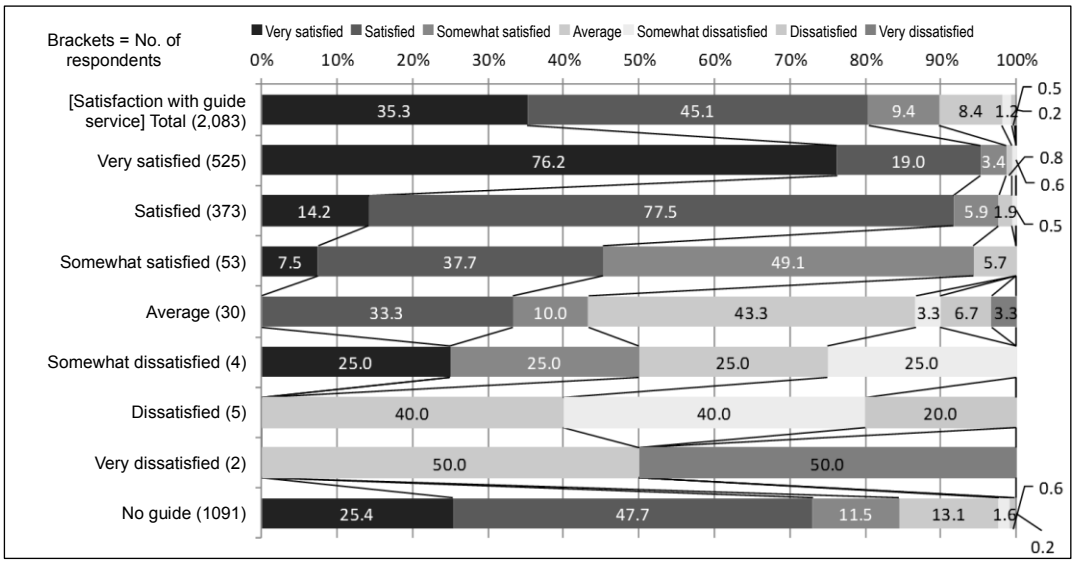


Figure11. Satisfaction with Component Part relative to satisfaction with guide services

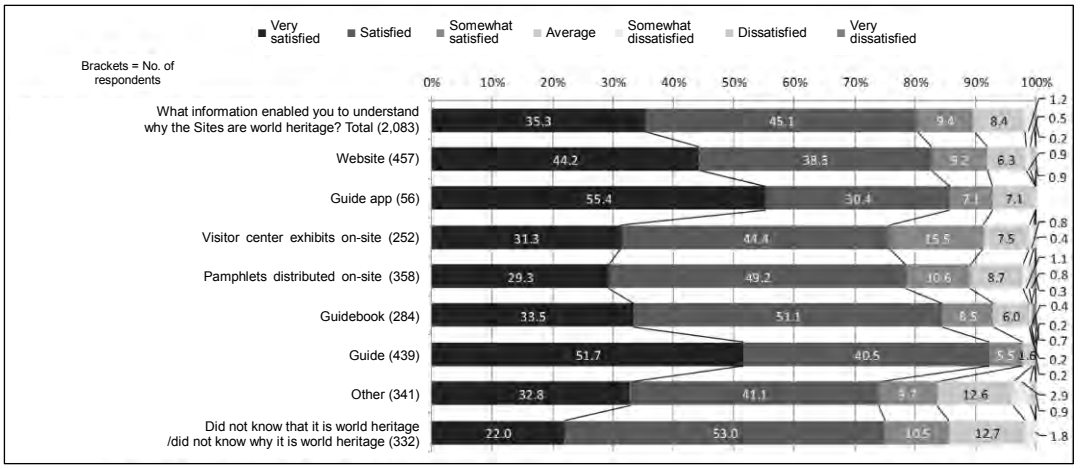


Figure12. Means of understanding why the Sites of Japan's Meiji Industrial Revolution are world heritage

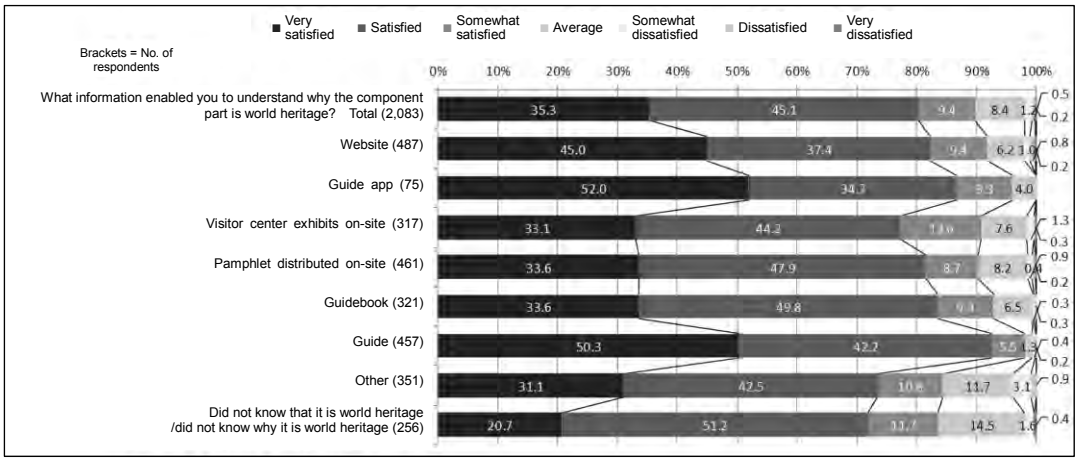


Figure13. Means of understanding why the Component Part visited is world heritage

➢ Food, beverage, shopping, and other service opportunities, and degree of satisfaction

Issues with the Component Parts that were frequently pointed out included inconvenient access (22%), nowhere to eat (9%), not enough toilet and other convenience facilities (9%), no appealing souvenirs (7%), and the site being boring/lacking in entertainment value (6%).

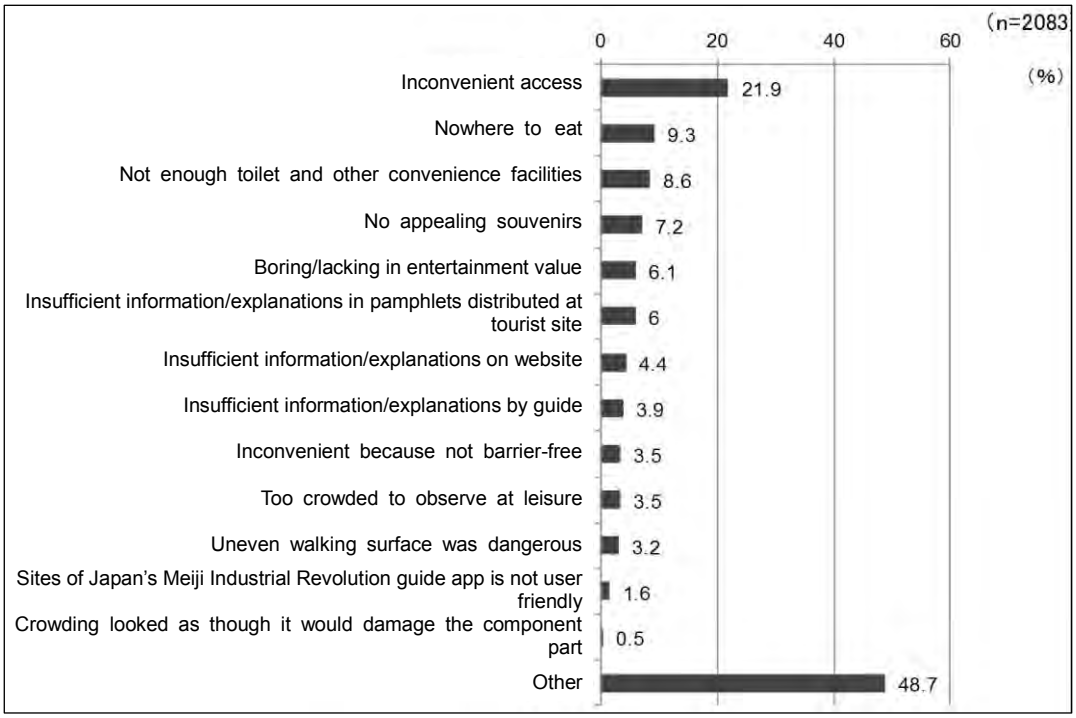


Figure14. Component Part issues and requests

➢ **Thinking on setting target levels**

The qualitative survey results further make clear the importance of the time spent by visitors at component parts. Based on visitor satisfaction surveys, when visitors spend at least two hours at a component part, they tend to understand the Outstanding Universal Value as World Heritage property as a whole and the role of the component part, and to feel satisfaction.

For promoting understanding by visitors, explanations by guides play an important role. As the surveys showed, satisfaction with a component part differs depending on whether the visitor was accompanied by high-quality guide service with which the visitor was "Very satisfied." While the sample is small, the Sites of Japan's Meiji Industrial Revolution guide application is also contributing to visitor satisfaction.

On the other hand, in addition to inconvenience of transportation access, there were relatively many issues pointed to regarding the facilities, equipment, and operation, such as inadequate eating options and toilets. Provision of facilities and equipment enabling visitors to enjoy their time at the component part is important for having them spend sufficient time there to appreciate its role as a component part contributing to Outstanding Universal Value.

These results show that factors such as time at the site, guide service, adequacy of facilities, equipment, and operation, and the state of the surrounding environment impact visitor understanding and satisfaction. They also serve as indicators for managing goal levels.

Current state, issues and directionality in relation to visitor management at Hagi Reverberatory Furnace (Area 1 Hagi/ Component part 1-1)

Preconditions: Visitor numbers: 154,609 (in 2015), 166,316 (in 2016)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor control ➢ Surveys of visitor numbers and current state A guide group enlisted by Hagi City for everyday control keeps track of visitor numbers, and investigates whether there are adverse impacts on the component part from visitors, such as graffiti or damage to the ground surface. Component part protection measures ➢ Installing fence around reverberatory furnace Fence was installed to prevent visitors from directly touching the reverberatory furnace. Conservation and management measures ➢ Assignment of administrator/guides Daily administrator and guide duties are performed by a guide group in the city.	Visitor control ➢ Indicating tour routes There is no tour route indication from the parking area to the reverberatory furnace. Conservation and management measures ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years.	Visitor control ➢ Setting of tour routes A tour route from the parking area to the reverberatory furnace will be set and visitors will be guided to the site. Conservation and management measures ➢ Educating new guides through regular training With the aim of developing new administrator/guides of diverse ages, periodic training will be offered, including lectures on the Sites of Japan's Meiji Industrial Revolution and the Hagi Reverberatory Furnace, and observation of component parts in other Areas.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Visitor control ➢ Surveys of visitor numbers and current state Surveys of visitor behavior observation, concurrent visitor numbers and time spent at the site, and surveys of visitor understanding and satisfaction are conducted periodically. Establishment of visitor center A World Heritage Visitor Center was opened March 4, 2017 as the central facility for guidance. Direction by guides ➢ Assignment of administrator/guides Daily administrator and guide duties are performed by a guide group in the city. Installation of explanatory boards and information boards, etc. ➢ World Heritage Plaque installation A World Heritage Plaque was installed at the entrance. ➢ Pamphlet and application provision A guide map to component parts in the Area 1 Hagi has been issued, and a mobile device application is provided. Installation of utility facilities ➢ Provision of new pedestrian slope without stairs A new slope was provided for the sake of visitors who have difficulty climbing stairs. ➢ Parking area and toilet provision A parking area for passenger cars and buses, as well as toilets, were provided in front of the Hagi Reverberatory Furnace. Wide-area guidance ➢ Indicating the site on road signs Road signs giving directions to the site have been installed at major intersections in Hagi.	Direction by guides ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. ➢ Raising guide skills Visitors have come to want explanations of the role of each component part in the Sites of Japan's Meiji Industrial Revolution, and its connection to component parts in other Areas. Training sessions on the Sites of Japan's Meiji Industrial Revolution were given following inscription on the World Heritage List, but the guides themselves have not yet reached the level of being able to provide explanations to visitors based on sufficient knowledge. Installation of explanatory boards and information boards, etc. ➢ Inadequate contents of explanatory boards Although explanatory boards have been installed, they do not explain the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution or the role of the Hagi Reverberatory Furnace. Installation of utility facilities ➢ Pedestrian safety measures in parking area Pedestrian walkways are not clearly indicated in the parking area. Wide-area guidance ➢ Tie-in with Ebisugahana Shipyard There is no explanation of the nearby Ebisugahana Shipyard or indication of the route to that site.	Direction by guides ➢ Regular guide training Periodic training will be offered, including lectures on the Sites of Japan's Meiji Industrial Revolution and the Hagi Reverberatory Furnace, and observation of component part s in other Areas, aimed at developing new guides and raising guide skills by having them acquire the level of knowledge required for guide work. Installation of explanatory boards and information boards, etc. ➢ Provision of explanatory boards Explanatory boards will be installed that provide information about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, the role of the 23 component parts, the process of historical changes and developments of the Hagi Reverberatory Furnace, and the industrial systems of the time. Installation of utility facilities ➢ Pedestrian safety measures in parking area Pedestrian walkways will be clearly set in the parking area. Wide-area guidance ➢ Tie-in with Ebisugahana Shipyard A view of Ebisugahana Shipyard from the Hagi Reverberatory Furnace site will be obtained, and explanatory boads will be installed regarding the Ebisugahana Shipyard.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-1

Current state, issues and directionality in relation to visitor management at Ebisugahana Shipyard (Area 1 Hagi/ Component part 1-2)

Preconditions: Visitor numbers: 56,204 (in 2015), 55,639 (in 2016)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor control ➢ Surveys of visitor numbers and current state A guide group enlisted by Hagi City for everyday control keeps track of visitor numbers, and investigates whether there are adverse impacts on the component part from visitors, such as graffiti or damage to the ground surface. Conservation and management measures ➢ Assignment of administrator/guides Daily administrator and guide duties are performed by a guide group in the city.	Conservation and management measures ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. Component part protection measures ➢ Concerns of damage from falling rocks, etc. Falling rocks or inflow of earth due to landsides in the nearby mountain forests could damage the component part or harm visitors.	Conservation and management measures ➢ Educating new guides through regular training With the aim of developing new administrator/guides of diverse ages, periodic training will be offered, including lectures about the Sites of Japan's Meiji Industrial Revolution and the Ebisugahana Shipyard and observation of component parts in other Areas. Component part protection measures ➢ Falling rock preventive measures Facilities will be installed to prevent falling rock or landslides in the nearby mountain forests from impacting the component part, for protection of the component part, and for ensuring safety of visitors.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Visitor control ➢ Surveys of visitor numbers and current state Surveys of visitor behavior observation, concurrent visitor numbers, and time spent at the site, and surveys of visitor understanding and satisfaction are conducted periodically. Establishment of visitor center A World Heritage Visitor Center was opened March 4, 2017 as the central facility for guidance. Direction by guides ➢ Assignment of administrator/guides Daily administrator and guides duties are performed by a guide group in the city. Installation of explanatory boards and information boards, etc. ➢ World Heritage Plaque installation A World Heritage Plaque was installed in front of the seawall. ➢ Pamphlet and application provision A guide map to component parts in the Hagi Area has been issued, and a mobile device application is provided. Installation of utility facilities ➢ Temporary installation of explanatory boards and toilets Explanatory boards, tour routes, and toilets have been temporarily provided. Wide-area guidance ➢ Indicating the site on road signs Road signs giving directions to the site have been installed at major intersections in the city.	Conservation and management structure ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. ➢ Raising guide skills Visitors have come to want explanations of the role of component part in the Sites of Japan's Meiji Industrial Revolution, and its connection to component parts in other Area. Training sessions on the Sites of Japan's Meiji Industrial Revolution were given following inscription on the World Heritage List, but the guides themselves have not yet reached the level of being able to provide explanations to visitors based on sufficient knowledge. Installation of explanatory boards and information boards, etc. ➢ Inadequate contents of explanatory boards Although temporary explanatory boards have been installed, they do not include explanations of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution or the role of the Ebisugahana Shipyard. Permanent installation of explanatory boards is necessary. Installation of utility facilities ➢ Lack of parking space A parking area for visitors has not yet been opened. ➢ Permanent installation of tour routes and toilets Permanent installation of tour routes and toilets is necessary. Wide-area guidance ➢ Tie-in with Hagi Reverberatory Furnace The shipyard gets fewer visitors than the Hagi Reverberatory Furnace, making it necessary to guide visitors from the Hagi Reverberatory Furnace to the Ebisugahana Shipyard. Safety measures ➢ Concerns of damage from falling rocks, etc. [as noted above] Falling rocks or inflow of earth due to landsides in the nearby mountain forests could damage the component part or harm visitors.	Conservation and management measures ➢ Educating new guides through regular training Periodic training will be offered, including lectures on the Sites of Japan's Meiji Industrial Revolution and the Ebisugahana Shipyard, and observation of component parts in other Areas, aimed at developing new administrator/guides of diverse age by having them acquire the level of knowledge required for guide work. Installation of explanatory boards and information boards, etc. ➢ Installation of permanent explanatory boards Permanent explanatory boards will be installed that provide information about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, the role of the 23 component parts, the process of historical changes and developments of the Ebisugahana Shipyard, and the industrial systems of the time. Installation of utility facilities ➢ Provision of parking area After selecting a location in consultation with local residents, a parking area will be provided. ➢ Tour route installation Tour routes will be set aimed at promoting understanding and improving ease of visiting around. ➢ Permanent toilet installation Toilets of the optimal number and types, accounting for the number of visitors expected, will be permanently installed. Wide-area guidance ➢ Strengthening tie-in with Hagi Reverberatory Furnace A route will be established from the Hagi Reverberatory Furnace to Ebisugahana Shipyard, and visitors will be directed to the Ebisugahana Shipyard. Safety measures ➢ Falling rock preventive measures Facilities will be installed to prevent falling rock or landslides in the nearby mountain forests from impacting the component part, for protection of the component part, and for ensuring safety of visitors.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Current state, issues and directionality in relation to visitor management at Ohitayama Tatara Iron Works (Area 1 Hagi/ Component part 1-3)

Preconditions: Visitor numbers: 14,869 (in 2015), 10,028 (in 2016)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor control ➢ Surveys of visitor numbers and current state A guide group enlisted by Hagi City for everyday control keeps track of visitor numbers, and investigates whether there are adverse impacts on the component part from visitors, such as graffiti or damage to the ground surface. Component part protection measures ➢ Covering with protective earth layer to protect underground archaeological remains Conservation and management measures ➢ Assignment of administrator/guides Daily administrator and guide duties are performed by a guide group in the city.	Component part protection measures ➢ Impact on underground archaeological remains from protective earth layer runoff There are concerns that runoff from the protective earth layer due to rainfall, etc. may impact the underground archaeological remains. ➢ Ultraviolet rays and visitor pressure on exposed remains In addition to natural deterioration of exposed remains from ultraviolet rays, etc., the surface of exposed stones is deteriorating from being walked on, and stone structure looseness is seen. Conservation and management measures ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years.	Component part protection measures ➢ Maintaining of earth layer cover on surface of remains The earth layer cover on top of the exposed remains will be fortified and hardened. ➢ Repair of exposed remains After a test run, the substrate will be strengthened using preservation science methods. ➢ Tour route Installation Tour routes will be installed to reduce the impact on the exposed remains from being walked on by visitors, and to promote understanding of the smelting processes. Conservation and management measures ➢ Regular guide training Periodic training will be offered, including lectures on the Sites of Japan's Meiji Industrial Revolution and the Ohitayama Tatara Iron Works, and observation of component parts in other Areas, aimed at developing new administrator/guides of diverse ages.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Visitor control ➢ Surveys of visitor numbers and current state Surveys of visitor behavior observation, concurrent visitor levels and time spent at the site, and surveys of visitor understanding and satisfaction are conducted periodically. Establishment of visitor center ➢ A World Heritage Visitor Center was opened March 4, 2017 as the central facility for guidance. Direction by guides ➢ Assignment of administrator/guides [as noted above] Daily administrator and guide duties are performed by a guide group in the city. Installation of explanatory boards and information boards, etc. ➢ World Heritage Plaque installation A World Heritage Plaque was installed at the entrance. ➢ Pamphlet and application provision A guide map to component parts in the Area1 Hagi has been issued, and a mobile device application is provided. Installation of utility facilities ➢ Installation of exhibit and rest facilities, toilets, and parking area Explanations using panels, videos, and the like, a rest area, toilets, and parking area for passenger cars and microbuses have been provided in the Area. Wide-area guidance ➢ Indicating the site on road signs Road signs giving directions to the site have been installed at major intersections in Hagi. ➢ Service for transferring from large bus to microbuses Large buses cannot go all the way to the component part because of the narrow approach road. A service is therefore provided for transferring to two microbuses at the nearest roadside station.	Direction by guides ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. ➢ Raising guide skills Visitors have come to want explanations of the role of each component part in the Sites of Japan's Meiji Industrial Revolution, and its connection to component parts in other Areas. Training sessions on the Sites of Japan's Meiji Industrial Revolution were given following inscription on the World Heritage List, but the guides themselves have not yet reached the level of being able to provide explanations to visitors based on sufficient knowledge. Installation of explanatory boards and information boards, etc. ➢ Indicating tour routes There is no tour route that traces the smelting processes.	Direction by guides ➢ Regular guide training Periodic training will be offered including lectures on the Sites of Japan's Meiji Industrial Revolution and the Ohitayama Tatara Iron Works, and observation of component parts in other Areas, aimed at developing new guides and raising guide skills by having them acquire the level of knowledge required for guide work. Installation of explanatory boards and information boards, etc. ➢ Tour route installation [as noted above] Tour routes will be installed to reduce the impact on the exposed remains from being walked on by visitors, and to promote understanding of the smelting processes by setting routes that trace those processes.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-3

Current state, issues and directionality in relation to visitor management at Hagi Castle Town (Area 1 Hagi/ Component part 1-4)

Preconditions: Visitor numbers: Ruins of the Castle 81,920 (in 2015), 57,693 (in 2016); District of the Upper Class Samurai 8,481 (in 2015), 6,150 (in 2016); District of the Merchant Class 61,579 (in 2015),42,935 (in 2016)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor control ➢ Surveys of visitor numbers and current state A guide group enlisted by Hagi City for everyday control keeps track of visitor numbers, and investigates whether there are adverse impacts on the component part from visitors, such as graffiti or damage to the ground surface. Conservation and management measures ➢ Assignment of administrator/guides at main buildings, etc. Daily administrator and guide duties at main buildings in the Hagi Castle Town are performed by a guide group in the city.	Conservation and management measures ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years.	Conservation and management measures ➢ Educating new guides through regular training Periodic training will be offered including lectures on the Sites of Japan's Meiji Industrial Revolution and the Hagi Castle Town, and observation of component parts in other Areas, aimed at developing new administrator/guides of diverse ages.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Visitor control ➢ Surveys of visitor numbers and current state [as noted above] Surveys of visitor behavior observation, concurrent visitor numbers and time spent at the site, and surveys of visitor understanding and satisfaction are conducted periodically. Establishment of visitor center A World Heritage Visitor Center was opened March 4, 2017 as the central facility for guidance. ➢ Positioning Hagi Museum as a core facility for information dissemination, investigation, and research The Hagi Museum located in Hagi Castle Town is positioned as a core facility for information dissemination and for investigation and research on Hagi Castle Town, where explanations including the process of historical changes and developments of the Hagi Castle Town take place. Direction by guides ➢ Assignment of administrator/guides at main buildings, etc. Daily administrator and guide duties at main buildings in the Hagi Castle Town are performed by a guide group in the city. ➢ Assignment of tour guides Guides are assigned to take people around and explain each of the facilities in the Hagi Castle Town. Installation of explanatory boards and information boards, etc. ➢ World Heritage Plaque installation A World Heritage Plaque was installed in the District of Upper Class Samurai. ➢ Pamphlet and application provision A guide map to component parts in the Area1 Hagi has been issued, and a mobile device application is provided. Installation of utility facilities ➢ Parking area and toilet provision Multiple parking areas and toilets are provided in and around the Hagi Castle Town. Wide-area guidance ➢ Indicating the site on road signs Road signs giving directions to the site have been installed at major intersections in the city.	Conservation and management measures ➢ Decline in administrator/guides Nearly all the administrator/guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. ➢ Training and obtaining tour guides Nearly all the tour guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. Installation of explanatory boards and information boards, etc. ➢ Setting of recommended tour routes Recommended tour routes that would aid in understanding the structures of early modern feudal society represented by the Hagi Castle Town have not been set.	Conservation and management measures ➢ Regular guide training [as noted above] Periodic training will be offered including lectures on the Sites of Japan's Meiji Industrial Revolution and the Hagi Castle Town, and observation of component parts in other Areas, aimed at developing new guides and raising guide skills by having them acquire the level of knowledge required for guide work. Installation of explanatory boards and information boards, etc. ➢ Setting of recommended tour routes Recommended tour routes will be set enabling easily understanding of the structures of early modern feudal society represented by the Hagi Castle Town, and will be indicated to visitors.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-4

Current state, issues and directionality in relation to visitor management at Shokasonjuku Academy (Area 1 Hagi/ Component part 1-5)

Preconditions: Visitor numbers: 817,257 (in 2015), 516,084 (in 2016)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor control ➢ Surveys of visitor members and current state Everyday management is performed by the Shoin Shrine (religious corporation,) which keeps track of visitor numbers daily, and investigates whether there are adverse impacts on the component part from visitors, such as graffiti or damage to the ground surface. Component part protection measures ➢ Installing fence around building Fence has been installed around the building to control entry inside.	Visitor control ➢ When there are large numbers of visitors, sometimes they overflow the approach to the shrine, which is one of the flow lines. ➢ Physical impact/harm to component part by visitors There are concerns about graffiti, arson, or other deliberate damage. Component part protection measures ➢ Building deterioration over time Subsidence and tilting of the roof portion of the building, changes in inclination, etc. of walls and columns, and deterioration of materials (columns, beams, fittings, etc.) are to be seen. ➢ Soil runoff and poor drainage around the building Soil runoff from rainfall, and poor drainage due to clogging of the drainage facilities are also problems.	Visitor control ➢ Devising visitor control strategies ➢ Dealing with crowding Flow lines for visitors to Shokasonjuku Academy and for worshippers at Shoin Shrine, respectively, will be made clear to ease crowding and promote understanding of Shokasonjuku Academy. Component part protection measures ➢ Provision of fire prevention and security systems Automatic fire alarms and other equipment will be repaired and surveillance cameras will be installed.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Visitor control ➢ Surveys of visitor numbers and current state [as noted above] Surveys of visitor behavior observation, concurrent visitor numbers and time spent at the site, and surveys of visitor understanding and satisfaction are conducted periodically. Provision of visitor center A World Heritage Visitor Center was opened March 4th, 2017 as the central facility for guidance. ➢ Opening of Shoin Memorial Museum "Shiseikan" Articles that belonged to Shoin Yoshida and his calligraphic works are displayed in Shiseikan, a museum dedicated to Shoin Yoshida and Shokasonjuku Academy. Direction by guides ➢ Assignment of guides Guide services at the site are provided by a guide group in the city. Installation of explanatory boards and information boards, etc. ➢ World Heritage Plaque installation A World Heritage Plaque was installed along the approach to the shrine. ➢ Pamphlet and application provision A guide map to component parts in the Area1 Hagi has been issued, and a mobile device application is provided. Installation of utility facilities ➢ Provision of parking areas Parking areas are provided inside and adjacent to the Shoin Shrine compound. Around New Year's holidays and during tourist season, when there are many visitors, temporary parking areas are provided and personnel are stationed to direct vehicles there. ➢ Toilet provision Public toilets are provided in the parking areas inside and adjacent to the Shoin Shrine compound. Wide-area guidance ➢ Indicating the site on road signs Road signs giving directions to the site have been installed at major intersections in the city.	Direction by guides ➢ Decline in number of guides Nearly all the guides are retired persons in their 60s and 70s, and there are concerns that their number will decline in coming years. ➢ Raising guide skills Visitors have come to want explanations of the role of each component part in the overall Sites of Japan's Meiji Industrial Revolution, and its connection to component parts in other Areas. Training sessions on the Sites of Japan's Meiji Industrial Revolution were held following inscription on the World Heritage List, but the guides themselves have not yet reached the level of being able to provide explanations to visitors based on sufficient knowledge. Installation of explanatory boards and information boards, etc. ➢ Inadequate contents of explanatory boards Although explanatory boards have been installed, they are showing deterioration and do not include explanations of the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution or the role of Shokasonjuku Academy. Wide-area guidance ➢ Guidance to related historic sites in the vicinity Various historic sites are located around Shokasonjuku Academy, but there are no signs directing people to them.	Direction by guides ➢ Regular guide training Periodic training will be offered including lectures on the Sites of Japan's Meiji Industrial Revolution and Shokasonjuku Academy, and observation of component parts in other Areas, aimed at developing new guides and raising guide skills by having them acquire the level of knowledge required for guide work. Installation of explanatory boards and information boards, etc. ➢ Installation of explanatory boards Explanatory boards will be installed that provide information about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution, the role the 23 component parts, and the process of historical changes and developments of the Shokasonjuku Academy, etc. Wide-area guidance ➢ Guidance directing people to related historic sites in the vicinity Tour routes linking to the surrounding historic sites will be introduced to visitors.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-5

Current state, issues and directionality in relation to visitor management at Shuseikan (Area 2 Kagoshima/ Component part 2-1)

Preconditions: Visitor numbers (in FY 2015 ⇨ FY 2016): Shuseikan Machinery Factory: 347,866 ⇨ 283,548; Sengan-en: 485,214 ⇨ 419,185; Former Kagoshima Foreign Engineer's Residence: 21,996 ⇨ 13,986

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ To determine the impact of visitors on the component part, surveys including observation of visitor behavior and time spent at the site are being conducted for three years starting from FY 2015. ➢ Based on the results of aseismic diagnosis conducted in FY 2007, the number of people allowed at one time inside the Former Kagoshima Foreign Engineer's Residence, which is a wooden structure, will be limited to 60. The number allowed into Iso Residence at Sengan-en at one time will be limited to 50. ➢ Parties concerned who are members of the Shuseikan Conservation Council have collaborated in creating an organizational structure for proper conservation and management of the component part, in accordance with the Conservation Management Plan (CMP). ➢ The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution conducts workshops for staff of municipalities concerning conservation and management approaches and other matters.	➢ Management of the component part is currently being carried out effectively by its owners and managers, and no adverse impacts on the component part are to be seen. ➢ In addition to owners and managers of the component part, steady conservation efforts must be made by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. ➢ A mechanism is needed by which those involved in management and administration of the component part can receive guidance from experts, enabling them to raise their expertise in their respective fields.	➢ For each component part, the possibility and necessity of setting visitor thresholds will be examined, based on the results of ongoing quantitative and qualitative surveys of visitors. ➢ The constituent elements included in the component part, the settings and landscape will be maintained in favorable condition, not only by owners and managers of the component part, but also by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. At the same time, disaster prevention and security measures will be taken, and in case of damage to a constituent element, restoration will be made promptly. ➢ A mechanism will be created by which those involved in management and administration of the component part, including owners and managers, can receive guidance from experts, enabling them to acquire the specialized knowledge and capabilities seen as necessary in their respective fields.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	➢ Guidance is provided to visitors by site owners, etc., in the Shuseikan Machinery Factory (current Shokoshuseikan Museum), the Shokoshuseikan Annex, and the Former Foreign Engineer's Residence. ➢ Under project planning carried out by the Partnership Council for Modern Industrial Heritage Sites in Kagoshima, explanatory boards and information boards were given a design standard to the Shuseikan Project. Kagoshima City and other component part owners then replaced or newly installed explanatory boards and information boards with this standard design during FYs 2014 to 2015. ➢ Visitor numbers are kept track of at the reception desks for Shokoshuseikan, Sengan-en, and the Former Foreign Engineer's Residence; but there are also remains related to the industrial systems of the Shuseikan Project that overlap paid-entry and free zones. ➢ On weekends, Kagoshima volunteer guides provide explanations and guidance to visitors in the Former Foreign Engineer's Residence, Terayama Charcoal Kiln, and Sekiyoshi Sluice Gate of Yoshino Leat. ➢ The owners and managers provide parking areas for passenger cars and large buses. ➢ Road signs giving directions have been installed on major roads for ease of travel by visitors around the Kagoshima Area.	➢ While it is recognized that certain items are lacking in the exhibit explanations mostly at the Shokoshuseikan and Former Foreign Engineer's Residence, it is unlikely that this can be remedied with the exhibit space available in the current facilities. Moreover, since the component part is located on a narrow strip of land, if new guidance facilities were to be built, selecting candidate places outside the area designated as National Historic Sites would be difficult. ➢ As progress is made in carrying out the work prescribed in the Conservation Work Programme and Implementation Programme, such as opening to the public elements not yet open, and exposing underground archaeological remains, the contents of existing information and explanatory boards need to be revised, and new ones need to be installed as well. ➢ The remains of reverberatory furnace, blast furnace, and other remains related to the industrial systems of the Shuseikan Project overlap paid-entry and free zones. For this reason, visitors cannot move freely along the tour route. ➢ Volunteer guides and facility staff need to continue with providing guidance and explanations, seeking to increase understanding by visitors. ➢ Parking spaces are currently provided where the cannon-boring mill and cut glass factory are located, and when displays have been installed above the underground archaeological remains, it results in less parking space for visitors.	➢ New guidance facilities will be installed on the grounds of Shuseikan to fill out the currently inadequate information giving an overview of the Sites of Japan's Meiji Industrial Revolution and of the overall Shuseikan Project. The scope of the facilities will be kept to a minimum, and the design, form, and layout will be chosen to avoid adverse impacts on the remains and landscape as a National Place of Scenic Beauty and Historic Site. ➢ In case future document surveys or excavation surveys turn up new information clarifying the industrial systems of the Shuseikan Project, the information and explanatory boards will be updated or newly added at the time displays are installed on the surface above the underground archaeological remains, such as those of the cannon-boring mill or cut glass factory. ➢ Guidance boards and tour routes will be installed in line with future excavation surveys and progress in displaying the remains, to enable smooth tours tracing the cannon manufacturing process. ➢ Guide training will be offered periodically to improve guide skills so as to help increase visitor understanding. ➢ If displays are installed on the surface above the cannon-boring and cut glass factory remains, under the current parking space, alternative parking space will be provided.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-6

Current state, issues and directionality in relation to visitor management at Terayama Charcoal Kiln (Area 2 Kagoshima/ Component part 2-2)

Preconditions: Visitor numbers FY 2015→FY 2016: 5,148 (858/mth)→3,658 (406/mth)
(Note: FY 2015 comprise only weekends/ public holidays in July-November and March, FY 2016 comprise only weekends/ public holidays in April-November and March)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ To determine the impact of visitors on the component part, surveys including observation of visitor behavior and time spent at the site are being conducted for three years starting from FY 2015 ➢ Parties concerned who are members of the Shuseikan Conservation Council have collaborated in creating an organizational structure for proper conservation and management of the component part, in accordance with the Conservation Management Plan (CMP).. ➢ The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution conducts workshops for staff of municipalities concerning conservation and management approaches and other matters.	➢ Management of the component part is currently being carried out effectively by its owners and managers, and no adverse impacts on the component part are to be seen. ➢ In addition to owners and managers of the component part, steady conservation efforts must be made by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. ➢ A mechanism is needed by which those involved in management and administration of the component part can receive guidance from experts, enabling them to raise their expertise in their respective fields.	➢ For each component part, visitor control strategies will be devised based on the results of ongoing quantitative and qualitative surveys of visitors. ➢ The constituent elements of the component part, the settings and landscape will be maintained in favorable condition, not only by owners and managers of the component part, but also by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. At the same time, disaster prevention and security measures will be taken, and in case of damage to a constituent element, restoration will be made promptly. ➢ A mechanism will be created by which those involved in management and administration of the component part, including owners and managers, can receive guidance from experts, enabling them to acquire the specialized knowledge and capabilities seen as necessary in their respective fields.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	➢ Guidance is provided to visitors by the land owners, etc., in the Shuseikan machinery Factory (current Shokoshuseikan Museun), the Shokoshuseikan Annex, and the Former Foreign Engineer's Residence. ➢ Under project planning carried out by the Partnership Council for Modern Industrial Heritage Sites in Kagoshima, explanatory boards and information boards were given a design standard to the Shuseikan Project. Kagoshima City and other component part owners then replaced or newly installed explanatory boards and information boards with this standard design during FYs 2014 to 2015. ➢ The nature trail passing through the component parts of Terayama Charcoal Kiln and the center of the buffer zone has been set up as a tour route. ➢ On weekends, Kagoshima Volunteer Guides provide explanations and guidance to visitors in the Former Foreign Engineer's Residence, Terayama Charcoal Kiln, and Sekiyoshi Sluice Gate of Yoshino Leat. ➢ Visitors use the parking area and toilets at Terayama Fureai Park, around 800 meters to the south of the component part, but this is slightly too far for the elderly people and others who have difficulty in walking. ➢ Road signs giving directions have been installed on major roads for ease of travel by visitors around the Area1 Kagoshima.	➢ Only the Former Foreign Engineer's Residence has exhibits adequately explaining the role of the Sekiyoshi Sluice Gate of Yoshino Leat as a component part of the Sites of Japan's Meiji Industrial Revolution. ➢ As progress is made in carrying out the work prescribed in the Conservation Work Programme and Implementation Programme, such as clarifing the value of component part based on the results of surveys regarding relevant facilities of Shuseikan Project, the contents of information and explanatory boards need to be revised or added. ➢ The nature trail used by visitors is steep in places, and rainwater in the ditches next to it sometimes overflows on to the trail. ➢ Volunteer guides need to continue providing guidance and explanations to increase understanding by visitors. ➢ Since the current parking areas and toilets are temporary ones, local groups have asked Kagoshima City to provide new ones.	➢ New guidance facilities will be installed on the grounds of Shuseikan to fill out the currently inadequate information giving an overview of the Sites of Japan's Meiji Industrial Revolution and of the overall Shuseikan Project. ➢ In case future document surveys or excavation surveys clarify the series of operation at charcoal kiln and scales and layouts of its related facilities, the information and explanatory boards will be updated or newly added when that information is displayed on the ground surface. ➢ The nature trail used as a tour route will undergo surface improvement. In addition, the tour route itself will be revised along with progress in excavation surveys and displays on remains. ➢ Guidance and explanations by volunteer guides and others will be continued, seeking to increase understanding by visitors. ➢ Considering visitor trends, a parking area will be installed in a place closer to the component part than the present location.

A state will be created providing **visitor (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-7

Current state, issues and directionality in relation to visitor management at Sekiyoshi Sluice Gate of Yoshino Leat (Area 2 Kagoshima/ Component part 2-3)

Preconditions: Visitor numbers (FY 2015 ⇨ FY 2016): 6,955 (1,159/month) ⇨ 5,765 (641/month)
(Note: FY 2015 comprise only weekends/holidays in July to November and March, and FY 2016 comprise only weekends/holidays in April to November and March.)

Item	(a) Current State (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ To determine the impact of visitors on the component part, surveys including observation of visitor behavior and time spent at the site are being conducted for three years starting from FY 2015. ➢ Parties concerned who are members of the Shuseikan Conservation Council have collaborated in creating an organizational structure for proper conservation and management of the component part, in accordance with the Conservation Management Plan (CMP). ➢ The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution conducts workshops for staff of municipalities concerning conservation and management approaches and other matters.	➢ Management of the component part is currently being carried out effectively by its owners and managers, and no adverse impacts on the component part are to be seen. ➢ In addition to owners and managers of the component part, steady conservation efforts must be made by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. ➢ A mechanism is needed by which those involved in management and administration of the component part can receive guidance from experts, enabling them to raise their expertise in their respective fields.	➢ For each component part, visitor control strategies will be devised based on the results of ongoing quantitative and qualitative surveys of visitors. ➢ The constituent elements included in the component part and the settings and landscape will be maintained in favorable condition, not only by owners and managers of the component part, but also by the Government of Japan, Kagoshima Prefectural Government, local neighborhood associations, NPOs, and other concerned institutions and groups, in mutual cooperation through the Shuseikan Conservation Council and other entities. At the same time, disaster prevention and security measures will be taken, and in case of damage to a constituent element, restoration will be made promptly. ➢ A mechanism will be created by which those involved in management and administration of the component part, including owners and managers, can receive guidance from experts, enabling them to acquire the specialized knowledge and capabilities seen as necessary in their respective fields.
Establishing the necessary facilities/ equipment/operational system for the **component part (A)** and **surrounding environment (B)**	➢ Guidance is provided to visitors by land owners, etc., in the Shuseikan Machinery Factory (current Shokoshuseikan), the Shokoshuseikan Annex, and the Former Foreign Engineer's Residence. ➢ Under project planning carried out by the Partnership Council for Modern Industrial Heritage Sites in Kagoshima, explanatory boards and information boards were given a design standard to the Shuseikan Project. Kagoshima City and other component part owners then replaced or newly installed explanatory boards and information boards with this standard design during FYs 2014 to 2015. ➢ An irrigation water administrative passageway is set as the tour route from the parking areas and bus stop to the component part. ➢ On weekends, Kagoshima volunteer guides provide explanations and guidance to visitors in the Former Foreign Engineer's Residence, Terayama Charcoal Kiln, and Sekiyoshi Sluice Gate of Yoshino Leat. ➢ Both the parking areas and toilets are temporary facilities. ➢ Road signs giving directions have been installed on major roads for ease of travel by visitors around the Kagoshima Area.	➢ Only the Former Foreign Engineer's Residence has exhibits adequately explaining the role of the Sekiyoshi Sluice Gate of Yoshino Leat as a component part of the Sites of Japan's Meiji Industrial Revolution. ➢ As progress is made in carrying out the work prescribed in the Conservation Work Programme and Implementation Programme, such as clarifying damming methods, the contents of information and explanatory boards need to be revised or added. ➢ Temporary guardrails are installed along the irrigation water administrative passageway used as a tour route, to prevent falls. ➢ Volunteer guides need to continue providing guidance and explanations to increase understanding by visitors. ➢ Since the current parking areas and toilets are temporary ones, local groups have asked Kagoshima City to provide new ones.	➢ New guidance facilities will be installed on the grounds of Shuseikan to fill out the currently inadequate information giving an overview of the Sites of Japan's Meiji Industrial Revolution and of the overall Shuseikan Project. ➢ In case future document surveys and excavation surveys clarify new information about the original scale and layout, etc. of the sluice gate and related facilities, the information and explanatory boards will be updated or newly added when that information is displayed on the ground surface. ➢ The nature trail used as a tour route will undergo surface improvement. In addition, the tour route itself will be revised along with progress in excavation surveys and displays on remains. ➢ Guidance and explanations by volunteer guides and others will be continued, seeking to increase understanding by visitors. ➢ Considering visitor trends, a parking area will be installed in a place closer to the component part than the present location.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-8

Current state, issues and directionality in relation to visitor management at the Nirayama Reverberatory Furnaces (Area 3 Nirayama/ Component part 3-1)

Preconditions: The number of visitors increased to 726,114 in FY 2015, the year of inscription, which was around 6.8 times up on the previous fiscal year. While this dropped approximately 40 percent to 426,783 in FY 2016, it remains around four times higher than the year before inscription.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ While the number of visitors has soared since World Heritage inscription, no physical impact (damage) has been found. ➢ Based on the conservation and management system noted in the Conservation Management Plan (CMP) for Nirayama Reverberatory Furnaces, conservation and management is being undertaken in partnership with local residents, etc., checked and directed by the Nirayama Conservation Council and other related institutions. ➢ Two surveillance cameras have been set up within the designated area of National Historical Site. Visitor Center staff monitor these constantly and go out to check the actual site where necessary. ➢ Arrangements are in place for local residents and other on-site guides to engage in guiding activities and also patrol within the component part and its surroundings, immediately contacting Izunokuni City if an issue is discovered.	➢ Ensuring steady and effective conservation and management will require collaboration with local residents, etc. ➢ Close coordination is needed amongst the divisions in charge of the various projects within municipal authorities, and the necessary personnel need to be secured. ➢ Systematic capacity building for human resources is needed to foster the capacity of all staff and related personnel with responsibility for routine management to ensure a consistent approach to that management and to promoting visitor understanding.	➢ To forestall a physical impact (damage) on the constituent elements of the component part contributing to the Outstanding Universal Value, collaboration with local residents, etc., will be pursued along with measures to develop conservation and management personnel, maintaining and strengthening conservation and management system. ➢ Based on analysis of visitor survey results, a visitor management strategy will be created in FY 2019 onward and visitor management undertaken accordingly.

Establishing the necessary facilities/
equipment/operational system for the **component part (A)** and **surrounding environment (B)**

Tour routes ➢ Visitor reception and management are handled by the guidance center opened in December 2016. A route has been set whereby visitors view the exhibits and videos at the center before going out into component part. ➢ A park was opened in the northeast of the component part in March 2017, enabling visitors to observe the whole river area. ➢ Visitor understanding of the component part has been improved by opening the guidance center and the park. Parking area ➢ A free, city-operated carpark has been completed on land adjoining the guidance center to the west. The carpark can take 151 cars and 12 large buses. A free, privately-operated carpark to the southeast of the Nirayama Reverberatory Furnaces has also been opened to visitors, and this can take 25 cars and 8 large buses. ➢ A survey of parked car numbers, etc., confirmed that there is sufficient year-round parking capacity. Even when visitors topped the previous record figure of 5,000/day, there were still sufficient carparks, and no traffic jams have occurred on surrounding roads. Visitor management strategy ➢ Surveys are currently underway on visitor understanding and satisfaction. ➢ Visitors arriving by cars are being encouraged via the website, etc., to use the recommended routes set up by the City to ensure smooth visitor flow and alleviate traffic jams on surrounding roads. ➢ Visitors are recommended to travel to the Nirayama Reverberatory Furnaces from the Ema Interchange of the Izu Chuo Expressway via a route that has no rail crossings for any of the lines within the area and which are sufficiently wide, and road signs have also been installed to direct traffic.	Tour routes ➢ Visitor routes need to be set in the component part and its surrounds for the purposes of proper visitor entry management and the promotion of visitor understanding of industrial systems related to cannon manufacturing. ➢ Exhibits within the guidance center and on-site guides, etc., need to be organically linked for the efficient provision of information to visitors. ➢ Visitors need to be encouraged to visit the park to the northeast of the furnaces. Parking area ➢ The carpark fill rate needs to be constantly checked through ongoing surveys on the number of parked cars and carpark crowding. When large-scale events are held, the necessary measures need to be taken, such as giving sufficient consideration beforehand to directing visitor cars in the appropriate direction. Visitor management strategy ➢ The results of not only surveys of the physical impact of visitors on the component part but also surveys on visitor understanding and satisfaction and carpark fill rates are needed to be analyzed, a visitor management strategy is needed to be designed for appropriate visitor management, and appropriate measures are needed to be designed based on that strategy.	Tour routes ➢ A visitor route will be established from the guidance center out through the component part, the northeast park, and the south tea fields observation deck for the purposes of proper visitor entry management and the promotion of visitor understanding of industrial systems related to cannon manufacturing. ➢ Existing exhibits and information and guidance facilities will be maintained, managed, improved, updated, with new facilities and exhibits added where necessary, to draw visitors smoothly down visitor routes and effectively promote their understanding of the component part. ➢ Guiding sign will be installed close to the entrance to the northeast park. Parking area ➢ Ongoing surveys will be made of the carpark fill rate. If survey results reveal a lack of parking capacity or the likelihood of this arising, steps will be taken such as running free shuttle buses and restricting tourist bus parking. Visitor management strategy ➢ A visitor management strategy will be created in FY 2019 onward based on analysis of visitor survey results, with visitor management conducted accordingly. ➢ The visitor management strategy will include (1) the extent of visitor impact on the component part; (2) the fill rates for carparks and utility facilities; and (3) indicators on understanding of the component part and the ease of getting around the Egawa residence and other related facilities in Izunokuni City. Appropriate improvement measures will be designed for (1) to (3). ➢ Izunokuni City will continue to encourage visitors arriving by tour bus or private car (most visitors) to come from the Ema Interchange of the Izu Chuo Expressway to ensure smooth visitor flow and alleviate traffic jams on surrounding roads.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again

Current state, issues and directionality in relation to visitor management at the Hashino Iron Mining and Smelting Site (Area 4 Kamaishi/ Component part 4-1)

Preconditions:

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ There is no particular sign of visitors having a negative impact on the component part.	➢ Visitor numbers are not having a physical impact on the component part.	➢ Monitoring will be conducted to ensure that there is no impact on remains or topography (annually)
Establishing the necessary facilities/ equipment/operational system for the **component part (A)** and **surrounding environment (B)**	➢ Outlines of the Sites of Japan's Meiji Industrial Revolution and of the Hashino Iron Mining and Smelting Site as a component part are explained via panels and videos. ➢ Information boards have been installed for the various blast furnace remains and office remains. ➢ A simple pamphlet (free) and a more detailed pamphlet (small charge) have been created to distribute to visitors. ➢ A volunteer guide is stationed full-time at the Information Center, and audio guide pens (multiple languages; small charge) are also available that provide a detailed explanation of the remains. ➢ The Hashino Iron Mining and Smelting Site Information Center was established in 2013. ➢ A carpark was built in 2013-14. ➢ A product booth was set up within the Information Center in 2016. ➢ Staff are deployed to direct traffic around the carpark during busy times such as events. ➢ A shuttle bus has been run between JR Kamaishi Station and the Hashino Iron Mining and Smelting Site since 2015. ➢ Temporary toilets have been installed near the main gate (the entrance to the component part).	➢ Impact on visitors: ▪ Impact on visitor safety: Frequency of bears appearance is increasing. ▪ Impact on visitor experience time: Because it takes a lot of time to get to the component part, visitors have less time to spend looking around. ▪ Impact on visitor understanding of value: Because only stonework and stonewalls remain at the site, it is difficult for visitors to understand the iron-making process. ➢ Lack of parking space: No issue at present ➢ No place within the site to buy food, drink, or souvenirs ➢ Few shuttle bus users ➢ Only temporary toilets in the immediate vicinity of the component part.	➢ Enhance explanation on the Sites of Japan's Meiji Industrial Revolution at the Hashino Iron Mining and Smelting Site Information Center ➢ Use digital contents that depicts the functions of remains within the component part to provide visual and audio information (AR, etc.) ➢ Examine whether to build sales facilities ➢ Advertise for product sellers ➢ Examine setting up permanent toilets (top priority is placed on ensuring that the septic tank and the well do not impact on the component part)

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-10

Current state, issues and directionality in relation to visitor management at the Mietsu Naval Dock (Area 5 Saga/ Component part 5-1)

Preconditions: Visitor numbers increased to 181,280 in FY 2015, up approximately 4.8 times on the previous year. While in FY 2016 this slipped around 30% on the previous year to 124,730, the level remains approximately 3.3 times higher than before inscription.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Component part preservation measures ➢ While the car parking area lies within the component part, this is not good in terms of preservation of underground archaeological remains and maintaining a good visual setting. Visitor management ➢ While the number of visitors has grown since inscription, this has not impacted negatively on the component part. ➢ The opening of the Ariake Sea Coastal Road is expected to boost visitor numbers.	Component part preservation measures ➢ The parking area needs to be moved outside the component part.	Component part preservation measures ➢ The parking area will be shifted to the north of the Tsunetami Sano Memorial Museum, which is adjacent to the northwestern side of the component part, ensuring that an appropriate number of parking spaces are available.

Establishing the necessary facilities/equipment/operational system
for the **component part (A)** and **surrounding environment (B)**

➢ Outside exhibit facilities
- These comprise (a) planar markers above the dry dock and other key remains to indicate their locations and scales; (b) full-size photo standing panels showing the dry dock at the time of the excavation survey; and (c) explanatory boards for the Mietsu Naval Dock as a whole and for each set of remains.

➢ Inside exhibit facilities
- The Mietsu Time Cruise (digital content using a large cylindrical monitor and 3D images) and the Mietsu Naval Dock information corner temporarily set up within the Tsunetami Sano Memorial Museum disseminate to visitors visually the Outstanding Universal Value of the World Heritage property and the positioning, etc., of the Mietsu Naval Dock in that.

➢ Guide program.
- Tsunetami Sano Memorial Museum staff and guides provide information and explanation on the museum and the component part

➢ Wide-area advertising
- Signboards with the Sites of Japan's Meiji Industrial Revolution logo have been placed at the expressway interchange and along major roads as wide-area advertising.

➢ Outside exhibit facilities
- The planar markers currently installed for underground archaeological remains do not provide enough concrete information, and it is difficult to convey the original appearance.
- There are no explanatory boards dealing with the surrounding scenery (farmland, rivers, and villages, etc.) or modern underground and above-ground (stone monuments, etc.) remains.
- Only names and simple explanations are given in English, and thought also needs to be given to providing information in multiple languages.
- The location of the remains and the scale and nature of underground archaeological remains need to be expressed in a viewer-friendly form.
- Visitors need to be alerted to the breakwater remains, which are above ground and can still be seen; the topography of the cove, the function of which has been continued since its days as fishermen's lodging to today's fishing port; and modern above-ground remains such as the stone monument, etc., and farmland, rivers, villages, and other landscape and functions continuing today in the surrounding area, using various means to provide explanations (the original appearance included).

➢ Inside exhibit facilities
- Exhibit facilities are not big enough, visitor flow lines are confused, and there is not enough exhibits and explanations that takes into consideration the wide range of the process of historical changes and developments. Some of the exhibits are not accurate, and could cause visitor misunderstanding.
- It will be important to clarify what needs to be disseminated to visitors, then install presentation facilities of an appropriate scale and in an appropriate location, and use both inside and outside exhibits to deepen visitor understanding.
- Active utilization needs to be made of various modes and methods so that visitors, town residents, and local residents can accurately understand the value of the remains and deepen their understanding.

➢ Guide program
- Guides have different levels of knowledge and customer skills, so more training opportunities need to be provided to boost guide quality and numbers.
- A space needs to be set up to which visitors and site operators can evacuate in times of emergency.

➢ Outside exhibit facilities
- Digital technologies will be used for sites that are difficult to present on-site.
- Exhibits and explanations will be provided that can be understood by anyone at any time.
- Accurate information will be provided on the dry dock's step-shaped wood and earth wall structure.

➢ Inside exhibit facilities
- Bearing in mind that because the component part is located within a river area, there are various constraints on on-site work for conservation, restoration, presentation and public utilization, inside exhibit facilities of an appropriate scale and environment will be installed so that inside and outside areas function as one synergetic exhibit facility.
- Visitor paths will be shaped to enable multiple visitors to understand the value of the Mietsu Naval Dock and envisage the work flow during the dock's operational phase. They will also be shaped in such a way that anyone—visitors, park users, fishing port users, the elderly, the disabled, etc.—can use the area safely and comfort.
- Accurate and specific explanations that can be understood by a range of visitors will be provided.

➢ Guide program
- Guide training sessions will be held regularly, boosting the quality of guides and involving new staff with the aim of conveying accurate and easily-understood information to visitors.
- An environment conducive to guiding activities will be created.

A state will be created providing **visitors (c)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Current state, issues and directionality in relation to visitor management at the Kosuge Slip Dock (Area 6 Nagasaki/ Component part 6-1)

Preconditions:

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ The exterior of the slip dock and the hauling hut are currently open to the public. ➢ Companies operate on the banks to the left and right of the slip dock within the component part, while the flat land at the top level of the left bank is used for the Kosuge Community Center and a monthly rental carpark, so from a land management perspective, these areas are basically not open to the public.	➢ While the scope of the area open to the public and the viewing route are not necessarily clear, visitors do not often go into the areas on the left and right banks where companies are operating. ➢ Because the site is unmanned at night, measures need to be taken to prevent crime and fire.	➢ A viewing course will be created, including a basic viewing route and signage explaining what visitors should look for.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Access route to the component part ➢ The Kosuge Slip Dock is located alongside National Road 499, which is also a public bus route, and visitors can access the component part immediately from the Kosuge-cho bus stop. There is no carpark in the vicinity, which makes it difficult to visit by car, so the Tourism Administration Divisions of Nagasaki City also recommend that people visit by bus. ➢ Signage to the Kosuge Slip Dock is installed at three places along National Road 499. Signage of the World Heritage property of "Sites of Japan's Meiji Industrial Revolution" has also been installed close to the sign for the Kosuge-cho bus stop. ➢ Signage has also been installed next to the road at the viewing point in the buffer zone. Guidance ➢ The related information facilities providing information on the Kosuge Slip Dock comprise the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Museum and the Former Mitsubishi No. 2 Dock House within the Glover Garden. ➢ Members of the local neighborhood association serve as volunteer guides on weekends and public holidays. ➢ Information is provided via Wi-Fi. ➢ Explanatory boards have been established in two places, as well as two stone sign posts indicating designation of National Historic Site. Safety measures ➢ Because there is only one entrance, visitors end up crossing roads used for vehicles and trucks, etc., for business activities. ➢ The access road and slip dock fences are around 50 years old and becoming dilapidated, posing a visitor safety issue.	Access route to the component part ➢ Most visitors come to the component part from the center of Nagasaki City in the northeast derection, so little thought has been given to approaches from the southwest derectio. ➢ The guiding signs for the visitors to component part and for private companies are installed at the same place, making it a little difficult for visitors to understand. Guidance ➢ The information facilities both have limited exhibits on the Kosuge Slip Dock, and are not connected effectively with on-site viewing or with guides. ➢ Basic information and explanations of facilities need to be installed to enable visitors coming on days when guides are not available to gain a basic understanding of the component part. ➢ The system for providing information to visitors needs to be enhanced using the existing Wi-Fi. ➢ Explanatory boards are inadequate for properly understanding the Kosuge Slip Dock. ➢ There are no explanations of the World Heritage property as a whole, the positioning of the Nagasaki Area or the Kosuge Slip Dock therein; the hauling hut, hauling machinery, the slip dock, stonework remains, and other constituent elements included in the component part; or the hauling mechanism. Safety measures ➢ The only safety measure comprises advising visitors and drivers to watch out for each other. ➢ Fences are rotting, and it is time they were replaced for both scenic and safety reasons.	Access route to the component part ➢ Appropriate signage will be installed to attract visitors to the component part from the southwest direction. Guidance. ➢ (1) An information corner will be set up in the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Museum as a related information facility to explain the Kosuge Slip Dock as part of World Heritage; (2) information on Kosuge Slip Dock will be supplemented with an explanation panel in the Former Mitsubishi No.2 Dock House within the Glover Garden; and (3) clear explanations of the Kosuge Slip Dock will be created and distributed to also serve as a guide around the site. These three measures will be pursued organically. Safety measures ➢ Signage will be installed reminding both visitors and company vehicles to watch out for each other. ➢ Dilapidated fencing will be updated.

A state will be created providing **visitors (c)** safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-12

Current state, issues and directionality in relation to visitor management at Takashima Coal Mine (Area 6 Nagasaki/ Component part 6-6)

Preconditions: Estimated visitor numbers: 355(in FY 2014); 1,957(in FY 2015); 2,933(in FY 2016)

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ Takashima Coal Mine is open to the public free of charge, and explanatory boards providing an outline of the remains, a diorama model, and sign post indicating designation of National Historic Site have been installed. ➢ Underground archaeological remains revealed through excavation surveys have all been buried and preserved underground. To appropriately convey to visitors the existence of the underground archaeological remains, actual-size photos of the remains have been baked into a ceramic plate installed on the ground immediately above them.	➢ Underground archaeological remains have all been buried with an earth layer of appropriate thickness, so visitors walking around the site have no negative impact on them.	➢ Visitor impact on the remains can be controlled by improving the Takashima Island loop bus service and restricting visitor tour routes at the site. ➢ Visitor routes will be established at the each stage of conservation, restoration presentation, and public utilization work to enable visitors to understand the appearance of the Takashima Coal Mine and the surrounding facilities when they were in operation, as well as the role that each played, while visitor access to places other than the place explanations of remains are given through exhibits, etc., will be restricted.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Access ➢ Visitors go by cruise liner (nine sailings/day) from Nagasaki Port to Takashima Port in around 30 minutes, then travel around 10 minutes to the site on the Takashima Island loop bus (17 runs/weekday, 18 runs/weekends and public holidays). Means of transport on the island comprise walking, the loop bus, rental cars, and rental cycles. Guidance ➢ Nagasaki City Takashima Coal Museum was established in 1988 as a facility for introducing the remains. In addition to photographs of the history of Takashima Island as it evolved in tandem with the mining operation, as well as machinery used in the mine, the museum exhibits a model of the original mineshafts, trucks and other heavy machinery, miners' clothing, etc. There is also a 1/100-scaled model of Hashima Island outside the museum. Viewing route ➢ Because the Takashima Coal Mine was in operation until 1986, there are many other mining remains, including mine shafts, around the island outside the Takashima Coal Mine. To disseminate the history of coal-mining on Takashima Island to later generations, materials will be exhibited in the museum and information and explanatory boards have been set up at the sites of the each remain around the island.	Access ➢ Museum visitors need to be actively directed to the Takashima Coal Mine, which is also on the island. Guidance ➢ Because none of the original facilities can be seen above ground other than the mining pit, steps need to be taken to effectively explain the deployment of the original facilities and the mining system. ➢ Because information on the value of Takashima Coal Mine provided at the museum is currently inadequate, exhibits need to be improved. Visitors' flow line ➢ Because the community wastewater treatment facility with no relation to mining has been built between Takashima Coal Mine and the former coal loading port to the north, it is impossible to convey visually to visitors the transport system as far as the port.	Guidance facility ➢ Nagasaki City Takashima Coal Museum will be positioned as a key information facility for the Takashima Coal Mine and exhibits and explanations on not only this mine but also other mines around Japan and the Sites of Japan's Meiji Industrial Revolution will be enhanced. ➢ Explanatory boards will be installed for underground archaeological remains discovered through excavation surveys, as well as explanatory boards indicating the locations of related remains as envisaged from old photographs, etc., and signage directing visitors to surrounding facilities. Explanatory boards will comprise simple explanations using old photographs; they will share the same design and scale, chosen to fit with the landscape; and they will use methods that also meet the needs of the physically disabled people and for foreigners. Visitors' flow line ➢ Explanatory boards on the remains of coal mining on Takashima Island and guide signage directing visitors to surrounding facilities will be installed, and a Takashima Coal Mine Guide Course will be created that links the museum to the related remains in historical order. ➢ Once the community wastewater treatment facility is no longer in use, the building will be re-purposed as a learning, viewing, and rest facility to help visitors understand the Takashima Coal Mine and the coal mining system there. A viewing route will also be established to draw visitors to the former coal loading port to the north. ➢ Signage will be painted on the surface of roads along with the viewing routes to guide visitors. ➢ A visitor carpark, bicycle parking, a rest facility, toilets, and benches will be installed on the land next to the Remains of Glover's Secondly Residence, which lies around 250 meters to the north of the component part.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-13

Current state, issues and directionality in relation to visitor management at Hashima Coal Mine (Area 6 Nagasaki/ Component part 6-7)

(Preconditions) Number of visitors landing: 191,000 (in FY 2014), 286,000 (in FY 2015), 265,000 (in FY 2016); Tourist boats docking at island (five companies, max. 10 boats/day)

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor management ➢ Visitors can use cruise boats run by five private companies to land on the island. Each boat takes 20-222 passengers, and each company runs two trips per day, while on each trip visitors spend up to one hour on the island. ➢ The Ordinance on Restriction of Access to Hashima Island prohibits access to any areas outside viewing facilities, so visitors landing on the island can only access the three viewing places set up by Nagasaki City (three viewing spaces and the viewing routes linking them). Conservation and management system ➢ The local fishing cooperative has been asked to handle routine inspections of the Hashima Coal Mine remains and report any natural damage or deterioration immediately to Nagasaki City.	Visitor management ➢ Ways must be found to provide information to visitors that do not require landing on the island, including times when rough weather prevents landings. Conservation and management system ➢ Hashima Coal Mine is basically an unattended facility.	Visitor management ➢ Cruise boat traffic to the island as a whole will be controlled through appropriate operation of the Restriction Ordinance so as to ensure an appropriate number of visitor landings and restrict visitor impact on the remains. ➢ When visitors land on the island, they will be directed only to those production facility zones enabling them to understand the appearance of the Hashima Coal Mine when it was in operation and the role that the mine played. Visitor impact will be limited by prohibiting access to anywhere outside the tour route.
Establishing the necessary facilities/equipment/operational system for the **component part (A)** and **surrounding environment (B)**	Guidance facilities ➢ Nagasaki City Takashima Coal Museum on Takashima Island serves as the guidance facility for the whole Takashima Coal Mine, including Hashima Coal Mine. Nagasaki City Gunkanjima Museum is a facility on Nomosaki on the coast across from Hashima Island that explains the state of Hashima Coal Mine as part of Sites of Japan's Meiji Industrial Revolution, the historical background, the history of coal mining, the changes of building coal mine facilities out of the sea, and life on Hashima Island. Establishment of explanatory boards and guiding signage, etc. ➢ Explanatory boards and guiding signage have been set up in the viewing spaces on the island. Access routes and utility facilities ➢ It must be made possible to enter areas other than the viewing facilities for a limited number of purposes, including studies and research, regular inspections, and facility restoration, etc.	Guidance facilities ➢ To effectively disseminate to visitors the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution, positioning of the component part therein, and other related remains within the island, in conjunction with visits to the coal mining facilities, a mechanism is needed to provide learning opportunities at the Nagasaki City Takashima Coal Museum, the Nagasaki City Gunkanjima Museum, and the Former Mitsubishi No. 2 Dock House as a guidance facilities, as well as at the Nakanoshima Coal Mine and Ikeshima Coal Mine as other coal mine remains in Nagasaki City. Establishment of explanatory boards and guiding signage, etc. ➢ No particular issues Access routes and utility facilities ➢ Facilities are needed in areas outside the viewing facilities for studies and research and for conservation and restoration work, but there are no access routes or utility facilities available for that purpose.	Guidance facilities ➢ At the Former Mitsubishi No.2 Dock House within the Glover Garden, information is provided as an information facility located in the center of Nagasaki City, which introduce Sites of Japan's Meiji Industrial Revolution. At Nagasaki City Gunkanjima Museum, which is located Nomozaki, southern part of Nagasaki City, information on the history of the coal mining industry and the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution will be provided. Establishment of explanatory boards and guiding signage, etc. ➢ New explanatory boards are not installed in keeping with Hashima Island's devastated landscape. Information and explanation about the facilities on the island will be provided by guides. A stone sign post indicating a designation of National Historic Site and a World Heritage Plaque will be installed in viewing spaces. 3D and virtual reality technologies will be used in all viewing spaces to enable visitors to experience visually from mobile devices the appearance of the island when the coal mine was in operation. Access routes and utility facilities ➢ The necessary access routes will be installed for surveys, academic research, restoration, etc., within the accommodation facility zone. ➢ New viewing access routes will be built in the production facility zone.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-14

Current state, issues and directionality in relation to visitor management at Glover House and Office (Area 6 Nagasaki/ Component part 6-8)

Preconditions: Glover Garden visitors: 1.035 million (in FY 2014), 1.221million (in FY 2015), 0.987million (in FY 2016)

Item	(a) Current state (already implemented measures involving visitors guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor management ➢ The main living spaces in the main building and annexes are permanently open to the public. ➢ Visitors have access to the hall, bedroom, store room for small tools, etc., study room for storing important documents, child's room, corridors, and corridor connecting with the annex, and also parts of the drawing room, dining hall, dining room, guest room, and kitchen, wearing their shoes on. They do not have access to the liquor storage room, workshop, or servants' rooms, etc., which are used as storehouses for management purposes. Conservation and management system ➢ The designated administrator contracted by Nagasaki City to handle Glover Garden management engages in maintenance and inspection and flower bed and tree management, as well as organizing training sessions for employees.	Visitor management ➢ As visitors have free access of the building, the building is showing signs of wear and deterioration. This presentation method therefore needs to be revisited. ➢ As doors and windows are left open all the time, wind and rain come in, causing wallpaper and ceiling paper to peel off. This needs to be addressed by restricting access points and reviewing viewing routes, etc. ➢ As Glover House and Office is open all year round, there is no time for building maintenance and restoration. Consideration therefore needs to be given to cleaning management and maintenance methods. Conservation and management system ➢ To use Glover House and Office as a learning and research resource and provide information on an ongoing basis in conjunction with other component parts in the Area, personnel need to be trained to handle surveys, research, and information dissemination, as well as personnel with a high level of knowledge of conservation, restoration, presentation and public utilization of buildings.	Visitor management ➢ Given that visitor numbers will increase over the coming years, Nagasaki City has set the following visitor management rules for Glover House and Office. (1) Access will be limited to one entrance and one exit. (2) A tour route will be established and signage for this set up indoors. (3) Appropriate air conditioning equipment will be installed. (4) Rooms will be closed at regular intervals for repair and cleaning. The aim of these rules is to (1) avoid physical damage to materials, etc. of Glover House and Office, (2) increase visitor understanding of the Outstanding Universal Value of World Heritage property and the positioning of Glover House and Office therein, (3) increase visitor comfort and safety, and (4) preserve and maintain Glover House and Office while opening the interior to visitors. Conservation and management systems ➢ Qualification acquisition systems such as the Nagasaki Association of Architects & Building Engineers' heritage manager qualification will be used to train engineers who will actively communicate restoration information and who can take the necessary steps and surveys for the preservation and utilization of the cultural property.

Establishing the necessary facilities/equipment operational system necessary for the **component part (A)** and **surrounding environment (B)**

Guidance facilities ➢ Explanation is provided on the Former Mitsubishi No.2 Dock House within Glover Garden in the form of video equipment and a panel exhibit on the Sites of Japan's Meiji Industrial Revolution. Information and explanation ➢ Furnishings and other items are displayed in the rooms open to the public in the main building and the annexes, and some rooms also have panel and material exhibits on Glover House and Office and Glover himself. ➢ Audio guides are available for rent so that visitors can listen to an explanation on the facilities in multiple languages while walking around the grounds. ➢ A designated administrator contracted by Nagasaki City engages in facility management, education, studies and research within the Glover Garden, where Glover House and Office included. Signage plan ➢ There are three types of signs within the Glover Garden: direction signs, explanatory signs, and management and operation signs. Direction signs have been installed as necessary, and the design differs according to when they were installed. Multiple signs indicating different routes are also installed in the same place, which is unnecessarily complicated. Utility facilities ➢ Illumination facilities were installed in Glover Garden in 2010. Currently, buildings within the grounds are lit up at night, and in 2014, illumination facilities comprising around 300,000 lights were also installed. ➢ Glover House and Office and most of the buffer zone have been selected as part of the Nagasaki City Minami-Yamate Preservation District for Groups of Historic Buildings. As part of the preservation plan for this, trees are designated as environmental elements, and the policy is to maintain them as they are for the purposes of maintaining the visual setting.	Guidance facilities ➢ The positioning of Glover House and Office as a component part in the Outstanding Universal Value of the World Heritage property and as a foreign settlement and the significance of Glover in the modern history of Nagasaki are not adequately delivered to the visitors. Information and explanation ➢ The latest survey and research results are not reflected or updated in exhibits. Surveys and research need to be pursued and the results made public. ➢ Glover House and Office is exhibited and utilized as an amusement, and its value as an Important Cultural Property and as a component part of the World Heritage property is not adequately conveyed to visitors. Exhibit content needs to be reviewed. ➢ Personnel need to be trained to handle surveys, research, and information dissemination, as well as personnel with a high level of knowledge of conservation, restoration presentation and public utilization work of buildings. Signage plan ➢ Signs have different forms and designs, so they do not create a coherent visual impression. Duplicate signage detracts from the landscape. Utility facilities ➢ Light from the illumination facilities overpowers the lighting for Glover House and Office, etc., and for the Giant Cantilever Crane, etc., on the opposite shore, so lighting color, height, and brightness need to be adjusted. ➢ Illumination cables detract from the landscape during daylight opening hours, so the color of these needs to be reviewed, as well as the way in which they are laid. ➢ Trees have grown large, changing the view from the Glover House and Office garden toward the harbor from what it was in 1864. Trees obstructing the view need to be pruned or felled.	Guidance facilities ➢ Panels will be installed inside Glover House and Office and in the front yard, including old maps and photographs of the settlement and replicas of the cannons seen in those photos. Information and explanation ➢ Furniture, furnishings, and equipment will be matched to the original look. Exhibits will be set up in the stable, barn and storehouse to recreate the way they were originally used based on studies and research. ➢ Exhibits will be installed that show Glover's activities and way of life, using explanatory panels and digital video equipment, etc. ➢ Panels showing old maps and photos will be set up inside Glover House and Office and in the front yard to convey appropriately to visitors the locational relationship between Glover House and Office and Mitsubishi Heavy Industries Nagasaki Shipyard, as well as the authenticity of Glover House and Office's location. ➢ Expert staff and volunteers who have received training will be developed into guides. Signage plan ➢ Direction signs will be consolidated and made consistent with universal design and useful to foreign visitors. A design will be chosen for explanation and direction signage that does not detract from the landscape. Utility facilities ➢ Illumination installation rules will be determined to suit the site. ➢ To maintain the value of the component part and restore trees to the original state during Glover's time, trees that meet the following criteria will be felled, transplanted, or pruned. (1) Trees impacting negatively on building management and maintenance (2) Trees that are in a markedly different state from Glover's time (3) Trees that obstruct the view of Glover House and Office (4) Trees that obstruct the view of Nagasaki Port from the front yard of Glover House and Office

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Current state, issues, and directionality in relation to visitor management at Miike Coal Mine and Miike Port (Area 7 Miike/ Component part 7-1)

Preconditions: In FY 2015, the year of inscription, visitor numbers rose approximately 25 times on the previous year to 72,849. This slipped by approximately half the next year to 33,723, but nevertheless remained 11 times higher than the year before inscription.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor management ➢ While the number of visitors has soared since World Heritage inscription, no negative physical impact has been found to constituent elements. Conservation and management system ➢ Based on the conservation and management system noted in the CMP, Omuta City and Arao City, which comprise the management group for the National Historic Site Miike Coal Mine and the Miike Port managers, are undertaking conservation and management in partnership with local residents, etc., checked and directed by the Miike Conservation Council (non-working) and other related institutions. ➢ Routine conservation and management is being undertaken by divisions in charge of each project based on overall management and coordination by the Omuta City World Heritage and Cultural Property Office and the Arao City World Heritage Promotion Office. ➢ Omuta City and Arao City conduct on-site conservation and management, while on-site guides engage in guiding activities and also patrol within the component part and its surrounds, immediately contacting the two cities if an issue is discovered.	Visitor management ➢ Private-sector pipelines still lie through the site of Miike Coal Railway. A capacity building plan for human resource must be created to build the capacities necessary for conservation and management of the component part among these private stakeholders and other parties with responsibility for routine management, as well as to ensure a consistent approach to routine conservation, management and promotion of visitor understanding. This plan must then be systematically implemented. Conservation and management system ➢ Both cities need to ensure close partnership among the divisions in charge of the various projects and secure the necessary personnel. ➢ The two cities will continue to work to confirm and coordinate among the relevant institutions and proceed with conservation management in partnership with the designated facility administrators. Collaboration with local residents must be promoted to ensure steady and effective conservation and management.	Visitor management ➢ Restoration and facility installation measures will be taken with a view to opening part of Miike Coal Railway to the public. Conservation and management system ➢ Conservation and management will be approached based on the general principals and a strategic framework across all the Sites of Japan's Meiji Industrial Revolution. ➢ Cross-cutting liaison system will be maintained and strengthened between the two cities' relevant departments.
Establishing the necessary facilities/equipment/operational system necessary for the **component part (A)** and **surrounding environment** (B)	Visitor management strategy ➢ A survey is currently underway on the extent of visitor understanding of and satisfaction with the component part. Establishment of explanation and information boards, etc. ➢ Explanation boards on the history of the Miike Coal Mine and the functions of coal mining system have been installed on-site, but not enough information is provided on the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution as a whole, the positioning of the Miike Coal Mine therein, or the coal industry system. Visitor center ➢ The Omuta Coal Industry and Science Museum, which serves as the visitor center for the Miike Area, does not provide enough information about the Sites of Japan's Meiji Industrial Revolution as a whole. Convenience facilities ➢ The current carpark has been found to have sufficient space. ➢ A temporary carpark and parking route have been set up to deal with any crowding that arises. ➢ No new commercial developments have been built in the neighborhood, and nor are there any plans for such, so at this point in time, there is no negative impact on the surrounding landscape around the component part.	Visitor management strategy ➢ A visitor management strategy needs to be created based on survey results, with appropriate measures implemented based on that strategy. ➢ Given the increase in visitors, visitor routes need to be determined as soon as possible to promote visitor understanding and facilitate their viewing experience. ➢ Access among the constituent elements within the whole Miike Coal Mine is inconvenient and consideration needs to be given to means of transport. Establishment of explanation and information boards, etc. ➢ Omuta City, Arao City, and Uki City within the Area 7 Miike need to enhance the information provided via exhibits and guides on the relationship among the various elements within the Area 7 Miike and the particular era to which they belong. ➢ There are not enough multilingual signs. Visitor center ➢ The Omuta Coal Industry and Science Museum, which serves as the visitor center for the Area 7 Miike, needs to spearhead considerations on means of information provision, coordinating fully with other component parts within the Area 7 Miike.	Visitor management strategy ➢ A survey will be conducted on (1) the extent of visitor impact on the component part, (2) the adequacy of the number of car parks and utility facilities given the number of visitors, and (3) the degree of understanding of the component part and the ease of access to other modern industrial heritage sites within the town which is related to the Miike Coal Mine, providing exhibits and explanations about the mutual links. (4) more multilingual signage will be provided, and (5) the public transport network will be improved. Establishment of explanation and information boards, etc. ➢ Routes will be established at the various constituent elements that enable visitors to understand the flow of the Meiji era coal industry system, and exhibits and explanation will be provided so that visitors can learn about topics such as the development of power and machinery and the actual conditions of coal mine. Visitor center ➢ Exhibits and explanations on the Sites of Japan's Meiji Industrial Revolution will be enhanced at the Omuta Coal Industry and Science Museum as the visitor center. ➢ Information on the Sites of Japan's Meiji Industrial Revolution will be provided at the Omuta Coal Industry and Science Museum as the gateway to the Miike Area, guiding visitors out to the various component parts (Miyanohara Pit, Manda Pit, Miike Coal Railway, Miike Port) from there.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-16-1

Current state, issues and directionality in relation to visitor management at Miike Port (Area 7 Miike/ Component part 7-1)

Preconditions: As Miike Port is a working industrial port, most of it is not open to the general public.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ As the component part is an operational port, most of it is not open to the general public. There is extremely little visitor impact.	➢ None in particular	➢ Industrial activities will be continued and port functions maintained. ➢ Access will continue to be restricted in areas where visitors could interrupt port activities, with these areas basically not opened to the public.
Establishing the necessary facilities/equipment/operational system necessary for the **component part (A)** and **surrounding environment (B)**	➢ In June 2015, a lookout was built in the buffer zone looking out over the entire port, along with a temporary carpark nearby, in order to attract visitors.	➢ There are few places where visitors can come into direct contact with the component part. ➢ The carpark at the lookout is only temporary and further development will be needed.	➢ The main viewing points will be the Miike Port lookout and the planned dock lock viewing spot. ➢ Facilities such as the Former Nagasaki Customs House Miike Branch Office and the Mikawa Pit will be used to convey information.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Current state, issues and directionality in relation to visitor management at Misumi West Port (Area 7 Miike/ Component part 7-2)

Preconditions: Visitor numbers were approximately 300,000 per annum. In 2015, the year of inscription, the figure topped 500,000, but the impact of the Kumamoto quakes saw this drop to 310,000 in 2016.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	Visitor management ➢ At present, visitor numbers have not been found to be impacting on the component part. If numbers hold at the current level, there should also be no impact in the years ahead. ➢ The footpath lining National Road 57 is narrow in places, and despite the fact that the area is now a quiet residential neighborhood, there are many cars burning up. To ensure safe transit and a quiet living environment for local residents, the area next to the National Road 57, road bridges, and town areas are excluded from the guided tour course, which focuses instead on the port area. ➢ In addition to tourism, many visitors to Misumi West Port come to fish.	Visitor management ➢ Greater visitor numbers have made it vital to raise visitor awareness and control traffic volume. Footpaths need to be improved to ensure visitor safety, including flow planning. ➢ Complaints have been received from visitors about trash lying around and poor manners.	Visitor management ➢ A rule will be made that visitors can only enter the local residential area under the direction of a guide, and that non-residents' cars are basically not permitted in the area. However, as the view of the sea from the drainage channel is valuable in terms of explaining the original water supply system, which remains in place today, this will be included as part of the guided tour on an exceptional basis. ➢ To keep the drainage channel looking attractive, notices at the guidance center and pamphlets are being used to appeal to local residents to improve their manners in this regard. ➢ Efforts will be made to improve guide quality and deploy sufficient numbers of guides. ➢ Rules on taking rubbish away and showing courtesy will be promoted for the purpose of visitor/local resident coexistence.
Establishing the necessary facilities/equipment/operational system necessary for the **component part (A)** and **surrounding environment (B)**	Guidance facility ➢ To promote understanding of World Heritage property, a guidance facility has been opened inside the Ryujokan building. This shows the locations, names, and photos of the 23 component parts, and provides a video introduction. However, the explanations are only brief, and there is not sufficient explanation on the positioning of Misumi West Port in terms of the Sites of Japan's Meiji Industrial Revolution overall. Guided tours ➢ The Uki Tourist Association serves as the window for tourists, holding guided tours for visitors particularly around the port area. Utility facilities ➢ There are five carparks within the Misumi West Port area, with enough space for 54 cars. A temporary carpark has also been set up on adjacent land, and this can take a maximum of 27 cars. ➢ In terms of public transport, the Sharetoru shuttle bus runs between the port and JR Misumi Station, but most visitors use their own cars.	Guidance facility ➢ More detailed explanations are needed of the connection between the Mitsui Miike Coal Mine and Miike Port, and of coal transport and storage in the Misumi area. The roles and themes of each facility must be clarified and visitors attracted there accordingly. Guided tours ➢ The guided explanation only deals with the pier and some of the buildings designated as cultural properties, with the current explanation system failing to properly convey the positioning of the Misumi West Port in terms of World Heritage property as a whole or the structure of the industrial system. Utility facilities ➢ Many visitors who come to fish use the carparks at Misumi West Port, but usually there is no shortage of parking spaces. ➢ While there are usually enough parking spaces, there are sometimes temporary shortages during events, etc.	Guidance facility ➢ The Ryujokan and Urashimaya buildings will be designated as the first access facility for visitors arriving at Misumi West Port, providing guidance for the whole component part, distributing pamphlets and maps, and providing the necessary information for subsequent walks around town or guided tours. Guided tours ➢ The current guided explanation, which focuses primarily on explaining Misumi West Port, needs to be expanded into a explanation system that sufficiently conveys the positioning of the Misumi West Port in terms of World Heritage property as a whole and the coal industry system. Guides will therefore be encouraged to participate in guide training sessions held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and another guide training session held by the Miike Hospitality Promotion Council, established within the municipal authority for the Miike Area. Utility facilities ➢ When a parking shortage is expected because of an event, etc., visitors need to be encouraged to use public transport options such as the Sharetoru bus and taxis from JR Misumi Station. If this does not resolve the problem, consideration will also be given to setting up a new carpark on nearby land. ➢ Consideration will be given to reviving the original sea transport so that visitors can approach Misumi West Port from the sea.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visit again.

Appendix c)-2-17

Current state, issues and directionality in relation to visitor management at the Imperial Steel Works, Japan (Area 8 Yawata/ Component part 8-1)

Preconditions: The Imperial Steel Works, Japan (First Head Office, Former Forge Shop, and Repair Shop) is located within the working Yawata Works belonging to the Nippon Steel & Sumitomo Metal Corporation, so unfettered public access is restricted.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ As the component part is located within an operational steelworks, unfettered public access is restricted, which means that the physical impact of visitors is extremely limited.	➢ None in particular	➢ None in particular
Establishing the necessary facilities/equipment/and operational system necessary for the **component part (A)** and **surrounding environment (B)**	➢ In April 2015, a viewing space was established within the steelworks 80 metres from the First Head Office for the general public to view the First Head Office. ➢ One volunteer is stationed at the viewing space 9:30-5:00 to provide tourist information. ➢ Bus tours for the general public have been run since August 2015, focusing primarily on the First Head Office. ▪ One tour in the morning and one in the afternoon on designated Saturdays ▪ Prior booking system; 40 passengers per trip ▪ Viewing under the control of a staff member ➢ The Sites of Japan's Meiji Industrial Revolution are comprehensively introduced through exhibits and a video at the Kitakyushu Innovation Gallery & Studio. ➢ The following signs have been installed, all bearing the same logo. Pedestrian signs: 31 Vehicle traffic: 22 ➢ The Higashida museum zone carpark is used for visitors. Tour buses use the Spaceworld carpark by the First Head Office viewing space.	➢ Visitors have little direct contact with the component part. ➢ The connection between the First Head Office viewing space and the Kitakyushu Innovation Gallery & Studio needs to be strengthened, making it easier to get around the site. ➢ A carpark needs to be secured for visitors to the First Head Office viewing space.	➢ Viewing of the First Head Office from the viewing space and exclusive bus tours within the site of Yawata works will be continued. ➢ Considerations and consultations will be conducted with the owners and other related institutions as to whether chances for visitors to make direct contact with the component part, such as a tour of the First Head Office, could be increased. ➢ The First Head Office viewing space and the Kitakyushu Innovation Gallery & Studio exhibits will be enhanced and expanded and events held that link the two. ➢ Information/direction signage will be improved. ➢ Considerations and coordination with the relevant institutions will be conducted to secure parking for visitors to the First Head Office viewing space.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visiting again.

Current state, issues and directionality in relation to visitor management at the Onga River Pumping Station (Area 8 Yawata/ Component part 8-2)

Preconditions: The Onga River Pumping Station is located within the operational Yawata Works belonging to the Nippon Steel & Sumitomo Metal Corporation Group same as the Imperial Steel Works, Japan, so public access is restricted.

Item	(a) Current state (already implemented measures involving visitor guidance, etc.)	(b) Issues	(c) Directionality
Physical impact on the **component part (A)**	➢ As the component part is located within a working steelworks, public access is restricted, which means that the physical impact of visitors is extremely limited.	➢ None in particular.	➢ Providing the viewing space will be the primary measurement for visitors.
Establishing the necessary facilities/equipment/operational system necessary for the **component part (A)** and **surrounding environment (B)**	➢ In July 2015, a temporary viewing space was established for the general public within the steelworks, which is located outside the scope of the component part. In March 2017, a permanent viewing space was set up, along with a World Heritage Plaque, a commentary board, and a bench (the lookout is next to the fence indicating the boundary of the component part). ➢ Study tours for limited numbers of people were held within the grounds in November 2016. - Prior booking system; 20 people per group; 6 trips within the grounds - Viewing under the control of a staff member and security staff - No viewing inside the Pumping Station ➢ An overview of the Sites of Japan's Meiji Industrial Revolution and materials on the Pumping Station are exhibited within the North Information Centre of Onga River Pumping Station. ➢ The following signs have been installed, all bearing the same logo. Pedestrian signs: 4 Vehicle traffic: 9 ➢ Use of the bus-only carpark at the widened portion of the Onga River embankment. On weekends and public holidays from July 2015 to March 2016, Nakama City ran a shuttle bus for visitors to the Onga River Pumping Station. As of July 2016, widened part of the Onga River embankment have been used for tour bus parking.	➢ Visitors cannot have direct contact with the component part. ➢ The main access method between the viewing space and the Onga River Pumping Station Information Centre is by foot (around 20 minutes one way), and a more convenient method of getting around must be found. ➢ A visitor carpark needs to be secured.	➢ Providing the viewing space will be the primary measurement for visitors. ➢ Ways of visiting related remains in Iizuka City and Tagawa City and tying these together with the visual landscape of the Onga River will be considered as a means of boosting visitor satisfaction. ➢ The content of exhibits at the Onga River Pumping Station Information Centre will be enhanced. ➢ Information (guidance) signage will be improved. ➢ The nearest carpark is currently the Nakama City Office riverbed carpark, from where it is a 10-minute walk to the component part. The river manager will be consulted about locating a visitor carpark in a location closer to the component part that does not impact on the surroundings of the World Heritage component part.

A state will be created providing **visitors (C)** with safety, comfort, security and a sense of satisfaction, as well as the motivation to visiting again.

Appendix c)-2-19

Checklist of Governance Framework Validation (for the Local Conservation Council (1))

Date of the meeting of the Council:	Year / Month / Day, 1st meeting of the Local Conservation Council (Area XX)
Name of the Chairperson of the Council:	Mr./Ms. XXXXXXXXXX

Local Conservation Council (Area XX):

☐ **Item 1. Feedback mechanism defined in the "Strategic Framework"**

check ✔	Sub-items
☐	Reviewed the monitoring results of each of the component parts reported by the monitoring body. ☐ Component part A ☐ Component part B
☐	Discussed about the monitoring results of each of the component parts through exchanging information and opinions among the members, and approved them.
☐	Confirmed whether or not any component parts at risk exists, owing to inadequate conservation and management.
☐	Explored the measures to enhance conservation and management of the component parts including to avoid a risk.
☐	Confirmed through monitoring whether it would be necessary to take comprehensively unified measures for the 23 component parts to ensure conservation and management of the World Heritage property as a whole. ☐ Requested the National Committee of Conservation and Management to consider new measures, where measures were needed,
☐	Sought advice from the Industrial Heritage Expert Committee including Working Properties and other sources in terms of approaches or measures for risk avoidance to improve the state of conservation and management of the component part, where necessary .
☐	Received requests from the National Committee of Conservation and Management on necessary approach to the conservation and management of the relevant component part . ☐ Exchanged information and opinions and determined responses, where receiving a request, .
☐	Compiled the results of sub-items into an annual report, and submitted it to the National Committee of Conservation and Management.

☐ **Item 2. Improvement, and Amendment of "Conservation and Management Plan (CMP)"**

check ✔	Sub-items
☐	Exchanged information and opinions and made decisions regarding amendment and/or improvement of the contents of Conservation and Management Plan (CMP) and its implementation approach.
☐	Analyzed progress of the conservation and management initiatives and reviewed the contents of CMP every 6 years, with the support by the Expert Committee and other sources. ☐ Clarified issue causes as needed and discussed countermeasures with stakeholders, where amended the contents of CMP.

☐ **Item 3. Periodic reporting to UNESCO by the Government of Japan based on the Operational Guidelines for the Implementation of the World Heritage Convention**

check ✔	Sub-items
☐	Confirmed the state of conservation and management of the component parts with support from the Expert Committee and other sources as needed, as part of the periodic reporting process to UNESCO by the Government of Japan in every six years,. ☐ Reported the results of above confirmation and changes occurred in the state of conservation and management of the component parts and the buffer zone to the National Committee of Conservation and Management.

☐ **Item 4. Others**

check ✔	Sub-items
☐	Properly handled matters relating to operation of the Local Conservation Council based on the rules. ☐ Amended the rules, where necessary.

Enter ✔ into ☐ at the head of Items 1 to 4, where the discussion item at the meeting of the Committee met.
Enter ✔ into ☐ at the head of each sub-item, where undertaken by the Committee.

* Strategic Framework: Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas, General Principles and Strategic Framework for Conservation and Management(see http://whc.unesco.org/uploads/nominations/1484).
* National Committee of Conservation and Management: National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution
* Expert Committee: Industrial Heritage Expert Committee Including Working Properties

The format of this checklist could be amended, depending on the state of the Area and the component part.

Checklist of Governance Framework Validation (Site-Specific Working Group(2))

Date of the meeting of the Working Group:	Year / Month / Day, 1st meeting of the Site-Specific Working Group
Name of the Chairperson of the Working Group:	Mr./Ms. XXXXXXXXXX

Site-Specific Working Group:

☐ **Item 1. Common issues for the component parts of working and non-working**

check ✔	Sub-items
☐	Gathered as needed to resolve common issues.
☐	Explored measures to resolve issues, and make decisions for adoption, with due attention to the intentions of stakeholders.
☐	Requested advice as needed from the National Committee of Conservation and Management or Expert Committee.
☐	Reported the results of assessment to the National Committee of Conservation and Management.
☐	Received requests from the National Committee of Conservation and Management on necessary approach to the conservation and management of the relevant component part .
	☐ Exchanged information and opinions and determined responses, where receiving a request, .

☐ **Item 2. Others**

check ✔	Sub-items
☐	Properly handled matters relating to operation of the site-specific working group based on the rules.
	☐ Amended the rules, where necessary.

Notes;

Enter ✔ into ☐ at the head of Items 1 and 2, where the discussion item at the meeting of the Working Group met.

Enter ✔ into ☐ at the head of each sub-item, where undertaken by the Working Group.

* National Committee of Conservation and Management: National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution

* Expert Committee: Industrial Heritage Expert Committee including Working Properties

The format of this checklist could be amended, depending on the state of the Area and the component part.

Checklist of Governance Framework Validation (for the National Committee of Conservation and Management (3))

Date of the meeting of the Committee:	Year / Month / Day, 1st meeting of the National Committee of Conservation and Management
Name of the Chairperson of the Committee:	Mr./Ms. XXXXXXXXXX

National Committee of Conservation and Management:

☐ **Item 1. Feedback mechanism defined in the "Strategic Framework"**

check ✔	Sub-items
☐	Shared information included in the reports that was submitted by the Local Conservation Council at least once annually, and discussed the need to review the general principles of conservation and management of the property.
☐	Explored the comprehensively unified measures for 23 component parts as a whole to ensure the proper conservation and management, where responding to requests from the Local Conservation Council.
☐	Asked the Expert Committee and its members to provide specialist advice in terms of the measures to improve conservation and management of the component parts, where necessary.
☐	Confirmed whether improvements were deemed necessary for the state of conservation and management of the component parts in maintaining the Outstanding Universal Value of the property as a whole, such as where stakeholders or the Local Conservation Councils undertook activities that contravened the principles of the Strategic Framework.
	☐ Requested stakeholders and Local Conservation Councils to take necessary steps, where improvements were deemed necessary, .

☐ **Item 2. Overall matters for 23 component parts**

check ✔	Sub-items
☐	Exchanged information and opinions and made decisions about the general principles for conservation and management, with due attention to the intentions of other stakeholders.
☐	Exchanged information and opinions for matters relating to the final assessments of monitoring included in the annual report, and made decisions for its approval, with due attention to the intentions of other stakeholders.
☐	Confirmed whether the Local Conservation Councils are functioning appropriately, while the properly conserving the Outstanding Universal Value as a whole.
	☐ Requested relevant Local Conservation Councils to take necessary steps, where issues arose that could affect the Outstanding Universal Value of the property consisting of 23 component parts as a whole, .

☐ **Item. 3 Revision of the "Strategic Framework"**

check ✔	Sub-items
☐	Analysed the state of implementation of the Strategic Framework every 10 years, and undertook its revisions where necessary, with technical advices from the Expert Committee.
	☐ Identified causes of issues and had stakeholders discuss countermeasures, while making revisions, .

☐ **Item 4. Periodic reporting based on the provisions of "Operational Guidelines for the Implementation of the World Heritage Convention"**

check ✔	Sub-items
☐	Confirmed the state of conservation of the Outstanding Universal Value of the property consisting of 23 component parts as a whole, based on the report by the Local Conservation Councils referring to the results of assessment for the state of conservation and management of the component parts and changes in their environs.
	☐ Discussed approach to preparing regular report after confirming and obtaining advice from expert committee.

☐ **Item 5. Others**

check ✔	Sub-items
☐	Properly handled matters relating to operation of the National Committee of Conservation and Management based on the rules.
	☐ Amended the rules, where necessary.

Notes;

Enter ✔ into ☐ at the head of Items 1 to 4, where the discussion item at the meeting of the Committee met.

Enter ✔ into ☐ at the head of each sub-item, where undertaken by the Committee.

* Strategic framework: Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas, General Principles and Strategic Framework for Conservation and Management (see http://whc.unesco.org/uploads/nominations/1484).

* National Committee of Conservation and Management:
National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution

* Expert committee: Industrial Heritage Expert Committee including Working Properties

Past records of the schedule and agenda of the meetings of Local Conservation Councils of individual Areas

Area 1 Hagi

No.	Schedule	Agenda	Remarks
1	April 8th 2013	1) Rules of Hagi Conservation Council (draft) 2) State of World Heritage and of preparations for nomination 3) Hagi Area Conservation Management Plan (draft) 4) Schedule hereafter	
2	March 30th 2015	1) Schedule up to inscription of "Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas" on the World Heritage List 2) Amendment of Rules of Hagi Conservation Council 3) Amendment of Hagi Area Conservation Management Plan 4) Annual report (provisional version)	
3	May 13th 2016	1) Amendment of Hagi Area Conservation Management Plan 2) Annual report	
4	May 15th 2015	1) Conservation management arrangements 2) Response to the Decision by the UNESCO World Heritage Committee 3) Annual report of FY 2015	
5	October 3rd 2017	1) Amendment of the annual report of FY 2016 2) State of Conservation Report 3) Conservation Work Programmes and Implementation Programmes for the Component Parts of Area 1 Hagi	

Area 2 Shuseikan

No.	Area	Agenda	Remarks
1	March 25th 2013	1) Rules of the Shuseikan Conservation Council (Draft) 2) State of efforts toward World Heritage inscription 3) Shuseikan Conservation Management Plan (CMP) (Draft)	
2	July 2nd 2014	1) State of efforts toward World Heritage inscription 2) Schedule and efforts toward World Heritage inscription 3) Amendment of the Shuseikan Conservation Management Plan	Executive Committee
3	March 20th 2015	1) State of efforts toward World Heritage inscription 2) Main amendment to the Shuseikan Conservation Management Plan (CMP) 3) State of considerations on the National Road 10 Kagoshima Northern Bypass 4) Annual report of Shuseikan Area (Draft)	

4	May 9th 2016	1) Amendment of the Rules of the Shuseikan Conservation Council 2) Overview of Kagoshima Area and development to date 3) Annual report of FY 2015 (Draft) 4) Policy of the response to the Recommendations by the World Heritage Committee (Draft) 5) Plan for Conservation, Restoration, Presentation and Public Utilization	
5	October 7th 2016	1) Developments to date and schedule 2) Plan for Conservation, Restoration, Presentation and Public Utilization (Rough Draft) 3) Monitoring charts	Executive Committee
6	December 20th 2016	1) Plan for Conservation, Restoration, Presentation and Public Utilization (Rough Draft) 2) Schedule	Executive Committee
7	May 23rd 2017	1) Amendments to Council Rules 2) Developments to Date and Schedule 3) Annual report of FY2016 (Draft) 4) Plan for Conservation, Restoration, Presentation and Public Utilization (Draft)	
8	September 27th 2017	1) Amendment of the annual report of FY2016 2) State of Conservation Report 3) Conservation Work Programme and Implementation Programme for the Component Part (Abstract) 4) Schedule for submission of the State of Conservation Report 5) Main Restorations and Improvements from FY 2018 (Report)	

Area 3 Nirayama

No.	Area	Agenda	Remarks
1	February 5th 2013	1) State of preparations for World Heritage nomination of Nirayama Reverberatory Furnaces and future plans 2) Rules of Nirayama Conservation Council (draft) 3) Nirayama Reverberatory Furnaces Conservation Management Plan (draft)	
2	April 18th 2013	1) Revision of Rules of Nirayama Conservation Council 2) Future schedule for World Heritage inscription of Nirayama Reverberatory Furnaces 3) Nirayama Reverberatory Furnaces Conservation Management Plan (draft)	
3	March 3rd 2015	1) State of preparations and plans for World Heritage inscription to date 2) Nirayama Reverberatory Furnaces Conservation Management Plan (provisional translation) 3) Revision of Council Rules 4) Nirayama Reverberatory Furnaces renovation program 5) Annual report of monitoring	

4	December 25th 2015	1) Revision of Council Rules 2) Preparations and progress up to inscription of Nirayama Reverberatory Furnaces on the World Heritage List 3) Decision made by the World Heritage Committee 4) Changes to Nirayama Reverberatory Furnaces admission fees 5) State of studies on conservation of reverberatory furnaces 6) State of visitor levels and parking 7) Progress of Nirayama Reverberatory Furnaces restoration program	
5	May 12th 2016	1) Revision of Council Rules 2) Policies for further monitoring of Nirayama Reverberatory Furnaces 3) Annual report of FY2015 (draft) 4) Drafting of the Plan for Conservation, Restoration, Presentation and Public Utilization of Nirayama Reverberatory Furnaces (response to the Recommendations made by the World Heritage Committee)	
6	December 26th 2016	1) Plan for Conservation, Restoration, Presentation and Public Utilization of Nirayama Reverberatory Furnaces (response to the Recommendations made by the World Heritage Committee) 2) Basic policy on conservation of reverberatory furnaces	
7	May 10th 2017	1) Schedule of operation for the Nirayama Conservation Council, FY2017 2) Annual Report of Monitoring in FY2016 3) Plan for Conservation, Restoration, Presentation and Public Utilization of Nirayama Reverberatoty Furnaces	
8	September 20th 2017	1) Plan for Conservation, Restoration, Presentation and Public Utilization of the Nirayama Reverberatory Furnaces 2) Digital Documentation Exhibition for Sites of Japan's Meiji Industrial Revolution 3) Amendment to the annual report of FY2016 4) State of Conservation Report 5) Conservation Work Programme and Implementation Programme for the Nirayama Reverberatory Furnaces (Abstract) 6) Report on the current state of the Visitor Centre (Guidance Facility) completed and opened at the Nirayama Reverberatory Furnaces	

Area 4 Kamaishi (held concurrently for working and non-working properties)

No.	Area	Agenda	Remarks
1	February 27th 2013	1) Partial revision to Rules of Kamaishi Conservation Council (rewording) 2) Amendment of the scope of Hashino Iron Mining and Smelting Site 3) Amendment of the Hashino Iron Mining and Smelting Site Conservation Management Plan	

2	March 25th 2013	1) Partial revision of Rules of Kamaishi Conservation Council (rewording) 2) Hashino Iron Mining and Smelting Site Conservation Management Plan (draft)	
3	February 26th 2015	1) State of recent initiatives 2) State of monitoring of Hashino Iron Mining and Smelting Site 3) Partial revision of Rules of Kamaishi Conservation Council (rewording) 4) Amendment of the scope of Hashino Iron Mining and Smelting Site 5) Amendment of the Hashino Iron Mining and Smelting Site Conservation Management Plan	
4	May 23rd 2016	1) State of recent initiatives 2) Partial revision of Rules of Kamaishi Conservation Council (rewording) 3) Partial revision of Hashino Iron Mining and Smelting Site Conservation Management Plan (CMP) (rewording) 4) Annual Report on the monitoring and state of conservation 5) Plan for Conservation, Restoration, Presentation and Public Utilization of the component part	
5	May 29th 2017	1) Partial revision of the Rules of Kamaishi Conservation Council (rewording) 2) Partial Amendment of the Hashino Iron Mining and Smelting Site Conservation Management Plan (CMP) (rewording) 3) State of Conservation Report 4) Monitoring of the component part 5) Conservation Work Programme	
6	September 29th 2017	1) Amendment of the annual report of FY2016 2) State of Conservation Report 3) Conservation Work Programme and Implementation Programme for Component Part (Abstract) 4) Schedule for submission of the State of Conservation Report	

Area 5 Saga

No.	Area	Agenda	Remarks
1	March 19th 2013	1) State of preparations and future plans for World Heritage nomination of Industrial Heritage of Modernization Sites in Kyushu-Yamaguchi region and Mietsu Naval Dock 2) Rules of Saga Conservation Council (draft) 3) Mietsu Naval Dock Conservation Management Plan (draft)	
2	April 9th 2013	1) Amendment of the Mietsu Naval Dock Conservation Management Plan 2) Mietsu Naval Dock Conservation Management Plan (draft)	

3	March 23rd 2015	1) Revision of Mietsu Naval Dock Conservation Management Plan 2) ICOMOS survey report and schedule hereafter 3) FY2015 public works project for Mietsu Naval Dock and the buffer zone 4) Visitor measures and services for increasing understanding 5) Monitoring of Mietsu Naval Dock	
4	November 16th 2015	1) Overview of the Decision and deliberations by the World Heritage Committee at the time of inscription of "Sites of Japan's Meiji Industrial Revolution" on the World Heritage List 2) Revision of Rules of Saga Conservation Council (draft) 3) Mietsu Naval Dock Impact Assessment Report (draft) 4) Visitor measures and services for increasing understanding	
5	May 18th 2016	1) Annual report of 2016 (draft) 2) Current state of construction project of Ariake Costal Road and its foreseen items in 2016 3) Ongoing state of development of the Plan for Conservation, Restoration, Presentation and Public Utilization of Mietsu Naval Dock 4) Project for set-up of a World Heritage Plaque	
6	November 16th 2016	1) Partial amendment of the Rules of the Saga Conservation Council 2) Request for ICOMOS opinion 3) Basic Plan for the development of Mietsu Naval Dock as a National Historic Site (Draft) 4) Schedule	Executive Committee
7	April 19th 2017	1) Amendment of the annual report of FY2016 2) Plan for Conservation, Restoration, Presentation and Public Utilization of Mietsu Naval Dock (Draft) 3) Report on observation tour by overseas experts	Executive Committee
8	May 18th 2017	1) Annual report of FY2016 (Draft) 2) Plan for the Conservation, Restoration, Presentation and Public Utilization of Mietsu Naval Dock (Draft) 3) Report on observation tour by overseas experts 4) Carpark transfer and guidance facility development	
9	August 18th 2017	1) Plan for Conservation, Restoration, Presentation and Public Utilization of Mietsu Naval Dock (Draft) 2) Conservation Work Programme and Implementation Programme for the Mietsu Naval Dock (Abstract) (Draft)	Executive Committee
10	October 4th 2017	1) Amendment of the annual report of FY2016 2) Plan for the Conservation, Restoration, Presentation and Public Utilization of Mietsu Naval Dock (Draft) 3) State of Conservation Report (Draft)	

Area 6 Nagasaki (working sites)

No.	Area	Agenda	Remarks

1	January 23rd 2014	1) Rules of Nagasaki Conservation Council (working properties) 2) State of nomination procedure for "Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas" to the World Heritage List and future plans 3) Conservation Management Plan 4) Taxation issues 5) Applicability of Landscape Act 6) Port Plan	
2	May 20th 2016	1) Revision of Rules of Nagasaki Conservation Council (working properties) 2) Response to Decision (including Recommendations) made by the World Heritage Committee 3) Annual report (monitoring)	
3	May 19th 2017	1) Annual report (monitoring)	
4	September 25th 2017	1) Additions to the content of the annual report 2) State of Conservation Report to the UNESCO World Heritage Committee	

Area 6 Nagasaki (non-working properties)

No.	Area	Agenda	Remarks
1	July 11th 2013	1) Rules of Nagasaki Conservation Council (non-working properties) (draft) 2) Conservation Management Plan (draft)	
2	May 20th 2016	1) Revision of the Rules of Nagasaki Conservation Council (non-working properties) 2) Response to the Decision (including Recommendations) made by the World Heritage Committee 3) Annual report (monitoring)	
3	May 19th 2017	1) Annual report (Monitoring)	
4	September 25th 2017	1) Amendment of Council Rules 2) Additions to the content of annual report 3) State of Conservation Report to the UNESCO World Heritage Committee	

Area 7 Miike (working properties)

No.	Area	Agenda	Remarks
1	June 12th 2013	1) State of initiatives to date 2) Rules of Miike Conservation Council (working properties) (draft) 3) Report on Miike Conservation Management Plan (draft)	
2	December 24th 2013	1) Report on Miike Conservation Management Plan (draft) 2) About future study subject	Executive Board
3	March 27th 2015	1) Partial revision of Rules of Miike Conservation Council (working properties) (draft) 2) State of conservation of the component part 3) Miike Port visitor measures	

4	August 29th 2016	1) Revision of Council Rules 2) Overview of Decision made by the World Heritage Committee and coming response 3) Change in ownership of part of the component part 4) Additional designation of former Miike Substation of old Nagasaki Customs House Miike Branch Office to already designated area as a National Historic Site 5) Visitor measures and services for increasing understanding 6) Report on Progress with the Ariake Coastal Road 7) Annual report (monitoring results)	
5	May 9th 2017	1) Results of monitoring of the Miike Port and the buffer zone 2) Miike Port Conservation Work Programme 3) Report on Progress with the Ariake Coastal Road 4) Designation of Former Nagasaki Customs House Miike Branch Office as a National Historic Site and change of its owner	
6	September 26th 2017	1) Amendment of the annual report of FY2016 2) State of Conservation Report (Draft) 3) Conservation Work Programme and Implementation Programme for the Miike Port (Abstract) 4) Report on Progress with the Ariake Coastal Road	

Area 7 Miike (non-working properties)

No.	Area	Agenda	Remarks
1	March 28th 2013	1) Rules of Miike Conservation Council (non-working properties) (draft) 2) Election of officers 3) Conservation Management Plan for Miike Coal Mine (Miyanohara Pit), Miike Coal Mine (Manda Pit), and Miike Coal Railway Trace (draft) 4) Misumi West Port Conservation Management Plan (draft) 5) Subcommittee establishment (proposed)	
2	March 27th 2015	1) State of initiatives to date 2) Partial revision of Rules of Miike Conservation Council (non-working properties) (draft) 3) State of conservation of the component parts 4) Project plan for coming conservation and management of the component parts (draft)	
3	August 29th 2016	1) Overview of Decision and deliberations by the World Heritage Committee at the time of inscription of “Sites of Japan’s Meiji Industrial Revolution” on the World Heritage List 2) Rules of Miike Conservation Council (non-working properties) (draft) 3) State of conservation of the component parts	

4	May 8th 2017	1) Amendment of Rules of Miike Conservation Council (non-working properties) 2) Monitoring results on the state of conservation of each component part 3) Projects on interpretations and information provision 4) Plans for Conservation, Restoration, Presentation and Public Utilization of Miike Coal Mine and Misumi West Port	
5	October 5th 2017	1) Partial Amendment of the Rules for the Miike Conservation Council (non-working properties) 2) Annual report on the results of FY2016 monitoring of component parts 3) State of Conservation Report 4) Conservation Work Programmes and Implementation Programmes for the Component Parts 5) Project for the promotion of understanding and information communication	

Area 8 Yawata

No.	Area	Agenda	Remarks
1	June 19th 2013	1) State of initiatives under new framework 2) Overview of the sites of Yawata 3) Rules of Yawata Conservation Council (draft) 4) Conservation Management Plan (CMP)	
2	December 17th 2014	1) Provision of site viewing space 2) Installation of signs to the building designated as a structure of landscape importance under the Landscape Act 3) Revision of Rules of Yawata Conservation Council 4) Schedule hereafter	
3	February 9th 2016	1) Revision of Council Rules 2) Annual report on the results of FY2015 monitoring of the component parts 3) FY2016 initiatives	
4	April 17th 2017	1) Revision of Council Rules 2) Annual report on the results of FY2016 monitoring of component parts 3) FY2017 initiatives	
5	October 6th 2017	1) Partial amendment to the form of the annual report 2) State of Conservation Report 3) State of Conservation Report: restoration of the Imperial Steel Works, Japan	

Past records of the schedule and agenda of the meetings of National Committee of Conservation and Management

No.	Schedule	Name	Agenda
1	June 11th 2014	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Background to and schedule for nomination of the "Sites of Japan's Meiji Industrial Revolution in Kyushu, Yamaguchi and Related Regions" to the World Heritage List. 2) Rules of the Committee in question (Draft) 3) Establishment of the Working Group 4) National Congress of Industrial Heritage
2	September 19th 2014	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Background 2) Establishment of the Working Group 3) Interpretive Strategy 4) Schedule
3	July 29th 2015	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Amendment of Rules of the Committee in question (Draft) 2) Recommendations included in the Decision by the World Heritage Committee 3) National Committee of Conservation and Management and Local Conservation Councils 4) Response to the Recommendations included in the Decision by the World Heritage Committee
4	July 29th 2015	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Amendment of the Rule of Working Group (Draft) 2) Digital Contents Demonstration 3) Response to the Recommendations included in the Decision by the World Heritage Committee
5	September 17th 2015	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Results of on-site interviews made by the Cabinet Secretariat with the local government bodies, etc., on the conservation issues of individual component parts 2) Policy, Directionality and Schedule for Responding to the Recommendations included in the Decision 3) Standard form for the establishment of the Plan for Conservation, Restoration, Presentation and public utilization of the individual component parts 1. 4) Survey on the current state of utilization of the component parts
6	September 9th 2015	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) World Heritage Route 2) Commemorative Stamps 3) Digital Documentation Exhibition

7	February 5th 2016	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Policy and schedule in response to the Recommendations included in the Decision by the World Heritage Committee 2) Plan for conservation, restoration, presentation and public utilization of the component parts 3) Monitoring 4) Visitor surveys 5) State of conservation report in accordance with the Para. 172 of the Operational Guidelines for the Implementation of the World Heritage Convention 6) Schedule
8	February 5th 2016	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Approach to development of an interpretive strategy 2) World Heritage Route 3) Guide App
9	May 30th 2016	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Annual report on the monitoring of the component parts of Japan's Meiji Industrial Revolution 2) Next Steps for Sites of Japan's Meiji Industrial Revolution
10	May 30th 2016	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Approach to development of an Interpretive Strategy 2) World Heritage route 3) Guide app 4) World Heritage Commemorative Plaque 5) World Heritage Emblem
11	November 18th 2016	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Amendment of the Rules of the Committee in question. 2) Inquiry to ask ICOMOS Views on the directionality and process of creating the state of conservation report requested by the World Heritage Committee. 3) Report to the World Heritage Centre on the State of Typhoon Damage at Hashino Iron Mining and Smelting Site and Future Steps
12	November 18th 2016	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Amendment of the Rules of the Working Group 2) Taiwan Travel Fair 3) Comprehensive Exhibitions
13	June 2nd 2017	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Annual reports of monitoring of the individual component parts submitted by the Local Conservation Councils 2) Outline of the State of Conservation Report to be submitted to the UNESCO World Heritage Centre 3) Future Schedule
14	June 2nd 2017	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Results of the field surveys made by the Overseas Auditor (January, May) 2) Interpretation activities 3) Measures related to the Meiji 150th Anniversary

15	October 20th 2017	National Committee of Conservation and Management for Sites of Japan's Meiji Industrial Revolution	1) Outline of the State of Conservation Report to be submitted to the UNESCO World Heritage Centre (Draft) 2) State of Conservation Report in accordance with the Para. 172 of the Operational Guidelines for the Implementation of the World Heritage Convention
16	October 20th 2017	Interpretation Working Group for Sites of Japan's Meiji Industrial Revolution	1) Interpretation strategy 2) Current state of interpretation activities

Past records of schedule and agenda of the meetings of the Industrial Heritage Expert Committee including Working Properties

No.	Schedule	Agenda	Remarks
1	July 3rd, 2012	1) Operation of Industrial Heritage Expert Committee including Working Properties 2) Appointment of acting chair 3) Overview of World Heritage Convention 4) New framework for nomination of industrial heritage including working properties to the World Heritage List 5) Heritage property of industrial revolution: Global legacy 6) Overview of the "Modern Industrial Heritage Sites – Kyushu, Yamaguchi and related Sites"	
2	March 25th, 2013	1) Background and current state regarding the "Modern Industrial Heritage Sites – Kyushu, Yamaguchi and related Sites" 2) Overview of the "Modern Industrial Heritage Sites – Kyushu, Yamaguchi and related Sites" 3) Composition of the nomination document and related reference documents of "Modern Industrial Heritage Sites – Kyushu, Yamaguchi and related Sites" 4) Process hereafter (fastest scenario)	
3	August 27th, 2013	Candidates of the component parts for World Cultural Heritage nomination (working properties)	
4	July 16th, 2014	Progress and outlook for schedule regarding "Sites of Japan's Meiji Industrial Revolution: Kyushu-Yamaguchi and Related Areas"	
5	October 2nd, 2015	1) Inscription of "Sites of Japan's Meiji Industrial Revolution: – Iron and Steel, Shipbuilding and Coal Mining" on the World Heritage List 2) Direction of initiatives in response to the Recommendations included in the Decision by the World Heritage Committee 3) Initiatives for increasing understanding of component sites as a whole	
6	June 8th, 2016	1) Progress of initiatives in response to World Heritage Committee recommendations, and future plans 2) Initiatives for increasing understanding of the inscribed property as a whole	
7	June 9th, 2017	1) State of Conservation Report (progress report) as the response to the Recommendations included in the Decision by the World Heritage Committee and future plans 2) Conservation Work Programme for the Imperial Steel Works, Japan and Onga River Pumping Station (Area 8: Yawata)	
8	November 17th, 2017	1) State of Conservation Report (progress report) as the response to the Recommendations included in the Decision by the World Heritage Committee and future plans 2) State of Conservation Report which will be submitted to the World Heritage Centre in accordance with para. 172 of the Operational Guidelines for the Implementation of the World Heritage Convention	

Monitoring charts for the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining"

1. Monitoring Types/Formats

(1) Types

The monitoring of the World Heritage property, "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" is conducted in the following four categories:

A. Monitoring of a component part and its buffer zone as a whole
B. Monitoring of a component part itself
C. Monitoring of various activities pertaining to the interpretation
D. Monitoring of various organizations in association

(2) Formats

For 1-(1)-A and B, a "monitoring chart" for each type of monitoring is prepared as described in 2 and the results are summarized in the "annual report"[1] (corresponding to Figure 4) every year.

For 1-(1)-C and D, the results are summarized in only the "annual report" (corresponding to Figure 4) without any "monitoring chart" prepared.

2. Monitoring of a Component Part/Site and its Buffer Zone

(1) Nature and purpose of the monitoring chart of a Component Part/Site and its Buffer Zone

In the Nomination Document submitted by the Government of Japan in 2014 for World Heritage inscription (pp.337–338 in the English version), the following two types of explanations were given as the grounds used in delineating the scope of buffer zone.

Type A

Buffer zones are required to control change in the surrounding area that may otherwise negatively impact the immediate settings of the component parts, which are important in supporting attributes such as 'location and setting' and/or 'use and function' that reflect Outstanding Universal Value.

Type B

Buffer zones are required to control change in the surrounding area that may otherwise negatively impact important views from and/or to the component parts which is important in supporting attributes such as 'location and setting' and/or 'use and function' reflecting Outstanding Universal Value.

As another ground that falls under Type A, a change or development conducted in the surrounding area, provides a compatible or traditional setting for the industrial site was also listed and the following three were listed as those falling under Type B: "the partial views from the terrace or garden of the Mitsubishi Senshokaku Guest House, which overlook operations in Mitsubishi No.3 Dry Dock", "the partial view from the Glover House and Office, which overlooks Mitsubishi Nagasaki Shipyard on the opposite shore of Nagasaki Port," and "the visual link between the First Head Office of the Imperial Steel Works, Japan and the waterfront."

Based on the above descriptions, the monitoring chart of a component part and its buffer zone must allow [1] a visual observation of any development conducted in the immediate buffer zone of a component part from

[1] Template of an annual report is indicated as **Appendix e)-3.**

the viewpoint of industrial activities familiar to said component part and [2] a periodic observation on the state of the landscape that aggregates the current state of the landscape offered from the component part to the buffer zone comprehensively and systematically and determines if there is any adverse impact on future landscape. This means that the monitoring chart can serve as an indication for making decisions such as preventing any adverse impact or making appropriate arrangement and improvement by grasping any occurrence of a development and alteration of the landscapes.

Therefore, when preparing a monitoring chart of a component part and its buffer zone, it is necessary to first provide several fixed observation points in appropriate locations selected within the component part and its buffer zone, grasp any change in the landscapes by periodically taking photographs from these points and perform the handling necessary such as guiding or arranging and improving the landscapes (Figure 1).

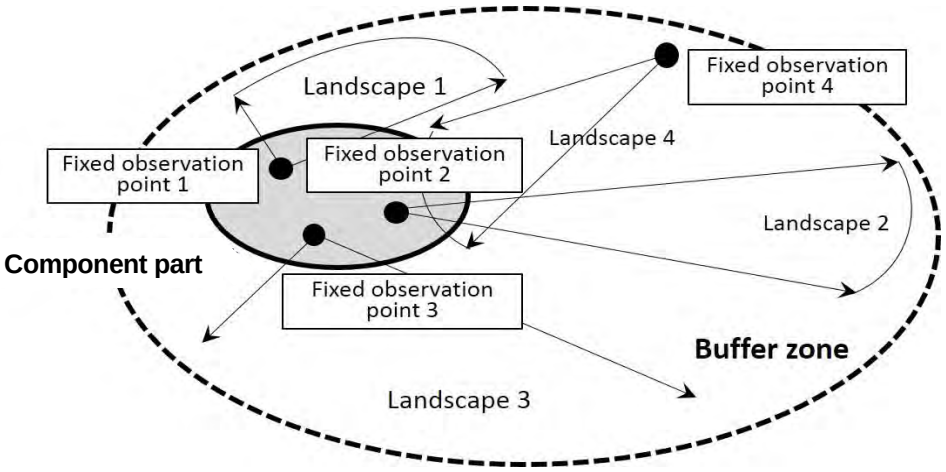


Figure 1 Monitoring of the Landscape by Fixed Observation Point

(2) Composition of the monitoring chart of a component part and its buffer zone--individual/general chart--

A monitoring chart of a component part and its buffer zone is composed of two parts: an individual chart and a general chart.

A. Individual chart

A chart prepared for grasping any change in the landscapes viewed from the fixed observation points in the appropriate locations selected at the component part and its buffer zone by periodically taking photograph from these points and performing the handling necessary such as guiding or improving and renovating the landscapes. Multiple individual charts are present for each individual elements of the component part.

B. General chart

A chart prepared for comprehensively indicating the landscapes from the multiple observation points and improvement measures such as guiding or arranging and improving the landscapes. A general chart comprehensively summarizes multiple individual charts on one sheet of paper.

3. Monitoring of the component parts

(1) Relationship among the component parts, constituent elements, and members

The relationship among the component parts, constituent elements and members can be organized as shown

in Figure 2.[2] However, the names of each constituent element of the 23 Component Parts (including those conveying the value other than the Outstanding Universal Value) are the same as those listed in each Conservation Management Plan (CMP) in principle.

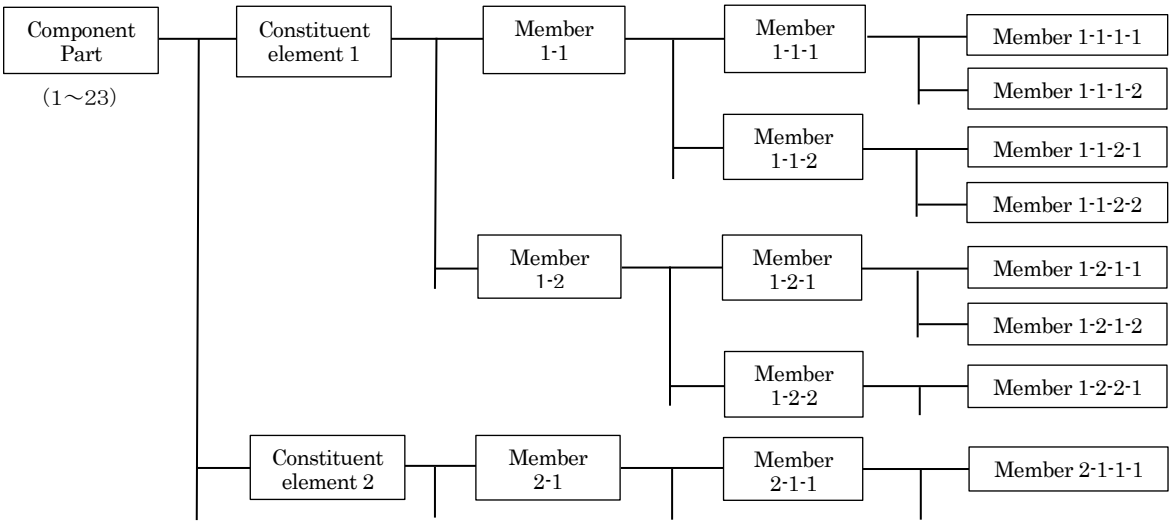


Figure 2 Relationships between component parts, constituent elements, and members

(2) Nature and purpose of the monitoring chart of a component part

A monitoring chart of a component part is a comprehensive and systematic aggregation of the current information of the constituent elements that serves as a starting point for periodically monitoring the state of the constituent elements.

It is also used in grasping any deterioration or weathering conditions or subsequent modifications such as wear of the materials and loosening or swelling of the structures that can be used as the information in deciding what treatment measures are appropriate.

Therefore, when preparing a monitoring chart of a component part, it is important to reflect the information concerning the current state of the constituent elements without fail and respond to any changes by adding new information obtained through periodical observations (such as visual observations).

(3) Composition of the monitoring chart of a component part—individual/general chart

A monitoring chart of a component part is composed of two parts: an individual chart and a general chart. The relationship between these two charts is as shown in Figure 3.

A. Individual chart

A chart that documents comprehensively the current information of each member that constitutes each element of a component part. Multiple individual charts are present for each individual constituent element.

[2]As for operational sites, the Conservation Management Plan (CMP) for the Nagasaki Shipyard (p.12) shows the following categories and definitions in a table; however, these categories and definitions can also be applied to non-operational sites in the same way.

- **Component Parts:** MHI Nagasaki Shipyard consists of four component parts:No.3 Dry Dock, Giant Cantilever Crane, Senshokaku Guest House, and Former Pattern Shop .
- Elements: Elements are the individual parts of a site making up a component part

At first, each constituent element is broken down into different members that constitute the element and an individual chart is prepared for each member.

An individual chart contains: 1) visual observation of each member, 2) issues with the future follow-ups, and 3) follow-up period, etc.

In case of a building, for example, the building, which is a constituent element, is broken down into multiple members (a living room, toilet, and a hallway on the first floor; a stairway, a living room, and a hallway on the second floor; etc.). Then, each member is broken down into materials such as [1] the ground/foundation, [2] floor, [3] interior walls (surrounding walls), [4] ceiling and also the materials constituting these sub-materials (such as columns, girders, beams, wall surfaces, windows, and shelves) are further identified.

B. General chart

A chart prepared for comprehensively indicating the improvement measures for the deterioration or weathering conditions of the entire constituent element. A general chart comprehensively summarizes multiple individual charts on one sheet of paper.

(4) Standard forms for individual/general charts based on the four types of constituent elements

A constituent element generally falls under any of the following four types. Therefore, four types of the standard individual and general charts are prepared to be used for each type of constituent element. A monitoring chart for each component part is prepared in compliance with these standard forms.

a) Stone walls (including stone buildings)

"Hashino Iron Mining and Smelting Site" is referred to as the standard form.

b) Buildings

"Miyanohara Pit of Miike Coal Mine and Miike Port (designated as an Important Cultural Property)" and Sengan-en Garden (designated as a Historic Site and a Place of Scenic Beauty) of "Shuseikan" are referred to as the standard forms according to the nature and type of cultural property of each constituent element.

c) Underground archaeological remains and the surrounding landscape

"Hashino Iron Mining and Smelting Site" and "Miyanohara Pit of Miike Coal Mine and Miike Port" are referred to as the standard forms.

d) Gardens and ponds

Sengan-en Garden of "Shuseikan" is referred to as the standard form.

(5) Additional amendments to existing "annual report" and Chapter 6 of Conservation Management Plan (CMP) of each component part

Following the reorganization of the structures and methods of the follow-up and preparation of the monitoring chart, the following two operations will additionally be required.

a) A partial revision to the "annual report" that was prepared by the Cabinet Secretariat in March 2015[3].

b) A partial revision to the items of the "Chapter 6 follow-up" of the Conservation Management Plan (CMP) prepared for nomination in 2014. In particular, the monitoring indicator and period should be added to the common items of the follow-up summarized in Section 1 of Chapter 6, which will allow for a physical and visual observation of any adverse impact caused by a development activity in the buffer zone. The revision of the CMP will be made in conjunction with the preparation of a periodic report submitted to UNESCO about every six years.

[3] New template of an annual report is indicated as **Appendix e)-3**

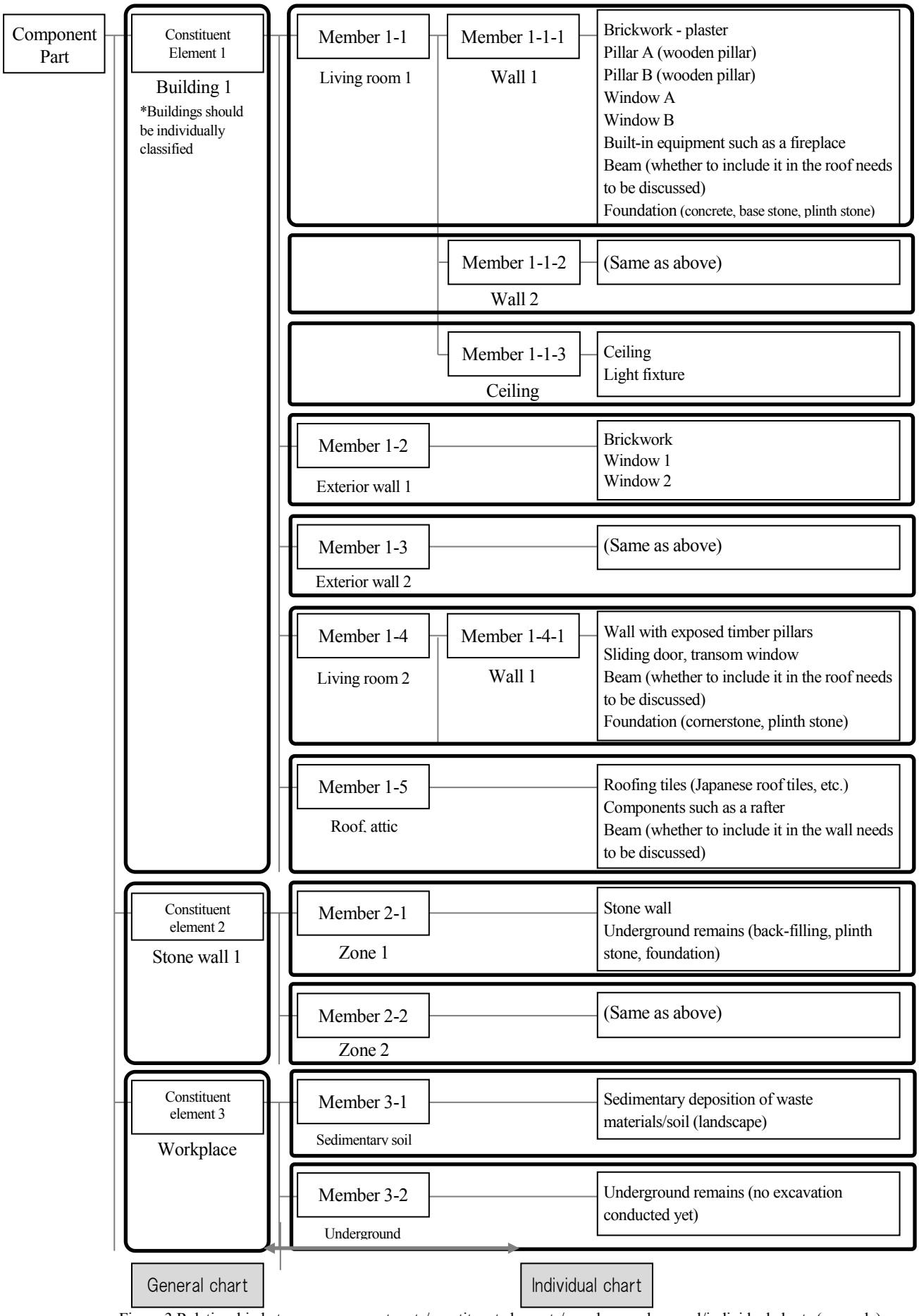
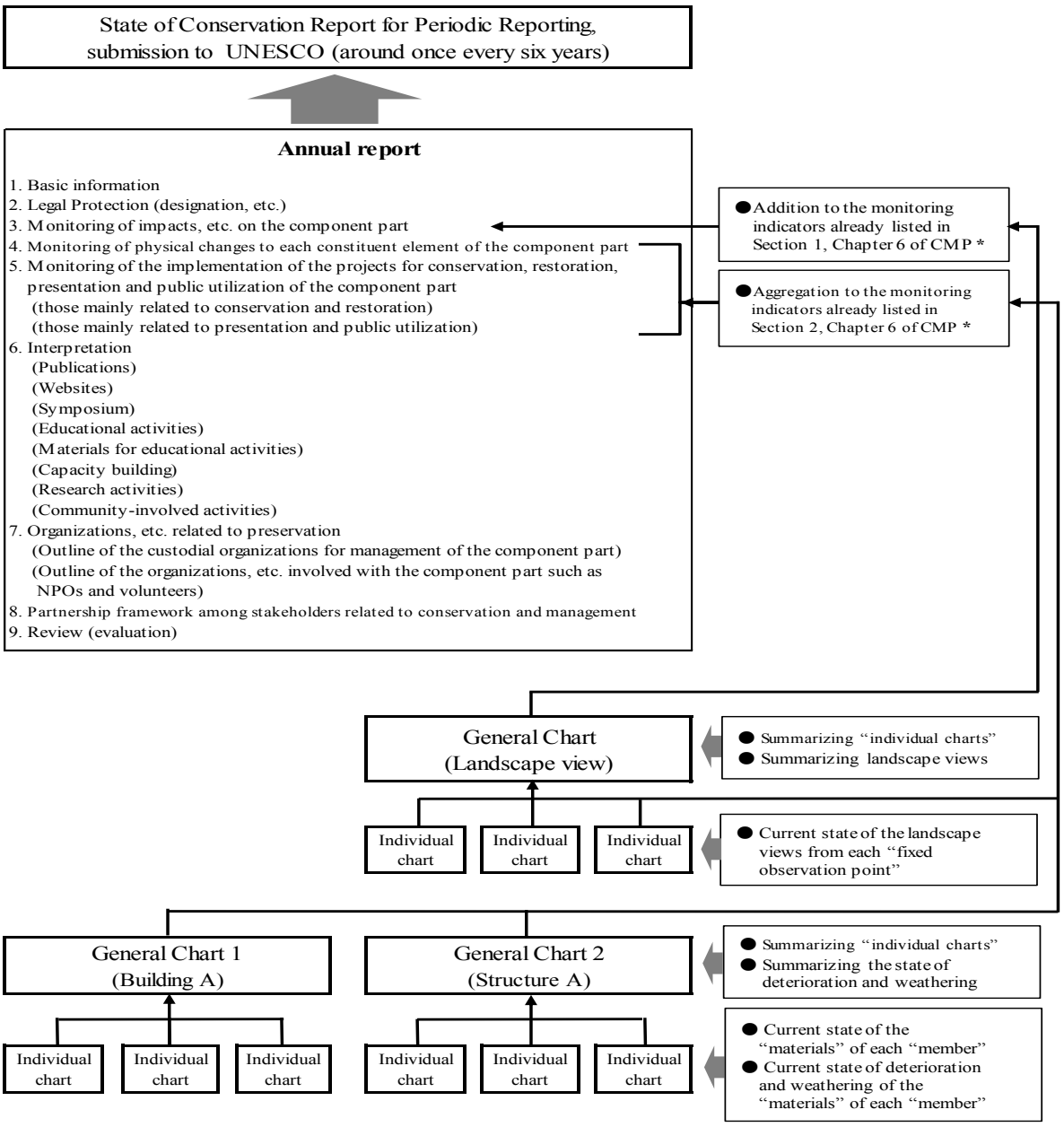


Figure 3 Relationship between component parts/constituent elements/members and general/individual charts (example)



* CMP: "Conservation Management Plan" for each of the 23 component parts of the property were attached to the Nomination Document in 2014.

Figure 4 Relationships between UNESCO State of Conservation Report for Periodic Reporting by the Government of Japan, annual report by the Local Conservation Councils, and general/individual charts by the owners and municipalities concerned

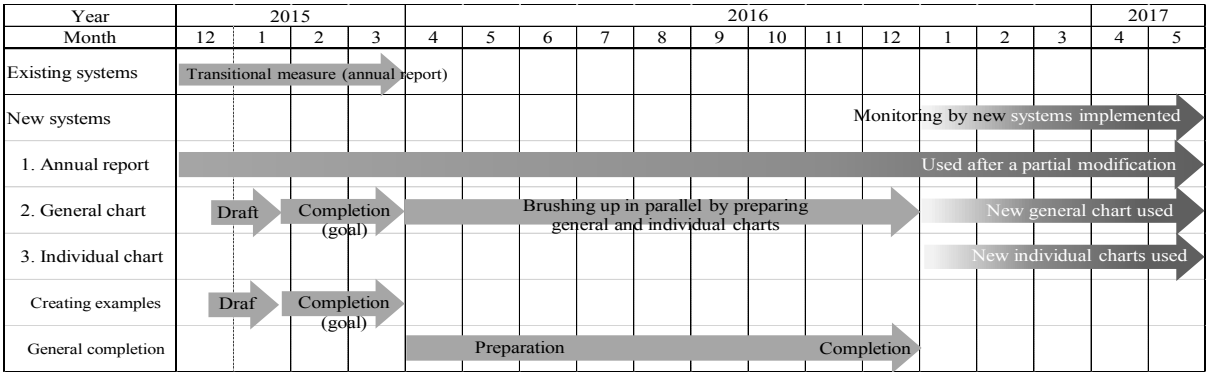


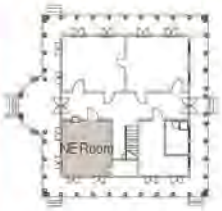
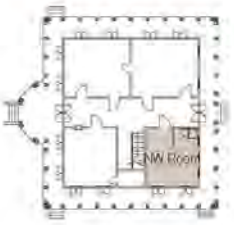
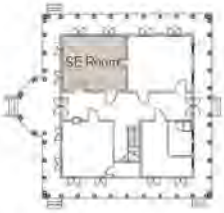
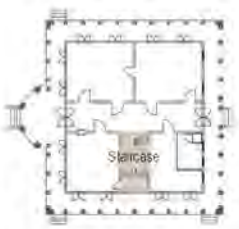
Figure 5 2015–2017 Schedule

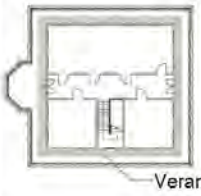
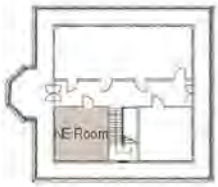
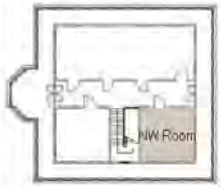
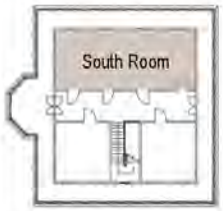
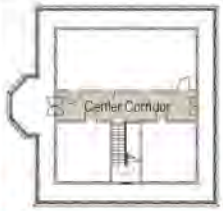
Monitoring charts consisting of general and individual charts for Shuseikan(samples)

Former Kagoshima Foreign Engineer's Residence Monitoring General Chart/Individual Chart

=General charts and Individual charts are attached as examples

Constituent Element	Part 1	Part 2	Materials
Former Kagoshima Foreign Engineer's Residence	Broken down by building exteriors (each side), each room, exterior elements, etc.	Subcategorization of the elements of Part 1 (e.g., for interior rooms, the units are wall surface, ceiling surface, floor, etc.)	Materials comprising Part 2
▶1 	Exterior Front (East side)	Roof	Tile
			Batten seam galvanized sheet iron
			Gutters (copper plate)
			Roof finial (tile)
		Foundation	Foundation stone
			Pillar foundation stone
		Columns, beams	Wooden columns & beams
			Railing, banister
		Exterior wall	Wall surface (wood & plaster)
			Stringcourse (galvanized steel)
			Small wall under eaves (wood)
			Window frame (wood)
▶2 	Exterior Side (North side)	Roof	Tile
			Batten seam galvanized sheet iron
			Gutters (copper plate)
		Foundation	Foundation stone
			Pillar foundation stone
		Columns, beams	Wooden columns & beams
			Railing, banister
		Exterior wall	Wall surface (wood & plaster)
			Stringcourse (galvanized steel)
			Small wall under eaves (wood)
			Window frame (wood)
	Exterior Rear (West side)	Roof	Tile
			Batten seam galvanized sheet iron
			Gutters (galvanized steel)
		Foundation	Foundation stone
			Pillar foundation stone
		Columns, beams	Wooden columns & beams
			Railing, banister
		Exterior wall	Wall surface (wood & plaster)
			Stringcourse (galvanized steel)
			Small wall under eaves (wood)
			Window frame (wood)
	Exterior Side (South side)	Roof	Tile
			Batten seam galvanized sheet iron
			Gutters (copper plate)
		Foundation	Foundation stone
			Pillar foundation stone
		Columns, beams	Wooden columns & beams
			Railing, banister
		Exterior wall	Wall surface (wood & plaster)
			Stringcourse (galvanized steel)
			Small wall under eaves (wood)
			Window frame (wood)
	1st Floor Veranda	Ceiling	Ceiling board (wood)
		Floor	Flagstone
		Exterior wall	Wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Fittings (wooden louver door)
			1st floor window frame (wood)
			Upper transom (wood)
			Glass

	1st Floor Center Corridor	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Wall surface (wood & plaster)
			Fittings (wooden door)
			Window frame (wood)
			Glass
			Fire hydrant
▶3 	1st Floor NE Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Window frame (wood)
			Glass
	1st Floor NW Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
			Tatami mats
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Window frame (wood)
			Glass
	1st Floor SE Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Glass
	1st Floor SW Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Window frame (wood)
			Glass
	Staircase from 1st to 2nd Flo	Ceiling	Ceiling board (wood)
			Lighting
		Stairs, Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Window frame (wood)
			Glass
		Railing	Wooden handrail

	2nd Floor Veranda	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Upper transom (wood)
			2nd floor exterior window frame (wood)
			Aluminum sash (interior)
			Glass
	2nd Floor NE Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Window frame (wood)
			Glass
	2nd Floor NW Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Glass
	2nd Floor South Room	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Eastern wall surface (wood & plaster)
			Western wall surface (wood & plaster)
			Southern wall surface (wood & plaster)
			Northern wall surface (wood & plaster)
			Fittings (wooden door)
			Fittings (wood & glass door)
			Glass
	2nd Floor Center Corridor	Ceiling	Ceiling board (wood)
			Lighting
		Floor	Carpeting
		Interior wall	Wall surface (wood & plaster)
			Fittings (wooden door)
			Upper transom (wood)
			Glass
			Fire hydrant
▶4 	Exterior Elements	East side of building	Plantings
			Water cannon
			Sensor
			Old well
		West side of building	Plantings
			Pathway, staircase
			Entrance for maintenance
			Water cannon
			Toilet
		South side of building	Sensor
			Old water tank
		North side of building	Front gate (visitor entrance)
			Information center
			Building manager's room
			Pump room
			Drinking fountain
			Plantings
			Explanation board

General Chart

Name of the component part	Former Kagoshima Foreign Engineer's Residence		
Survey date	December 15, 2016 (Thurs.) 10:00-13:00	Weather	Sunny
Surveyor	Mr./Ms.XXXX, Cultural Properties Division, Board of Education, Kagoshima City		

No.	Survey category (Part 1) / Part 2	Survey findings: Recommendations	Follow-up	Remediation needed (#)	Contributing factors (by number)	Special remarks
1	Exterior Front (East side)					
(1)	Roof	✔				
(2)	Foundation		✔		4	Crack in pillar foundation stone
(3)	Columns, beams		✔		4	Peeling, fading of paint
(4)	Exterior wall		✔		4	Peeling, fading of paint
2	Exterior Side (North side)					
(1)	Roof			2 places	4	Gutters (2 places)
(2)	Foundation	✔				
(3)	Columns, beams		✔		4	Peeling, fading of paint
(4)	Exterior wall		✔		4	Peeling, fading of paint
3	Exterior Rear (West side)					
(1)	Roof			2 places	4	Gutters (2 places)
(2)	Foundation	✔				
(3)	Columns, beams		✔		4	Peeling, fading of paint
(4)	Exterior wall		✔		4	Peeling, fading of paint
4	Exterior Side (South side)					
(1)	Roof			2 places	4	Gutters (2 places)
(2)	Foundation		✔		4	Crack in pillar foundation stone
(3)	Columns, beams		✔		4	Peeling, fading of paint
(4)	Exterior wall		✔		4	Peeling, fading of paint
5	1st Floor Veranda					
(1)	Ceiling	✔				
(2)	Floor		✔		4	Gaps between stones
(3)	Exterior wall		✔		4	Cracks, warping of louver doors, etc
6	1st Floor Center Corridor					
(1)	Ceiling	✔				
(2)	Floor	✔				
(3)	Exterior wall	✔				
7	1st Floor NE Room					
(1)	Ceiling	✔				
(2)	Floor	✔				
(3)	Interior wall	✔				
8	1st Floor NW Room					
(1)	Ceiling	✔				
(2)	Floor	✔				
(3)	Interior wall	✔				
9	1st Floor SE Room					
(1)	Ceiling	✔				
(2)	Floor	✔				
(3)	Interior wall		✔		4	Cracked glass
10	1st Floor SW Room					
(1)	Ceiling	✔				
(2)	Floor	✔				
(3)	Interior wall	✔				
11	Staircase from 1st to 2nd Floor					
(1)	Ceiling	✔				
(2)	Stairs, Floor	✔				
(3)	Interior wall	✔				
(4)	Handrail	✔				

▶1 ▶2 ▶3

12	2nd Floor Veranda						
(1)		Ceiling	✔				
(2)		Floor		✔		4	Fading in part of the carpet
(3)		Interior wall		✔		4	Peeling, fading of paint
13	2nd Floor NE Room						
(1)		Ceiling	✔				
(2)		Floor	✔				
(3)		Interior wall		✔		4	Cracked glass
14	2nd Floor NW Room						
(1)		Ceiling	✔				
(2)		Floor	✔				
(3)		Interior wall	✔				
15	2nd Floor South Room						
(1)		Ceiling		✔		4	Crack in ventilating hole
(2)		Floor	✔				
(3)		Interior wall	✔				
16	2nd Floor Center Corridor						
(1)		Ceiling	✔				
(2)		Floor	✔				
(3)		Interior wall	✔				
17	Exterior Elements						
(1)		East side of building	✔				
(2)		West side of building		✔		4	Damage, missing pieces in staircase brick work
(3)		South side of building	✔				
(4)		North side of building	✔				

4

State of planned improvements, etc.

No.	Details of improvement measures or reason why improvements cannot be implemented	Date of (planned) improvement Year/Month

Contributing factors

Environmental changes	1: Trees and shrubs, etc., 2: Insects, 3: Mold, 4: Time-related deterioration
Natural disaster	5: Fire, 6: Lightning, 7: Wind and flooding, 8: Landslide, 9: Earthquake, 10: Tsunami, 11: Volca
Tourism pressures	12: Man-made acts by visitors, etc.
Other	13: Other

▶1

Individual Chart

Chart No.	

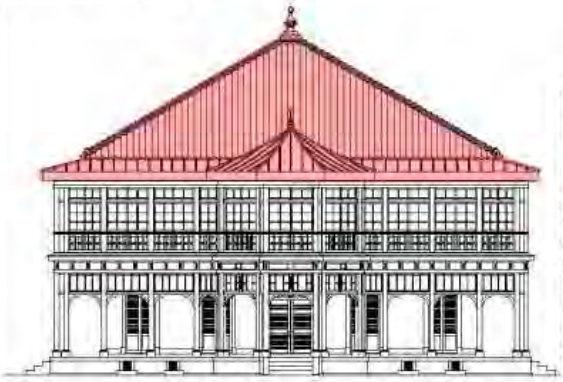
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	Roof	Part 1	Exterior front (East side)	Part 2	Roof
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Tile	Good			Check for tile damage, missing tile, cracks, etc.	
Batten seam galvanized sheet iron	Good			Check underlying materials for warping, displacement, breaks, corrosion, etc.	
Gutters (copper plate)	Good			Check for damage, fallen portions, instability of support hardware, etc.	
Exterior wall finial (til	Good			Check for damage, missing tile, cracks, etc.	

[Diagram, photos, etc.]



Exterior front (East



Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.	Repairs were made in two spots to damaged gutters (March 1–31, 2016).		

▶ 1

Individual Chart

Chart No.	

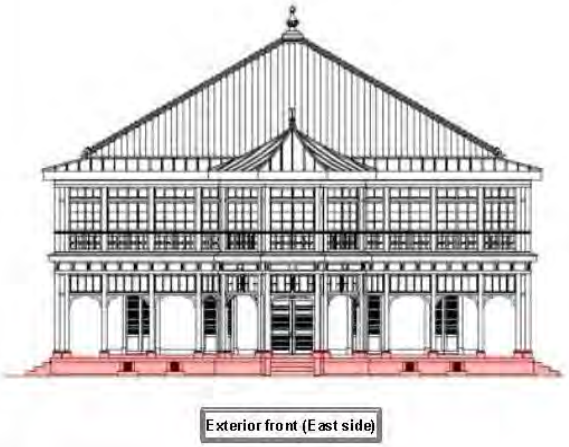
(**Name of the component part: Shuseikan**)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior front (East side)	Part 2	Foundation
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Foundation stone	Good			Check for cracks, break away parts, damage, etc., to stone	
Pillar foundation stone	Crack in stone in 1 location			Check for cracks, break away parts, damage, and termite damage to stone	

[Diagram, photos, etc.]

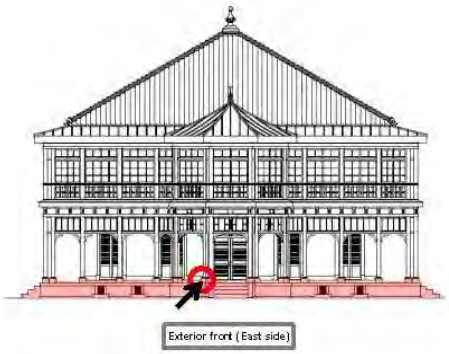






Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	Pillar foundation stone near front entrance

Position diagram/photo







Special remarks (measures to be taken)	A crack can be seen in the pillar foundation stone. Since this does not require immediate repair, we will monitor how it progresses. It will be fixed the next time repair work is being carried out.
History of repairs, etc.	

▶1

Individual Chart

Chart No.	

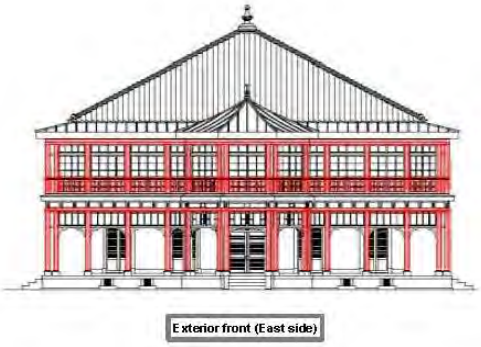
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st and 2nd Floor	Part 1	Exterior front (East side)	Part 2	Columns, beams
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Wooden columns, beams	Overall fading, some paint peeling			Check for peeling paint, cracks, fading, corrosion, termite damage, etc.	
Railing, banister	Overall fading, some paint peeling			Check for peeling paint, cracks, fading, corrosion, etc.	

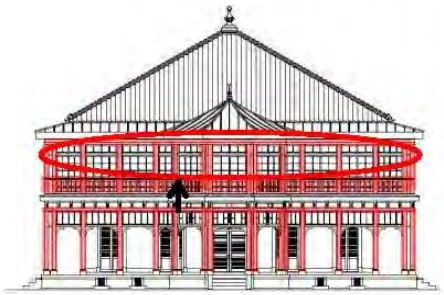
[Diagram, photos, etc.]





Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	2nd floor railing

Position diagram/photo







Special remarks (measures to be taken)	There is deterioration of the paint on the columns, beams, railings, and banisters due to UV light, and along with fading, there is some peeling. We will continue to monitor the impact on the base wood materials and will paint it at the appropriate time.
History of repairs, etc.	

▶1

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

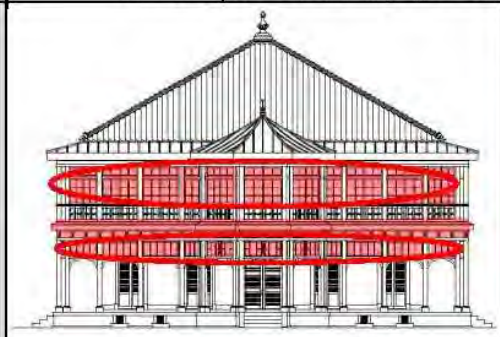
Floor No.	1st and 2nd floors	Part 1	Exterior front (East side)	Part 2	Exterior wall
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Wall surface (wood & plaster)	Good			Check plaster surface for cracks and peeling, fading, stains, dirt, etc.	
Stringcourse (galvanized steel)	Good			Check for fissures and breakage, peeling, cracks, etc.	
Small wall under eaves (wood)	Good			Check for fissures and breakage, peeling, cracks, etc.	
Window frame (wood)	Overall fading, some paint peeling			Check for fissures and breakage, peeling, cracks, etc.	

[Diagram, photos, etc.]



Exterior front (East side)



Position of degradation or damage				
Date of record	2016/12/15	Position of damage (location)	Window frame (wood)	
Position diagram/photo	 Exterior front (East side)			
Special remarks (measures to be taken)	There is deterioration of the paint on the window frame due to UV light, and along with fading, there is some peeling. We will continue to monitor the impact on the base wood materials and will paint it at the appropriate time.			
History of repairs, etc.				

▶2

Individual Chart

Chart No.	

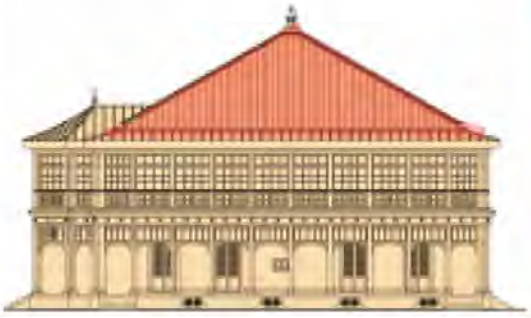
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	Roof	Part 1	Exterior side (North side)	Part 2	Roof
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Tile	Good			Check for tile breakage, missing tiles, cracks, etc.	
Batten seam galvanized sheet iron	Good			Check base materials for warping, displacement, breaks, corrosion, etc.	
Gutters (copper plate)	Gutter breakage in two locations.			Check for damage, fallen portions, instability of support hardware, etc.	

[Diagram, photos, etc.]



Exterior side (North side)



Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	Gutters (2 locations)
Position diagram/photo	 Exterior side (North side)		
Special remarks (measures to be taken)	The edge of the roof is curled up and there is breakage, so repairs will be done at the appropriate time.		
History of repairs, etc.			

▶2

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

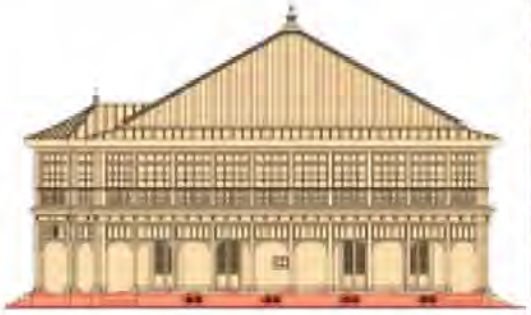
Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior side (North side)	Part 2	Foundation

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Foundation stone	Good	Check stone for cracks, break away parts, damage, et
Pillar foundation stone	Good	Check stone for cracks, break away parts, damage, and termite damage

[Diagram, photos, etc.]



Exterior side (North side)



Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶2

Individual Chart

Chart No.	

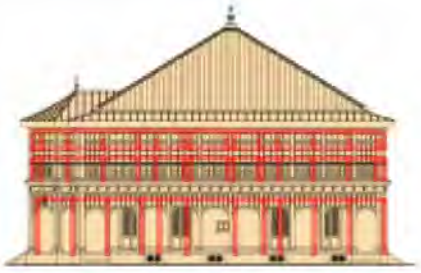
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st and 2nd floors	Part 1	Exterior side (North side)	Part 2	Columns, beams
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Wooden columns, beams	Overall fading, some paint peeling; vertical fissures can be seen on one column			Check for peeling paint, cracks, fading, corrosion, termite damage, etc.	
Railing, banister	Overall fading, some paint peeling			Check for peeling paint, cracks, fading, corrosion, etc.	

[Diagram, photos, etc.]



Exterior side (North side)



Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	1st floor column portion

Position diagram/photo



Exterior side (North side)





Special remarks (measures to be taken)	There is deterioration of the paint on the columns, beams, railings and banisters due to UV light, and along with fading, there is some peeling. We will continue to observe the impact on the base wood materials and will paint it at the appropriate time. In addition, cracks can be seen on a column. We do not believe that this requires immediate repair, so we will monitor the progress and will fix it appropriately in response to the situation.
History of repairs, etc.	

▶2

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st and 2nd floors	Part 1	Exterior side (North side)	Part 2	Exterior wall

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Wall surface (wood & plaster)	Good	Check plaster surface for fissures and peeling, fading, stains, dirt, etc.
Stringcourse (galvanized steel)	Good	Check for fissures and breakage, peeling, cracks, etc.
Small wall under eaves (wood)	Good	Check for fissures and breakage, peeling, cracks, etc.
Window frame (wood)	Overall fading, some paint peeling	Check for fissures and breakage, peeling, cracks, etc.

[Diagram, photos, etc.]

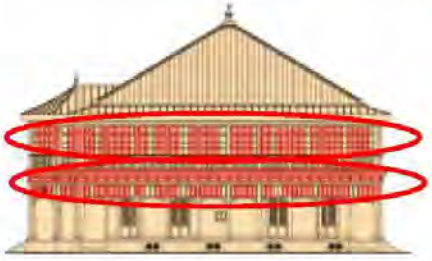


Exterior side (North side)



Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	Window frame (wood)

Position diagram/photo



Exterior side (North



Special remarks (measures to be taken)	There is deterioration of the paint on the window frames due to UV light, and along with fading, there is some peeling. We will continue to monitor the impact on the base wood materials and will paint it at the appropriate time.
History of repairs, etc.	

▶3

Individual Chart

Chart No.	

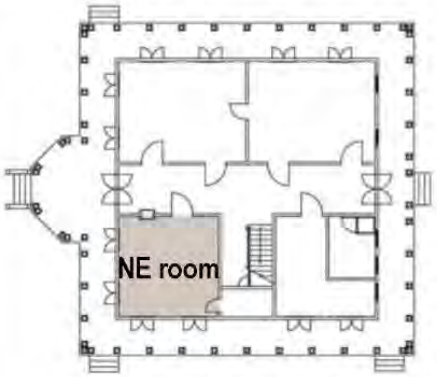
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	1st floor NE room	Part 2	Ceiling
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Ceiling board (wood)	Good			Check for fissures, peeling, fading, stains, dirt, gaps, etc.	
Lighting	Good			Check light fixtures, suspended items, etc., for deterioration, damage	

[Diagram, photos, etc.]





Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶3

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

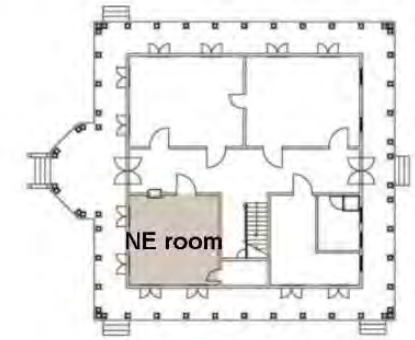
Last modified	December 15, 2016

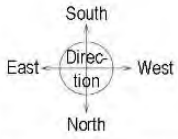
Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

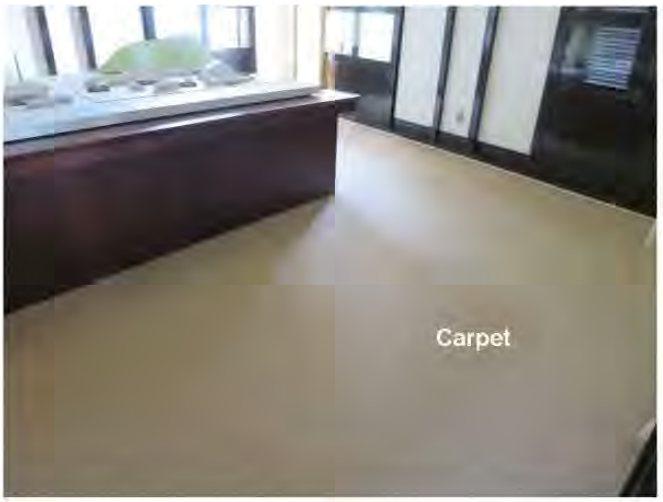
Floor No.	1st floor	Part 1	1st floor NE room	Part 2	Floor

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Carpeting	Good	Check for flaws, wear, fading, stains, dirt, etc.

[Diagram, photos, etc.]







Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶ 3

Individual Chart

Chart No.	

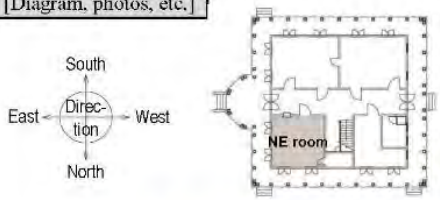
(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	1st floor NE room	Part 2	Interior wall
Materials	State/Remarks			Points to keep in mind (points to pass along in particular, etc.)	
Wall surface (East)	Good			Check for fissures, damage, peeling, fading, stains, dirt, etc.	
Wall surface (West)	Good			Check for fissures, damage, peeling, fading, stains, dirt, etc.	
Wall surface (South)	Good			Check for fissures, damage, peeling, fading, stains, dirt, etc.	
Wall surface (North)	Good			Check for fissures, damage, peeling, fading, stains, dirt, etc.	
Fittings (wooden door)	Good			Check condition of paint and look for fissures, cracks, breakage, etc.	
Fittings (glass door)	Good			Check condition of paint and look for fissures, cracks, breakage, etc.	
Glass	Good			Check for cracks, breakage, etc.	

[Diagram, photos, etc.]











Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶4

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior elements	Part 2	East side of building

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Plantings	Good	Pruning of branches, check for harmful insects, etc.
Water cannon	Good	Check condition of metal fittings, check for breakage, etc.
Sensor	Good	Check condition of metal fittings, check for breakage, etc.
Old well	Good	Check for deterioration due to cracks, separation, damage, etc., to stone

[Diagram, photos, etc.]











Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶4

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

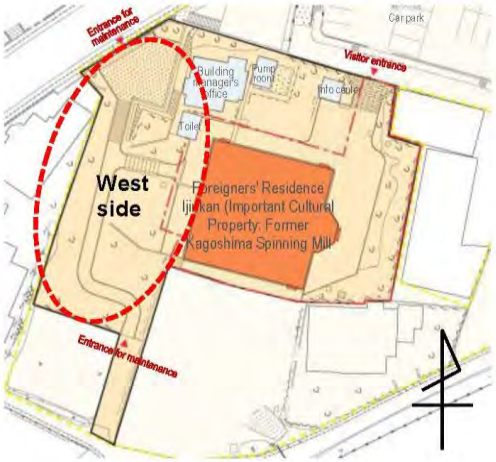
Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior elements	Part 2	West side of building

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Plantings	Good	Pruning of branches, check for harmful insects, etc.
Pathway, staircase	Damage/missing pieces in brickwork (2 places)	Check for presence of unevenness, tilting, cracks, damage, etc.
Entrance for maintenance	Good	Check for presence of unevenness, tilting, cracks, damage, etc.
Water cannon	Good	Check condition of metal fittings, check for breakage, etc.
Toilet	Good	Check for fissures, breakage, peeling, cracks, etc.

[Diagram, photos, etc.]



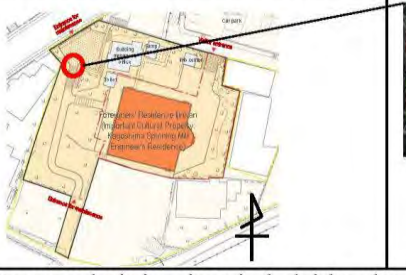










Position of degradation or damage			
Date of record	2016/12/15	Position of damage (location)	Staircase, brickwork
Position diagram/photo			
Special remarks (measures to be taken)	There is damage and missing pieces in the brickwork on the stairs in two locations. This does not require immediate repair, but we will monitor how it progresses. It will be fixed the next time repair work is being carried out.		
History of repairs, etc.			

▶4

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior elements	Part 2	South side of building
Materials	State/Remarks				Points to keep in mind (points to pass along in particular, etc.)
Sensor	Good				Check condition of metal fittings, check for breakage, etc.
Old water tank	Good				Check for deterioration due to cracks, break away parts, damage, etc., to stone

[Diagram, photos, etc.]









Position of degradation or damage			
Date of record		Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

▶4

Individual Chart

Chart No.	

(Name of the component part: Shuseikan)

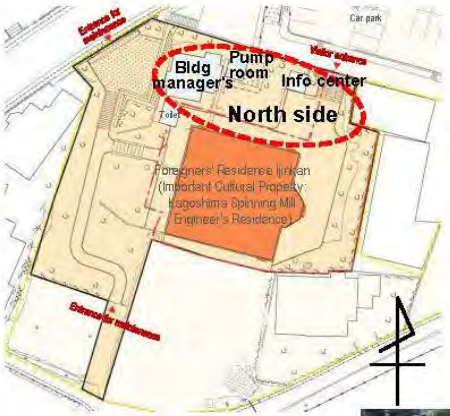
Last modified	December 15, 2016

Name of the Constituent Element (building)	Former Kagoshima Foreign Engineer's Residence

Floor No.	1st floor	Part 1	Exterior elements	Part 2	North side of building

Materials	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Front gate (visitor entrance)	Good	Check for presence of unevenness, tilting, cracks, damage, etc.
Information center	Good	Check for fissures, breakage, peeling, cracks, etc.
Building manager's room	Good	Check for fissures, breakage, peeling, cracks, etc.
Pump room	Good	Check for fissures, breakage, peeling, cracks, etc.
Drinking fountain	Good	Check for fissures, breakage, peeling, cracks, etc.
Plantings	Good	Pruning of branches, check for harmful insects, etc.
Explanation board	Good	Check for fissures, breakage, peeling, cracks, etc.

[Diagram, photos, etc.]













Position of degradation or damage			
Date of record	December 15, 2016	Position of damage (location)	
Position diagram/photo			
Special remarks (measures to be taken)			
History of repairs, etc.			

Relationship between Component Part, Constituent Elements, and Parts (Terayama Charcoal Kiln)

	Component Part	Constituent Element	Part 1	Part 2
▶1	Terayama Charcoal Kiln	Remains of charcoal kiln	Stonework	Front right side Front left side Inside entrance right side Front entrance left side Inside back face
			Vestibule	Ground surface
▶2	Terayama Charcoal Kiln	Kiln monument	Stone monument	Front Right side Left side Back
▶3	Terayama Charcoal Kiln	Scenic view	Vantage point 1	Scenic view 1-1 Scenic view 1-2
			Vantage point 2	Scenic view 2-1 Scenic view 2-2
			Vantage point 3	Scenic view 3
			Vantage point 4	Scenic view 4
			Vantage point 5	Scenic view 5-1 Scenic view 5-2
			Vantage point 6	Scenic view 6
			Vantage point 7	Scenic view 7
			Vantage point 8	Scenic view 8

General Chart

A2 Kagoshima Area

Name of the component part	2 Terayama Charcoal Kiln

Survey date	February 15, 2017 (Wed.)	Weather	Sunny
Surveyor	Mr./Ms.XXXX, Cultural Assets Division, Board of Education, Kagoshima City		

No.	Survey category		Survey findings			Contributing factors (by number)	Special remarks
	Part 1	Part 2	No deterioration	Follow up	Remediation needed (d)		
▶1 1	Remains of charcoal kiln						
(1)	Stonework	Front right side		✓			Looseness, bulging
(2)		Front left side		✓			Looseness, bulging
(3)		Inside entrance right side		✓			Looseness, bulging
(4)		Inside entrance left side		✓			Looseness, bulging
(5)		Inside back face	✓				Looseness, bulging
(6)	Vestibule	Ground surface	✓				
▶2 2	Kiln monument						
(1)	Stone monument	Front	✓				
(2)		Right side	✓				
(3)		Left side	✓				
(4)		Back	✓				
▶3 3	Scenic view						
(1)	Vantage point 1	Scenic view 1-1	✓				
(2)		Scenic view 1-2	✓				
(3)	Vantage point 2	Scenic view 2-1	✓				
(4)		Scenic view 2-2	✓				
(5)	Vantage point 3	Scenic view 3	✓				
(6)	Vantage point 4	Scenic view 4	✓				
(7)	Vantage point 5	Scenic view 5-1	✓				
(8)		Scenic view 5-2	✓				
(9)	Vantage point 6	Scenic view 6	✓				
(10)	Vantage point 7	Scenic view 7	✓				
(11)	Vantage point 8	Scenic view 8	✓				

Status of planned improvements, etc.

No.	Details of improvement measures or reason why improvements cannot be implemented	Date of (planned) improvement Year/Month

Contributing factors

Environmental changes	1: Trees and shrubs, etc., 2: Insects, 3: Mold, 4: Time-related deterioration
Natural disaster	5: Fire, 6: Lightning, 7: Wind and flooding, 8: Landslide, 9: Earthquake, 10: Tsunami, 11: Vo
Tourism pressures	12: Man-made acts by visitors, etc.
Other	13: Other

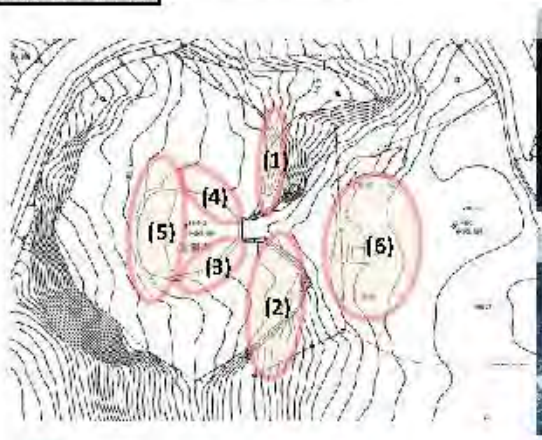
▶1

Individual Chart

Component part	Constituent Element	Last modified
Terayama Charcoal Kil	Remains of charcoal kiln	February 15, 2017

Surveyed Part		State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Part 1	Part 2		
Stonework	Front right side	Looseness, bulging, gaps in seams	Looseness, bulging, gaps in seams in stonework; tree grov
	Front left side	Looseness, bulging, gaps in seams	Looseness, bulging, gaps in seams in stonework; tree grov
	Inside entrance right sid	Looseness, bulging, gaps in seams	Looseness, bulging, gaps in seams in stonework; tree grov
	Inside entrance left side	Looseness, bulging, gaps in seams	Looseness, bulging, gaps in seams in stonework; tree grov
	Inside back face	Good	Looseness, bulging, gaps in seams in stonework; tree grov
Vestibule	Ground surface	Good	Ground surface condition

[Diagram, photos, etc.]















Position of degradation or damage

Part	(1) Front left side		
Date of record	February 15, 2017	Position of damage (location)	Looseness in the stones near the entrance, gaps in the seams, and overall bulging can be seen.
Position diagram/photo			
Special remarks (measures to be taken)	We have been taking measurements since 2015. We will analyze records from multiple years and consider repairs.		
History of repairs, etc.			

▶2

Individual Chart

Component part	Constituent Element	Last modified
Terayama Charcoal Kiln	Kiln monument	February 15, 2017

Surveyed Part		State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Part 1	Part 2		
Stone monument	Front	Good	Weathering of the surface that could render writing illeg
	Right side	Good	Weathering of the surface that could render writing illeg
	Left side	Good	Weathering of the surface that could render writing illeg
	Back	Good	Weathering of the surface that could render writing illeg

[Diagram, photos, etc.]




(1) Front


(2) Right side


(3) Left side


(4) Back

Position of degradation or damage

Part	(1) Front, (2) Right side, (3) Left side		
Date of record	February 15, 2017	Position of damage (location)	None in particular
Position diagram/photo	 (1)  (2) Right  (3) Left		
Special remarks (measures to be taken)	Currently there is no deterioration or damage, but we will be careful to ensure that there is no weathering of the surface that could render writing illegible.		
History of repairs, etc.			

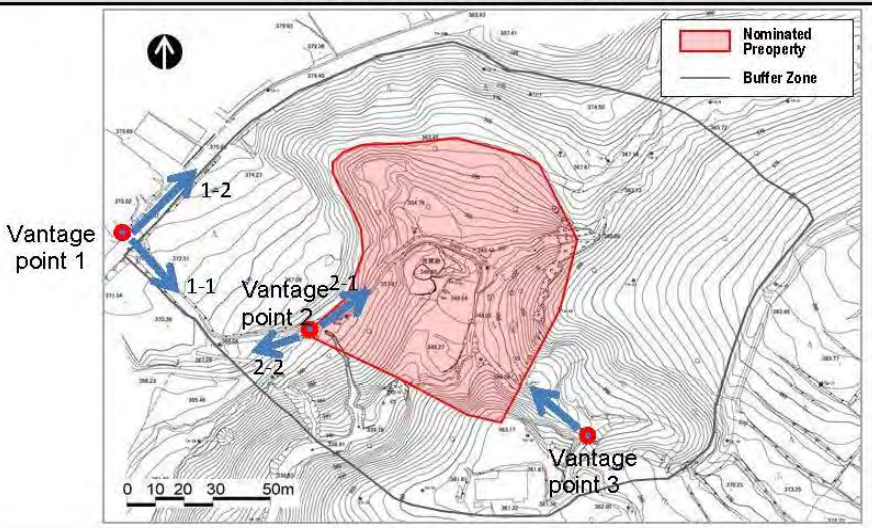
▶3

Individual Chart

A2 Kagoshima Area

Component Part	2 Terayama Charcoal Kiln			N0.1
Constituent Element	3 Scenic view	Vantage point	Vantage points 1–3	Record date: February 15, 2017
Value to be preserved	Vegetation, topography, and natural environment surrounding the charcoal kiln			

Position and overview of vantage point



Current status



Photo (Scenic view 1-1)



Photo (Scenic view 1-2)



Photo (Scenic view 2-1)



Photo (Scenic view 2-2)

Individual Chart

A2 Kagoshima Area

Component Part	2 Terayama Charcoal Kiln			N0.2
Constituent Element	3 Scenic view	Vantage point	Vantage points 1–3	Record date: February 15, 2017
Value to be preserved	Vegetation, topography, and natural environment surrounding the charcoal kiln			

Position and overview of vantage point	
 Photo (Scenic view 3)	

Changes in scenic view
No notable change.

Handling of guidance, beautification, etc.
—

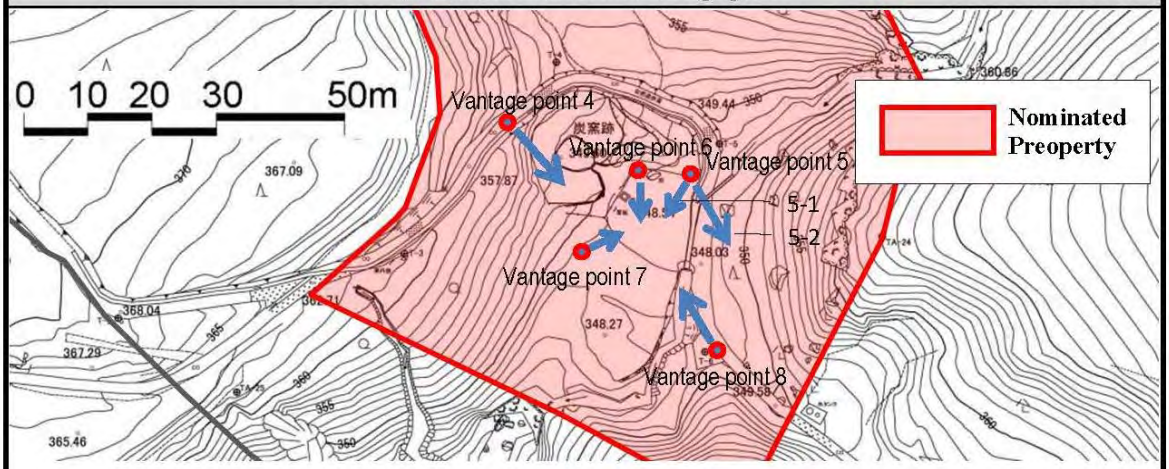
▶3

Individual Chart

A2 Kagoshima Area

Component Part	2 Terayama Charcoal Kiln			N0.3
Constituent Element	3 Scenic view	Vantage point	Vantage points 4–8	Record date: February 15, 2017
Value to be preserved	Vegetation, topography, and natural environment surrounding the charcoal kiln			

Position and overview of vantage point



Current status



Photo (Scenic view 4)



Photo (Scenic view 5-1)



Photo (Scenic view 5-2)



Photo (Scenic view 6)

Appendix e)-2

Individual Record

A2 Kagoshima Area

Component Part	2 Terayama Charcoal Kiln			N0.4
Constituent Element	3 Scenic view	Vantage point	Vantage points 4–8	Record date 2017/2/15
Value to be preserved	Vegetation, topography, and natural environment surrounding the charcoal kiln			

Position and overview of vantage point



Photo (Scenic view 7)



Photo (Scenic view 8)

Changes in scenic view

No notable change.

Handling of guidance, beautification, etc.

—

Relationship between Component Part, Elements, and Parts
(Sekiyoshi Sluice Gate of Yoshino Leat)

Component Part	Constituent Element	Part 1	Part 2
▶1 Sekiyoshi Sluice Gate of Yoshino Leat	Remains of sluice gate (Genroku Period 1688-1704)	Intake weir	Remains A Remains B Remains C Remains D Remains E
		Dam	Stone wall F Stone wall G
▶2 Sekiyoshi Sluice Gate of Yoshino Leat	Monument to water god Suiten	Main body	Front Left side Right side
		Foundation	Ground surface
▶3 Sekiyoshi Sluice Gate of Yoshino Leat	Scenic view	Vantage point 1	Scenic view 1-1
		Vantage point 2	Scenic view 2-1 Scenic view 2-2
		Vantage point 3	Scenic view 3-1 Scenic view 3-2 Scenic view 3-3 Scenic view 3-4 Scenic view 3-5
		Vantage point 4	Scenic view 4-1

General Chart

Component Part	Sekiyoshi Sluice Gate of Yoshino Leat		
Survey date	February 15, 2017 (Wed.)	Weather	Sunny
Surveyor	Mr./Ms.XXXX, Cultural Assets Division, Board of Education, Kagoshima City		

No.	Survey category		Survey findings			Contributing factors (by number)	Special remarks
	Part 1	Part 2	Foundations	Follow up	Remediation status(※)		
▶1 1	Remains of sluice gate						
(1)	Intake weir	Remains A	✔				
		Remains B	✔				
		Remains C	✔				
		Remains D	✔				
		Remains E	✔				
(2)	Dam	Stone wall F	✔				
		Stone wall G		✔			Some part of lower area of stone
▶2 2	Monument to water god Suiten						
(1)	Main body	Front	✔				
		Left side	✔				
		Right side	✔				
	Foundation	Ground surface	✔				
▶3 3	Scenic view						
(1)	Vantage point 1	Scenic view 1-1	✔				
(2)	Vantage point 2	Scenic view 2-1	✔				
		Scenic view 2-2	✔				
(3)	Vantage point 3	Scenic view 3-1	✔				
		Scenic view 3-2	✔				
		Scenic view 3-3	✔				
		Scenic view 3-4	✔				
		Scenic view 3-5	✔				
(4)	Vantage point 4	Scenic view 4-1	✔				

State of planned improvements, etc.

No.	Details of improvement measures or reason why improvements cannot be implemented	Date of (planned) improvement Year/Month

Contributing factors

Environmental changes	1: Trees and shrubs, etc., 2: Insects, 3: Mold, 4: Time-related deterioration
Natural disaster	5: Fire, 6: Lightning, 7: Wind and flooding, 8: Landslide, 9: Earthquake, 10: Tsunami, 11: Volcano
Tourism	12: Man-made acts by visitors, etc.
Other	13: Other

Appendix e)-2

▶1

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat)

Constituent Element	Remains of sluice gate	Part 2	Intake weir	Record date
				February 15, 2017

Part 2	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Remains A	Good	Weathering, deterioration, damage, etc.
Remains B	Good	Weathering, deterioration, damage, etc.
Remains C	Good	Weathering, deterioration, damage, etc.
Remains D	Good	Weathering, deterioration, damage, etc.
Remains E	Good	Weathering, deterioration, damage, etc.
History of repairs, etc.	Overview of repairs	



Map

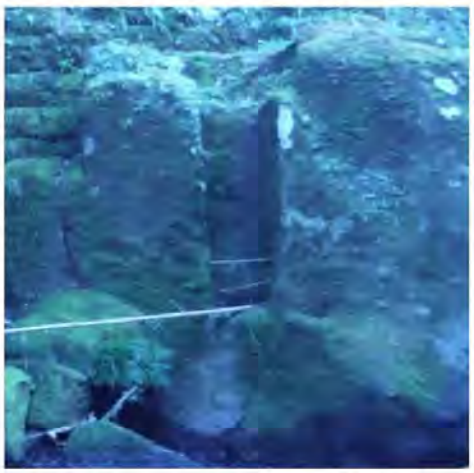


Photo (Remains A)



Photo (Remains B)

Individual Chart

(Component part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.2

Constituent Element	Remains of sluice gate (Genroku Period)	Part 1	Intake weir	Record date
				XX, XX, 2016



Photo (Remains C)

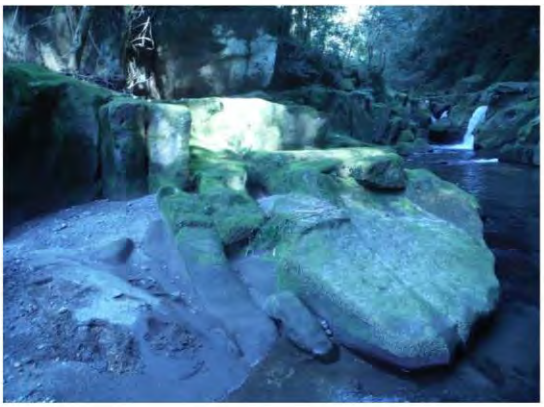


Photo (Remains D)



Photo (Remains E)

▶1

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.3

Constituent Element	Remains of sluice gate (Genroku Period)	Part 1	Dam	Record date
				February 15, 2017

Part 2	State/Remarks	Points to keep in mind (points to pass along in particular,
Stone wall F	Good	Weathering, deterioration, damage, etc.
Stone wall G	Some part of lower area of stone wall has been scoured out	Weathering, deterioration, damage, etc.
History of repairs, etc.	Overview of repairs	

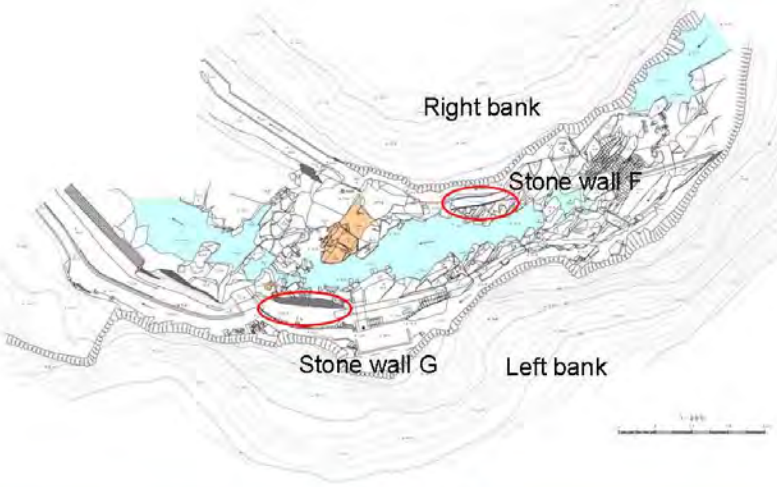




Photo (Stone wall F)



Photo (Stone wall G)

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.4

Constituent Element	Remains of sluice gate (Genroku Period)	Part 1	Dam	Record date 2017/2/15



Photo (close-up of lower portion of stone wall G)

▶2

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.1

Constituent Element	Monument to water god Suiten	Part 1	Main body	Record date
				February 15, 2017

Part 2	State/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Front	Good	Weathering, deterioration, damage, etc.
Left side	Good	Weathering, deterioration, damage, etc.
Right side	Good	Weathering, deterioration, damage, etc.
History of repairs, etc.	Overview of repairs	



Map



Photo (front)



Photo (left side)

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.1

Constituent Element	Monument to water god Suiten	Part 1	Main body	Record date
				February 15, 2017



Photo (right side)

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.2

Constituent Element	Monument to water god Suiten	Part 1	Foundation	Record date
				February 15, 2017

Part 2	Status/Remarks	Points to keep in mind (points to pass along in particular, etc.)
Ground surface	Good	Soil erosion etc.
History of repairs, etc.	Overview of repairs	



Map



Photo (Ground surface)

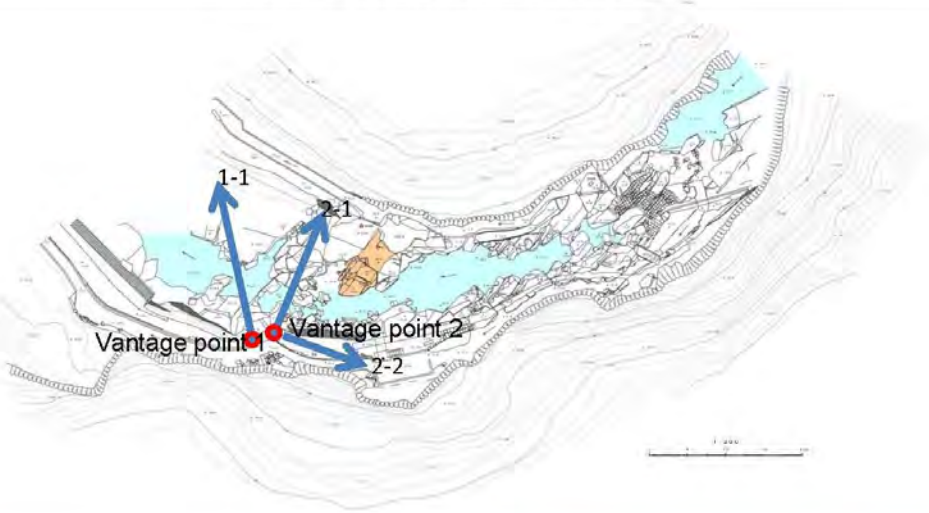
▶3

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0. 1

Constituent Element	Scenic view	Record date
		February 15, 2017
Value to be preserved		

Position and overview of vantage point



Current state



Photo (Scenic view 1-1)



Photo (Scenic view 2-1)



Photo (Scenic view 2-2)

Changes in scenic view

No notable change.

Handling of guidance, beautification, etc.

—

Appendix e)-2

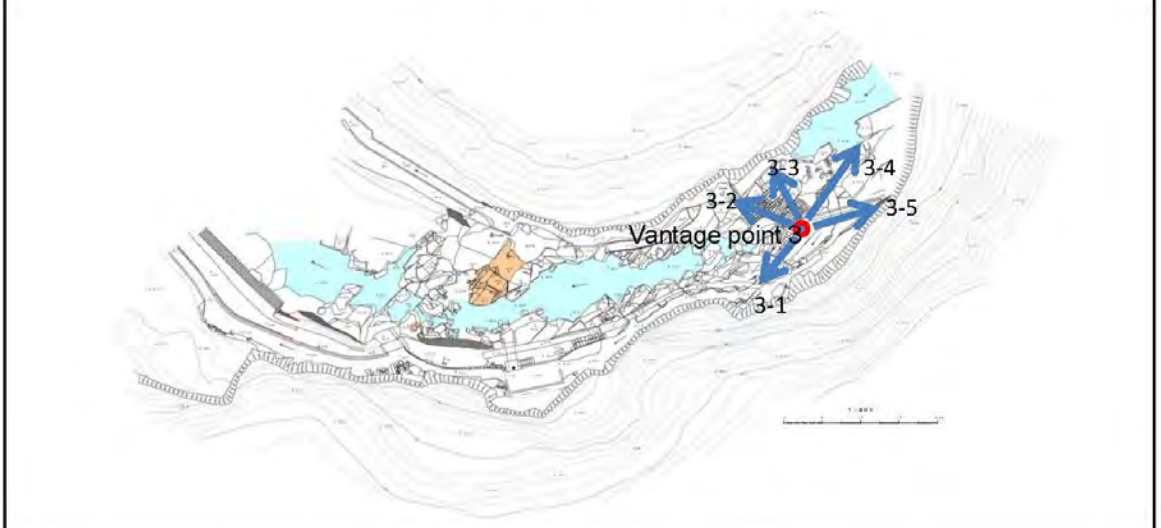
▶3

Individual Chart

(Component Part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.2

Constituent Element	Scenic view	Record date
		February 15, 2017
Value to be preserved		

Position and overview of vantage point



Current state



Photo (Scenic view 3-1)



Photo (Scenic view 3-2)



Photo (Scenic view 3-3)



Photo (Scenic view 3-4)

Individual Chart

(Component part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.3

Constituent Element	Scenic view	Record date
		February 15, 2017
Value to be preserved		



Photo (Scenic view 3-5)

Changes in scenic view

No notable change.

Handling of guidance, beautification, etc.

—

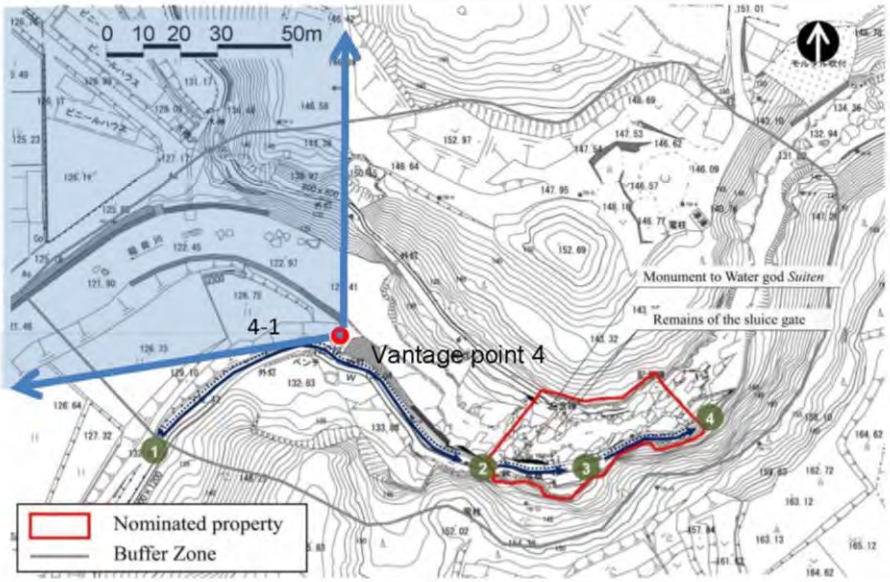
▶3

Individual Chart

(Component part: Sekiyoshi Sluice Gate of Yoshino Leat) N0.5

Constituen t Element	Scenic view	Record date
		February 15, 2017
Value to be preserved		

Position and overview of vantage point



Current state



Photo (looking outward from edge of buffer zone)

Changes in scenic view

No notable change.

Handling of guidance, beautification, etc.

—

ID・Component Part/Site

Annual Report of 20XX FY

MM, 20XX

Local Conservation Council, XXXX

(Monitoring Implementation Body : ○○○○
Monitoring Responsible Body : ○○○○)

ID・Component Part/Site

Table of contents

1. Basic information

2. Legal protection (designation, etc.)

3. Monitoring of impacts, etc. on the Component Part/Site

4. Monitoring of physical changes to each element of the Component Part/Site

5. Monitoring of the implementation of the projects for restoration, conservation and utilization of the Component Part/Site

6. Interpretation

7. Organizations, etc. related to preservation

8. Partnership framework among stakeholders related to conservation and management

9. Review (evaluation)

ID・Component Part/Site

1. Basic information

	Component Part	Buffer Zone
Boundary	(Drawing)	(Drawing)
Area	ha	ha
Use		

ID・Component Part/Site

2. Legal Protection (designation, etc.)

	Component Part	Buffer Zone
Boundary	((Drawing))	((Drawing))
Designation	Historic Site (Law for the Protection of Cultural properties) [date] Structures of Landscape Importance (Landscape Act) [date]	

In case of being additionally designated, fill in only the date of final designation and write "Additional" on the right of the date.

ID・Component Part/Site

3. Monitoring of impacts, etc. on the Component Part/Site

Negative Impacts	Monitoring Indicators	Indicators Measurement Methods	Periodicity	Monitoring Body	Results of 2015FY	Results of 2014FY	Comments

As to development plans at the component part and buffer zone, fill in additional information in this section regardless of presence or absence of the monitoring indicators.

4. Monitoring of physical changes to each element of the Component Part/Site

Element	Monitoring Indicator	Indicators Measurement Methods	Periodicity	Monitoring Body	Results of 2015FY	Results of 2014FY	Comments

ID・Component Part/Site

5. Monitoring of the implementation of the projects for restoration, conservation and utilization of the Component Part/Site

(Mainly related to restoration and conservation)

Name of Projects	Outline of Project	Implementing Body	Starting Year	Project Expenses in 2014FY	Project Expensed in 2015FY	Subsidies, etc.

(Mainly related to utilization)

Name of Project	Outline of Project	Implementing Body	Starting Year	Project Expenses in 2014FY	Project Expenses in 2015FY	Subsidies, etc.

ID・Component Part/Site

6. Interpretation

(Publications)

Name	Publishment (Revision) Body	Size and Volume	Circulation	Languages	Outline	Subsidies, etc.
Comments						

(Websites)

Name	Outline	URL	Frequency of Update	Page View
Comments				

(Symposium)

Name	Date	Organizer	Number of Participants	Outline
Comments				

ID・Component Part/Site

(Educational activities)

Name	Date	Organizer	Number of Participants	Outline
Comments				

(Materials for educational activities)

Name	Drawing up (Revising) Body	Size and Volume	Circulation	Outline	Subsidies, etc.
Comments					

(Capacity building)

Name	Date	Implementation Body	Number of Participants	Targeted people	Outline
Comments					

ID・Component Part/Site

(Research activities)

Name of Research/Survey	Implementation Body	Implementation Period	Outline	Subsidies, etc.

(Community-involved activities)

Name of Activity	Date	Organizer	Number of Participants	Outline of Participans, Organizations and Activities
Comments				

ID・Component Part/Site

7. Organizations, etc. related to preservation

(Outline of custodial organizations for management of Component Part/Site)

Name	Owner/Manager	Number of Staff	Outline of Organization

(Outline of the organizations, etc. involved with the Component Part such as NPOs and volunteers)

Name	Classification of organization	Number of staff	Outline of Organization

ID・Component Part/Site

8. Partnership framework among stakeholders related to conservation and management

ID・Component Part/Site

9. Review (evaluation)

Annual Report
FY 2016

May 2017

Shuseikan Conservation Council

Monitors:	Individual owners and managers
Body responsible for monitoring:	Kagoshima City

2 Shuseikan

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2 Shuseikan

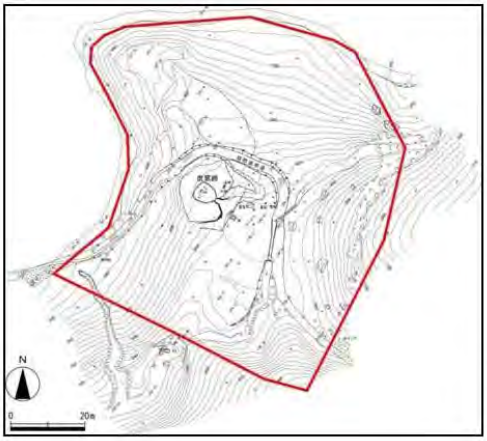
1 Basic Information

(1) 2-1 Shuseikan

	Component Part	Buffer Zone
Scope of the component part and buffer zone	(Map) 	(Map) 
Surface area	9.98ha	61.09ha
Use	Garden designated as a National Place of Scenic Beauty, National Historic Site, national/municipal roads, locally designated river, museum, historical archive, commercial facility, privately owned dwelling, woodlands	Garden designated as a National Place of Scenic Beauty, National Historic Site, woodlands, national/municipal roads, locally designated river, privately owned dwelling, beach, coast, commercial facility

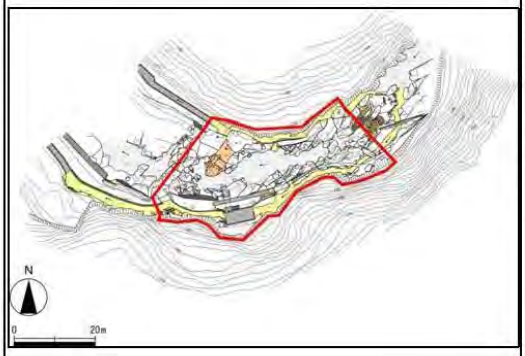
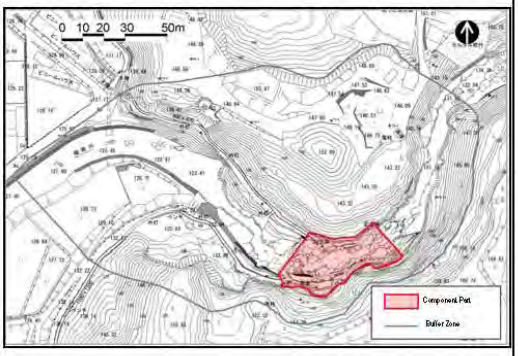
2 Shuseikan

(2) 2-2 Terayama Charcoal Kiln

	Component Part	Buffer Zone
Scope of the component part and buffer zone	(Map) 	(Map) 
Surface area	0.64ha	2.01ha
Use	National Historic Site (remains of charcoal kiln), woodlands, nature trail	National Historic Site, woodlands, nature trail

Comments	There has been no change from the previous fiscal year in terms of the surface area and use of each component part and its buffer zone.

(3) 2-3 Sekiyoshi Sluice Gate of Yoshino Leat

	Component Part	Buffer Zone
Scope of component part and buffer zone	(Map) 	(Map) 
Surface area	0.11ha	1.93ha
Use	River, waterway (leat), agricultural road	River, waterway (leat), agricultural road, farmland, woodlands, quarry

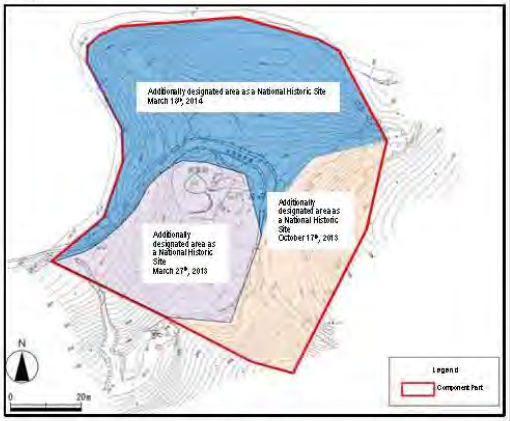
2 State of Legal Protection (Designations, etc.)

(1) 2-1 Shuseikan

	Component Part	Buffer Zone
Scope of the component part and buffer zone	(Map) 	(Map) 
State of designations	Law for the Protection of Cultural Properties Additional Designation of National Historic Site, Former Shuseikan including Terayama Charcoal Kiln, Sekiyoshi Sluice Gate of Yoshino Leat (March 18th, 2014) Additional Designation of National Historic Site, Kagoshima Spinning Mill (March 10th, 2015) Additional Designation of Place of Scenic Beauty, Sengan-en including Kekura Okariya Garden (October 17th, 2013)	Class II Special Zone & Ordinary Zone of Kirishima-Kinkowan National Park (Natural Parks Act) Important Landscape Formation Area (Landscape Act/Kagoshima City Landscape Ordinance, Kagoshima City Landscape Plan) (enacted April 1st, 2014) Scenic Area (City Planning Act), Place of Scenic Beauty (Law for the Protection of Cultural Properties)

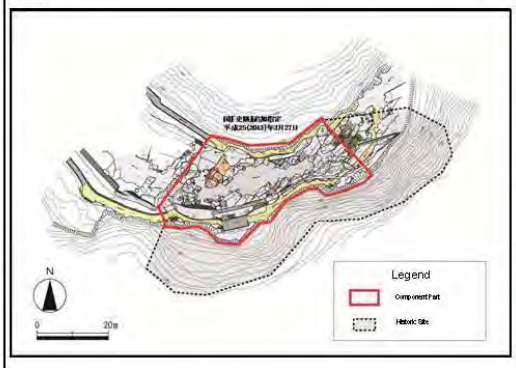
2 Shuseikan

(2) 2-2 Terayama Charcoal Kiln

	Component Part	Buffer Zone
Scope of the component part and buffer zone	(Map) 	(Map) 
State of designations	Law for the Protection of Cultural Properties Additional Designation of National Historic Site, Former Shuseikan including Terayama Charcoal Kiln, Sekiyoshi Sluice Gate of Yoshino Leat (March 18th, 2014)	Class II Special Zone of Kirishima-Kinkowan National Park (Natural Park Act), Scenic Area (City Planning Act) Landscape Planning Area (Landscape Act/Kagoshima City Landscape Ordinance, Kagoshima City Landscape Plan)

2 Shuseikan

(3) 2-3 Sekiyoshi Sluice Gate of Yoshino Leat

	Component Part	Buffer Zone
Scope of the component part and buffer zone	(Map) 	(Map) 
State of designations	Law for the Protection of Cultural Properties Additional Designation of National Historic Site, Former Shuseikan including Terayama Charcoal Kiln, Sekiyoshi Sluice Gate of Yoshino Leat (March 27th, 2013)	River Zone (River Act), Regulated Area for Housing Land Development (Act on the Regulation of Housing Land Development), Landscape Planning Area (Landscape Act/Kagoshima City Landscape Ordinance, Kagoshima City Landscape Plan), Urbanization Control Area (City Planning Act)
Comments	There have been no changes from the previous year to the state of the designations of National Historic Sites and Places of Scenic Beauty in each component part and buffer zone nor to the laws and regulations related thereto, and we are making every effort to preserve the sites.	

2 Shuseikan

3 Monitoring of Impact on the Component Parts

Adverse Impact		Monitoring Indicators	Content & Method for Measuring Indicators	Cycle	Recorded by	FY2016 Results	FY2015 Results	Comments
Natural disaster	Volcanic activity	Number of explosive eruptions (see note 1)	Assess number of explosive eruptions of Sakurajima	Monthly	Japan Meteorological Agency	2x/month	36x/month	Decreased significantly compared to previous year. (No eruptions since August)
	Earthquakes	Observation of precursory phenomena	Observe precursory phenomena by seismometer (3 or higher on Japanese seismic scale)	As needed	Japan Meteorological Agency	4x	2x	With the Kumamoto Earthquake, 1 level 4 quake and 3 level 3 quakes were observed. No problems were encountered with the patrols made immediately after the earthquake or in the subsequent monitoring of events.
	Landslides	Survey of landslide damage, collapsed land	Conduct visual observation, and when necessary, survey landslides and collapsed areas.	As needed	Kagoshima City; Kagoshima Prefecture (River)	1x	2x	Due to the heavy rains in May, a portion of the left bank of the Kokura River crumbled. Because the edge of the left bank area was unsettled, the City carried out emergency repairs (revetment repairs and riverbed girdle).
	Wind & flood damage	Number of damaged cultural properties	Track instances of damage to cultural properties	As needed	Kagoshima City Board of Education	0	0	There was no damage from Typhoon 16, etc. The impact of inflows of earth and sand, etc. into the sluice gate (Shuseikan side) should be closely observed.
	Fire	Number of fires	Track number of fires	Annually	Kagoshima City	0	0	No instances of fires.
		Number of inspections of fire prevention equipment	Inspect fire prevention equipment	Annually	Kagoshima City Board of Education; Shimadzu Limited	2x	1x	No problems.
		Number of firefighting and disaster prevention drills	Hold firefighting and disaster prevention drills	Annually	Kagoshima City Board of Education, Shimadzu Limited	1x	1x	A cultural property fire prevention day is held monthly, with fire-fighting training and evacuation drills.

[Note 1: Number of explosive eruptions at Sakurajima]

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	112	169	64	14	5	46	0	0	0	0	22	5	437	36.4
FY2016	15	2	1	2	0	0	0	0	0	0	0	0	20	1.7

2 Shuseikan

Adverse Impact		Monitoring Indicators	Content & Method for Measuring Indicators	Cycle	Recorded by	FY2016 Results	FY2015 Results	Comments
Tourism pressure	Impact on buildings by the increased number of visitors	Number of visitors (see note 2)	Track the number of visitors visiting each component part	Monthly	Shimadzu Limited, Kagoshima City	Sengan-en: 34,932 people/mo. Terayama Charcoal Kiln: 406 people/mo. Sekiyoshi Sluice Gate of Yoshino Leat: 641 people/mo.	Sengan-en: 40,435 people/mo. Terayama Charcoal Kiln: 858 people/mo. Sekiyoshi Sluice Gate of Yoshino Leat: 1,160 people/mo.	Since World Heritage inscription, there has been no visible impact on the component part. We will continue to track the trends in visitors and will develop countermeasures if needed.
		Number of cars using visitor parking lot	Track the number of cars using parking lot for visitors	Monthly	Shimadzu Limited, Kagoshima City	Sengan-en: 5,088 vehicles/mo. (incl. 704 buses) Sekiyoshi Sluice Gate of Yoshino Leat: 222 vehicles/mo. (incl. 5 buses)	Sengan-en: 5,591 vehicles/mo. (incl. 710 buses) Sekiyoshi Sluice Gate of Yoshino Leat: 434 vehicles/mo. (incl. 7 buses)	No visible impact on the properties. We will continue to track the number of vehicles using the parking lot and will develop countermeasures if needed.
Development pressure	Within component part	Existence of plans	Confirm whether or not plans exist.	Annually	Kagoshima City	0	0	No foreseeable plans.
	Within buffer zone	Existence of plans	Confirm whether or not plans exist.	Annually	Kagoshima City	1 case	1 case	On December 22nd, 2015, a city planning decision was reached on the route for the National Road 10 North Bypass that took into consideration the scope of the component part and buffer zone, and surrounding scenic views.

[Note 2: Number of visitors]

Former Kagoshima Foreign Engineers' Residence (Ijin-kan) (unit: people)

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	699	1,254	987	1,379	2,151	2,644	2,251	3,185	2,464	1,500	1,589	1,893	21,996	1,833
FY2016	1,050	1,281	624	1,009	1,768	1,391	1,296	1,348	1,393	790	937	1,099	13,986	1,166

Former Shuseikan Machinery Factory (unit: people)

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	26,064	41,055	22,373	22,506	27,436	29,169	34,046	38,460	27,635	21,192	24,885	33,045	347,866	28,989
FY2016	18,940	21,043	12,994	17,572	25,879	32,455	28,903	33,717	25,179	14,814	20,980	31,072	283,548	23,629

Sengan-en (unit: people)

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	36,814	56,245	28,119	32,076	37,594	40,035	47,269	57,915	36,131	29,989	35,641	47,386	485,214	40,435
FY2016	28,576	29,533	18,158	25,154	38,281	43,539	39,228	54,725	36,326	25,227	32,244	48,194	419,185	34,932

Terayama Charcoal Kiln (unit: people)

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	—	—	—	617	1,136	1,184	1,142	818	—	—	—	251	5,148	858
FY2016	275	531	164	466	650	311	293	548	—	—	—	420	3,658	406

※Counts were taken by volunteer guides on weekends and holidays (FY2016: February 2nd–November 27th, March 4th–)

Sekiyoshi Sluice Gate of Yoshino Leat (unit: people)

	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	Total	Monthly Avg.
FY2015	—	—	—	890	1,470	1,492	1,324	1,339	—	—	—	440	6,955	1,159
FY2016	541	838	579	636	1,137	519	526	677	—	—	—	312	5,765	641

※Counts were taken by volunteer guides on weekends and holidays (FY2016: 4/2~11/27, 3/4~)

4 Monitoring of Physical Alterations to Each Constituent Element within the Component Parts

Constituent Element	Monitoring Indicators	Content & Method for Measuring Indicators	Cycle	Recorded by	FY2016 Results	FY2015 Results	Comments
Important Cultural Property of Former Kagoshima Foreign Engineers' Residence	Condition of wooden structures	Check for deterioration of or damage to structures due to natural disasters, weathering, etc.	Annually	Kagoshima City Board of Education	Requires repairs: 6 places Follow-up: 18 places	9 places	Because damage was detected in the gutters (6 places), those will need to be repaired in sequence. Cracks in the foundation stone and damage to window panes, etc., will be monitored for changes over time and we will consider how to handle repairs as needed.
Important Cultural Property of Former Shuseikan Machinery Factory	Condition of stone structures	Check for deterioration of or damage to structures due to natural disasters, weathering, etc.	Annually	Shimadzu Limited	Follow-up: 6 places	1 place	Deterioration to the gutters, window frames, doors, stonework on exterior walls, etc., will be monitored for changes over time and we will consider how to handle repairs as needed.
Historic Site of Shuseikan	State of the ground surface in parts where remains exist	Check for changing conditions, etc., of the ground surface.	Annually	Shimadzu Limited	Follow-up: 1 place	—	In terms of places where there are underground remains, no substantial changes were seen, but because weeds are growing at the foundry remains where there is exposure displayed, it requires clearing.
	Incidences of damaged stonework on reverberatory furnace	In terms of incidences of damaged stonework, check for damage due to natural disasters, weathering, etc.	Annually	Shimadzu Limited	Follow-up: 1 places	1 place	There is a place where the surface of the stone is chipping. We will observe the changes over time.
	Incidences of damaged stonework on the leat (Shuseikan side)	In terms of incidences of damaged stonework and impact from trees and shrubs, check for damage due to natural disasters, weathering, etc.	Annually	Shimadzu Limited	Requires repairs: 2 places Follow-up: 2 places	0 places	In terms of trees and shrubs growing inside the stonework, trimming and other measures must be implemented before that stonework is damaged. With regard to bulging stonework, we will monitor the changes over time.
Historic Site of Kagoshima Spinning Mill	State of ground surface in parts where remains exist.	Check for changing conditions, etc. of the ground surface.	Annually	Shimadzu Limited, Kagoshima City Board of Education	Nothing unusual	—	In terms of places where there are underground remains, no substantial changes were seen, but because national road, commercial facilities, etc., are located there, we will continue to monitor the changes over time.

2 Shuseikan

Constituent Element	Monitoring Indicators	Content & Method for Measuring Indicators	Cycle	Recorded by	FY2016 Results	FY2015 Results	Comments
Place of Scenic Beauty Sengan-en	State of deterioration, damage, etc. to structures	Check for deterioration of or damage to structures due to natural disasters, weathering, etc.	Annually	Shimadzu Limited	Requires repairs: 3 places (warehouse) Follow-up: 5 places (Bogakuro, main gate, storage house)	Completed repairs to tiles on the roof of the residence	In the warehouse, peeling of the plaster wall and deterioration of the foundation stone, etc., were visible, and we are deliberating on how to address this based on expert opinions. In terms of Bogakuro, the main gate, and the storage house, we will monitor for changes over time and will consider how to handle repairs as needed.
	Vegetation survey of plants, shrubs, etc.	Visually check growth of trees and shrubs.	Annually	Shimadzu Limited	Follow-up: 2 places	Decay of Yakushima white pine	By and large, it is being well managed. In terms of the Yakushima white pine, in FY2015, after consulting a tree doctor, pruning was carried out on the upper trunk and the thicker branches in order to lower the tree height, and we are continuing to monitor its condition.
	Incidences of damaged stonework on fences, stone walls, etc. (including site of ascending kiln remains)	In terms of incidences of damaged stonework, check for damage due to natural disasters, weathering, etc.	Annually	Shimadzu Limited	Requires repairs: 9 places Follow-up: 39 places	0 places	The ascending kiln remains are in good condition. In particular, there was weathering observed on the stone fence around the edge, and we will consider how to address that based on expert opinions.
	Other changes to stonework in other stone structures (including crane lantern)	Visually check state of weathering of stone.	Annually	Shimadzu Limited	Requires repairs: 1 place Follow-up: 6 places	Nothing unusual	The crane lantern is in good condition. Because weathering was observed on some of the stone lanterns, etc., we will consider how to address repairs to structures that require repairs based on expert opinions. For others, we will continue to monitor for changes over time.
	State of other elements that comprise the gardens	Check on the state of other elements that comprise the garden.	Annually	Shimadzu Limited	Follow-up: 6 places	—	Some deterioration was observed in parts of the board fence, and those sections will be repaired or replaced as appropriate.
Scenic View (Shuseikan)	Confirm view from vantage points	Confirm the state of the view from vantage points.	Annually	Kagoshima City Board of Education	Nothing unusual	—	There were no changes to the view.

2 Shuseikan

Constituent Element	Monitoring Indicators	Content & Method for Measuring Indicators	Cycle	Recorded by	FY2016 Results	FY2015 Results	Comments
Charcoal Kiln	Slippage in stonework	In terms of incidences of damaged stonework, check for damage due to natural disasters, weathering, etc.	Annually	Kagoshima City Board of Education	Follow-up: 4 places	0 places	Although no damage was observed, there were signs of looseness and bulging in the stonework, and so we will continue the fixed-point (dynamic) observations that we have been conducting since FY2015 to monitor the condition of the stonework.
	Vegetation survey of plants, shrubs, etc.	Visually check growth of trees and shrubs.	Annually	Kagoshima City Board of Education	Nothing unusual	Nothing unusual	Although there was no indication of tree and shrub growth that would have an impact on the component part, we will continue to monitor this and prune as needed.
Kiln Monument	Weathering of stone structures	Visually check the state of weathering of stone.	Annually	Kagoshima City Board of Education	Nothing unusual	Nothing unusual	The integrity was preserved.
Scenic View (Terayama)	Confirm view from vantage points	Confirm the state of the view from vantage points.	Annually	Kagoshima City Board of Education	Nothing unusual	—	There were no changes to the view.
Remains of the Sluice Gate	State of the stonework in the relics	In terms of incidences of damaged stonework, check for damage due to natural disasters, weathering, etc.	Annually	Kagoshima Prefecture, Kagoshima City	Follow-up: 1 place	0 places	There is a partial loss of stones in the stonework due to corrosion in the lower portion of the wall along the bank, so we will monitor for changes over time and will consider how to respond as needed.
Monument to Water God Shrine	Vegetation survey of plants, shrubs, etc.	Visually check growth of trees and shrubs.	Annually	Kagoshima City Board of Education	Nothing unusual	Nothing unusual	Although there was no indication of tree and shrub growth that would have an impact on the component part, we will monitor the vegetation on the surrounding slopes and prune as needed.
	Weathering of stone structures	Visually check the state of weathering of stone.	Annually	Kagoshima City Board of Education	Nothing unusual	Nothing unusual	The integrity was preserved.
Scenic View (Sekiyoshi)	Confirm view from vantage points	Confirm the state of the view from vantage points.	Annually	Kagoshima City Board of Education	Nothing unusual	—	There were no changes to the view.

2 Shuseikan

5 Monitoring Related to Implementation of Conservation, Restoration, Presentation and Public Utilization Projects for the Component Parts and Buffer Zones

(Primarily related to conservation and restoration)

[Area of Component Part]

Project Name	Project Overview	Implementing Body	Initial Year	2016 Expenditures	Subsidies, etc.
Fixed point observation, etc., of Terayama Charcoal Kiln	Carry out dynamic (fixed-point) survey of the stonework in the main body of the charcoal kiln, and analyze the state of preservation of the stonework.	Kagoshima City	FY2015	¥486,000	Subsidies by the Government of Japan 1/2
Repair work to the right bank of the Kokura River	Repairs were done to the right bank of the river due to the heavy rainfall in May.	Shimadzu Limited	FY2016	¥467,800	N/A
Repair work on leaks in the building of residence	Tile repairs were done on the roof of the residence due to leaks.	Shimadzu Limited	FY2016	¥6,480,000	N/A

[Buffer Zone]

Project Name	Project Overview	Implementing Body	Initial Year	2016 Expenditures	Grants, etc.
Emergency preventive afforestation work	In order to prevent falling boulders, etc., on the hills to the rear, rockfall prevention work, etc., was carried out.	Kagoshima Prefecture	FY2016	¥50,000,000	Gov't subsidy 5.5/10
Repair work to the left bank of the Kokura River	Repairs were done to the left bank of the river and remedial work was done on the river bed (river bed girdle) due to the heavy rainfall in May.	Kagoshima City	FY2016	¥1,186,000	N/A

(Mainly related to presentation and public utilization)

[Area of the component part]

Project Name	Project Overview	Implementing Body	Initial Year	2016 Expenditures	Grants, etc.
Interior and exterior repairs to entrance building	Repair work was done on the interior and exterior of the Sengan-en entrance building.	Shimadzu Limited	FY2016	¥33,700,000 (not incl. tax)	N/A
Iso Kohi-kan repairs	In order to introduce restaurant service, primarily parking lot maintenance, arrangement to the surrounding area of the buildings, etc., were conducted.	Shimadzu Limited	FY2016	¥15,100,000 (not incl. tax)	N/A

2 Shuseikan

Project Name	Project Overview	Implementing Body	Initial Year	2016 Expenditures	Grants, etc.
Operation and maintenance of Terayama nature trail	Surface improvements were made to the Terayama nature trail (repairs to spots where rain caused sediment runoff).	Kagoshima City	FY2016	¥183,600	N/A
Terayama nature trail safety fence installation	A safety fence (rope fence) was installed along the nature trail near the Terayama Charcoal Kiln to prevent falls.	Kagoshima City	FY2016	¥493,560	N/A

[Buffer Zone]

Project Name	Project Overview	Implementing Body	Initial Year	2016 Expenditures	Grants, etc.
Terayama nature trail safety fence installation[see above]	A safety fence (rope fence) was installed along the nature trail near the Terayama Charcoal Kiln to prevent falls.	Kagoshima City	FY2016	¥493,560	N/A
Repair work to agricultural road	Repair work was done on the gravel pavement along the Terayama nature trail.	Kagoshima City	FY2016	¥300,000	N/A

2 Shuseikan

6 Interpretation

(Publications)

Name	Organization Responsible for Production (Revision)	Format/pages	No. Released	Language	Overview	Grants, etc.
Promotional DVD, "Sites of Japan's Meiji Industrial Revolution"	World Heritage Council for Sites of Japan's Meiji Industrial Revolution	Produced in each of the 8 Areas of the property, about 10 minutes	56	Japanese	DVD to provide information on Japan's Meiji Industrial Revolution based on the app (to target children and seniors who do not use smartphones)	Yes
PR pamphlet	World Heritage Council for Sites of Japan's Meiji Industrial Revolution	A4, 24 pages (color)	200,000	Japanese	Created for the general public to improve understanding of the World Heritage value, etc., distributed to all local governments and elsewhere	Yes
Smartphone application	World Heritage Council for Sites of Japan's Meiji Industrial Revolution	AndroidOS, iOS	1	Japanese, English, Chinese (traditional/simplified), Korean	To expand the number of visitors by improving understanding of the World Heritage value, etc., and to promote tours among the areas	Yes
Content for promotional DVD (English version), "Sites of Japan's Meiji Industrial Revolution"	World Heritage Council for Sites of Japan's Meiji Industrial Revolution	Approx. 20 minutes	1	English	DVD content to introduce the value and story of the World Heritage property to foreigners	Yes
Flyer for children about the property	Kagoshima Prefecture	A4/1 page	15,000	Japanese	Creation of a flyer for elementary school students to help them understand the component parts of the "Sites of Japan's Meiji Industrial Revolution" that exist within the prefecture	N/A
Publicity poster for component parts in Kagoshima Prefecture	Kagoshima Prefecture	B1	100	Japanese	Creation of a poster and distribution of poster to airports and other public facilities	N/A
"Shuseikan" leaflet	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	A4 trifold, equivalent of 8 pages	30,000	Japanese	Updated with addition of UNESCO World Heritage logo	N/A

2 Shuseikan

Name	Organization Responsible for Production (Revision)	Format/pages	No. Released	Language	Overview	Grants, etc.
PR commemorative goods to celebrate 1st anniversary of inscription (wet tissue)	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	W145×H84	3,000	Japanese	Newly created	N/A
PR commemorative goods to celebrate 1st anniversary of inscription (fan)	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Regular size, color on both sides	2,000	Japanese	Newly created	N/A
"Shuseikan" walking map	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	4/6 /folded	40,000	Japanese	Updated with addition of UNESCO World Heritage logo	N/A
"Shuseikan" guide book	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	A6/24 pages	20,000	Japanese	Updated with addition of UNESCO World Heritage logo	N/A
Small flags in support of Kagoshima Marathon	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	W297×H210	1,000	Japanese	As part of World Heritage PR, created small flags for cheering on runners at the Kagoshima Marathon	N/A
"Sites of Japan's Meiji Industrial Revolution" flag	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	W550×H900	40	Japanese	World Heritage flags displayed by street associations	N/A
PR sign to commemorate 1st anniversary of inscription	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	W9400×H1200	1	Japanese	Displayed in the front hallway of the main office of city hall	N/A
Bus wrapping ad for World Heritage	Kagoshima City	Airport shuttle bus	1 bus	—	Ad on the body of the bus that connects the center of the city with the Kagoshima Airport	N/A
Road guide sign with common design	Kagoshima Prefecture, Kagoshima City	Prefectural and municipal roads	24	Japanese, English	Created road guide signs featuring the industrial heritage sites logo that were shared with 8 prefectures and 11 cities	N/A
Comments	Using goods prepared to commemorate the 1st anniversary of inscription, leaflets, a smartphone application, etc., and distributing or utilizing them for World Heritage–related events and lectures, for tourism promotion, and other occasions, we worked to improve information on and understanding of the value and appeal of World Heritage and to increase the number of visitors through the promotion of tourism among the areas.					

2 Shuseikan

(Website)

Name	Overview	URL	Updates	No. of hits
"Sites of Japan's Meiji Industrial Revolution—Iron & Steel, Shipbuilding and Coal Mining" homepage (of World Heritage Council for Sites of Japan's Meiji Industrial Revolution)	On the occasion of the inscription on the World Heritage List, the Council for Sites of Japan's Meiji Industrial Revolution, in cooperation with the National Congress of Industrial Heritage (a general incorporated foundation) and the Cabinet Secretariat, launched a new "Sites of Japan's Meiji Industrial Revolution" homepage to introduce the sites' value as World Heritage, various interpretation activities, initiatives of the Council, and so on. (Launched at July 2nd, 2015)	http://www.japansmeijiindustrialrevolution.com/	As needed	79,017
Pages for Shuseikan and "Sites of Japan's Meiji Industrial Revolution" (Kagoshima City homepage)	Provides a range of information related to the World Heritage property, including the value of Shuseikan, an overview of the property, the process that led to World Heritage inscription, directions to each of the component parts, etc.	http://www.city.kagoshima.lg.jp/kanko/sekaisan/top/index.html	As needed	5,923
Pages related to the "Partnership Council for Modern Industrial Heritage Sites in Kagoshima" (Kagoshima City homepage)	Introduces the "Partnership Council for Modern Industrial Heritage Sites in Kagoshima", which promotes initiatives that utilize the sites	http://www.city.kagoshima.lg.jp/kanko/sekaisan/pa-tona-suppu_gaiyou.html	As needed	222
Comments	We are working to disseminate various information related to the World Heritage property and the component parts in Kagoshima—e.g., the value as World Heritage, interpretation activities, an overview of the component parts, how to get there, the state of cooperative initiatives of the Partnership Council—and to promote greater awareness and understanding of the property as a whole and its component parts			

2 Shuseikan

(Symposia, lectures, etc.)

Name	Date	Implementing Body	No. of Participants	Overview
Public awareness program for the Modern Industrial Heritage Sites (educational efforts for general residents of prefecture)	(Minamiosumi) December 1st (Amami region) January 14th, 15th (Kirishima) January 29th	Kagoshima Prefecture	Total: 179	A bus tour and lecture were held for local residents of areas where Shuseikan-related sites remain in order to promote awareness of the component parts within the prefecture that are part of the "Sites of Japan's Meiji Industrial Revolution" and the connection to local heritage sites.
Talk show to commemorate 1st anniversary of inscription of "Meiji Japan's Industrial Revolution Heritage Sites"	February 4th	Kagoshima Prefecture	Approx. 1,000	A talk show was held to commemorate the 1st anniversary of the inscription of the "Sites of Japan's Meiji Industrial Revolution" and to convey the value and significance of the component parts within the prefecture, their historical background, etc., to people within and outside of Kagoshima Prefecture.
"Sites of Japan's Meiji Industrial Revolution" Symposium	October 2nd	Kagoshima Prefecture	Approx. 170	Under the title, "This Is Amazing! The Sekiyoshi Sluice Gate of Yoshino Leat Shuseikan Program—This Is How World Heritage Will Change the Region," experts offered a keynote speech and a symposium with other relevant people was held to discuss how to utilize the World Heritage component parts to revitalize the region.
Digital Documentation Exhibit	From May 5th to March 31st	The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution	—	Using a panoramic video displayed on large screens (using Google Liquid Galaxy), this exhibit traveled to each region (Kagoshima, Aso, Nagasaki, Kitakyushu) to provide integrated information on the 23 component parts of the property.
Bus tour of Kagoshima World Cultural Heritage component parts	August 14th, 21st; September 17th, 18th; November 12th, 13th, 19th, 20th (total 8 days)	Kagoshima City	Total: 236	A bus tour was offered that toured the component parts in order to increase understanding of their value as World Heritage and of the Shuseikan project.
Modern Industrial Heritage Sites hospitality course	July 19th, 20th; August 30th; January 11th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Approx. total: 90	A course was offered for taxi drivers, bus guides, hotel workers, and others that provided an overview of the Outstanding Universal Value of the property and its component parts, interacting with foreigners, etc., in order to improve hospitality toward visitors.
Liaison meeting for tour guide organizations	October 14th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	8 guide organizations, relevant government officials	In order to increase visitors and be able to handle foreign tourists, a liaison meeting was held to promote exchange and cooperation among tour guide organizations.

2 Shuseikan

Name	Date	Implementing Body	No. of Participants	Overview
Lectures for local residents	October 29th, November 12th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Total: 75	Lectures were held to deepen local residents' understanding of the value and attractiveness of the World Heritage property.
Walking events utilizing the component parts	August 21st, October 10th, November 23rd	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Total: 500	In order to promote regional revitalization through the use of the sites, walking events (Sekiyoshi Sluice Gate of Yoshino Leat Amazing Discovery Mystery Tour, Yoshino Hyoroku Historic Roadway Walk, and A Visit to Shimgakuji Temple) were carried out that were planned and operated by community organizations.
PR for Shuseikan as one of the component parts of Sites of Japan's Meiji Industrial Revolution at the Meiji Restoration Hometown Fair	October 29th, 30th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Approx. total: 200	In order to expand the fan base for the Industrial Revolution Heritage Sites, we carried out PR activities for Shuseikan at the Meiji Restoration Hometown Fair that were planned and carried out by college students (making toy Nariakira cannons, a picture-story show, etc.).
PR for Shuseikan as one of the component parts of Sites of Japan's Meiji Industrial Revolution at the Ohara Festival	November 3rd	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Approx. 200	In order to expand the fan base for the modern industrial heritage sites, we carried out PR activities for Shuseikan at the Ohara Festival that were planned and carried out by college students (an exhibit of original panels, a shooting contest with toy Nariakira cannons, etc.).
PR for Shuseikan at Shigakukan University's cultural festival (Icho Festival)	November 19th–20th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Approx. total: 250	In order to expand the fan base for the modern industrial heritage sites, a Shuseikan PR booth was set up at the Shigakukan University Icho Festival, which was planned and carried out by college students.
Seminar & walking tour "Two people who inherited Nariakira's vision, Segodon and Godai-sama"	November 26th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Approx. 30	In order to expand the fan base for the modern industrial heritage sites, a seminar and walking tour were carried out, which were planned and run by a community organization.
Visiting lecture for city government on the World Cultural Heritage property	June 7th, August 22nd, September 5th, November 25th, 28th, December 14th	Kagoshima City	Total: 137	Visiting lectures were held by city employees for neighborhood associations and other private organizations.
Comments	We are holding events and lectures related to Sites of Japan's Meiji Industrial Revolution for citizens, tour guides, people in the tourism-related industries, and others, with the goal of disseminating information on and increasing understanding about the Outstanding Universal Value of the property as a whole and the positioning of each of the component parts in that. We will continue to promote effective initiatives to provide information to even more visitors and increase their understanding.			

2 Shuseikan

(Educational initiatives)

Name	Date	Implementing Body	No. of Participants	Overview
PR and educational activities on modern industrial heritage sites (promote understanding among young children/students)	July 7th–September 10th, Application period, November 29th, Results announced, December 17th, Award ceremony	Kagoshima Prefecture	Submitted works: 66	An essay contest was held for elementary school students within Kagoshima Prefecture on the theme of the component parts of the Sites of Japan's Meiji Industrial Revolution that are located within the prefecture.
Visiting class on Modern Industrial Heritage Sites	April – March	Kagoshima City	Total: 857 (12 events)	Lecturers from within the prefecture who are knowledgeable about the World Heritage property held special classes at elementary and middle schools in order to deepen understanding of the history of the late Edo and Meiji Restoration periods, including the Shuseikan project, and also to foster pride in their hometown.
Field trip for educators	August 9th	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	13	The objective was to deepen educators' understanding of the general overview and value of the World Heritage property and its component parts and to encourage educational activities in schools.
Shoko-Shuseikan workshops and lectures for educators	July 5th, 29th, August 3rd, 6th, September 3rd, October 8th, December 3rd	Shimadzu Limited	Total: 215 (7 events)	Lectures and workshops were held for members of the general public who are interested in history as well as educators in order to promote understanding of the Shuseikan project.
Workshops for primary school students	May 18th, 26th, June 9th, September 23rd, 25th, October 19th, 21st, 26th, 28th, November 4th, 5th, February 16th	Shimadzu Limited	Total: 1,060 (12 events)	On-site workshops were held for primary school students in order to increase understanding of the Sites of Japan's Meiji Industrial Revolution and of the Shuseikan project.
Comments	In addition to carrying out an essay contest and visiting lectures aimed at young children and students, courses and workshops were conducted for educators in order to promote understanding of the Sites of Japan's Meiji Industrial Revolution.			

2 Shuseikan

(Materials for educational activities)

Name	Organization Responsible for Production (Revision)	Format/pages	No. Released	Overview	Grants, etc.
Kagoshima Time Travel	Kagoshima Prefecture	A4, 22 pages	50,000	A supplementary reader for use in class was distributed to all 5th graders in the prefecture.	N/A
Stationery (desk pad) to promote learning and awareness	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	A4+double-sided	6,000	New stationery goods (desk pads) were created to provide an opportunity for students to learn about the value and appeal of the heritage sites, and they were distributed to 5th grade children in the city of Kagoshima	N/A
Curriculum guide leaflet	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	A3+double-sided	500	Leaflets were produced (additional printing) as reference for educators to encourage the incorporation of the Sites of Japan's Meiji Industrial Revolution into the primary school curriculum as a theme; they were distributed to elementary and middle schools in the city	N/A
Comments	Educational materials including stationery goods to promote learning/awareness and a curriculum guide leaflet were created and distributed in order to promote understanding of the Sites of Japan's Meiji Industrial Revolution. Continued efforts will be made to work with schools and other relevant organizations to promote understanding of the sites.				

(Capacity-building)

Name	Date	Implementing Body	No. of Participants	Target Audience	Overview
Workshop on conservation and management	May 17th, February 10th	The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution	Approx. total 80 (4 from Kagoshima City)	Local government personnel involved with the Sites of Japan's Meiji Industrial Revolution	A course was held for newly appointed staff and outside experts were invited to offer lectures as part of a training program aimed at improving knowledge of and technical capacity in conservation and management.
Tour guide training for Sites of Japan's Meiji Industrial Revolution	November 15th–16th	The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution	90	Guides and others from each area, relevant local government personnel	In addition to increasing knowledge of the Outstanding Universal Value of the World Heritage property as a whole and positioning of each of the component parts in that, the training deepened cooperation and exchange among the relevant regions in terms of guide-related activities.
Comments	In addition to increasing knowledge of the Sites of Japan's Meiji Industrial Revolution, conservation and management, etc., these projects deepened cooperation and exchange among guides in the relevant regions. Training for those working on conservation and management, guides, and others will be further strengthened to help improve the capabilities of relevant personnel.				

2 Shuseikan

(Activities involving the local community)

Name	Date	Implementing Body	No. of Participants	Overview of participants, organization, activities
Clean-up activities in the Shuseikan area	July 24th, February 26th, March 12th	Iso Neighborhood Association	Total: approx. 50	Clean-up activities were carried out by the local neighborhood association in the area around Shuseikan.
Hospitality activities at Shuseikan	November 19th, March 5th	Iso Neighborhood Association	Total: approx. 40	Hospitality activities were carried out for visitors to the Former Foreign Engineers' Residence, and World Heritage PR efforts were conducted at the Kagoshima Marathon.
Clean-up activities in the Terayama Charcoal Kiln area	1x per month	Yoshino-cho Higashi-Shobudani Neighborhood Association	Total: approx. 120	Clean-up activities were carried out by the local neighborhood association in the area around the Terayama Charcoal Kiln.
Making charcoal experience at Kiln	February 14th (place pots in kiln), February 18th (remove pots from kiln)	Yoshino-cho Higashi-Shobudani Neighborhood Association	Total: approx. 30	Making charcoal experience at Kiln was carried out with the local neighborhood association.
Clean-up activities in the Sekiyoshi Sluice Gate of Yoshino Leat area and maintenance of the sluice gate	All year	Shimoda-cho Neighborhood Association	Total: approx. 150	Clean-up activities and maintenance of irrigation water was carried out by the local neighborhood association in the area around the Sekiyoshi Sluice Gate of Yoshino Leat.
Planting activities around the Sekiyoshi Sluice Gate of Yoshino Leat	November 2nd, February 16th	Shimoda-cho Neighborhood Association	Total: approx. 30	Planting activities (sowing of rapeseed, maintenance of hydranges and rows of cherry trees) were carried out by the local neighborhood association around the Sekiyoshi Sluice Gate of Yoshino Leat.
Clean-up activities by college students around the site	7x per year	Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Total: approx. 100	Clean-up activities and workshops were held by university and junior college students around the site.
Volunteer guide activities (fixed locations)	Sat., Sun., holidays (except part of winter)	Kagoshima Convention & Visitors Bureau	Total: approx. 860	At the Former Foreign Engineers' Residence, Terayama Charcoal Kiln, and Sekiyoshi Sluice Gate of Yoshino Leat, stationary guides were available to convey the value and appeal of the site on weekends and holidays (Terayama/Sekiyoshi closed for winter from December through February).
Volunteer guide activities (walking tour)	All year	Kagoshima Convention & Visitors Bureau	Total: approx. 140	Kagoshima volunteer guides conducted guided walking tours of the "Walk Around Shuseikan, a World Heritage site" course.
Comments	In addition to clean-up and planting vegetation work with groups like local neighborhood associations and hospitality and other activities that enhance the region's appeal, the Partnership Council for Modern Industrial Heritage Sites in Kagoshima carries out work such as having volunteers serve as stationary guides to share the sites' value and appeal. We will cooperate and collaborate with the relevant administrative agencies to continue carrying these activities out in the future.			

2 Shuseikan

7 Organizations and Others Involved in Conservation of the Component Parts

(Overview of managing entities, etc.)

Name	Owner/Administrator	Number of workers/employees	Overview of organization
Shimadzu Limited	Owner of the Garden designated as a Place of Scenic Beauty, Historic Site Shuseikan Machinery Factory (currently Shoko Shuseikan), etc.	[No. involved in conservation and management of the component part] Shoko Shuseikan: 4 Sengan-en: 54	Manages Shoko Shuseikan (historical museum) and Garden of Sengan-en designated as a Place of Scenic Beauty. The conservation and management of the Historic Site and the Machinery Factory is done by the Shoko Shuseikan; the conservation and management within the Garden of Sengan-en is done by Sengan-en's Park Interior Management Division.
Kagoshima City	Owner of the Former Foreign Engineers' Residence, Manager of municipal roadways, river	[No. involved in conservation and management of the component part] Division head: 3 Admin.: 5	Local public body (number of employees: 3,706). Jurisdiction for site conservation and management lies with the Cultural Properties Division; management of municipal roads and rivers lies with the Road Management Division and the River and Harbor Affairs Division.

(Overview of NPOs, Volunteer Groups, and other organizations related to the component part)

Name	Type of organization	Number of workers/employees	Overview of organization
Partnership Council for Modern Industrial Heritage Sites in Kagoshima	Private organization	Approx. 30	Established in March 2014, when the "Kagoshima Modern Industry Cooperative Action Plan" was set. Comprised of local citizens, NPOs, operators, and other relevant organizations, each body cooperated in implementing initiatives aimed at preservation of the Modern Industrial Heritage Sites and at regional revitalization.
Kanmachi Town Management	Private organization	Approx. 20	Led by residents of Kanmachi, an old castle town located in the vicinity of Kagoshima Station, which is the closest station in the Iso district, this group carries out community-building activities. They have been a core member of the Partnership Council.
Machizukuri Chiiki Forum-Kagoshima Tanken no Kai (NPO Community-Building Forum-Kagoshima Explorers Club)	Nonprofit organization	Approx. 5	As an NPO that considers how to learn about historical geography and nature, and how to build the community, the Forum carries out walking tours of the Modern Industrial Heritage Sites, offers lectures, etc.

2 Shuseikan

8 System for Cooperation among Parties Relevant to Management and Conservation

(State of meetings of local conservation councils)

Division	Proceedings and Reports	Notes
(1st Council Meeting) May 9, 2016		
① Feedback mechanism set out in "Strategic Framework"	Regarding FY2015 annual report (draft)	
② Implementation, improvement, and amendment of Conservation Management Plan (CMP)	Regarding the restoration and maintenance utilization plan	
④ Other	Regarding amendments to the regulations on area-based local conservation councils	
(1st Board Meeting) October 7, 2016		
① Feedback mechanism set out in "Strategic Framework"	Regarding a new monitoring chart	
② Implementation, improvement, and amendment of Conservation Management Plan (CMP)	Regarding the restoration and maintenance utilization plan	
(2nd Board Meeting) December 20, 2016		
② Implementation, improvement, and amendment of Conservation Management Plan (CMP)	Regarding the restoration and maintenance utilization plan	

9 Summary (Evaluation)

(1) Regarding the work for conservation and management, etc.

1) Overall

- In terms of the displays within each component part, in 2015, as part of the Shuseikan project, explanatory and guide signs were installed with a unified design. Based on the results of future research, we will improve the guidance functions as needed, for example by updating or adding explanatory signs.

2) Shuseikan

- In the Sengan-en entrance building, we revised the reception layout according to visitor traffic flow, and in the Iso Kōhi-kan, as a new restaurant was added, repairs were made to the interior and exterior. We will continue to make improvements and enrichments to the environment in which visitors are greeted.
- With regard to the roof of the residence in Sengan-en, tile repairs were carried out in response to leaks, and revetment repairs and riverbed girdle repairs were also carried out when a portion of the bank of the Kekura River stonework crumbled and there was sediment runoff due to heavy rains. We will continue to monitor the situation and, keeping in mind the landscape as a Place of Scenic Beauty, will discuss the necessary measures.

3) Sekiyoshi Sluice Gate of Yoshino Leat

- The necessary measures were taken to ensure a safe and pleasant environment for visitors, such as inspecting and repairing the fall prevention fence, cleaning up the area following the typhoon, clearing driftwood from within the river section, and so on.

4) Terayama Charcoal Kiln

- Since November 2015, fixed-point observations have been carried out to survey the condition of stonework. We will continue to carry out fixed-point observations and will ask experts for their opinions as we carefully analyze the condition of the stonework and consider concrete measures for the future.
- With regard to the nature trail, in addition to repair work on uneven areas of the trail, a rope safety fence was installed to prevent falls. We will continue to work to ensure a safe and pleasant environment for visitors.

(2) Regarding Interpretation

- We worked on PR and educational efforts aimed at visitors and others using the leaflets, goods, phone app, and so on that were produced. We will continue to disseminate information on and increase understanding about the World Heritage sites' value and appeal, and will continue to work to increase the number of visitors by promoting tourism among the areas.
- With regard to Shuseikan's guidance function, based on the current division of roles between the display contents in each of the facilities, we will consider ways to enhance that guidance function so that the "Sites of Japan's Meiji Industrial Revolution" and the Shuseikan project can be understood in their entirety as the Iso area's overall guidance facilities.

Current state, issues, and directionality of capacity building of human resource in Area 1 Hagi

Preconditions: Hagi City is the chief manager of Hagi Reverberatory Furnace, Ebisugahana Shipyard, Ohitayama Tatara Iron Works, and Hagi Castle Town. Shoin Shrine (a religious organization) performs that role for Shokasonjuku Academy.

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the Component Part	•Subsequent to World Heritage inscription, Hagi City conducted two training sessions on conservation and management of the Component Parts for each of their owners and chief managers.	•As chief managers of the component parts, Hagi City and Shoin Shrine (a religious organization) are responsible for leading development project in the buffer zone to be appropriate for conservation and management for the relevant component parts while properly engaging in management, including for changing current state within the component parts. The city's Cultural Property Protection Division therefore needs to share information and communicate certainly with local departments of the Government og Japan in Yamaguchi Prefecture and the development departments of the Yamaguchi Prefectural Government and Hagi City •It is necessary to maintain and reinforce the structure of the Cultural Property Protection Division of the Hagi municipal office and enhance staff skills, tasks for restoration and public utilization will be largely concentrated during the next 10 years. The city will need to secure sufficient experts, especially for conservation and surveys for historic buildings and excavation surveys for archaeological remains, in view of the quality and quantity of future works.	•As a supervisory unit for the World Heritage protection, Hagi City's Cultural Property Protection Division will ensure that there are no detriment to the component parts and their environs owing to changes to their current states and development in areas that include the buffer zones. It will do so by inviting World Heritage experts or staffers from the Cabinet Secretariat and other entities as lecturers in regularly holding conservation and management training sessions for all stakeholder and staffer levels of the local departments of the Government of Japan and Yamaguchi Prefectural Government and Hagi City officials who are involved in the conservation and management works of the component parts. •Secure personnel, including the experts in charge of conservation and management of historic buildings and excavation survey, and enhance human resources, including for personnel dispatched from related agencies, such as Yamaguchi Prefectural Government. •For personnel engaged in protecting heritage property to acquire more advanced knowledge and skills, allocate budgets that enable them to participate in training sessions prepared by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution or other specialist institutions.
b) People performing administrative tasks (designated administrators and other managers) at the Component Parts	•Hagi City has not assigned people performing administrative tasks (designated administrators and other managers) for each of the component parts in the Area 1. Hagi.	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the Component Parts	•Yet to be implemented.	•Local guides currently undertake daily cleaning for the component parts. Although they have been trained as tourist guides, these people have received no training in-site conservation and management.	•Ensure that those engaging in daily cleaning also attend the regular conservation and management training sessions of Hagi City's Cultural Property Protection Division to acquire knowledge about such tasks and enhance their capacity buildings.
d) People permanently engaged in guidance work at the Component Parts	•Subsequent to World Heritage inscription, there were four training sessions relating to the Sites of Japan's Meiji Industrial Revolution for people permanently engaged in guidance work.	•Most guides are retirees in their 60s and 70s, and there are concerns that the number will decline. •Visitors have started to ask for explanations about the positioning of each component part in the overall context of the Sites of Japan's Meiji Industrial Revolution and the connections to the component parts in other Areas. Although overall seminars about the Sites of Japan's Meiji Industrial Revolution were held subsequent to the World Heritage inscription, these were insufficient for guides to digest all the knowledge and use it effectively in their work.	•Hagi City will hold regular seminars on the Sites of Japan's Meiji Industrial Revolution and other courses that include visiting the component parts in other Areas to develop new guides by helping them to acquire the knowledge they need to guide and explain things to visitors and enhance their capacity buildings.

Appendix f)-1

Current state, issues, and directionality of capacity building of human resource in Area 2 Kagoshima

Preconditions: Eight people from Kagoshima City, 58 from Shimadzu Limited, and approximately 30 from Partnership Council for Modern Industrial Heritage Sites in Kagoshima

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the Component Part	•Kagoshima City encourages municipal workers in relevant departments and agencies to participate in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. The goal of the session is for relevant local public officers to share common knowledge overall about the Sites of Japan's Meiji Industrial Revolution, Outstanding Universal Value, and its conservation and management mechanisms. •The private business that owns the component parts has already conducted training sessions twice after World Heritage inscription for those in charge of Shuseikan's operation and maintenance and the management of Sengan-en, to publicize the World Heritage overview and value.	•Ongoing training opportunities are necessary for Kagoshima City and the private business that owns the Component Parts to undertake conservation and management works and publicly use for the Component Parts based on proper World Heritage knowledge.	•Kagoshima City will continue to encourage its relevant officers to participate in the training sessions that are organized by the World Heritage Council for the Sites of Japan's Industrial Revolution aiming at capacity building of those officers in the field of conservation and management mechanisms of the World Heritage property . •The private business that owns Component Parts will continue to conduct training sessions to share information about the overview of the World Heritage property, its Outstanding Universal Value, and ideal maintenance and management practices among those undertaking Shuseikan operations and maintenance and management of Sengan-en.
b) People performing administrative tasks (designated administrators and other managers) at the Component Parts	•In reality, there are almost no opportunities for local businesses commissioned to manage the Component Parts to acquire some degree of World Heritage expertise and skills.	•There is a need to provide opportunities for businesses managing the Component Parts to receive expert instruction on enhancing their World Heritage expertise.	•The Shuseikan Area Conservation Council, of which secretariat is Kagoshima City, will provide opportunities to businesses managing the Component Parts to learn about the overview of the property, its Outstanding Universal Value, and ideal maintenance and management practices from the World Heritage perspective, such as by inviting experts to deliver lectures.
c) People undertaking routine maintenance, including cleaning, and repairs, at the Component Parts	•In reality, there are almost no opportunities for those directly engaging in cleaning, repairs, and other daily maintenance and management tasks at the Component Parts to acquire some degree of World Heritage expertise and skills.	•Regular instructions by experts are necessary so that the operators who daily manage and maintain the Component Parts can draw on World Heritage knowledge in their work.	•The Shuseikan Conservation Council, of which secretariat is Kagoshima City, will provide opportunities to the operators who daily manage and maintain the Component Parts to learn about the overview of the property, its Outstanding Universal Value, and ideal maintenance and management practices from the World Heritage perspective, such as by inviting experts to deliver lectures.
d) People permanently engaged in guidance work at the Component Parts	•The Kagoshima Convention and Visitors Bureau, Partnership Council for Modern Industrial Heritage Sites in Kagoshima and other entities are conducting training sessions on World Heritage overview and how to deal with foreign tourists for volunteer guides, hotel employees, and other tourism personnel. •As a result of these and other initiatives, certain numbers of trained tourism personnel are available to explain the Component Parts to visitors. Personnel numbers are limited, however, and few can explain relationships with other Component Parts of the Sites of Japan's Meiji Industrial Revolution.	•Regular instructions by experts are needed for tourism personnel to engage in guidance work at the Component Parts to acquire sufficient World Heritage knowledge for their work. •To accommodate visitors with more guides in the future, ongoing initiatives are needed to deepen the understanding and interest among more citizens about the Component Parts.	•The World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and other entities will produce training materials for capacity building and conduct training sessions on the Outstanding Universal Value as a World Heritage property, historical stories about each industrial field, technologies for posterity, and other information, for tourist guides and other relevant Component Part stakeholders. The Council will also make training materials available on its website. •Such organizations as the Kagoshima Convention and Visitors Bureau and the Partnership Council for Modern Industrial Heritage Sites in Kagoshima will continue conducting training sessions for volunteer guides, hotel employees, and other tourism personnel to share knowledge about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution. Both organizations will also encourage volunteer guides and other personnel to participate in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and use training materials that the Council in question prepared. •In line with the "Kagoshima Modern Industrial Heritage Cooperation Action Plan" established by the Partnership Council for Modern Industrial Heritage Sites in Kagoshima, foster activities to increase public awareness about the Sites of Japan's Meiji Industrial Revolution through classes at elementary and junior high schools, training sessions for teachers, and courses for citizens, cultivating and expanding the pool of hospitality personnel.

Current state, issues, and directionality of capacity building of human resource in Area 3 Nirayama

Preconditions

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	•Izunokuni City World Heritage personnel take part in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to enhance capacity building for conservation and management. Participants endeavor to share their knowledge with colleagues.	•Izunokuni City needs to promote capacity building initiatives for human resource (skill developments) to ensure a consistent approach for all stakeholders involved in daily conservation and management of the component part and enhancement of understanding of the Outstanding Universal Value of the property as a whole.	•Izunokuni City will plan and conduct training sessions for municipal employees through expert lecture about implementation and operations of the projects for restoration and public utilization of the component part and the advanced case studies and other tools.
b) People performing administrative tasks (designated administrators and other managers) at the component parts	•Izunokuni City has not assigned people performing administrative tasks (designated and other managers) for the Nirayama Reverberatory Furnaces.	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	•Izunokuni City World Heritage personnel take part in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to enhance capacity building for conservation and management. Participants endeavor to share the knowledge with colleagues of the City after training.	•Izunokuni City needs to promote capacity building initiatives for human resource (skill developments) to ensure a consistent approach for all stakeholders involved in daily conservation and management of the component part and enhancement of understanding of the Outstanding Universal Value of the property as a whole.	•Izunokuni City will plan and conduct training sessions for municipal employees through expert lecture about implementation and operations of the projects for conservation, restoration, presentation and public utilization of the component part and the advanced case studies and other tools.
d) People permanently engaged in guidance work at the component parts	•There are around 70 Japanese and foreign language guides, but they are all aging. •Local guides at Nirayama Reverberatory Furnaces participate in annual training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to enhance their skills. After training, participants endeavor to share their knowledge with members of the Nirayama Reverberatory Furnaces local guide organization.	•Izunokuni City needs to improve the skills of guides by collaborating with the guide organization and to address guide aging.	•Izunokuni City will provide specialized knowledge communication and educational opportunities for interested citizens to improve skill of and address the aging of guides. It will also undertake public awareness initiatives relating to World Heritage component part and the associated heritage sites in the community and at schools and other places to encourage people to become guides and make the community more supportive of tourism.

Current state, issues, and directionality of capacity building of human resource in Area 4 Kamaishi

Preconditions: Eight people from Kamaishi City (six from the Department of World Heritage, with four of them working concurrently in other areas and five people responsible for cultural properties at the Administrative Division of the Board of Education of Kamaishi City, three working concurrently in other areas)

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Direction
a) Owners and chief managers of the component part	• Kamaishi City encourages municipal workers in relevant departments and agencies to participate in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. The goal of the session is for relevant local public officers to share common knowledge overall about the Sites of Japan's Meiji Industrial Revolution, the Outstanding Universal Value, and its conservation and management mechanisms. • Kamaishi City requires workers from two component part owners to accompany municipal workers to site explorations and other activities to promote understanding about the overview and Outstanding Universala Value of the World Heritage property. Those owners are the Sanriku-Chubu District Forest Office of the Forestry Agency and Kamaishi Kozan Co., Ltd., a subsidiary of Nittetsu Mining Co., Ltd.	• Kamaishi City faces a shortage of municipal workers. This is due to increased workloads relating to projects to restore damage by Great East Japan Earthquake of 2011 and a 2016 typhoon. • Because of personnel reshuffles, declining understanding about the World Heritage property has become a concern for Kamaishi City and the Sanriku-Chubu District Forest Office of the Forestry Agency.	• Kamaishi City will train new staffs. • Kamaishi City will enhance a common awareness about preservation, notably through gatherings of the Kamaishi Conservation Council.
b) People performing administrative tasks (designated administrators and other managers) at the component parts	•Kmaishi City has not assigned people performing administrative tasks (designated and other managers) for the Hashino Iron Minig and Smelting Site.	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	• Kamaishi City commissioned around 10 members of the Hashino Town Promotion Association, taking turns so two at a time manage the information center. All association members take part in management, including to weed at and around the Hashino Iron Mining and Smelting Site four times a year. • To acquire certain levels of specialized knowledge about the World Heritage property and response capabilities, Kamaishi City is encouraging members of the Hashino Town Promotion Association to participate in guide training sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and in an annual course run by municipal workers.	• In general, retired members of the Hashino Town Promotion Association over the age of 60 are involved in maintenance and management of the component part. The aging of members reflects depopulation.	• Kamaishi City will seek financial resources to cover increased fees for managing the Hashino Iron Mining and Smelting Site, improving wages so people can make a living from the work. • Kamaishi City will continue to encourage Hashino Town Promotion Association members to participate in guide training sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and an annual course held by the municipal workers.
d) People permanently engaged in guidance work at the component parts	• Kamaishi City has commissioned members of the Kamaishi Tourist Volunteer Guides Association as volunteer guides for tourists, with one permanently stationed. • Only one person belonging to the Kamaishi Tourist Volunteer Guides Association is permanently stationed and cannot handle sudden visitors as the person guides people around at regular intervals. • The Kamaishi Tourist Volunteer Guides Association holds training sessions once a month, and endeavors to disseminate information on the history of iron in Kamaishi, including at the Hashino Iron Mining and Smelting Site. The association participates in training for guides sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution.	• Many members of the Kamaishi Tourist Volunteer Guides Association are after retirement, so the membership is aging. • Because there is an excessive desire to disseminate information about Kamaishi, the needs of visitors are not always met (there is a need to correct the disparity between knowledge and what tourists want to know).	• Kamaishi City will seek financial resources to cover increased fees for managing the Hashino Iron Mining and Smelting Site, improving wages so people can make a living from the work. • As well as providing guide training, endeavor to hold tourist hospitality classes. • The Kamaishi Tourist Volunteer Guides Association will continue to conduct monthly training for members. • Kamaishi City will continue to encourage members of the Kamaishi Tourist Volunteer Guides Association to participate in training for guides sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution.

Appendix f)-4

Current state, issues, and directionality of capacity building of human resource in Area 5 Saga

Preconditions: Saga City manages the Mietsu Naval Dock on a daily basis. The Construction Department's south construction office looks after the park, the Agriculture, Forestry, and Fisheries Department's Fisheries Division oversees the fishing port, and the Board of Education's Cultural Promotion Division looks after the Nationa Historic Site. The Planning and Liaison Department's Mietsu World Heritage Division is in charge of conservation and management of the World Heritage component part. The Tsunetami Sano Memorial Museum (whose administrative remit includes the Social Education Division of the Board of Education) draws on volunteer staff to act as guides for history and also uses children as guides to show people around the Museum and areas designated as a National Historic Site and provide commentary.

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the Component Part	• Saga City manages the Mietsu Naval Dock. It endeavors to share information and collaborate with related departments under the "Municipal Office Liaison Meetings for Conservation, Presentation, and Utilization of Mietsu Naval Dock". • Saga Conservation Council comprises national and related local governments organizations, owners of the component part, and local communities. It endeavors to share information and collaborate in conservation and management of Mietsu Naval Dock. • Staffers from Saga City's Mietsu World Heritage Division participate in the semiannual training sessions for conservation and management that are organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to accumulate knowledge and information.	• By offering training courses, seminars, and other opportunities, it is important to ensure that Saga City personnel in relevant departments understand the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution as a whole and the positioning of Mietsu Naval Dock therein while enhancing their knowledge so that they can appropriately undertake conservation and management of the component part. • It is necessary for the personnel of Saga City's Mietsu World Heritage Division to undertake conservation and management of Mietsu Naval Dock while closely collaborating and liaising with relevant departments and striving to improve their skills so that they can properly operate the Saga Conservation Council. • The Mietsu World Heritage Division of Saga City needs to hold regular training sessions to amass and share information on conservation and management of Mietsu Naval Dock and to produce conservation and management manuals for the relevant municipal office departments that daily undertake maintenance of Mietsu Naval Dock.	• The Mietsu World Heritage Division of Saga City will hold training sessions for the staff of related departments involved in conservation and management of Mietsu Naval Dock to foster understanding about the Outstanding Universal Value of the Site of Japan's Meiji Industrial Revolution overall and the positioning of Mietsu Naval Dock therein and encourage ideal conservation and management and conservation practices. • By holding Saga Conservation Council meetings and the Municipal Office Liaison Meeting for Conservation, Restoration, Presentation, and Public Utilization of Mietsu Naval Dock, the Mietsu World Heritage Division of Saga City will pursue close collaboration and information sharing between the relevant authorities. • Personnel from Saga City's Mietsu World Heritage Division and relevant departments of the municipality will participate in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. • The Mietsu World Heritage Division of Saga City will produce conservation and management manuals to share among the relevant authorities. It will also use manuals in training sessions for relevant municipal office departments that conduct daily management.
b) People performing administrative tasks (designated administrators and other managers) at the Component Parts	● Saga City has not assigned people performing administrative tasks (designated and other managers) for Mietsu Naval Dock.	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the Component Parts	• There is no current training for those undertaking routine maintenance, including cleaning and repairs, at the component parts.	• To maintain the Mietsu Naval Dock environs in good conditions in terms of a World Heritage component part, those undertaking routine maintenance, including cleaning and repairs, at the component part need to properly understand the positioning of Mietsu Naval Dock in the Outstanding Universal Value.	• Relevant municipal departments involved in daily management will use manuals to ensure ideal practices for those undertaking routine maintenance, including cleaning and restoration, at Mietsu Naval Dock.
d) People permanently engaged in guidance work at the Component Parts	• Several times a year at Tsunetami Sano Memorial Museum adjacent to Mietsu Naval Dock, Saga City's Mietsu World Heritage division and Social Education Division hold training seminars for local volunteer guides, museum employees, and other volunteers. The seminars convey the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning of Mietsu Naval Dock therein and explain how to deal with visitors. • Saga City's Mietsu World Heritage Division encourages local volunteer guides at Mietsu Naval Dock to participate in guide training sessions by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. At the same time, it encourages them to engage with guides for other component parts. • Saga City's Mietsu World Heritage Division and the Tsunetami Sano Memorial Museum conduct training courses for new entrants to increase the number of volunteer guides.	• There is a need to expand the guide system and secure new guides to ensure that activities are sustainable. • It would be ideal to create an environment that is more attractive for volunteer guides and create a more extensive and more robust training and operational system of guides for improving their quality. • It is necessary to enhance training for local volunteer guides, employees of Tsunetami Sano Memorial Museum, and other volunteers to convey correct and comprehensible information about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning of Mietsu Naval Dock therein.	• Saga City's Mietsu World Heritage Division and the Tsunetami Sano Memorial Museum will continue to operate a training program for volunteer guides, museum employees, and other volunteers. The program encompasses attuning guides to match visitor understanding levels and provide desirable responses. • Use guide manuals produced by the Saga City's Mietsu World Heritage Division for the above program including training sessions and update the manuals as needed. • As well as recruiting volunteer guides, Saga City's Mietsu World Heritage Division and the Tsunetami Sano Memorial Museum will create an environment that is conducive to sustainable volunteer guide work by providing training and other support.

Appendix f)-5

Current state, issues, and directionality of capacity building of human resource in Area 6 Nagasaki

Preconditions:

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	• As owner of the Takashima Coal Mine, Hashima Coal Mine and Glover House and Office, Nagasaki City has allocated the personnel needed to conserve cultural properties and World Heritage component parts through such organizations as the municipal office's departments of cultural property, World Heritage promotion, the tourism policy planning, and the tourism promotion. • Mitsubishi Heavy Industries Nagasaki Shipyard directly manages Kosuge Slip Dock and other working properties and allocates the required people. • At Glover Garden, which includes the Glover House and Office, a Nagasaki City-designated administrator oversees operation of the facilities, provides information to educates the public, and conducts investigations and research. • Nagasaki City set up the Institute of Nagasaki Studies within the Nagasaki Museum of History and Culture to study the Nagasaki's history. The prefectural and municipal governments of Nagasaki jointly run the museum. • Nagasaki City workers participate in training sessions sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and endeavor to improve thier abilities for conservation and management. • Mitsubishi Heavy Industries Nagasaki Shipyard, which is the owner of Kosuge Slip Dock and other working properties, provides opportunities to exchange opinions and hold discussions with the prefectural and municipal governments of Nagasaki at least once annually. However, details about the Sites of Japan's Meiji Industrial Revolution's training sessions have yet to be conveyed effectively. • Although the designated administrator of Glover House and Office has received information as needed, details of the Sites of Japan's Meiji Industrial Revolution's training sessions have yet to be conveyed effectively.	• It is necessary to promote capacity building for human resources through conducting regular training sessions under the guidance by the experts in different fields, so that the managers of the component parts and other related parties can acquire the necessary skills of conservation and management for their daily work and activities and enhance their capabilities by learning about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning of the component parts therein. • There is a need to share information among site managers and maintenance and management staffs who participates in the training seminars organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution, so that they can understand the Outstanding Universal Value of the property as a whole, positioning of the component parts therein, and enhance their conservation and management skills. • As well as training those involved in disseminating information and conducting research, it is also necessary to train people with advanced structural repair and restoration skills.	• Nagasaki City will encourage guides and other relevant parties to participate in training and other events sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to bolster the required knowledge and skills. • Nagasaki City will hold training sessions or seminars at least once annually for local residents, guides and related organizations involved in preservation and utilization of the Component part. It will also hold evacuation drills to ensure visitor safety. • Nagasaki City will help cultivate tourist guides by sending lecturers to local travel businesses and other organizations. • Nagasaki City will plan sessions to train new and current municipal workers and businesses to enhance their awareness and hold seminars and other events for citizens that highlight modern heritage, including that relating to the Sites of Japan's Meiji Industrial Revolution. • Add the Sites of Japan's Meiji Industrial Revolution to the topics of regular seminars held by Nagasaki City and the Institute of Nagasaki Studies. • While disclosing information on restorations, Nagasaki City will train engineers to become well versed in research and public usage of cultural properties, utilizing the Heritage Manager qualification system offered by the Nagasaki Association of Architects and Building Engineers. • Recruit residents as volunteer guides to augment Nagasaki Saruku guides.
b) People performing administrative tasks (designated administrators and other managers) at the component parts			
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	• Though Nagasaki City's municipal workers participate in various training sessions sponsored by the World Heritage Council for Sites of Japan's Meiji Industrial Revolution to enhance their ability to conserve and manage component parts, the contents of sessions are not sufficiently communicated to the staffs of local daily maintenance and management operators.		
d) People permanently engaged in guidance work at the component parts	• Guides participate in training sessions that the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution holds annually, and endeavor to improve thier guiding abilities. Although participants share what they learn from the sessions with other related parties, not all staffs are necessarily apprised with the details. • Nagasaki City holds an annual modern heritage seminar for residents. • Nagasaki City sends lecturers to sessions that citizens and businesses run on the Sites of Japan's Meiji Industrial Revolution. • Although the Institute of Nagasaki Studies regularly presents study reports and conducts seminars, it has yet to hold a seminar on the Sites of Japan's Meiji Industrial Revolution. • The Nagasaki International Tourism and Convention Association offers seminars every year for Saruku Guide, a local community organization by local residents' association and volunteers that explains the city's cultural properties to tourists and other visitors. The goal is to enhance the skills and knowledge of guides and broaden their networks. • For Hashima Coal Mine, the operator of tourist boats to the island trains its own safety instructors and guides.	• All guides need to fully understand the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution. • It is necessary to cultivate guides who can explain to visitors the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution. • Training in communication and service skills, and domestic and overseas cultures and languages to match guide qualifications and abilities is needed to handle individual and group tours by domestic and international visitors.	

Appendix f)-6

Current state, issues, and directionality of capacity building of human resource in Area 7 Miike (Miyanohara Pit, Miike Coal Mine)

Preconditions:

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	●The relevant Omuta City municipal workers participate in the annual conservation and management training session held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to acquire the required knowledge, including about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the conservation and management mechanisms. ●Participants of the training session report, liaise, and consult regarding what they have learned with colleagues through reports on their business to maintain standards of knowledge and ideas that are comparable with those for other component parts.	●It is necessary to encourage participation in the capacity building program for human resources as municipal workers yet to have sufficient basic knowledge about the Sites of Japan's Meiji Industrial Revolution. ●Related municipal departments and agencies are gradually cooperating more in the field of World Heritage conservation and management. Nonetheless, there is still a need for a personnel structure that makes it possible to enables to broadly and countiously cultivate people who are well versed in the field of conservation and management for World Heritage property and cultural property across boundaries among the departments concerned.	●The relevant municipal workers attend a training course on conservation and management of the property that is held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution, so that they can receive training about the Sites of Japan's Meiji Industrial Revolution's overall, the Outstanding Universal Value of the property as a whole, and its conservation and management mechanisms. ●Session participants report, liaise, and consult regarding what they have learned with colleagues through reports on their business to maintain standards of knowledge and ideas that are comparable with those for other component parts.
b) People performing administrative tasks (designated administrator and other managers) at the component parts	●Omuta City has not assigned people performing administrative tasks (designated and other managers) for the Miyanohara Pit.	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	●Personnel in charge of daily maintenance and management participate in an annual training session on conservation and management of the component parts in Omuta City, learning about the Sites of Japan's Meiji Industrial Revolution overall, the Outstanding Universal Value of the property, and the conservation and management mechanisms.	●It is necessary to conduct ongoing consistent training, as the annual conservation and management session in Omuta City is patchy and understanding of the participants is superficial	●Conduct ongoing training sessions for conservation and management of the property several times during the year in Omuta City to enhance personnel awareness. ●Encourage guides to participate in training sessions and seminars sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and Fukuoka Prefectural Government, enhancing their skills by promoting and educating about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution while fostering and expanding the pool of human resources.
d) People permanently engaged in guidance work at the component parts	●Since FY 2017, those have participated in monthly sessions held by Omuta City regarding the Outstanding Universal Value of Sites of Japan's Meiji Industrial Revolution and the mechanism for its conservation and management. ●They have also taken part in Miike Area guide training sessions, which the "Area 7 Miike Hospitality Council" holds three times a year. ●All people engaged in guidance work take these sessions and exchange opinions while endeavoring to maintain standards of knowledge and ideas that are comparable with those for other component parts.	●Basic knowledge about the Sites of Japan's Meiji Industrial Revolution is inadequate. There is a need to equalize skills and knowledge and implement a more advanced, capacity building training program for human resources with repeated sessions, as there is a gap among individual skill levels.	●Encourage guides to participate in training sessions and seminars sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and Fukuoka Prefectural Government, enhancing their skills by sharing and educating about the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution while fostering and expanding the pool of human resources. ●Encourage stronger and broader collaboration between the component parts in the Area. ●Foster "through guides" who can serve visitors moving all over the Miike Area.

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Current state, issues, and directionality of capacity building of human resource in Area 7 Miike (Manda Pit, Miike Coal Mine)

Preconditions:

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
1) Owners and chief managers of the component part	●Arao City provides annual training session for municipal workers to enhance their understanding of the Sites of Japan's Meiji Industrial Revolution. It also incorporates World Heritage content in its training curriculum for new employees. ●Arao City and the designated administrator of Manda Pit facilities jointly hold annual training sessions for the designated administrator's workers. ●The city invites outside lecturers and experts to conduct annual World Heritage lectures and symposiums for enhancing the awareness of citizens about the World Heritage property. ●Arao City's workers participate in the annual session for conservation and management held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution, so that they can learn about the Outstanding Universal Value of Site of Japan's Meiji Industrial Revolution and its the conservation and management mechanisms. ●The tourism divisions of Omuta City, Arao City, and Uki City organized the "Area 7 Miike Hospitality Council" to hold annual training sessions for guides in the Miike Area.	●It is necessary to encourage active participation in the capacity building program for human resources as Arao municipal workers yet to have basic knowledge about the Sites of Japan's Meiji Industrial Revolution. ●Collaboration among related departments and agencies of Arao City in World Heritage conservation and management is inadequate. There is a need for a personnel structure that makes it possible to enables to systematically cultivate people who are well versed in the fields of conservation and management for the World Heritage property and cultural properties.	●Improve basic knowledge about the Sites of Japan's Meiji Industrial Revolution among Arao municipal workers and other related entities by expanding the scope of trainees, encouraging more Arao municipal workers in particular to participate. ●Draw on World Heritage and other local resources to make the city more attractive, holding workshops and town building symposiums in collaboration with universities and other research institutions, providing new opportunities to cultivate human resources.
2) People performing administrative tasks (designated administrators and other managers) at the component parts	●Arao City and the designated administrator of Manda Pit facilities (Arao Sightseeing Association) jointly hold annual training sessions for designated administrator workers. ●Participating in lectures and symposiums held once a year by Arao City. ●Participating in Miike Area guide training sessions that the "Area 7 Miike Hospitality Council" holds three times annually.	●It is necessary to verify if the designated administrator (Arao Sightseeing Association) acquires basic and sufficient knowledge about the Sites of Japan's Meiji Industrial Revolution. ●Personnel shortages have been an issue for the designated administrator (Arao Sightseeing Association), reflecting employment terms and other factors. ●There is insufficient collaboration between related departments and agencies and component parts.	●Encourage employees and other workers hired by the designated administrator (Arao Sightseeing Association) to actively take part in training sessions and lectures sponsored by Arao City to cultivate and expand hospitality professionals by sharing and educating about the World Heritage value of the Sites of Japan's Meiji Industrial Revolution. ●Reinforce collaboration between relevant departments and agencies of Arao City and between the component parts within the Area.
3) People undertaking routine maintenance, including cleaning and repair, at the component parts			
4) People permanently engaged in guidance work at the component parts	●Arao City and the designated administrator of Manda Pit facilities (Arao Sightseeing Association) jointly hold annual training sessions for designated administrator workers. ●Participating in lecture and symposiums held once a year by Arao City. ●Participating in annual guide training sessions held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. ●Participating in Miike Area guide training sessions that the "Area 7 Miike Hospitality Council" holds three times annually, and skill enhancement training sessions.	●A human resources shortage owing to the aging of guides has been an issue. ●Collaboration between related departments and agencies of Arao City is inadequate for explanations to visitors. ●Collaboration between component parts is inadequate for explanations to visitors.	●Encourage guides to actively participate in training sessions and lectures sponsored by Arao City to cultivate and expand hospitality professionals by sharing and educating about the World Heritage value of the Sites of Japan's Meiji Industrial Revolution. ●Reinforce collaboration between relevant Arao City departments and agencies and between the component parts in the Area. ●Explore initiatives to attract younger people, such as by using social media to encourage them to register as guides. ●Arao City will consider deploying a certified guide program. ●Foster "through guides" who can serve visitors moving all over the Area7 Miike

Appendix f)-7

Current state, issues, and directionality of capacity building of human resource in Area 7 Miike (Misumi West Port)

Preconditions:

Trainee category	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	●Established the Uki City World Heritage Exchange Headquarters to promote close collaboration between related departments and agencies and implement projects smoothly and effectively. ●Attend the training session on conservation and management of the World Heritage property as a whole and the Mietsu West Port held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to improve municipal workers' knowledge.	●Such owners of the each land of component part as Government of Japan, Kumamoto Prefectural Government, and Uki City are managing it individually. Uki City Board of Education needs, however, to undertake comprehensive conservation and management of the component part and address related administrative matters. ●There is a need for all employees involved in tourism and other areas, not just those engaged with conservation and management of the component part, to learn and share common understandings about the Sites of Japan's Meiji Industrial Revolution.	●The Uki City World Heritage Exchange Headquarters, which comprises related municipal departments, will spearhead coordination and role allocation, collaborating with Government of Japan, Kumamoto Prefectural Government and the related departments of Uki City to push ahead with management and operations of projects concerned. Site managers are also Miike Conservation Council members, and will accordingly convene meetings and take the initiative in exchanging information and opinions. ●Encourage the relevant workers to participate in the training sessions on conservation and management of the property that are sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution, apply their knowledge received at the session to the conservation, management, presentation and public utilization projects.
b) People performing administrative tasks (designated administrator and other managers) at the component parts	●Established the Uki City World Heritage Exchange Headquarters to promote close collaboration between related departments and agencies and implement projects smoothly and effectively. ●Attend the training session for conservation and management of the component part that has been held by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution to improve municipal workers' knowledge.	●Such owners of the each land of component part as Government of Japan, Kumamoto Prefectural Government, and Uki City are managing it individually. Uki City Board of Education needs, however, to undertake comprehensive conservation and management of the component part and address related administrative matters. ●There is a need for all employees involved in tourism and other areas, not just those engaged with conservation and management of the component part, to learn and share common understandings about the Sites of Japan's Meiji Industrial Revolution.	●The Uki City World Heritage Exchange Headquarters, which comprises related municipal departments, will spearhead coordination and role allocation, collaborating with the Government of Japan, Kumamoto Prefectural Government and related departments of Uki City to push ahead with management and operations of the projects for conservation, restoration, presentation and public utilization of the component part. ●Designated administrator and other managers are the members of Miike Conservation Council and will hold meetings and exchange information and opinions.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	●Operators commissioned to manage maintenance and designated administrators operate by the City. manage. and clean sites. Since they deal with component part on a daily basis, they also attend meetings as members of the Miike Conservation Council, participating in its work.	●Commissioned operators and designated administrators are engaging in management and other work, and given their close involvement with component parts and their sensitivity to changes there is a need to collaborate closer and build a contact structure with them.	●The Misumi West Port meeting is organized once monthly to gather community views. Misumimachi Promotion Co., Ltd., Uki Tourist Association, Misumi shops existed in the area of Misumi West Port, and local resident representatives compile their requests to conservation, restoration, presentation and public utilization of the component part, and Uki City reflect their requests on the discussion at the working group of Uki City World Heritage Exchange Promotion Headquarters. There will be a need for a mechanism to assess the requests of local residents and visitors, while improving the discussion at the working group. The commissioned operators and designated administrators are also members of Miike Conservation Council, and will exchange information and opinions at the meeting of the Council.
d) People permanently engaged in guidance work at the component parts	●Uki Tourist Association is providing tourist guides for Misumi West Port, and revised prices in FY 2017 to ensure sustainability in the years ahead. ●Participating in the guide training session particularly organized by the Uki Torist Association and another guide training session sponsored by the World Heritage Council fo the Sites of Japan's Meiji Industrial Revolution and the Miike Area Hospitality Council.	●It is necessary to continue training and informing Misumi West Port tourist guides so that they can provide more qualitative tourist experiences to the visitors. ●There is a need to explain about the Outstanding Yniversal Value of the Sites of Japan's Meiji Industrial Revolution as a whole, positioning of its component parts therein, links to the Miike Area, and other information.	●While increasing the number of tourist guides for Misumi West Port, cultivate human resources and improve skills, notably through training sessions by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and the Miike Area Hospitality Council.

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Current state, issues, and directionality of capacity building of human resource in Area 7 Miike (Miike Port)

Preconditions: The manager of the entire port is the Ports and Harbors Division of Fukuoka Prefecture. The owners are the Government of Japan, Fukuoka Prefectural Government, Omuta City and private enterprise. The World Heritage Registration Promotion Office of the Cultural Promotion Division of Fukuoka Prefectural Government and Omuta City jointly disseminate information about the component parts of the World Heritage property.

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
1) Owners and chief managers of the component part	• In Fukuoka Prefectural Government, staffers from the Ports and Harbors Division, which oversees Miike Port, participate in training sessions organized by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. These sessions are to share knowledge among relevant local public officers about the whole picture of sites, their Outstanding Universal Value, and conservation and management mechanisms.. • Personnel from Omuta City, the owner of the Old Nagasaki Customs, Miike Branch and Miike Coal Railway, also participate in these sessions.	• Miike Port is still working site as an industrial port, so the development and continuity of the port and harbor activities are important. At the same time, port and harbor plans encompass conserving the component part as one of the World Heritage property, so the port manager must cater to industrial activity and conservation obligations. • City administrative offices differ for the Old Nagasaki Customs, Miike Branch and Miike Coal Railway, which are constituent elements partially included in the area of National Historic Site, and partially designated as Structures of Landscape Importance, and parts of the roads. Close collaboration within municipal office departments is therefore necessary.	• For Miike Port, maintain an awareness of World Heritage conservation through closer collaboration and information sharing between Ports and Harbors Division as the manager and the World Heritage Registration Promotion Office of Fukuoka Prefectural Government, which disseminates information on the World Heritage Outstanding Universala Value and the positioning of component parts therein and other information.
2) People performing administrative tasks (designated administrator and other managers) at the component parts 3) People undertaking routine maintenance, including cleaning and repairs, at the component parts	• It is difficult for operators commissioned to undertake daily maintenance and management of Miike Port to acquire certain expert knowledge and response capabilities about component parts. • Cultural properties personnel at Omuta City managing the Old Nagasaki Customs, Miike Branch have specialist knowledge about National Historic Sites. They have attended the national government's cultural properties training sessions, so there are no issues with their management capabilities. • It is difficult for the manager of the Miike Coal Railway, which is part of the port district, to acquire expert knowledge and response capabilities regarding Component Parts.	• The current on-site manager of Miike Port has overseen the component part since its inscription on the World Heritage List. The manager understands the World Heritage Outstanding Universal Value and uses the facility carefully. It is necessary to pass on knowledge of the World Heritage Outstanding Universala Value to future managers so that the port can continue to be used. • Administrative offices within Omuta and Arao Cities differ for Old Nagasaki Custom House Miike Branch Office and Miike Coal Railway, which are constituent elements partially included in the area of National Historic Site, and partially designated as Structures of Landscape Importance, and parts of the roads. Close collaboration within municipal office departments is therefore necessary.	• Through opportunities such as those with the Miike Conservation Council (working properties), collaborate closely with Fukuoka Prefectural Government, Omuta City and site managers and other personnel to maintain an awareness of conserving the component parts of the World Heritage property.
4) People permanently engaged in guidance work at the component parts	• Omuta City has employed and stationed local guides at the observation point installed in 2015 along the Ariake Sea Coastal Road. They participate in the volunteer guide training sessions of the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. • These guides have also taken part in Miike Area guide sessions held by the Miike Area Hospitality Council, set up by Omuta City, Arao City and Uki City. • These guides have participated in Omuta City's monthly training course since FY 2017. They have learned about the Outstanding Universal Value of the Sites of Japan's Meiji ndustrial Revolution, and the mechanisms for conservation and management. • All operators take the above courses and exchange views while endeavoring to maintain standards of knowledge and ideas that are comparable with those for other component parts.	• Basic knowledge about the Sites of Japan's Meiji Industrial Revolution is inadequate. There is a need to equalize skills and knowledge and implement a more advanced personnel training program with repeated sessions, as there is a gap among individual skill levels.	• Encourage guides to actively participate in training sessions and seminars sponsored by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and Fukuoka Prefectural Government, enhancing their skills by cultivating personnel and educating about the Outstanding Universala Value of the Sites of Japan's Meiji Industrial Revolution while fostering and expanding the pool of human resources. • Encourage stronger and broader collaboration between the component parts in the Area. • Foster "through guides" who can serve visitors moving all over the Area 7 Miike.

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Current state, issues, and directionality of capacity building of human resource in Area 8 Yawata

Preconditions: The Imperial Steel Works, Japan (First Head Office, Former Forge Shop, Repair Shop) and Onga River Pumping Station are located on the premises of the currently operational Yawata Steel Works of Nippon Steel & Sumitomo Metal Corporation. In principle no outsiders can enter the site.

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	• Nippon Steel & Sumitomo Metal Corporation shares and introduces information on the relevant component parts in-house through internal newsletters and DVDs.	• There is a need to foster understanding of the Outstanding Universal Value of the World Heritage property as a whole and the positioning of 23 component parts therein.	• Nippon Steel & Sumitomo Metal Corporation will internally share information on the component parts concerned. • Based on discussions with Nippon Steel & Sumitomo Metal Corporation and other related entities, Kitakyushu City and Nakama City will undertake specific training measures.
b) People performing administrative tasks (designated administrators and other managers) at the component parts	• Nippon Steel & Sumitomo Metal Corporation shares and introduces information on the relevant component parts in-house through internal newsletters and DVDs.	• There is a need to foster understanding of the Outstanding Universal Value of the World Heritage property as a whole and the positioning of 23 component parts therein.	• Nippon Steel & Sumitomo Metal Corporation will internally share information on the component parts concerned. • Based on discussions with Nippon Steel & Sumitomo Metal Corporation and other related entities, Kitakyushu City and Nakama City will undertake specific training measures.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	• Nippon Steel & Sumitomo Metal Corporation shares and introduces information on the relevant component parts in-house through internal newsletters and DVDs.	• There is a need to foster understanding of the Outstanding Universal Value of the World Heritage property as a whole and the positioning of 23 component parts therein.	• Nippon Steel & Sumitomo Metal Corporation will internally share information on the component parts concerned. • Based on discussions with Nippon Steel & Sumitomo Metal Corporation and other related entities, Kitakyushu City and Nakama City will undertake specific training measures.
d) People permanently engaged in guidance work at the component parts	• Nippon Steel & Sumitomo Metal Corporation shares and introduces information on the relevant component parts in-house through internal newsletters and DVDs. • Guides of Kitakyushu Tourism Volunteer at the viewing areas for the First Head Office and volunteer guides of Nakama City Tour Guide Association at the viewing areas for Onga River Pumping Station provide explanations to visitors. • Kitakyushu City, Nakama City and Nippon Steel & Sumitomo Metal Corporation encourage volunteer guides to participate in the annual training sessions organized by the World Heritage Council of the Sites of Japan's Meiji Industrial Revolution. At the same time, they distribute appropriate materials so that guides can improve their skills and expand their activities, notably by explaining about the Outstanding Universal Value and all of the 23 component parts	• There is a need to foster understanding of the Outstanding Universal Value of the World Heritage property as a whole and the positioning of 23 Component Parts therein. • There is a need to enhance the skills of volunteer guides.	• Nippon Steel & Sumitomo Metal Corporation will internally share and introduce information on the relevant component parts. • Based on discussions with Nippon Steel & Sumitomo Metal Corporation and other related entities, Kitakyushu City and Nakama City will undertake specific training measures. • Collaborate with the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution and use its training sessions and materials effectively to enhance guide skills.

Schedules and contents of training sessions and other plans held to date by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution

Preconditions:

Type of personnel	Current state (capacity building measures taken to this day)	Issues	Directions
a) Owners and chief managers of the component part	● Conducting training sessions twice annually for workers of municipalities that constitute the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution. ● The first session was mainly for newly transferred staffs to learn such bases as the World Heritage overview, Outstanding Universal Value, and the observation and management mechanisms. ● The second session was for all staffs, covering such topics as conservation and management of the component parts, World Heritage trends, and regional revitalization. ● The lecturers have included university professors, Cabinet Secretariat officials, and Council secretariat personnel.	● In the second session for staffers of all relevant municipalities, as the situations differ according to component parts, it is needed to coordinate requirements by the municipalities and set up optimal training topics catering to those requirements.	● In view of the desires of relevant municipalities and while collaborating with universities and other research institutions, the Council will invite appropriate lecturers for each topic. It will continue to organize training sessions in keeping with requests from relevant municipalities.
b) People performing administrative tasks (designated administrators and other managers) at the component parts	● As conservation and management approaches depend on the nature of the component parts, each municipality would ideally provide its own training session led by staffs who have attended the training sessions organized by the Council. The Council therefore offers no training for people performing administrative tasks (designated administrators and other managers).	None in particular.	None in particular.
c) People undertaking routine maintenance, including cleaning and repairs, at the component parts	● As conservation and management approaches depend on the nature of the component parts, each municipality would ideally provide its own training session led by staffs who have attended the training sessions organized by the Council. The Council therefore offers no training for people undertaking routine maintenance, including cleaning and repairs.	None in particular.	None in particular.
d) People permanently engaged in guidance work at the component parts	● As the property comprise a series of 23 component parts and because guides need to provide consistent explanations for each component part, including the Outstanding Universal Value of the World Heritage property as a whole and positioning of the component part therein, the Council provides training session to representative guides of each Areas. ● The Council augments this training session by enabling guides to share information on implementation in their Areas and exchange their opinions, thereby providing opportunities to foster cooperation between component parts. ● The lecturers at the training session include Council secretariat personnel and staffs of local public agencies involved in conservation and management of the World Heritage component parts that take advanced initiatives, and others.	● Some training contents need to be customized to convey abstruse contents such as complex stories and the roles of 23 component parts to relatively elderly guides.	● The Council will hold joint training sessions as needed for representative guides to form the cores for each Area. ● Through training sessions for municipality staffers as described in a), the Council will endeavor to ensure appropriate training sessions for Area guides, spearheaded by municipalities.

INTERPRETATION STRATEGY
"Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining"

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Annexe: Interpretation Audit

1 INTRODUCTION

The UNESCO World Heritage Committee, at its 39th ordinary session in July 2015, inscribed the *Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining* as a World Heritage Site.

Recommendation g) in the World Heritage Committee's decision stated:

"Preparing an interpretive strategy for the presentation of the nominated property, which gives particular emphasis to the way each of the sites contributes to OUV and reflects one or more of the phases of industrialisation; and also allows an understanding of the full history of each site."

The report of "ICOMOS Evaluations of Nominations of Cultural and Mixed Properties" (WHC-15/39.COM/INF.8B, pp 99-100) noted the following points as the premise of the Recommendation g) consequently included in the Decision by the World Heritage Committee at its 39th session in 2015:

- *The presentation of the components is mainly place specific and does not present the OUV or indicate how each component relates to each other or to the whole property.*
- *What is urgently needed is clear interpretation to show how each site or component relates to the overall series, particularly in terms of the way they reflect the one or more phases of Japan's industrialisation and convey their contribution to OUV.*

Recommendation g) also referred to a footnote regarding the Government of Japan's statement at the time of the inscription, and indicated:

- *Preparing an interpretive strategy which allows an understanding of the full history of each site.*

Recalling the Article 5 of the Convention Concerning the Protection of the World Cultural and Natural Heritage, the Government of Japan commits itself to protect, conserve, present and transmit to future generations the World Heritage values of the *Sites of Japan's Meiji Industrial Revolution*. The Cabinet Secretariat is the agency that takes overall responsibility as the overarching authority to coordinate government ministries, municipalities and all stakeholders, including private companies.

In response to the World Heritage Committee's recommendations, an audit was undertaken of what component parts currently present and/or are developing for their interpretation, followed by an interpretation plan to address any shortcomings, and to optimise opportunities. These actions are contained within this Interpretation Strategy, a dynamic ongoing framework within which to communicate the significances of the World Heritage Site. The *ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites* (2008) provides an international framework for the Interpretation Strategy. From the outset, there has been the full expectation that the implementation of the Charter will be adapted to the characteristics and specific needs of Japan.

2 VISION

We believe that the proud memory of Japan's transformation in the Meiji era should remain vivid by the effective management, protection, conservation and interpretation of the *Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining* in relation to their Outstanding Universal Value as well as national and local values, and we commit to pass this precious heritage to future generations.

Every effort will be made to share and promote this vision. Individual aspects of cultural heritage have differing levels of significance, some with universal values, and others of national, regional or local importance. We will ensure the consultation and participation of local communities in the protection, conservation and interpretation of their heritage as represented within the WHS.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE (OUV)

Brief synthesis

A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of southwest of Japan, represent the first successful transfer of industrialisation from the West to a non-Western nation. The rapid industrialisation that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialisation achieved over a short space of just over fifty years between 1850s and 1910.

The first phase in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialisation was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless, this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.

The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialisation achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors.

The 23 component parts are in 11 cities within 8 discrete areas. Six of the eight areas are in

the southwest of the country, with one in the central part and one in the northern part of the central island. Collectively the sites are an outstanding reflection of the way Japan moved from a clan based society to a major industrial society with innovative approaches to adapting Western technology in response to local needs and profoundly influenced the wider development of East Asia.

After 1910, many sites later became fully-fledged industrial complexes, some of which are still in operation or are part of operational sites.

3 AIMS and OBJECTIVES

Through the implementation of this Strategy, we anticipate that our audience will gain an understanding of the significance of the *Sites of Japan's Meiji Industrial Revolution* World Heritage Site, and that they will achieve specific gains in what they experience, learn, feel and do as a result of the interpretation and presentation that is provided for, and at, the property, and its general awareness achieved through promotion and other activity. Specifically:

1. The meaning and values of the property communicated to a diverse range of audiences through careful, documented recognition of significance by accepted scientific and scholarly methods, safeguarding tangible and intangible values, whilst presenting and promoting material in an accessible way that meets various audience needs.

2. Engage with an appropriate presentation of the property that uses comprehensive themes and topics that are linked in a coherent and compelling story, thus facilitating the understanding and appreciation of the whole property, the way each component part contributes to the whole, and associated and related features in its wider setting, fostering public awareness in the protection and conservation of its values. While the period relevant to OUV will be the primary focus, interpretation will also include important aspects of the history of each component part before and after the period relating to OUV.

3. A respect for the authenticity and sense of place of all aspects of the property through the communication of the significance of its historic fabric and cultural values, and through their protection from the adverse impact of intrusive interpretive infrastructure, visitor pressure, and inaccurate or inappropriate interpretation and promotion.

4. A feeling and spirit of inclusiveness in the interpretation of the property through the facilitation of the involvement of stakeholders and associated communities in the development and implementation of interpretive programmes, promoting public understanding of, and participation in, ongoing conservation efforts.

5. An experience that is worthwhile, satisfying and enjoyable, and which engages audiences in a way that meets their range of learning needs, increases their knowledge and understanding, and influences their attitudes and feelings in a way that positively contributes to the vision and aims of the property's Management Planning.

6. The Nomination Document has established a new set of values for the property, and these values will be progressively reflected in all associated media hosted by all stakeholders, whether on-site (for example interpretation panels) or off-site (for example website, leaflets and booklets).

7. The overarching interpretive theme (derived from OUV) will be shared consistently between all areas and component parts as the headline theme for a hierarchy of area- and site-specific themes and stories that ensure all property values are integrated into interpretive content and that a consistent and integrated presentation is achieved across the whole property

and its stakeholders.

8. Develop a manual of technical and professional guidelines for heritage interpretation and presentation, including technologies, research, and training, and integrate a diverse range of media across all attributes of the property to deliver engaging interpretation that enhances the visitor experience in an inclusive way. Such guidelines must be appropriate and sustainable in their social and financial contexts.

9. Ensure long-term maintenance of interpretive infrastructure and regular review of its content, updating marketing and promotional programmes as appropriate.

4 PRINCIPLES

The Interpretation Working Group (A group established under the National Committee of Conservation and Management to formulate action plans responding to tourism pressures and conducting promotional activities) identified the importance of the transmission of World Heritage values through interpretation and presentation, and considered a set of principles, derived from the ICOMOS Interpretation Charter, 2008, as fundamental to the interpretation process.

Principle 1: Access and Understanding
Principle 2: Information Sources
Principle 3: Context and Setting
Principle 4: Authenticity
Principle 5: Sustainability
Principle 6: Inclusiveness (Participatory Approach)
Principle 7: Research, Training, and Evaluation

Principle 1: Access and Understanding

Interpretation, presentation and promotion programmes should facilitate and coordinate public intellectual and, where appropriate, physical access to the multiple component parts that comprise the single World Heritage Site. This will be done in a way that assists actual, or potential, visitors and users in gaining maximum benefit from their engagement.

1.1 Effective interpretation and presentation should enhance personal experience, increase public respect, understanding, care and other positive actions, and communicate the importance of the conservation of cultural heritage across the series of component parts.

1.2 Interpretation and presentation should encourage individuals and communities to reflect on their own perceptions of a site and its values, and assist them in establishing a meaningful connection to it. The aim should be to stimulate further interest, learning, experience, and exploration.

1.3 Interpretation and presentation programmes should identify and assess their audiences demographically and culturally. Every effort should be made to communicate values and significance across the range of varied audiences.

1.4 The diversity of language among visitors and associated communities connected with sites, particularly in the case of a widely spread serial World Heritage Site, will be taken into account in interpretive infrastructure. A level of multilingual interpretation is desirable at sites,

including Japanese, English, Chinese and Korean. Multilingual information and accessibility is easier with increasing digitised content. Websites should be ideally available in different languages.

1.5 Interpretation and presentation activities should also be physically accessible to the public, in all its variety.

1.6 Interpretation and presentation will be provided off-site in cases where physical access to a cultural heritage site is restricted due to operational activity in working sites, conservation concerns, cultural sensitivities, private and adaptive re-use, or safety issues.

Principle 2: Information Sources

Interpretation and presentation should be based on evidence gathered through accepted scientific and scholarly methods, with reliable accuracy and authenticity of information and sources being paramount.

2.1 Interpretation should reflect the wide range of written information, illustrative records, material remains, traditions, and meanings attributed to a site. The sources of this information should be documented, archived, and made accessible to the public.

2.2 Interpretation should be based on a well-researched multidisciplinary study of the site, its setting and wider context. It should also acknowledge that meaningful interpretation necessarily includes the potential of reflection on alternative historical hypotheses, local traditions, and stories.

2.3 At cultural heritage sites where traditional storytelling or memories of historical participants provide an important source of information about the significance of the site, interpretive programmes should incorporate these oral testimonies.

2.4 Visual reconstructions, whether by artists, architects, or computer modelers, should be based upon detailed and systematic analysis of environmental, archaeological, architectural, and historical data.

2.5 Interpretation and presentation programmes and activities should also be documented and archived for future reference, reflection and review.

Principle 3: Context and Setting

Interpretation and presentation of cultural heritage sites should relate to their wider social, cultural, historical, technological and natural contexts and settings, and further reflect the full history of the component parts and sites – both prior to 1850s and after 1910.

3.1 Interpretation should explore the significance of a site in its multi-faceted historical, political, spiritual, and artistic contexts. It should consider all aspects of the site's cultural,

social, and environmental significance and values.

3.2 The public interpretation of a cultural heritage site should clearly distinguish and date the successive phases and influences in its evolution. The contributions of all periods to the significance of a site should be respected.

3.3 Interpretation should also take into account all groups that have contributed to the historical and cultural significance of the site.

3.4 The surrounding landscape, natural environment, and geographical setting are integral parts of a site's historical and cultural significance, and, as such, should be considered in its interpretation.

3.5 Intangible elements of a site's heritage such as cultural and spiritual traditions, stories, music, dance, theatre, literature, visual arts, local customs and culinary heritage should be considered in its interpretation.

3.6 The cross-cultural significance of heritage sites, as well as the range of perspectives about them based on scholarly research, historic records, and living traditions, should be considered in the formulation of interpretive programmes.

Principle 4: Authenticity

Interpretation and presentation of cultural heritage sites must respect the basic tenets of authenticity in the spirit of the Nara Document (1994). Authenticity of information that underpins interpretive content is paramount in the protection of cultural values.

4.1 Authenticity is a concern relevant to human communities as well as material remains. The design of a heritage interpretation programme should respect the traditional social functions of the site and the cultural practices and dignity of local residents and associated communities.

4.2 Interpretation and presentation should contribute to the conservation of the authenticity of a cultural heritage site by communicating its significance without adversely impacting its cultural values or irreversibly altering its fabric.

4.3 All visible interpretive infrastructures (such as access pathways and information panels) must be sensitive to the character, setting and the cultural and natural significance of the site, while remaining easily identifiable. Fixed interpretation should use materials sympathetic to its surroundings and be located so it does not impinge on the character of a site or building.

4.4 On-site concerts, dramatic performances, and other interpretive programmes must be carefully planned to protect the significance and physical surroundings of the site and minimize disturbance to local residents.

Principle 5: Sustainability

Interpretation for a cultural heritage site must be sensitive to its natural and cultural environment, with social, financial, and environmental sustainability among its central goals. Environmental sustainability is an important issue and best practice should be followed in all projects. Live interpretation (e.g. guided walks and demonstrations) is often the most environmentally friendly format, although it may not be suitable for other reasons.

5.1 The development and implementation of interpretation and presentation programmes should be an integral part of the overall planning, budgeting, and management process of cultural heritage sites.

5.2 The potential effect of interpretive infrastructure and the level of visitor numbers on the cultural value, physical characteristics, integrity, and natural environment of the site must be fully considered in heritage impact assessment studies.

5.3 Interpretation and presentation should serve a wide range of conservation, educational and cultural objectives. The success of an interpretive programme should not be evaluated solely on the basis of visitor attendance figures or revenue.

5.4 Interpretation and presentation should be an integral part of the conservation process, enhancing the public's awareness of specific conservation problems encountered at the site and explaining the efforts being taken to protect the site's physical and functional integrity and authenticity.

5.5 Any technical or technological elements selected to become a permanent part of a site's interpretive infrastructure should be designed and constructed in a manner that will ensure effective and regular maintenance.

5.6 Interpretive programmes should aim to provide equitable and sustainable economic, social, and cultural benefits to all stakeholders through education, training and employment opportunities in site interpretation programmes.

Principle 6: Inclusiveness (Participatory Approach)

Interpretation and presentation of cultural heritage sites must be the result of meaningful collaboration between heritage professionals, host and associated communities, and other stakeholders.

6.1 The multidisciplinary expertise of scholars, community members, conservation experts, governmental authorities, site managers and interpreters, tourism operators, and other professionals should be integrated in the formulation of interpretation, presentation and promotion programmes.

6.2 The rights, responsibilities, and interests of property owners and host and associated communities should be noted and respected in the planning of site interpretation, presentation

and promotion programmes.

6.3 Plans for expansion or revision of interpretation and presentation programmes should be open for public comment and involvement. It is the right and responsibility of all to make their opinions and perspectives known.

6.4 Because the question of intellectual property rights is especially relevant to the interpretation process and its expression in various communication media (such as on-site multimedia presentations, digital media, and printed materials), legal ownership and right to use images, texts, and other interpretive materials should be discussed, clarified, and agreed in the planning process.

Principle 7: Research, Training, and Evaluation

Continuing research, training, and evaluation are essential components of the interpretation of a cultural heritage site.

7.1 The interpretation of a cultural heritage site should not be considered complete with the implementation of a specific interpretive infrastructure. Continuing research and consultation are important to furthering the understanding and appreciation of a site's significance. Regular review should be an integral element in every heritage interpretation programme.

7.2 The interpretive programme and infrastructure should be designed and constructed in a way that facilitates ongoing content revision and/or expansion.

7.3 Evaluation of learning and interpretation will help to ensure objectives are met, and to improve future provision. Interpretation and presentation programmes and their physical impact on a site should be continuously monitored and evaluated, and periodic changes made on the basis of both scientific and scholarly analysis and public feedback. Visitors and members of associated communities as well as heritage professionals should be involved in this evaluation process.

7.4 Every interpretation programme should be considered as an educational resource for people of all ages. Its design should take into account its possible uses in school curricula, informal and lifelong learning programmes, communications and information media, special activities, events, and seasonal volunteer involvement.

7.5 The training of qualified professionals in the specialised fields of heritage interpretation and presentation, such as content creation, management, technology, guiding, and education, is a crucial objective. In addition, basic academic conservation programmes should include a component on interpretation and presentation in their courses of study.

7.6 On-site training programmes and courses should be developed with the objective of updating and informing heritage and interpretation staff of all levels and associated and host communities of recent developments and innovations in the field.

7.7 International cooperation and sharing of experience are essential to developing and maintaining standards in interpretation methods and technologies.

5 METHODOLOGY

In 2017, Interpretation Audit of the "Sites of Japan's Meiji Industrial Revolution" was undertaken to review the status and achievements of the interpretation since inscription. On-site inspections were made for the Audit in January and May 2017 to review if Outstanding Universal Value, as well as the contribution of each component part to the World Heritage value, was properly presented at the visitor centres of each area or at component parts. To be more specific, in addition to the contribution of each component part to Outstanding Universal Value, the review laid emphasis on the appropriate interpretation related to the industrial connections that exist between component parts. The Audit was carried out in terms of scale, location, management, access and resources, highlighting the complexity and challenges of interpreting a serial World Heritage Site composed of 23 component parts. It makes recommendations to strengthen the interpretive connectivity and consistency between the component parts to foster a better appreciation of the World Heritage value. This Interpretation Strategy was prepared based on the comments and recommendations of the Audit.

Summaries of the Audit are included within the Strategy. The full audit report is contained in the Annexe.

6 AUDIT OF WHS-WIDE DEVELOPMENTS

A number of series-wide developments, both prior to and post-inscription, were noted during the audit, a few key examples of which are summarised below.

Website "Sites of Japan's Meiji Industrial Revolution"

Two different websites have been created.

1. Homepage of General Incorporated Foundation National Congress of Industrial Heritage
(https://sangyoisankokuminkaigi.jimdo.com/)

Online since 2013, this mainly consists of explanations on what General Incorporated Foundation National Congress of Industrial Heritage is, news, newsletters and activities.



Appendix g)-1

It includes encouraging comments from Sir Neil Cossons and Dr. Stuart Smith.



It contains a contributed thesis by Dr. Dietrich Soyez.



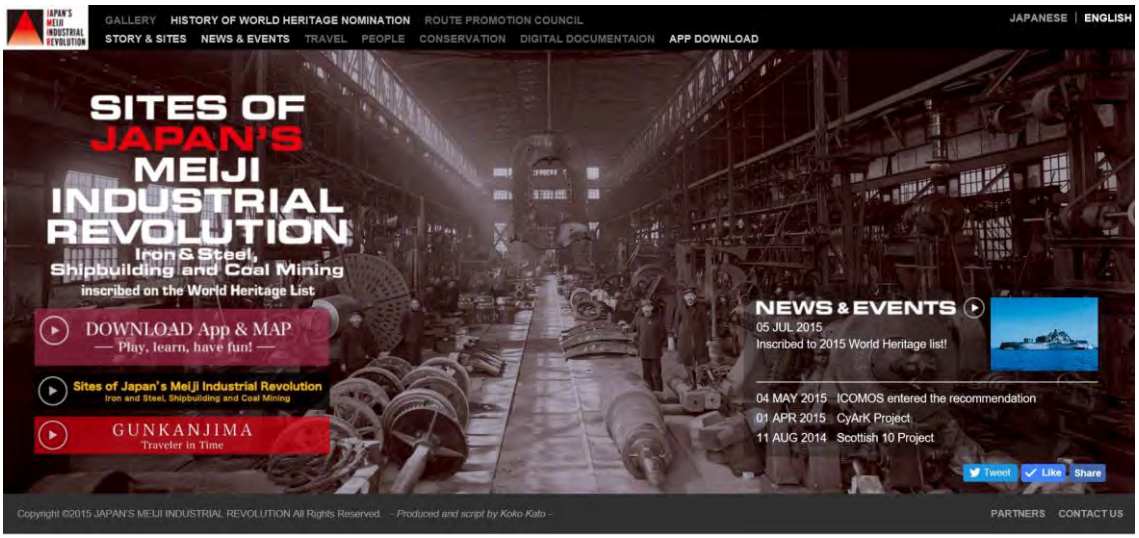
It introduces the Joint ICOMOS – TICCIH Principles.



2. Homepage of the "Sites of Japan's Meiji Industrial Revolution"
(http://www.japansmeijiindustrialrevolution.com/en/)

This website serves as the principal website for the *"Sites of Japan's Meiji Industrial Revolution"* and has been online since 2015. It mainly consists of World Heritage-related topics. Please see below.

The update of this website was conducted in November 2017.

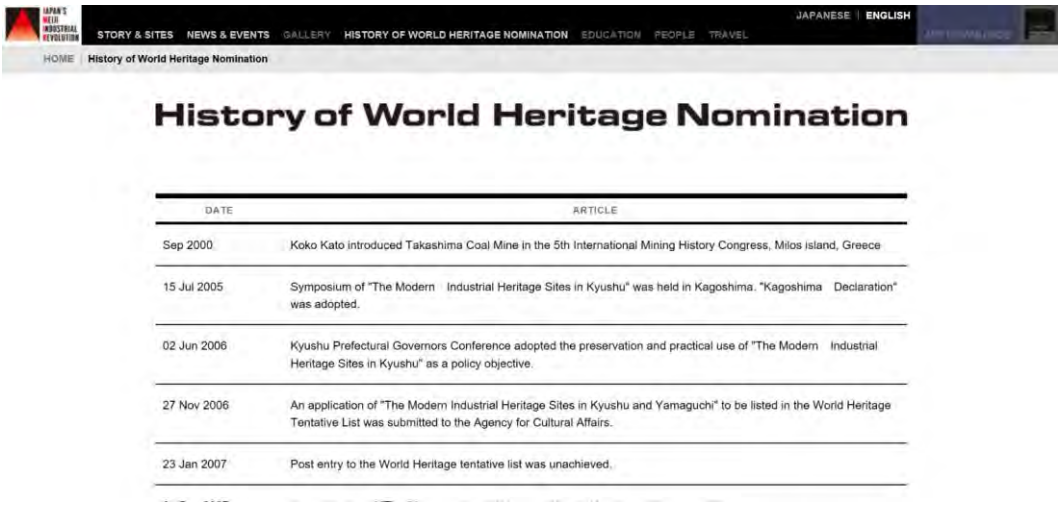


■TOP Page

- There is a button for downloading the app and MAP and for the gallery page which has an assortment of educational videos
- The latest articles of PEOPLE and NEWS & EVENTS are highlighted.

■Each Category

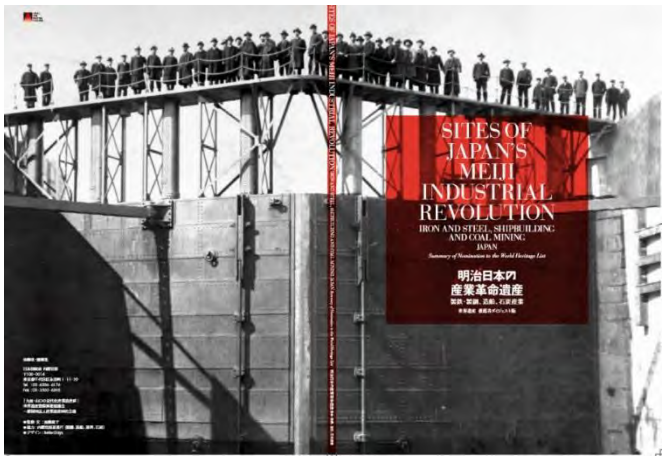
- Story & Sites (1 OUV; 2 Historical Background; 3 Chronological Development Phase; 4 Location)





Booklet of "Summary of Nomination to the World Heritage List"

This booklet summarises the contents of the World Heritage Nomination Document submitted to UNESCO. The Document was published in Japanese, English and Chinese.



Official Pamphlet for the Public

Although the booklet of the "Summary of Nomination to the World Heritage List" precisely summarised the contents of the World Heritage Nomination Document, it was not intended for general readers. Therefore the official pamphlet for the public (the "Mini Pamphlet") was created by the World Heritage Council in order to provide widely accessible interpretation using stories of the *"Sites of Japan's Meiji Industrial Revolution."* It consists of 24 pages with explanations on OUV in the first 2 pages and stories of each component part using easy-to-understand expressions. This pamphlet is available at each component part and at their guidance centres.



Appendix g)-1

Map of the "Sites of Japan's Meiji Industrial Revolution"

An access guide MAP, both in Japanese and English, has been produced and is distributed free to visitors to help them with World Heritage Site orientation and to understand all component parts across Japan - and encourage them to visit as many as possible.

An Application (described below) and the MAP are linked with each other.

By casting a smartphone over the Map QR codes, users can easily and quickly get information on how to access each component part. Using the AR camera function, you can see pop-up photos of component parts by casting a smartphone over the World Heritage logos.









Map QR Codes Pop-up photos by the AR camera function of the app.

Appendix g)-1

App of "Sites of Japan's Meiji Industrial Revolution"

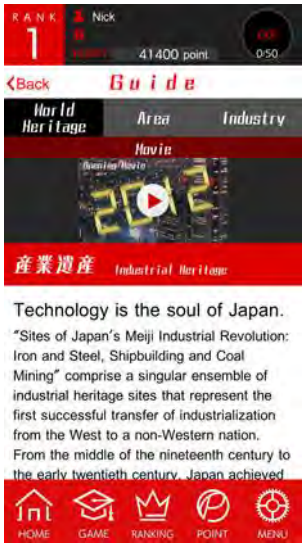
Overview

The World Heritage Council of the "Sites of Japan's Meiji Industrial Revolution" developed a guiding application available in Japanese, English, Korean, simplified Chinese and traditional Chinese to promote interpretation and education among the general public regarding the *"Sites of Japan's Meiji Industrial Revolution."* The application was launched on March 20th, 2017.

The App is available in several languages:



Japanese



English



Korean



Simplified Chinese



Traditional Chinese

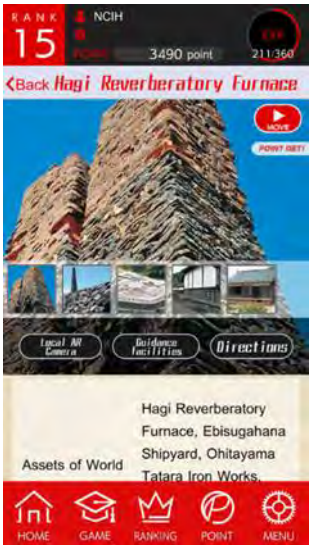
What the application offers:

Guidance

The app provides guidance to the *"Sites of Japan's Meiji Industrial Revolution"* with detailed stories and explanations, their historical background, movies, CG animations and photos. It also allows easier access to each component part by linking with car navigation and with the MAP.







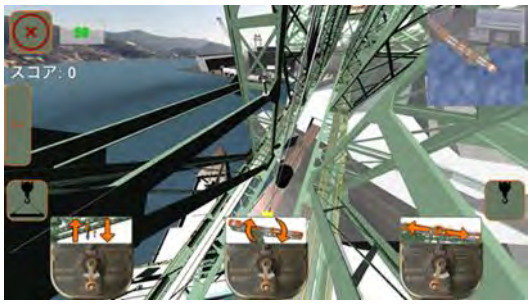




Although some of the component parts are not open to the public because they are operating facilities, visitors can view those component parts via this app and learn about them as an alternative “visiting” solution. One of them is Mitsubishi Giant Cantilever Crane. Using the data measured through The Scottish Ten Project, a joint project with the Scotland Government, the app offers a “3D viewer” that can be activated only at the site and a “simulator” that allow users to intuitively learn the structure of the Mitsubishi Giant Cantilever Crane. By these functions, the app can provide such digital documentation information about component parts that cannot be physically accessed.



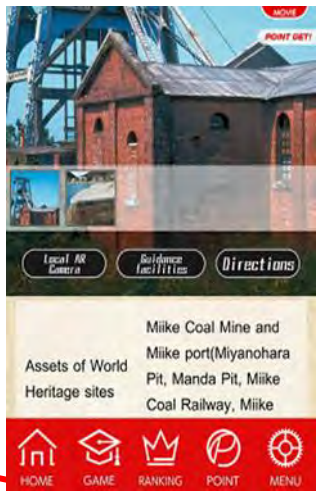




AR (Augmented Reality Effect)

When you activate the camera, you’ll see some tags. You can see some contents such as movies, photos and explanations of the component parts. This is an example of Miike Port. You can a view a 360-degree drone movie that can be adjusted by changing the angle of your smartphone.





Quizzes

The app allows users to learn about each component part by doing quizzes.
By giving correct answers and by high utilisation of the app, users can earn certain titles.







Points

Users can earn points by giving correct quiz answers and by visiting component parts and related facilities. With those earned points, users can exchange points with additional quizzes and a daily fortune-teller.







Ranking

Users can move up or down in the ranking by the points and the number of correct answers on quizzes.



Collaboration with a local private company

Featuring Nagasaki's Glover House and Office, a collaboration campaign was conducted from April 2017 (for a limited duration within the app) with the Nagasaki Branch of KIRIN Brewery Company (that is associated with Thomas Glover). By holding the app over the limited edition of canned and bottled beer of KIRIN, the app showed a special movie about Thomas B. Glover who was based in the Glover House and Office which played a critical role during Japan's emergent period of industrialisation.



“Immersive Multi-Display Platform” “LIQUID GALAXY”

The Platform

The "Liquid Galaxy" utilizes several servers to show Google Earth and panoramic images that surround the viewer in an immersive display setting. Seven (55 inch to 60 inch) displays show a full HD 1920 x 1080 resolution image, and each is adjusted for the correct viewing angle in an arc around the viewers.

Liquid Galaxy began as a Google project and is now an open source platform utilised in over 50 locations around the globe by large companies, universities, museums and aquariums, including the Air & Space Museum in Washington DC and the Musée Océanographique in Monaco.

With this platform, various locations of the *“Sites of Japan’s Meiji Industrial Revolution”* can be shown as they appear on the globe, combining photos and videos to give a full sense of a specific site.



First deployment in October 2015 at the “Digital Documentation” exhibition at UNESCO headquarters in Paris.

*Google Earth and Street View is a trademark of Google, Inc, USA

* Liquid Galaxy is a trademark of End Point Inc, USA

The initial presentation of the system took place as part of the exhibition “Digital Documentation: Conservation and Preservation with Science and Technology” in October 2015 at UNESCO HQ (Paris).

Following the presentation in Paris, General Incorporated Foundation National Congress of Industrial Heritage and the local authorities started a 24-month tour exhibition in each World Heritage Site city.

The system was set in each local venue for a three-month period in 8 locations. (January 2016 to January 2018). With this presentation, more visitors were able to learn about the “serial property” of the “Meiji Industrial Revolution”; virtual visits to see the sites from a remote location.



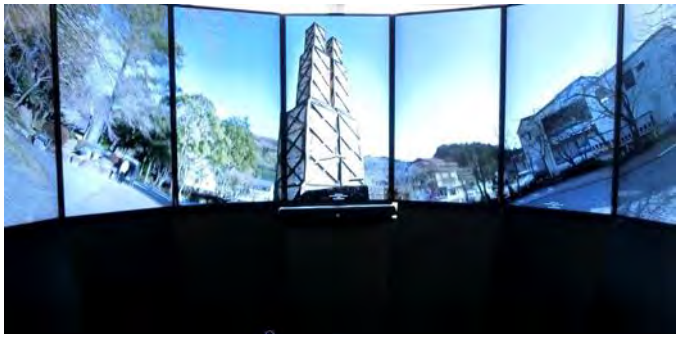
Seven 55-inch displays set vertically controlled by the central touch screen panel.



Top menu ("Home Screen") of the touch panel screen: the joystick type controller gives the user a simple and interactive presentation display.



The 23 component parts are categorised by "Chronology" and by "Industry". Each box represents access to the information of individual sites.



Nirayama



Using the Google Earth function, visitors can enjoy viewing the images of sites that are not open to the public. This is an example of Yawata Steel Works, an operational industrial production site with preserved World Heritage at its core, and that belongs to Nippon Steel & Sumitomo Metal Corporation.



Mitsubishi Heavy Industry Group, Nagasaki Shipyard, No. 3 Dry Dock.



Hashima (Gunkanjima), especially the interior of much of the complex that is closed for safety reasons as well as for preservation and conservation actions.



The system also has access to other industrial heritage in the world. The image is a 3D image of the “Forth Bridge” which was inscribed on the World Heritage List in 2015.

Commemorative Coin Sets of the "Sites of Japan's Meiji Industrial Revolution World Heritage Site"

This set of six new Japanese coins, issued by the Japan Mint in July 2015, is presented in a case accompanied by a special booklet that explains the OUV of the property and each component part in detail.



Commemorative Proof Medal Sets of the "Sites of Japan's Meiji Industrial Revolution World Heritage Site"

Three commemorative medals, issued by the Japan Mint in July 2015, represent component parts. Their presentation includes a special booklet that explains the OUV of the property and each component part in detail.



Elevation drawings of the Giant Cantilever Crane and No.3 Dry Dock in Nagasaki derived point cloud data generated by 3D laser-scan surveys by the Centre for Digital Documentation and Visualisation (CDDV) as part of the Scottish Ten project in 2014.





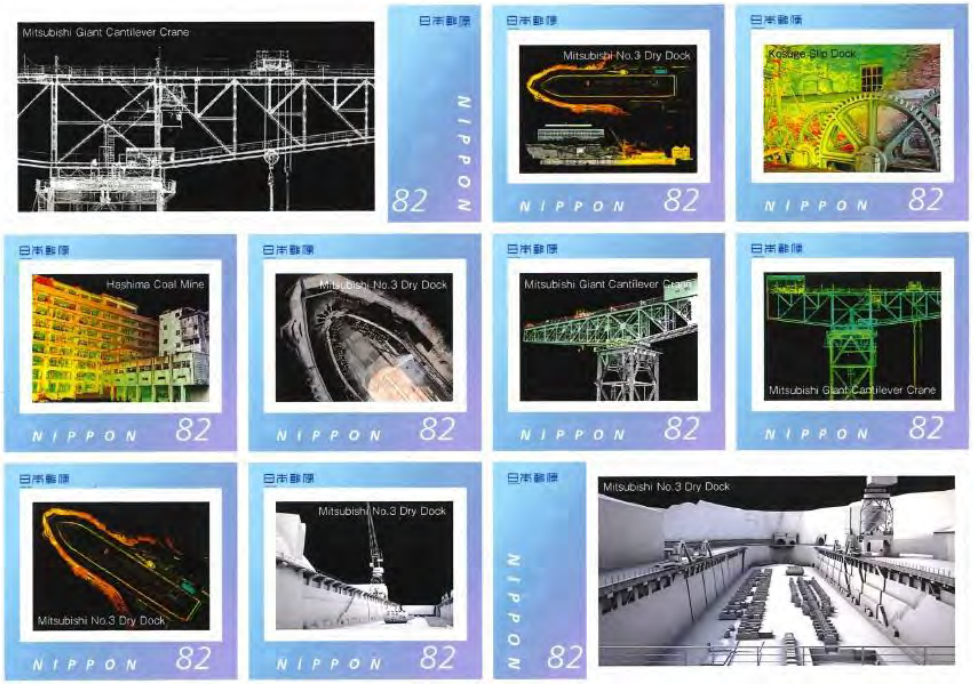
Commemorative Stamps

These commemorative stamps, issued by Japan Post in July 2016, are presented in a special black folder that consists of explanations on the *Sites of Japan's Meiji Industrial Revolution* and stamps sorted by 8 areas.





Point-cloud elevation drawings of the Giant Cantilever Crane, Kosuge Slip Dock, No.3 Dry Dock and Hashima Coal Mine in Nagasaki, drawn from data generated by a 3D laser-scan surveys by the Centre for Digital Documentation and Visualisation (CDDV) as part of the Scottish Ten project in 2014.



7 AUDIT OF COMPONENT PARTS AND SITES

All component parts and sites were independently audited during January-February 2017 and May 2017, the report subsequently produced in summer 2017. The full Interpretation Audit Report is annexed to this Strategy.

Recommendations arising from the interpretation audit conducted in January and May 2017

The Audit Report *...highlights the complexity and challenges of interpreting a serial WHS, particularly in terms of scale, location, management, access and resources. There is a need for a more consistent, cohesive and coordinated approach to connect and present the 23 component parts to communicate Outstanding Universal Value and how the component parts relate to each other.*

Overall, there has been significant progress across the 8 areas and 23 component parts in:
- (1)* Coordination of WHS-wide overarching interpretation, and
- (2)* Site-specific interpretation.

Various factors are taken into account when reviewing progress, and setting future targets:
- WHS inscription in July 2015 triggered a centralised and coordinated initiative for strategic interpretation across the series (under the Strategic Framework management system),
- the auditing of all component parts and sites in 2017, and
- in terms of resources the complex prefectural and city budget planning and appropriation cycles.

(1)* Coordination of WHS-wide overarching interpretation
- New WHS website.
- Web-based WHS-wide application available for download at all component parts.
- Introductory WHS film made and distributed for use at all sites.
- Japanese and English language WHS summary booklet available freely across all component parts.
- Single WHS map created and made available at all component parts.
- WHS-wide traffic signage using the common logo implemented at all component parts and sites, and a WHS 'Route' implemented.
- Site assistance 3D laser scanning of major sites and features, for conservation and interpretive purposes, such as Mitsubishi Nagasaki Giant Cantilever Crane (unavailable for public access, so a high-quality versatile virtual tool has been created).
- WHS awareness raising completed through popular products and product endorsement, including special WHS coin sets issued in silver, WHS postage stamps, and iconic site images (such as the Giant Cantilever Crane) appearing on cans of KIRIN Beer (with its origins in the WHS story).

(2)* Site-specific interpretation

- New major visitor centres at Hagi and Nirayama (local government), and Nagasaki (Gunkanjima Digital Museum, private)
- Significant investment in IT-based virtual reality and audio and visual interpretive tools at Hagi, Saga, Miike and Kamaishi
- New WHS exhibitions in Hagi, Kagoshima, Nirayama, Saga, Nagasaki and Yawata.
- New site-based interpretive facilities in all component parts.

Summary

Although the site-specific interpretation at each component part has significantly progressed since pre-inscription, the OUV interpretation and the area-specific/industry-specific interpretation need further enhancement/improvement in all the component parts. From FY 2018, the interpretation at the visitor centres of each area is planned to be implemented serially. For its implementation, the Cabinet Secretariat, local authorities and General Incorporated Foundation National Congress of Industrial Heritage need to carry out sufficient adjustments whilst considering advice from international experts in order to ensure consistency among the WHS-wide overarching interpretation, the area-specific interpretation and the site-specific interpretation.

Upon implementation of the interpretation at each component part, proper progress management would be required by conducting a regular audit by international experts.

Regarding the 'full history' of each site, a recommendation of the World Heritage Committee, the period of greatest contribution to OUV, through attributes linked to criteria ii) and iv), is 1850s-1910. The *relevant* full history, therefore, needing to be addressed at sites, is pre-1850s at some sites and post-1910 at others. Irrelevant, or at least history not featuring significantly before or after the period of OUV, is explained in the chart, "Consideration of the Full History of Sites" on page 78.

Following the inception series of interpretation lectures given at all component parts during the Interpretation Audit, a further series of interpretation workshops are being provided at sites during FY 2017, together with the provision of a training manual to be used by sites' interpretive staff and volunteers.

Other recommendations include:

- World Heritage plaque – installation of the plaques should be completed as soon as possible and placed where they can be easily viewed as a visitor enters a site to inform them that it is part of the WHS.
- Audience evaluation – audience research and analysis should be undertaken on a regular basis across all component parts to inform the ongoing development of interpretive material and experiences.
- Interpretive themes - the continued development of consistent and connected themes and stories is essential to optimize understanding of OUV. This will ensure that the audience experience is memorable and engaging.

- Consistency and brand for the WHS - a consistent look and feel of the introductory presentation of OUV, across all the component parts, should be implemented. This should also clearly articulate the connections between the component parts and their respective contributions. This should be informed by the development of a style guide.
- Collaboration – regular opportunities should be provided for the managers, staff and volunteers to meet to discuss joint interpretive projects and share ideas, opportunities and best practice. This will also enable the sharing of resources across the component parts and provide a consistency of interpretation and connectivity.

Road Signs with ΔLogo

As of November 1, 2017

Prefecture	City	Settled	To be Settled	Total	Memo
Fukuoka	Kitakyushu	53	0	53	
	Omuta	20	0	20	
	Nakama	13	0	13	
Saga	Saga	25	0	25	
Nagasaki	Nagasaki	3	13	16	Three more signs are planned in FY 2018
Kumamoto	Arao	41	0	41	
	Uki	18	0	18	
Kagoshima	Kagoshima	29	8	37	
Yamaguchi	Hagi	44	0	44	
Iwate	Kamaishi	20	0	20	
Shizuoka	Izunokuni	4	0	4	Four more signs are planned by FY 2020. After that, more signs are planned upon regular renewal
Total		270	21	291	

(Ref: Council for "Sites of Japan's Meiji Industrial Revolution")

Examples of the Logo





Area 1 Hagi

The **Principal Interpretive Centre** for Area 1 Hagi is the new **Hagi Meiringakusha Visitor Centre**, installed in the former Hagi Domain School. This facility is designed in two parts: the main WHS visitor centre and the Bakumatsu Museum that houses collections and interpretation of the important pre-1850s history of the Hagi area. **Hagi Museum** supports the World Heritage Site visitor centre.

Access

Hagi Castle Town, Hagi Reverberatory Furnace, Ebisugahana Shipyard, Shokasonjuku Academy and Oitayama Tatara Iron Works are mainly reached by car. There is enough space for parking at the Hagi Castle Town and Shokasonjuku Academy, and nearby parking spaces are also available for visitors to the Hagi Reverberatory Furnace, Ebisugahana Shipyard, and Oitayama Tatara Iron Works. The road leading to the Ohitayama Tatara Iron Works is very narrow, thus new access measures have been developed as identified in the audit.

Site audit

Uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations. They are clear, and work extremely effectively.

The principal visitor centre for the Hagi area, the Hagi Meiringakusha Visitor Centre is located centrally, immediately adjacent to Hagi Castle Town. A new custom-made visitor centre for the World Heritage Site, and the orientation and interpretation of its Hagi component parts, is housed in an attractive historic building (former domain school). The other 'half' of the building contains a complementary Bakumatsu Museum that tells the precursor relevant context of Hagi; in other words, the 'full relevant history' of the component part, except some post-1910 conservation history. Carrying capacity is high and there is ample car and coach parking, and bus service links. There is a charge.

The arrival experience is personal and welcoming, efficient, and elegant.

Orientation and introduction is efficient, an audio-visual theatre setting the scene. Overall, materials and workmanship, quality and interpretive content are exceptional. The WHS as a whole receives effective interpretive treatment, with chronological, functional and socio-technical links well expressed. An excellent diverse range of appropriate media combines with rich and meaningful interpretive content to provide an interactive, engaging and worthwhile experience. Displays range from low-tech interactives to high-tech virtual reality experiences, and from interpretive reconstructions to conventional high-quality museum showcases of authentic artefacts that relate to the sites.
With the additional Bakumatsu Museum, the two distinctive exhibitions comprise an exemplary facility.

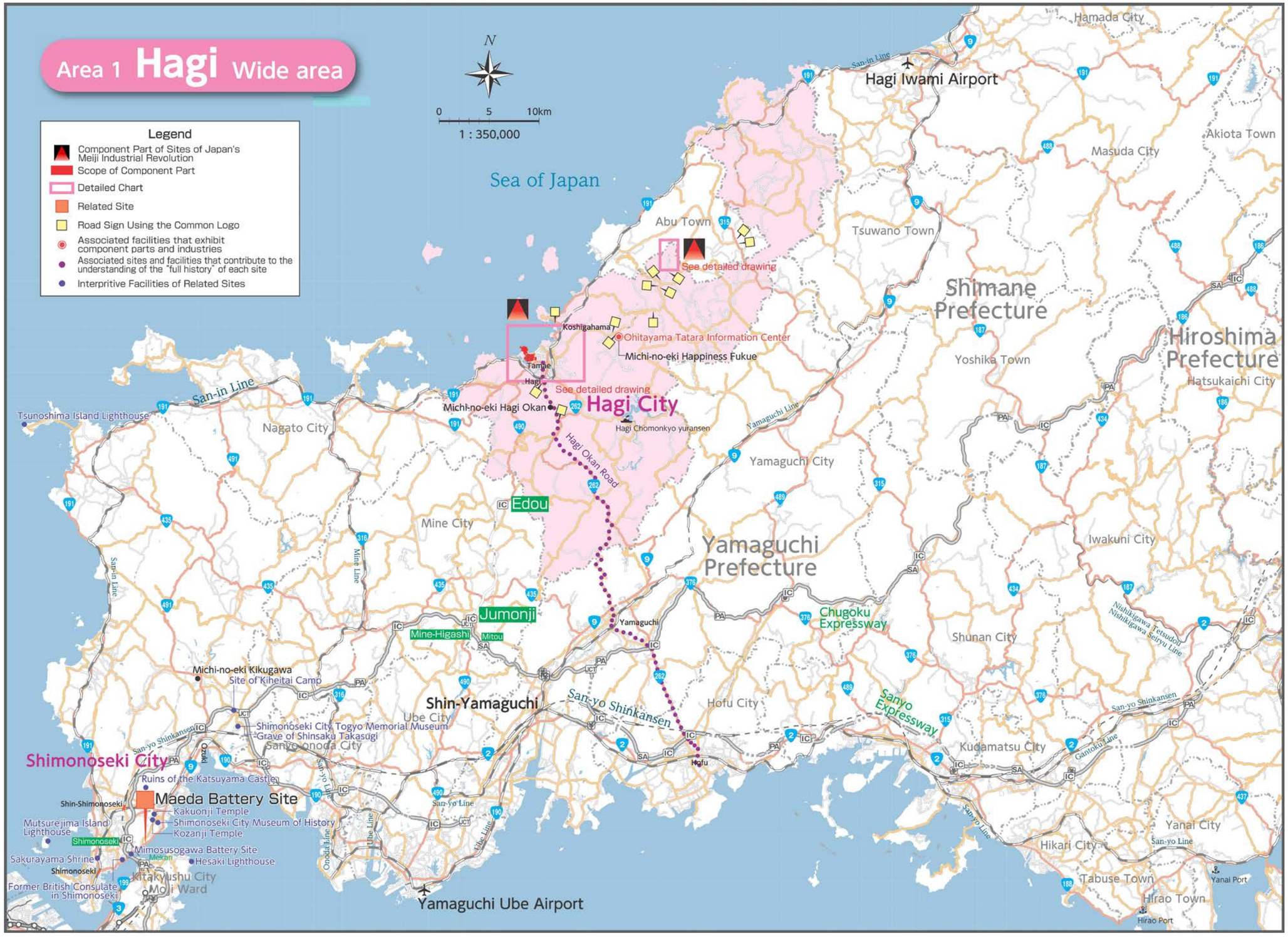
A new mix of interpretive media has been applied to all sites (see Interpretation Audit

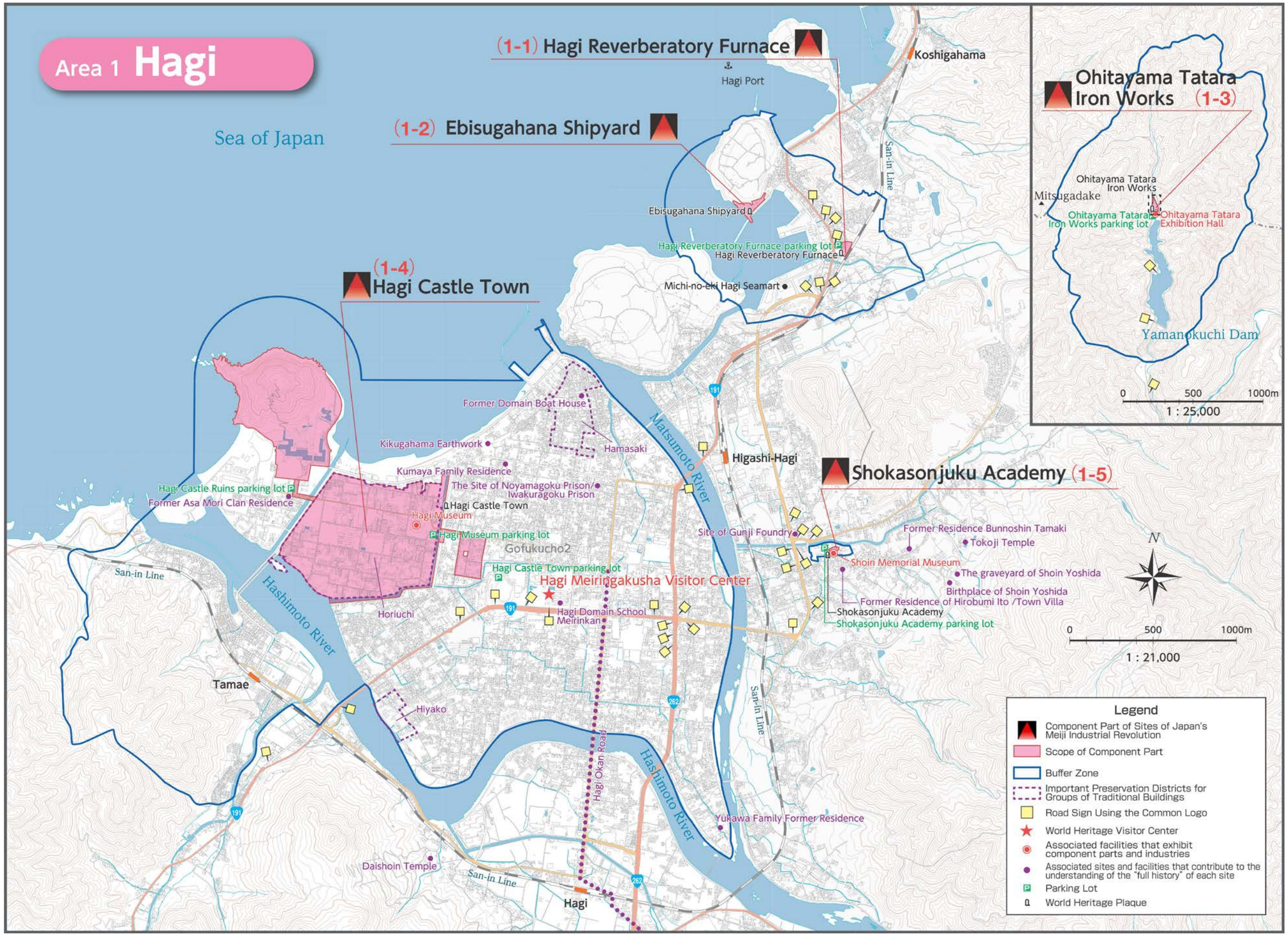
with annexed Photo Trails).

Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Hagi Meiringakusha Visitor Center
Associated facilities that exhibit component parts and industries	Hagi Museum
	Ohitayama Tatara Information Center
	Ohitayama Tatara Exhibition Hall
	Shoin Memorial Museum
Associated sites and facilities that contribute to the understanding of the “full history” of each site	Hagi Domain School Meirinkan
	Yukawa Family Former Residence
	Former Residence of Hirobumi Ito /Town Villa
	Site of Gunji Foundry
	Former Domain Boat House
	Former Asa Mori Clan Residence
	Tokoji Temple
	Daishoin Temple
	Kumaya Family Residence
	Hagi Okan Road
	Horiuchi（Important Preservation Districts for Groups of Traditional Buildings）
	Hamasaki（Important Preservation Districts for Groups of Traditional Buildings）
	Hiyako（Important Preservation Districts for Groups of Traditional Buildings）
	Birthplace of Shoin Yoshida
	The graveyard of Shoin Yoshida
	Former Residence Bunnoshin Tamaki
	Kikugahama Earthwork
	The Site of Noyamagoku Prison/Iwakuragoku Prison


Area 1 Hagi Wide area
N
0 5 10km
1 : 350,000
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Related Site
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Interpritive Facilities of Related Sites
Sea of Japan
Hamada City
Hagi Iwami Airport
San-in Line
Akiota Town
Masuda City
Abu Town
See detailed drawing
Tsuwano Town
Shimane Prefecture
Hiroshima Prefecture
Hatsukaichi City
Yoshika Town
Koshigahama
Ohitayama Tatara Information Center
Michi-no-eki Happiness Fukue
Tamae
Hagi
See detailed drawing
Michi-no-eki Hagi Okan
Hagi City
Hagi Chomonkyo yuransen
Hagi Okan Road
Yamaguchi Line
Tsunoshima Island Lighthouse
Nagato City
Yamaguchi City
Edou
Mine City
Yamaguchi Prefecture
Iwakuni City
Jumonji
Mine-Higashi
Mitou
Yamaguchi
Chugoku Expressway
Shunan City
Nishikigawa Tetsudou Nishikigawa Seiryu Line
Michi-no-eki Kikugawa
Site of Kiheitai Camp
Shin-Yamaguchi
Ube City
San-yo Shinkansen
Hofu City
Sanyo Expressway
Kudamatsu City
Shimonoseki City
Shimonoseki City Togyo Memorial Museum
Grave of Shinsaku Takasugi
Sanyo-onoda City
Ruins of the Katsuyama Castle
Maeda Battery Site
Kakuonji Temple
Shimonoseki City Museum of History
Kozanji Temple
Shin-Shimonoseki
Mutsurejima Island Lighthouse
Shimonoseki
Mimosusogawa Battery Site
Mekari
Hesaki Lighthouse
Sakurayama Shrine
Shimonoseki
Kitakyushu City
Moji Ward
Former British Consulate in Shimonoseki
Yamaguchi Ube Airport
Yanai City
Hikari City
Tabuse Town
Hirao Town
Yanai Port
Hirao Port


Area 1 Hagi
(1-1) Hagi Reverberatory Furnace
(1-2) Ebisugahana Shipyard
(1-4) Hagi Castle Town
Sea of Japan
Hagi Port
Koshigahama
San-in Line
Ebisugahana Shipyard
Hagi Reverberatory Furnace parking lot
Hagi Reverberatory Furnace
Michi-no-eki Hagi Seamart
Ohitayama Tatara Iron Works (1-3)
Ohitayama Tatara Iron Works
Mitsugadake
Ohitayama Tatara Iron Works parking lot
Ohitayama Tatara Exhibition Hall
Yamanokuchi Dam
0 500 1000m
1 : 25,000
Former Domain Boat House
Kikugahama Earthwork
Hamasaki
Matsumoto River
Higashi-Hagi
Shokasonjuku Academy (1-5)
Kumaya Family Residence
The Site of Noyamagoku Prison/ Iwakuragoku Prison
Hagi Castle Ruins parking lot
Former Asa Mori Clan Residence
Hagi Castle Town
Hagi Museum
Hagi Museum parking lot
Gofukucho2
Site of Gunji Foundry
Former Residence Bunnoshin Tamaki
Tokoji Temple
Shoin Memorial Museum
The graveyard of Shoin Yoshida
Birthplace of Shoin Yoshida
Former Residence of Hirobumi Ito /Town Villa
Shokasonjuku Academy
Shokasonjuku Academy parking lot
N
0 500 1000m
1 : 21,000
San-in Line
Hashimoto River
Hagi Castle Town parking lot
Hagi Meiringakusha Visitor Center
Hagi Domain School Meirinkan
Horiuchi
Tamae
Hiyako
Hagi Okan Road
Yukawa Family Former Residence
Daishoin Temple
Hagi
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Important Preservation Districts for Groups of Traditional Buildings
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Parking Lot
World Heritage Plaque

Area 2 Kagoshima

The **Principal Interpretive Centre** for Area 2 Kagoshima is **Shokoshuseikan Museum (Former Shuseikan Machinery Factory)**, together with the Former Kagoshima Foreign Engineers' Residence. This provides visitor information about the site, buildings, its history and conservation. Shuseikan is well equipped with basic amenities and interpretive information for visitors to the Shokoshuseikan Museum, Sengan-en, and the Former Kagoshima Foreign Engineers' Residence. Interpretation boards are displayed in the nature trails in the Terayama Charcoal Kiln and Sekiyoshi Sluice Gate of Yoshino Leat. Guide training at the whole property is now underway.

Access

Cars, and buses in service from various transport facilities, easily reach the Shuseikan. Pay parking spaces for 125 vehicles and 26 large-sized buses are currently available. However, chronic traffic congestion and a potential shortage of parking space is anticipated in the future when the excavation of the archeological remains situated in the current parking area proceeds and its archaeology is subsequently displayed to the public. In consideration of heritage values, some traffic measures shall be discussed based on a comprehensive transportation investigation (park and ride facilities, and possibility of the construction of a new station).

Visitors to the Terayama Charcoal Kiln can use buses as well as park at the nearby parking spaces and Terayama Park and are directed on foot to the site via a nature trail. Visitors to the Sekiyoshi Sluice Gate of Yoshino Leat can access not only by buses but also by cars. They can park at the nearby parking spaces and walk to the site, viewing the idyllic scenery.

Site audit

The uniform WHS-wide, branded road signs and interpretation boards using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations. They are clear, and work extremely effectively. Additionally, World Heritage promotional signage appears at the railway station and the main bus station.

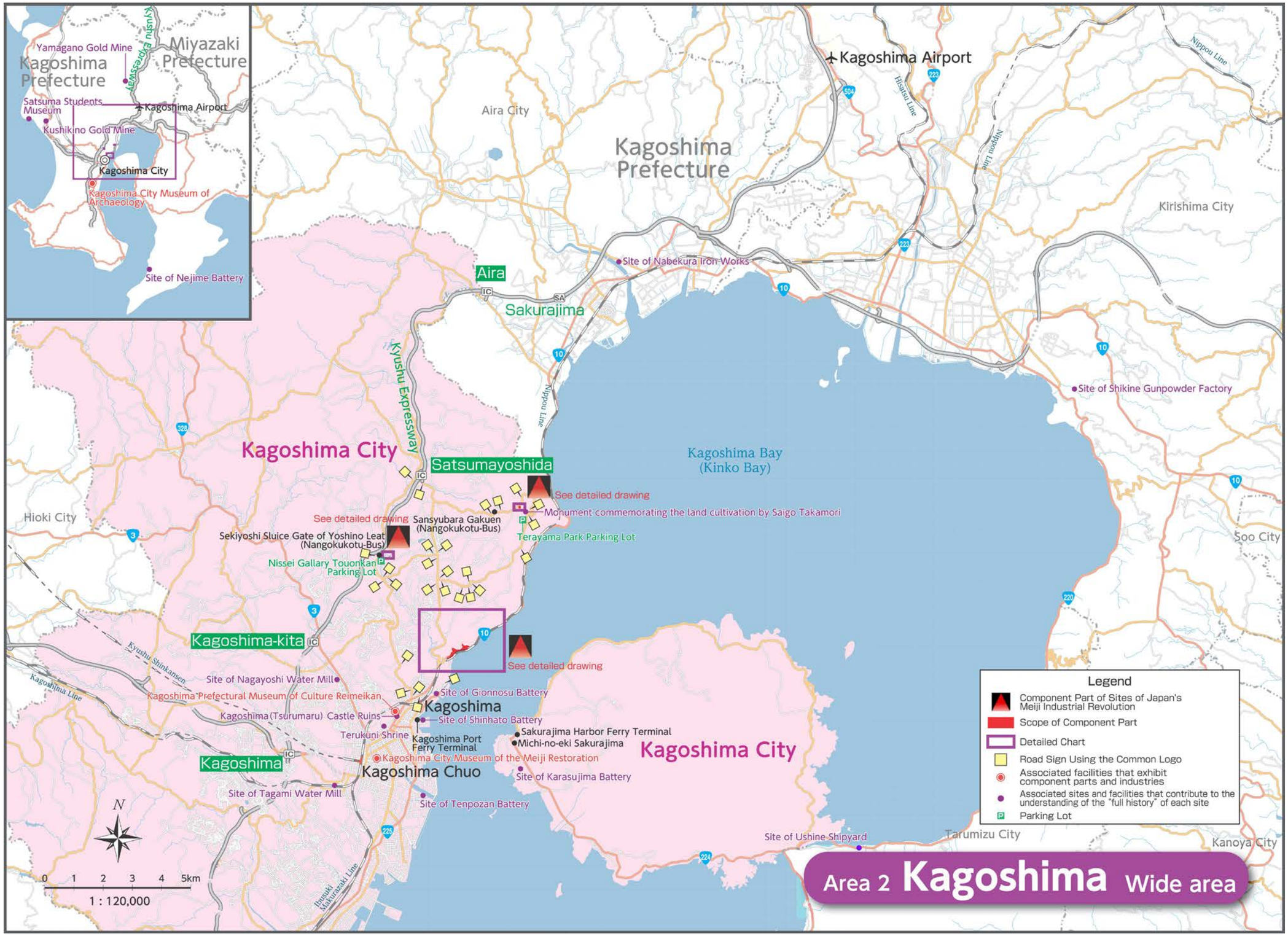
The key visitor facilities are Shokoshuseikan Museum, a pre-existing high-quality museum and interpretive facility, and the Former Kagoshima Foreign Engineers' Residence, followed by Sengan-en. All have uniform WHS-wide interpretation boards stylishly made from metallic plaques set on corten steel. Historic clan motifs of Satsuma clan that represent the Shuseikan business are artistically and effectively used. Entrance fees apply.

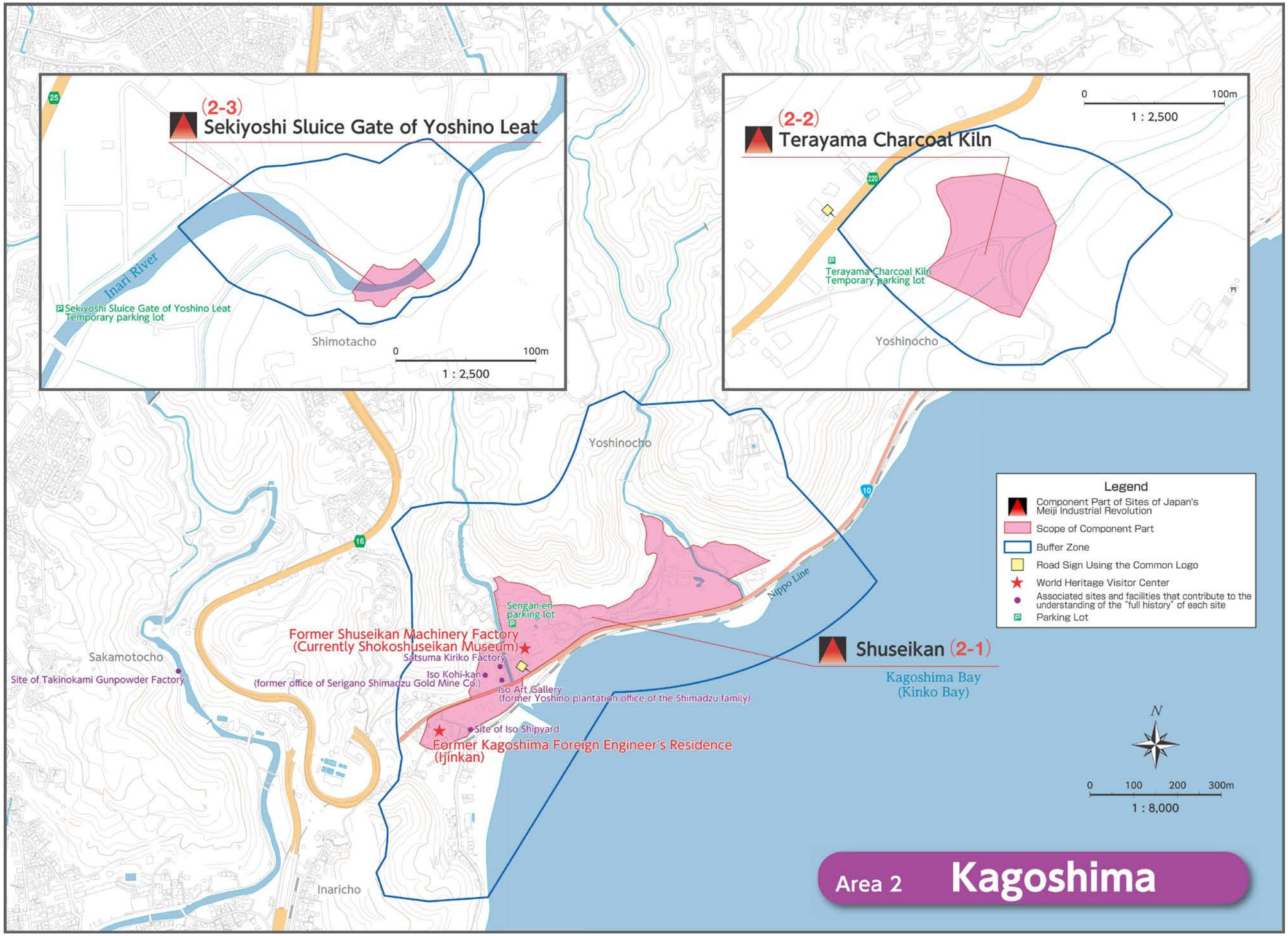
A new mix of interpretive media has been applied to all sites (see Interpretation Audit with annexed Photo Trails).

Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Former Shuseikan Machinery Factory(Currently Shokoshuseikan Museum)
	Former Kagoshima Foreign Engineer's Residence（Ijinkan）
Associated facilities that exhibit component parts and industries	Kagoshima Prefectural Museum of Culture Reimeikan
	Kagoshima City Museum of the Meiji Restoration
	Kagoshima City Museum of Archaeology
Associated sites and facilities that contribute to the understanding of the "full history" of sites	Site of Shinhato Battery
	Site of Tenpozan Battery
	Site of Gionnosu Battery
	Kagoshima（Tsurumaru） Castle Ruins
	Terukuni Shrine
	Site of Shikine Gunpowder Factory
	Site of Tagami Water Mill
	Site of Nejime Battery
	Site of Karasujima Battery
	Site of Iso Shipyard
	Site of Takinokami Gunpowder Factory
	Site of Nagayoshi Water Mill
	Site of Nabekura Iron Works
	Site of Ushine Shipyard
	Iso Kohi-kan(former office of Serigano Shimadzu Gold Mine Co.)
	Iso Art Gallery（former Yoshino plantation office of the Shimadzu family）
	Satsuma Kiriko Factory
	Monument commemorating the land cultivation by Saigo Takamori
	Kushikino Gold Mine
	Satsuma Students Museum
	Yamagano Gold Mine


Yamagano Gold Mine
Kagoshima Prefecture
Miyazaki Prefecture
Kyushu Expressway
Satsuma Students Museum
Kagoshima Airport
Kushikino Gold Mine
Kagoshima City
Kagoshima City Museum of Archaeology
Site of Nejime Battery
Aira City
Kagoshima Prefecture
Kagoshima Airport
Hisatsu Line
Nippou Line
Kirishima City
Site of Nabekura Iron Works
Aira
IC
SA
Sakurajima
Kyushu Expressway
Nippon Line
Site of Shikine Gunpowder Factory
Kagoshima City
Satsumayoshida
Kagoshima Bay
(Kinko Bay)
See detailed drawing
Monument commemorating the land cultivation by Saigo Takamori
Hioki City
See detailed drawing
Sansyubara Gakuen (Nangokukotu-Bus)
Sekiyoshi Sluice Gate of Yoshino Leat (Nangokukotu-Bus)
Terayama Park Parking Lot
Nissei Gallary Touonkan Parking Lot
Soo City
Kagoshima-kita
Kyushu Shinkansen
Kagoshima Line
See detailed drawing
Site of Nagayoshi Water Mill
Kagoshima Prefectural Museum of Culture Reimeikan
Site of Gionnosu Battery
Kagoshima
Kagoshima (Tsurumaru) Castle Ruins
Site of Shinhato Battery
Terukuni Shrine
Kagoshima Port Ferry Terminal
Sakurajima Harbor Ferry Terminal
Michi-no-eki Sakurajima
Kagoshima City
Kagoshima
Kagoshima City Museum of the Meiji Restoration
Kagoshima Chuo
Site of Karasujima Battery
Site of Tagami Water Mill
Site of Tenpozan Battery
Site of Ushine Shipyard
Tarumizu City
Kanoya City
Ibusuki Makurazaki Line
N
0 1 2 3 4 5km
1 : 120,000
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Parking Lot
Area 2 Kagoshima Wide area


(2-3)
Sekiyoshi Sluice Gate of Yoshino Leat
Inari River
Sekiyoshi Sluice Gate of Yoshino Leat
Temporary parking lot
Shimotacho
0
100m
1 : 2,500
(2-2)
Terayama Charcoal Kiln
Terayama Charcoal Kiln
Temporary parking lot
Yoshinocho
0
100m
1 : 2,500
Yoshinocho
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Parking Lot
Sengan-en
parking lot
Former Shuseikan Machinery Factory
(Currently Shokoshuseikan Museum)
Satsuma Kiriko Factory
Nippo Line
Shuseikan (2-1)
Kagoshima Bay
(Kinko Bay)
Sakamotocho
Site of Takinokami Gunpowder Factory
Iso Kohi-kan
(former office of Serigano Shimadzu Gold Mine Co.)
Iso Art Gallery
(former Yoshino plantation office of the Shimadzu family)
Site of Iso Shipyard
Former Kagoshima Foreign Engineer's Residence
(Ijinkan)
Inaricho
N
0
100
200
300m
1 : 8,000
Area 2
Kagoshima

Area 3 Nirayama

The **Principal Interpretive Centre** for Area 3 Nirayama is **the Nirayama Reverberatory Furnaces Guidance Center**. This new visitor centre serves as the main guidance facility to control the visitor entrance and provide interpretation about the property. Local people offer goodwill guides for visitors.

Access

The site is mainly accessed by car, with major routes well developed and signed. There are ample parking spaces for buses and cars.

Site audit

The new, uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at some key locations. Since additional locations are planned for installation of signs, those branded road signs using the common logo will be installed at all key locations in the near future. They are clear, and work extremely effectively.

A new visitor centre (referred to as 'guidance centre, because all site tours are guided by volunteers) has been sensitively constructed (low height, new overlooks to the furnaces and high-quality materials such as Cor-Ten steel, metal and wood), and strategically situated. It has been provided with ample coach and car parking.

The quality of internal architecture, finishes and interpretive content is very high (some further progress to be completed including an overall introduction to the World Heritage Site, series-wide, as an introductory film, to be shown prior to the excellent site-specific film) The highlight of the visitor centre is the impressive multi-media show (in Japanese), which gives an excellent interpretation of Nirayama Furnaces.

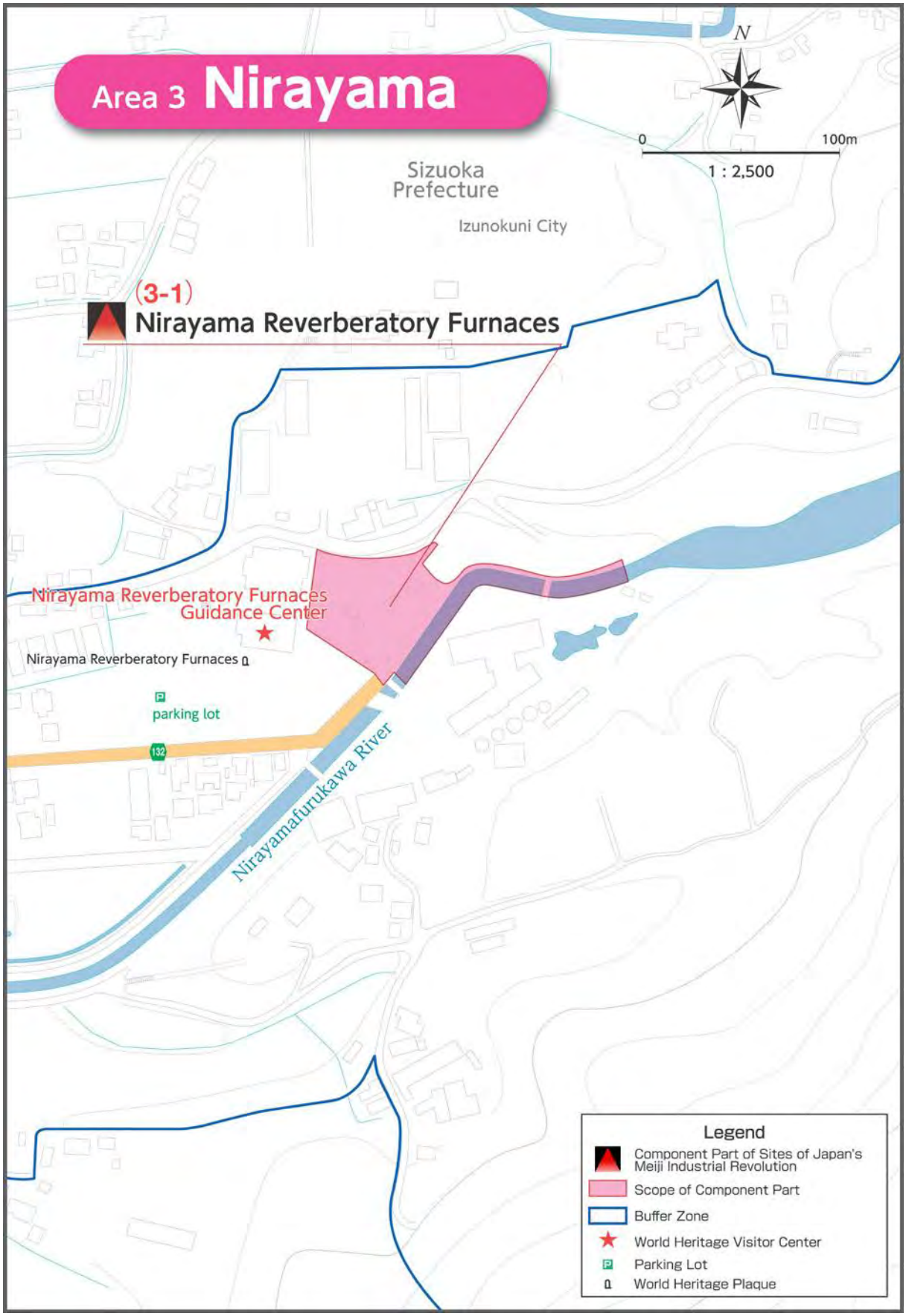
A new mix of interpretive media has been applied to the site (see Interpretation Audit with annexed Photo Trails).

Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Nirayama Reverberatory Furnaces Guidance Center
Associated facilities that exhibit component parts and industries	Egawa Residence
Associated sites and facilities that contribute to the understanding of the "full history" of sites	Shinagawa Battery
	Museum of ship building materials collected from local areas


Area 3 Nirayama Wide area
N
0 1 2 3 4 5km
1 : 125,000
Fuji City
Nagaizumi Town
Numazu City
Susono City
Mishima City
Shin-Tomei Expressway
Surugawan Numazu
Nagaizumi Numazu
Tomei Expressway
Gotemba Line
Numazu
Ashitaka
Tokaido Line
Tokaido Shinkansen
Mishima
Shizuoka Prefecture
Shimizu Town
Kannami Town
Izu Hakone Railway
Suruga Bay
Ema
Izu Chuo Toll Road Expressway
Egawa Residence
Nagaoka-kita
Izu-Nagaoka
See detailed drawing
Izu-no-kuni City
Michi-no-eki Izu no Heso
Numazu City
Museum of ship building materials collected from local areas
Tokyo Metropolis
Shinagawa Battery
Yamanashi Prefecture
Kanagawa Prefecture
Yokohama City
Tomei Expressway
Tokaido Shinkansen
Shizuoka Prefecture
Ashigara
Tokaido Line
Atami City
Numazu City
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site


Area 3 Nirayama
N
0
100m
1 : 2,500
Sizuoka Prefecture
Izunokuni City
(3-1)
Nirayama Reverberatory Furnaces
Nirayama Reverberatory Furnaces Guidance Center
Nirayama Reverberatory Furnaces
parking lot
132
Nirayamafurukawa River
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
World Heritage Visitor Center
Parking Lot
World Heritage Plaque

Area 4 Kamaishi

The **Principal Interpretive Centre** for Area 4 Kamaishi is **Hashino Iron Mining and Smelting Site Information Centre** constructed in the nearby area outside of the property, with basic amenities. The **Iron and Steel History Museum** located in the centre of the Kamaishi City has several exhibitions including a full-scale replica of one of the blast furnaces at Hashimo Iron Mining and Smelting Site, supporting the Hashino Iron Mining and Smelting Site Information Centre. Interpretation boards are installed within the property.

Access

Access to the World Heritage Site area is mainly by car via a well-developed road system. A parking area with a capacity for 80 cars is located adjacent to the Hashino Iron Mining and Smelting Site Information Centre, just outside the property. Another parking area, for about 10 vehicles, is available at the entrance of the Site. Since there is as yet unused capacity in the vicinity, it is possible to expand the parking spaces depending on visitor demand. Regarding the component parts Transportation Site and the Iron Mining Site, Kamaishi City will provide visitor observation tours. Guide training will be carried out for further improvement.

Site audit

The uniform WHS-wide, branded road signs using the common logo of the “Sites of Japan’s Meiji Industrial Revolution” have been installed at all key locations. They are clear, and work extremely effectively.

There are three principal visitor centres: Hashino Iron Mining and Smelting Site Information Center, Iron and Steel History Museum, and the Former Kamaishi Mine's Office Building. All three make an individual contribution.

Hashino Iron Mining and Smelting Site Information Center, immediately adjacent to the component part, provides an overview of the whole WHS together with site-specific detail of the component part. Audio interpretation devices are available to use on site that explain Hashino Iron Mining and Smelting Site

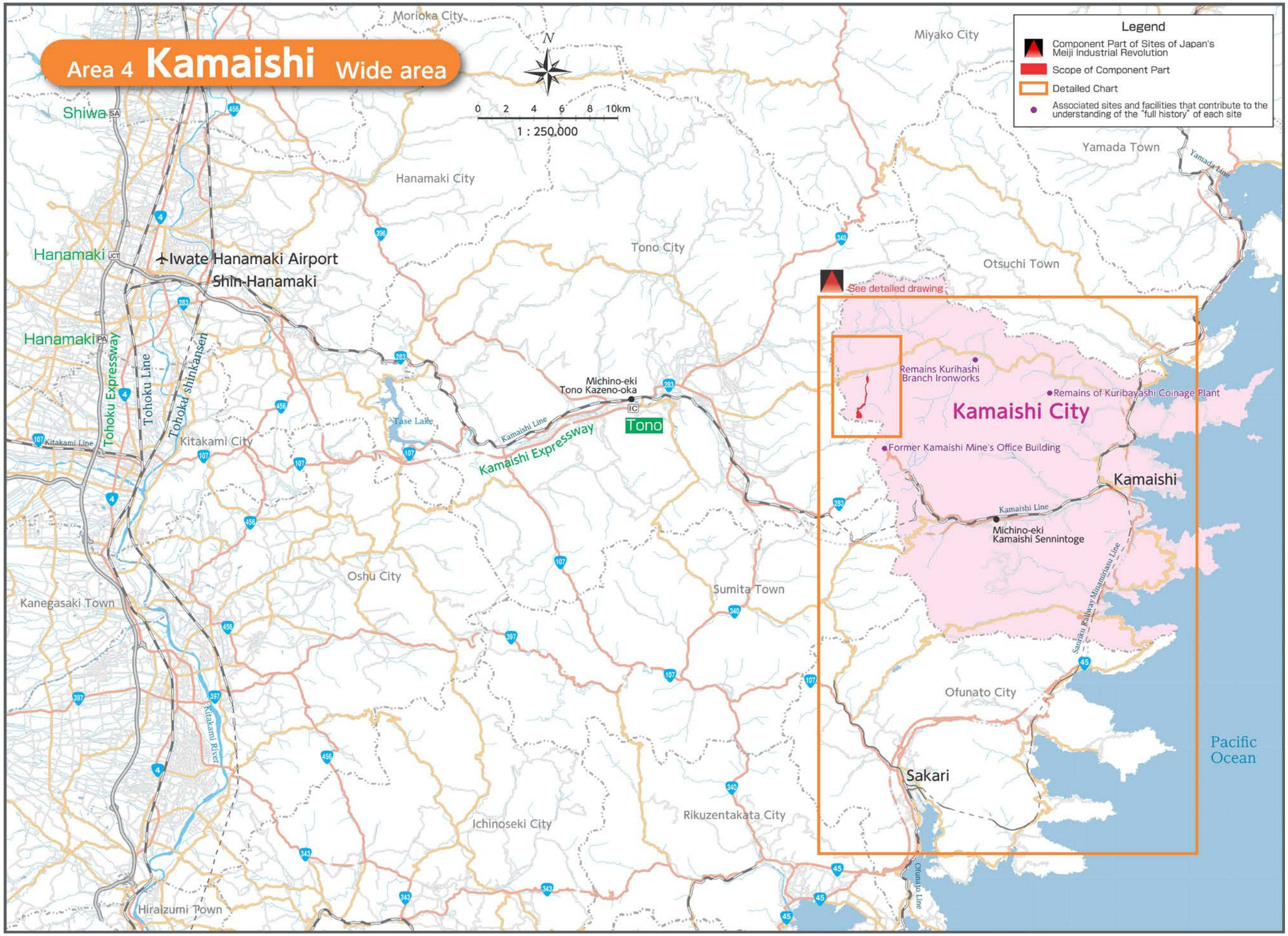
The Iron and Steel History Museum is an excellent principal interpretation centre for the property. The centrepiece of the Iron and Steel History Museum is a full-scale replica section of one of the Hashino blast furnaces, brought to life in a multi-media show that explains its function, operation and ends with putting it in the context of the series-wide World Heritage Site. Links are made with other component parts.

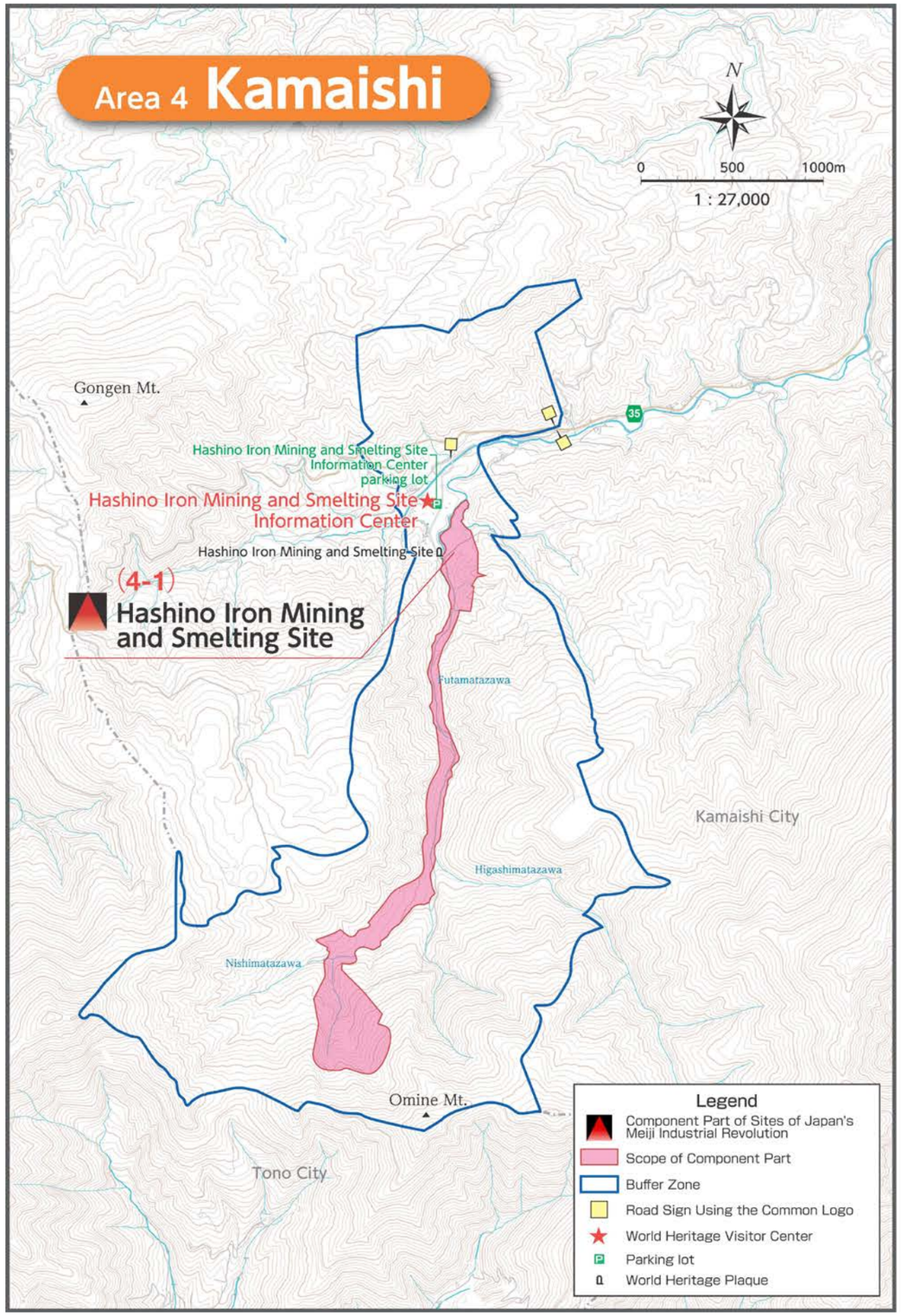
Former Kamaishi Mine's Office Building is Kamaishi Mine’s former office (which still has interesting industrial archaeology and also offers an underground mine tour). There is an interesting exhibition with many original artefacts and archives. The geology of the magnetite deposit is expertly explained.

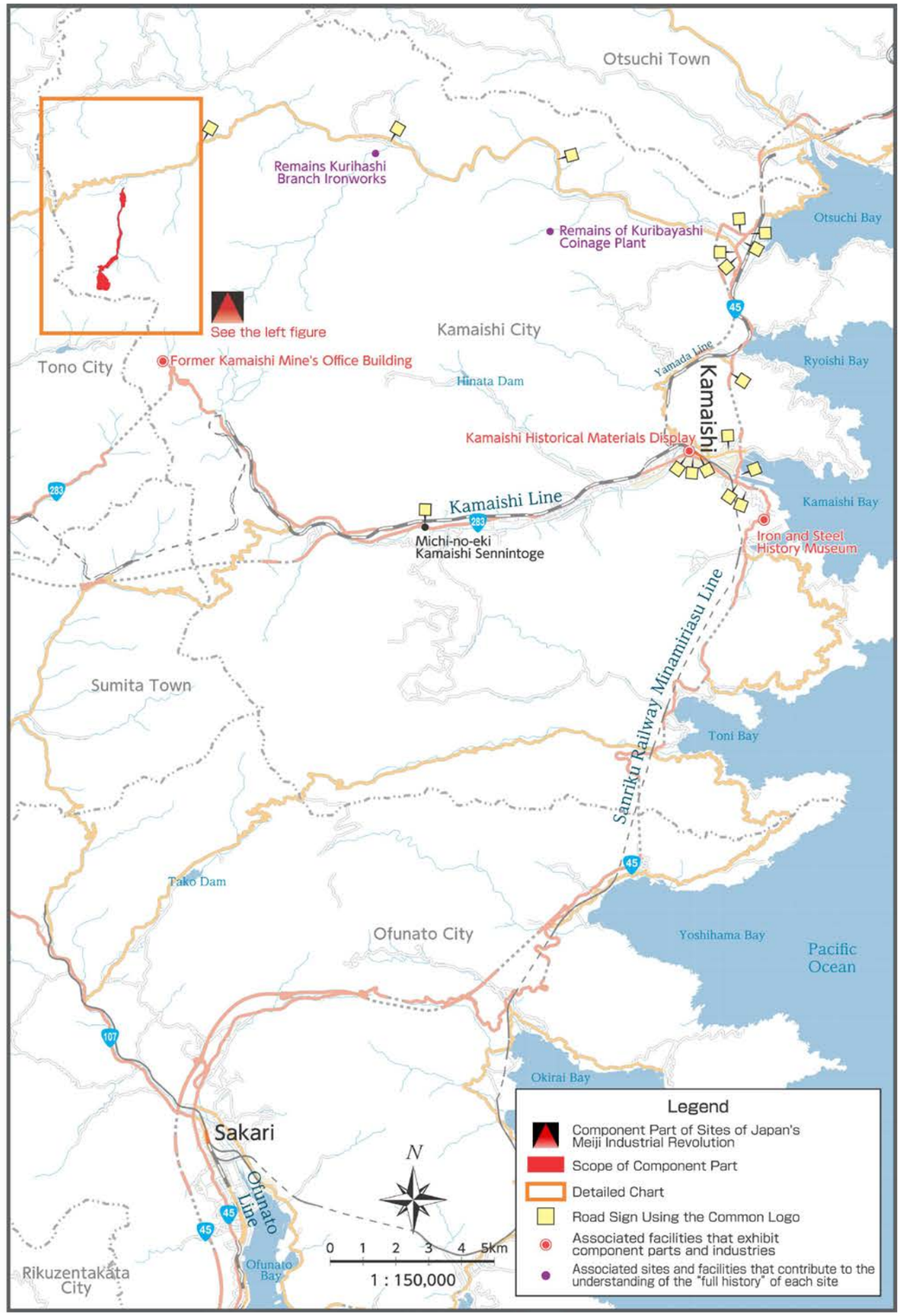
Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Hashino Iron Mining and Smelting Site Information Center
Associated facilities that exhibit component parts and industries	Iron and Steel History Museum
	Former Kamaishi Mine's Office Building
	Kamaishi Historical Materials Display
Associated sites and facilities that contribute to the understanding of the "full history" of sites	Remains of Kuribayashi Coinage Plant
	Remains Kurihashi Branch Ironworks


Area 4 Kamaishi Wide area
N
0 2 4 6 8 10km
1 : 250,000
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Morioka City
Miyako City
Shiwa SA
Hanamaki City
Yamada Town
Yamada Line
Hanamaki IC
Iwate Hanamaki Airport
Shin-Hanamaki
Tono City
Otsuchi Town
See detailed drawing
Hanamaki PA
Tohoku Expressway
Tohoku Line
Tohoku shinkansen
Michino-eki
Tono Kazeno-oka
IC
Tono
Tase Lake
Kamaishi Line
Kamaishi Expressway
Kitakami Line
Kitakami City
Remains Kurihashi Branch Ironworks
Remains of Kuribayashi Coinage Plant
Kamaishi City
Former Kamaishi Mine's Office Building
Kamaishi
Michino-eki
Kamaishi Sennintoge
Sanriku Railway Minamirisasu Line
Oshu City
Sumita Town
Kanegasaki Town
Ofunato City
Kitakami River
Pacific Ocean
Sakari
Ichinoseki City
Rikuzentakata City
Ofunato Line
Hiraizumi Town


Area 4 Kamaishi
N
0 500 1000m
1 : 27,000
Gongen Mt.
Hashino Iron Mining and Smelting Site Information Center parking lot
Hashino Iron Mining and Smelting Site Information Center
Hashino Iron Mining and Smelting Site
(4-1)
Hashino Iron Mining and Smelting Site
Futamatazawa
Higashimatazawa
Nishimatazawa
Kamaishi City
Omine Mt.
Tono City
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Parking lot
World Heritage Plaque


Otsuchi Town
Remains Kurihashi Branch Ironworks
Remains of Kuribayashi Coinage Plant
Otsuchi Bay
See the left figure
Kamaishi City
Tono City
Former Kamaishi Mine's Office Building
Hinata Dam
Yamada Line
Kamaishi
Ryoishi Bay
Kamaishi Historical Materials Display
Kamaishi Line
Michi-no-eki Kamaishi Sennintoge
Kamaishi Bay
Iron and Steel History Museum
Minamiriasu Line
Sumita Town
Sanriku Railway Minamiriasu Line
Toni Bay
Tako Dam
Ofunato City
Yoshihama Bay
Pacific Ocean
Okirai Bay
Sakari
Ofunato Line
Ofunato Bay
Rikuzentakata City
N
0 1 2 3 4 5km
1 : 150,000
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site

Area 5 Saga

The **Principal Interpretive Centre** for Area 5 Saga is the **Tsunetami Sano Memorial Museum**, located adjacent to the World Heritage Site. The modern and spacious museum serves as the main visitor information and amenities facility with models and interpretive exhibits. The museum also has an observation deck with excellent views across the site. Mietsu Naval Dock is open to the public at any time, and there are several interpretive panels at strategic positions across the site.

Access

This site can be reached by car as well as by bus from Saga station. There are free parking spaces with the capacity for about 60 cars and several large-sized buses.

Site audit

The uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations. They are clear, and work extremely effectively.

The principal visitor centre is the existing Tsunetami Sano Memorial Museum that overlooks the property. This is staffed all year round and visitors are greeted at reception. The Museum contains many exhibits related to Mietsu and also displays artefacts recovered during archaeological campaigns on site. Recently, updated exhibitions and World Heritage Site displays have been installed, together with IT-based interactive experiences, including virtual reality (VR). VR glasses are available at the Museum for use exploring the property.

Mietsu Naval Dock is interpreted with the use of scale models, graphic illustrations and even actual size photography taken during archaeological excavation during the World Heritage nomination process. A seated motion pod virtual reality experience provides interpretation that supports the understanding of Mietsu Naval Dock at that time.

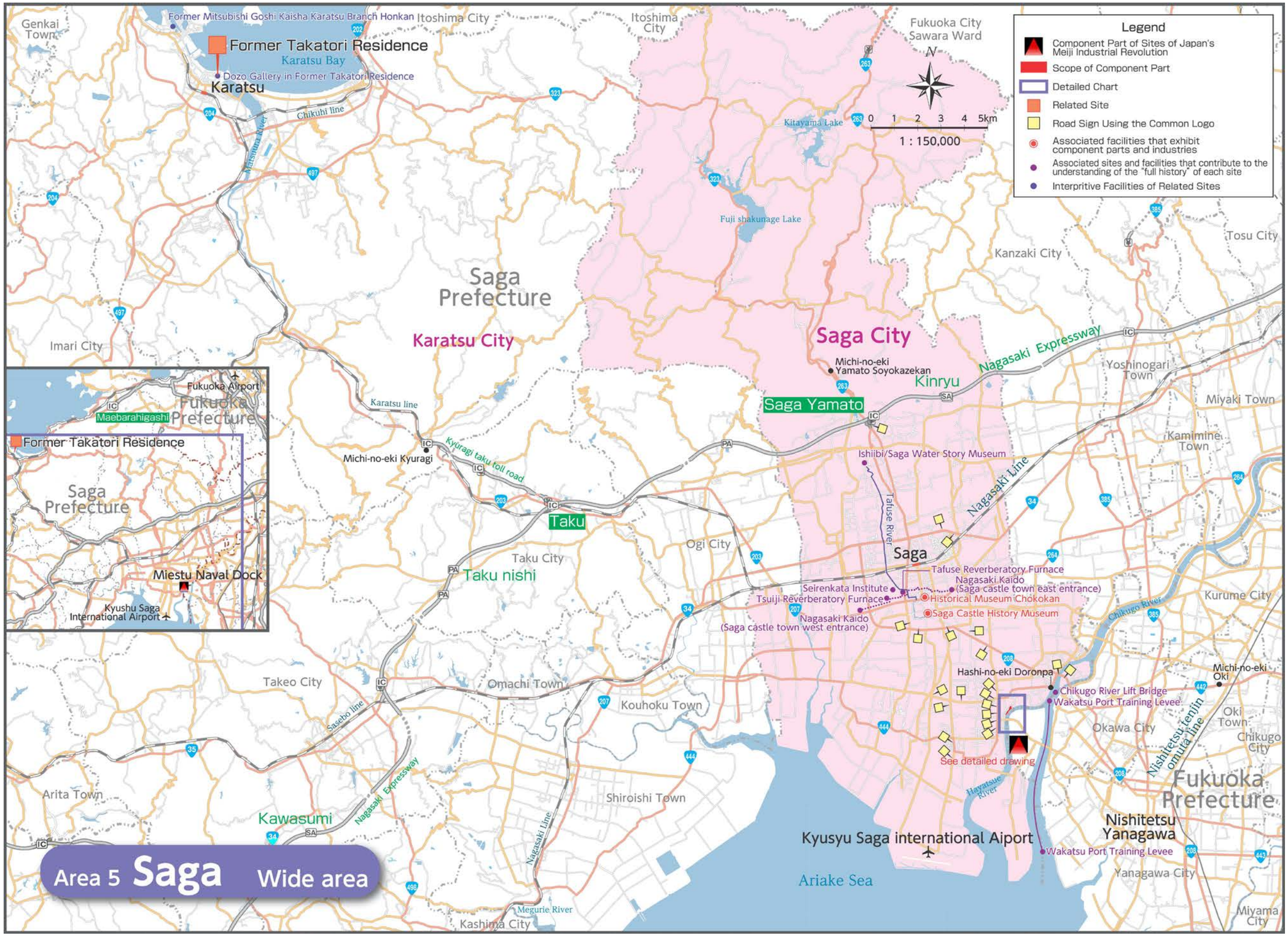
On-site, new interpretive panels complement VR and audio points.

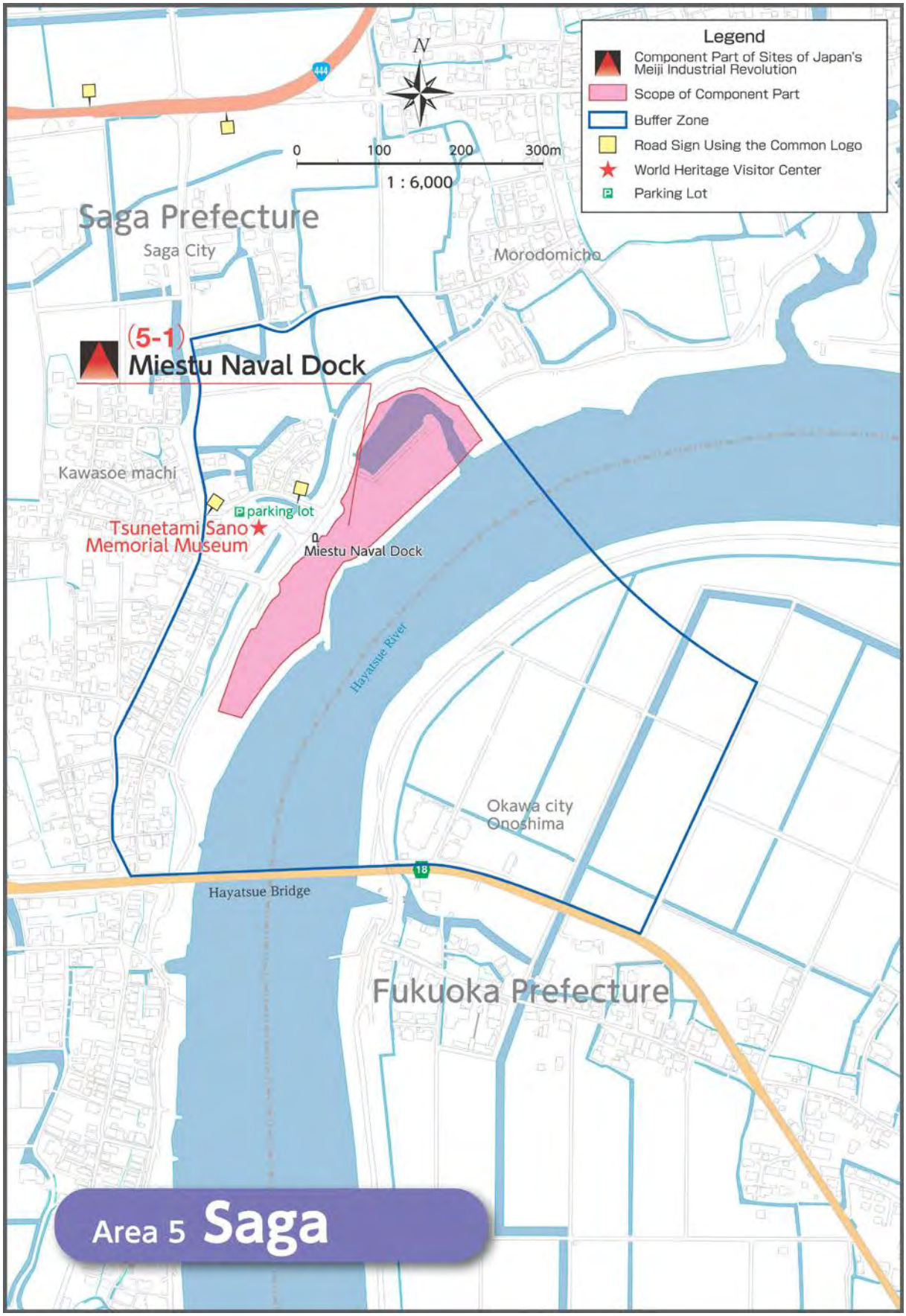
Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Tsunetami Sano Memorial Museum
Associated facilities that exhibit component parts and industries	Saga Castle History Museum
	Historical Museum Chokokan

Associated sites and facilities that contribute to the understanding of the "full history" of sites	Ishiibi/Saga Water Story Museum
	Tafuse River
	Seirenkata Institute
	Tsuiji Reverberatory Furnace
	Tafuse Reverberatory Furnace
	Nagasaki Kaido(Saga castle town west entrance)
	Nagasaki Kaido(Saga castle town east entrance)
	Wakatsu Port Training Levee
	Chikugo River Lift Bridge


Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Related Site
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Interpritive Facilities of Related Sites
N
0 1 2 3 4 5km
1 : 150,000
Former Mitsubishi Goshi Kaisha Karatsu Branch Honkan
Former Takatori Residence
Karatsu Bay
Dozo Gallery in Former Takatori Residence
Karatsu
Genkai Town
Itoshima City
Fukuoka City Sawara Ward
Chikuhi line
Matsuura River
Kitayama Lake
Fuji shakunage Lake
Saga Prefecture
Karatsu City
Imari City
Kanzaki City
Tosu City
Saga City
Michi-no-eki Yamato Soyokazekan
Kinryu
Nagasaki Expressway
Yoshinogari Town
Saga Yamato
Miyaki Town
Kamimine Town
Ishiibi/Saga Water Story Museum
Karatsu line
Michi-no-eki Kyuragi
Kyuragi taku toll road
Taku
Taku City
Taku nishi
Ogi City
Tafuse River
Saga
Nagasaki Line
Tafuse Reverberatory Furnace
Nagasaki Kaido (Saga castle town east entrance)
Historical Museum Chokokan
Seirenkata Institute
Tsuiji Reverberatory Furnace
Saga Castle History Museum
Nagasaki Kaido (Saga castle town west entrance)
Kurume City
Chikugo River
Hashi-no-eki Doronpa
Michi-no-eki Oki
Chikugo River Lift Bridge
Wakatsu Port Training Levee
Okawa City
Oki Town
Chikugo City
Nishitetsu Tenjin Omuta line
See detailed drawing
Hayatsue River
Fukuoka Prefecture
Nishitetsu Yanagawa
Takeo City
Omachi Town
Kouhoku Town
Sasebo line
Arita Town
Kawasumi
Shiroishi Town
Kyusyu Saga international Aiport
Wakatsu Port Training Levee
Yanagawa City
Ariake Sea
Megurie River
Kashima City
Miyama City
Fukuoka Airport
Fukuoka Prefecture
Maebarahigashi
Former Takatori Residence
Saga Prefecture
Miestu Naval Dock
Kyushu Saga International Airport
Area 5 Saga Wide area


Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Parking Lot
N
0
100
200
300m
1 : 6,000
Saga Prefecture
Saga City
Morodomicho
(5-1)
Miestu Naval Dock
Kawasoe machi
parking lot
Tsunetami Sano
Memorial Museum
Miestu Naval Dock
Hayatsue River
Okawa city
Onoshima
Hayatsue Bridge
Fukuoka Prefecture
Area 5 Saga

Area 6 Nagasaki

Each of the component parts has their own interpretive facility or function.

Nagasaki Shipyard

The **Principal Interpretive Centre** for Mitsubishi Nagasaki Shipyard (the present Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works) is the Historical Museum located in the Former Pattern Shop. It is open to public to introduce the shipbuilding history of Mitsubishi Nagasaki Shipyard and has a basic visitor information function. The museum is open to the public year around. Reservation is required.

Access

Access to the Historical Museum (Former Pattern Shop) is by designated shuttlebus or chartered bus for groups. There is no public access to the three other (operational) component parts within the Shipyard, though all can be viewed from the water on harbour boat tours.

Kosuge Slip Dock

Kosuge Slip Dock and the outside of the steam engine haulage house are open to public access. Both left and right banks (quays and wharves) are still used for industrial purposes, and the inside of the steam engine house is not presently open to the public because of conservation and safety issues. Because access to the site is limited at present, the Historical Museum (Former Pattern Shop) at Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works serves as a visitor facility to display relevant materials about Kosuge Slip Dock. There is an interpretation panel at the Site but the Conservation Management Plan foreshadows the development of an interpretative plan for Kosuge that would aim to increase and improve public access and interpretation.

Access

The Kosuge Slip Dock can be reached by public bus. Public parking is not available.

Takashima Coal Mine & Hashima Coal Mine

The **Principal Interpretive Centre** for Takashima Coal Mine is "Nagasaki City Takashima Coal Museum" located near the Takashima Port Ferry Terminal.
The **Principal Interpretive Centres** for Hashima Coal Mine are the **Nagasaki City Gunkanjima Museum** located in Nomozaki district on the Nagasaki Peninsula, and the **Gunkanjima Digital Museum** adjacent to the main boat dock in Nagasaki. A model of Hashima is installed in the lobby of the first floor of Ohato Ferry Terminal.

On Hashima Island, visitor access is strictly controlled. There are no amenities because it is necessary to secure the setting of Hashima Coal Mine. Some visitor information and

history are given on the ferries/tour boats that provide guided public access to the island, where interpretation is by guide, and basic temporary interpretation panels are also used.

Access

Cruise ships operated by the ship companies are available for access to both Takashima and Hashima Islands. Guidance is offered to visitors on board.

Glover House and Office

The **Principal Interpretive Centre** for Glover House and Office is located outside the WH property in **The Glover Garden** in a relocated Former Mitsubishi No.2 Dock House. There are good amenities and guidance functions, and it is open to the public seven days a week, with a fee payable. Within Glover House and Office some information boards are provided, and planning is underway to improve visitor interpretation.

Access

Glover House and Office can be reached by car, tram, public bus and sightseeing bus. There is no parking space at the site, but a public parking area is located nearby. Moreover, lifts are installed so that visitors have direct access to the top part of Glover Garden. Road signs and pedestrian signs to the Site are already set up from public parking spaces and bus stops.

Site audit

The uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at some key locations. Since additional locations are planned for installation of signs, those branded road signs using the common logo will be installed at all key locations in the near future. They are clear, and work extremely effectively.

In the area (outside the property), Gunkanjima Digital Museum, Nagasaki City Gunkanjima Museum, Former Mitsubishi No.2 Dock House supplement the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Historical Museum located in the Former Pattern Shop.

Gunkanjima Digital Museum

This is a new pre-visit facility for boat trips to Hashima Island (Gunkanjima).

An innovative new 'digital museum' has been created as a visitor facility to complement boat trips to the island (especially useful if rough seas prevent a visit on the day; if such visits are not possible then tickets are either refunded or alternatives issued). The Museum is privately owned and located close to the boat dock, not far from Glover House.

Digital displays and experiences are varied and impressive, and are, importantly, highly

authentic in terms of interpretive content which helps to deliver key messages.

Nagasaki City Gunkanjima Museum

There is another interpretive facility for Hashima Island (Gunkanjima), near the boat dock on the peninsula to the east of the Island, a museum run by Nagasaki City. There is plenty of coach and car parking. On the adjacent hill, accessed via several flights of steps, is an interpretive overlook to Hashima Island (Gunkanjima) itself, provided with some graphic panels and picnic facilities.

Exhibitions comprise a range of interpretive material delivered by graphic panels, artefact case displays, audio-visual presentations (including the WHS series) and even live web-cam on top of the island itself.

On-sites, new interpretive panels and other media have been provided (graphic floor tiles and VR facilities at Hokkei Pit, Takashima).

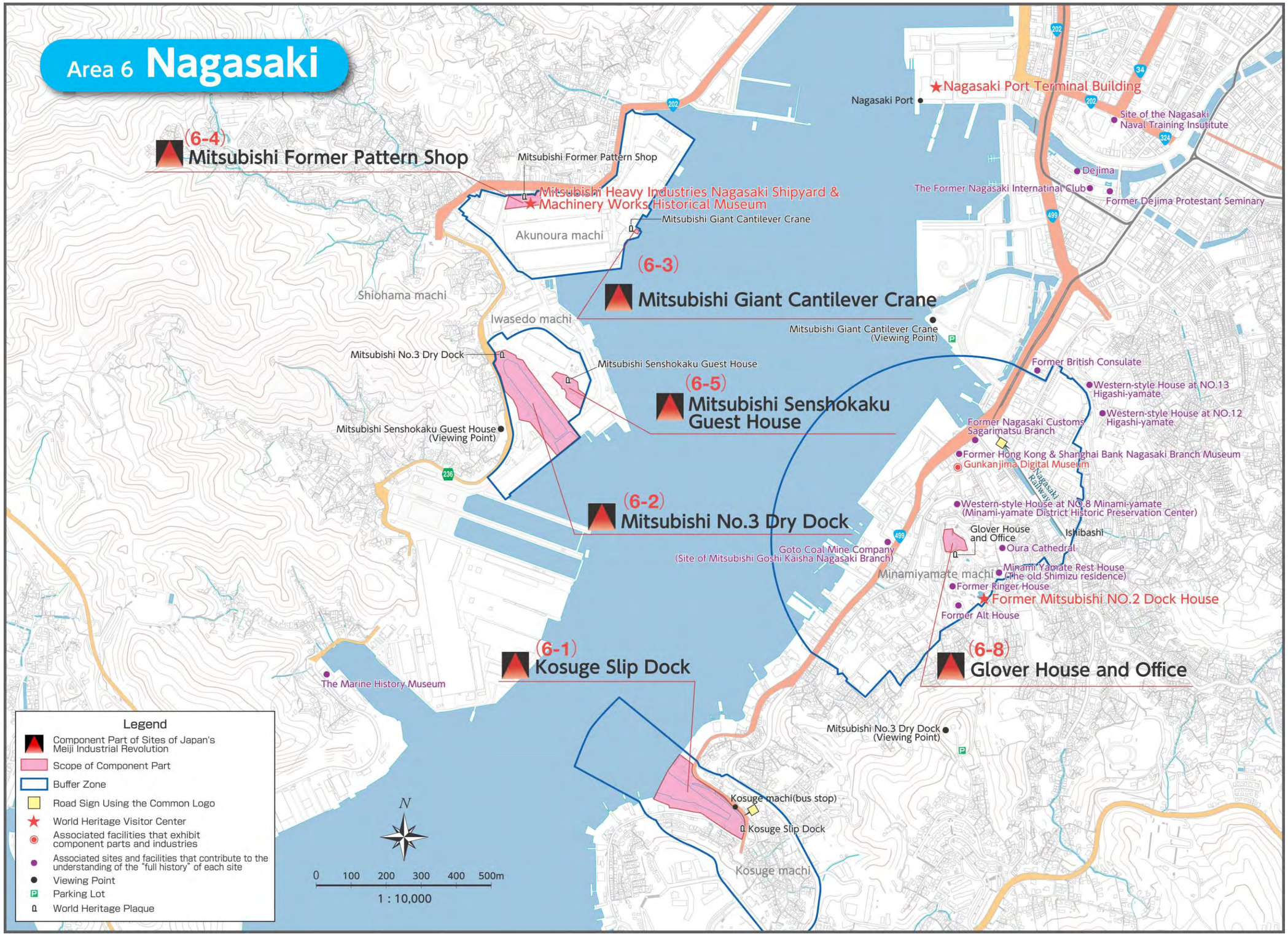
Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Historical Museum
	Nagasaki City Gunkanjima Museum
	Former Mitsubishi No.2 Dock House
	Nagasaki Port Terminal Building
Associated facilities that exhibit component parts and industries	Nagasaki City Takashima Coal Museum
	Gunkanjima Digital Museum
Associated sites and facilities that contribute to the understanding of the "full history" of sites	Dejima
	Nagasaki Museum of History and Culture
	Ikeshima
	Site of the Nagasaki Naval Training Insutitute
	Site of Shirogashima Fort
	Nagasaki Kameyama Shachu Memorial Museum
	Former Dejima Protestant Seminary
	The Former Nagasaki International Club
	Former British Consulate

	Western-style House at No.13 Higashi-yamate
	Western-style House at No.12 Higashi-yamate
	Minami Yamate Rest House（The old Shimizu residence）
	Western-style House at No.8 Minami-yamate（Minami-yamate District Historic Preservation Center）
	Former Hong Kong & Shanghai Bank Nagasaki Branch Museum
	Remains of Glover's Secondary Residence
	Kogakura Landing Facility of the International Submarine Communication Cables
	The Marine History Museum
	Hongochi Kobu Dam
	Hongochi Teibu Dam
	Himi Tunnel
	Iojima Lighthouse
	Oura Cathedral
	Former Ringer House
	Former Alt House
	Former Nagasaki Customs Sagarimatsu Branch
	Goto Coal Mine Company（Site of Mitsubishi Goshi Kaisha Nagasaki Branch）
	Peace Park
	Nagasaki Atomic Bomb Museum
	Open space in front of Takashima Shrine


Area 6 Nagasaki Wide area
Arita Town
Takeo City
Kawanobori
Sasebo City
Hasami Town
Sasebo Bay
Saga Prefecture
Kawatana Town
Ureshino City
Higashisonogi Town
Nagasaki Expressway
Omura Bay
Saikai City
Omura City
Nagasaki Prefecture
Nagasaki Airport
Koba
Isahaya City
Ikeshima
Nagasaki City
Michi-no-eki Yuhi-ga-oka Sotome
Togitsu Town
Nagayo Town
Nagasaki Line
Peace Park
Nagasaki Atomic Bomb Museum
Hongochi Teibu Dam
Hongochi Kobu Dam
Sumounada Sea
Nagasaki
Himi Tunnel
See detailed drawing
Nagasaki Museum of History and Culture
Nagasaki Kameyama Shachu Memorial Museum
Nagasaki
Site of Shirogashima Fort
Iojima Lighthouse
Iojima Port
Kogakura Landing Facility of the International Submarine Communication Cables
Nagasaki Bay
Tachibana Bay
See detailed drawing
See detailed drawing
N
Nonogushi Port
Amakusa Sea
0 2 4 6 8 10km
1 : 260,000
Nagasaki City Gunkanjima Museum
Legend
Heritage assets of Japanese Industrial Revolution asset in Meiji Era
Scope of Component Part
Detailed Chart
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated sites and facilities that contribute to the understanding of the "full history" of each site


Area 6 Nagasaki
(6-4)
Mitsubishi Former Pattern Shop
Mitsubishi Former Pattern Shop
Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Historical Museum
Mitsubishi Giant Cantilever Crane
Akunoura machi
(6-3)
Mitsubishi Giant Cantilever Crane
Shiohama machi
Iwasedo machi
Mitsubishi Giant Cantilever Crane (Viewing Point)
Mitsubishi No.3 Dry Dock
Mitsubishi Senshokaku Guest House
(6-5)
Mitsubishi Senshokaku Guest House
Mitsubishi Senshokaku Guest House (Viewing Point)
(6-2)
Mitsubishi No.3 Dry Dock
Goto Coal Mine Company (Site of Mitsubishi Goshi Kaisha Nagasaki Branch)
(6-1)
Kosuge Slip Dock
The Marine History Museum
Kosuge machi(bus stop)
Kosuge Slip Dock
Kosuge machi
Mitsubishi No.3 Dry Dock (Viewing Point)
(6-8)
Glover House and Office
Minamiyamate machi
Former Mitsubishi NO.2 Dock House
Former Alt House
Former Ringer House
Minami Yamate Rest House (The old Shimizu residence)
Glover House and Office
Oura Cathedral
Ishibashi
Western-style House at NO.8 Minami-yamate (Minami-yamate District Historic Preservation Center)
Former Hong Kong & Shanghai Bank Nagasaki Branch Museum
Gunkanjima Digital Museum
Former Nagasaki Customs Sagarimatsu Branch
Western-style House at NO.13 Higashi-yamate
Western-style House at NO.12 Higashi-yamate
Former British Consulate
Nagasaki Port
★Nagasaki Port Terminal Building
Site of the Nagasaki Naval Training Insutitute
Dejima
The Former Nagasaki Internatinal Club
Former Dejima Protestant Seminary
Nagasaki Railway
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Viewing Point
Parking Lot
World Heritage Plaque
N
0 100 200 300 400 500m
1 : 10,000


Area 6 Nagasaki
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
World Heritage Plaque
N
0
100m
1 : 2,000
(6-7)
Hashima Coal Mine
Sumounada Sea
Takashima machi
Hashima Coal Mine


Remains of Glover's Secondary Residence
Takashima Coal Mine
185
(6-6)
Takashima Coal Mine
Takashima machi
Open space in front of Takashima Shrine
Nagasaki City Takashima Coal Museum
Takashima Port
Sumounada Sea
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
World Heritage Plaque
N
0
100
200
300m
1 : 8,000

Area 7 Miike

The new, uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations. They are clear, and work extremely effectively.

The new visitor sequence is designed as follows (though visitors may arrive at any site, in any order): Omuta Coal Industry and Science Museum > Miyanohara Pit > Manda Pit > Miike Coal Railway > Miike Port > Old Nagasaki Customs House Miike Branch Office > Mikawa Pit > Mitsui Minato Club.

The principal visitor centre is Omuta Coal Industry and Science Museum, located outside the property and near the sea/Miike Port. This provides orientation and an introduction to the World Heritage series, before the presentation of a complete story of Miike Coal Mine – in museum object displays supported by a wide range of interpretive media.

In addition to the story of the Miike Coal Mine, and of each of the component parts of the World Heritage Site, the full history of the property is brought up to date with technological achievements highlighted by original equipment such as coal-cutting machinery displayed in mock mining contexts.

Another principal visitor centre is Ryujokan situated inside the Misumi West Port. A new interpretive overlook has also been constructed at Miike Port that allows a view along the axis of the 'hummingbird' (inner dock, lock gates, and outer harbour / breakwater groins).

Each of the component parts has their own interpretive facilities.

Miyanohara Pit, Manda Pit and the Miike Coal Railway

The **Principal Interpretive Centre** for Miike Coal Mine is the **"Omuta Coal Industry and Science Museum"**, with a further visitor centre at "Manda Pit Station". These are equipped with basic amenities and visitor guidance functions to the relevant sites of Miike Coal Mine. Manda Pit Station offers tours by professional guides and audio guidance with four languages. Moreover, the Manda Coal Mine Museum displays relevant materials and exhibitions of Miike Coal Mine. Interpretation boards are also installed both at the Miyanohara Pit and Manda Pit to enhance guidance functions.

Access

Miyanohara Pit, Manda Pit and the Miike Coal Railway can be reached by car and public bus. A parking area at the Manda Pit Station is available for 72 vehicles and 5 large buses, capable of 50,000 visitors a year. Miyanohara Pit has a parking area with the capacity of 5 large-sized buses and 57 vehicles in an area adjacent to the property.

Miike Port

The **Principal Interpretive Centre** for Miike Port is **The Old Nagasaki Customs House Miike Branch Office**. This displays historical materials of Miike Port and portrays the coal export story. There is a new interpretive overlook to the port and a new information centre is expected to open in Mikawa Pit next to Mitsui Minato Club, in walking distance of Miike Port.

Access
The Old Nagasaki Customs House Miike Branch Office can be reached by car and public bus. There are parking spaces for cars and buses at the site.

Misumi West Port

The **Principal Interpretive Centre** for Misumi West Port is **"Ryujokan"**, a building that has amenities and visitor guidance functions, and interpretive models and panels that introduce the history of the port. "Urashima-ya", another building, is also used for guidances to visitors. Moreover, the local people offer goodwill guides for visitors.

Access

Misumi West Port can be reached by car and public bus. There are ample parking spaces provided.

Site audit

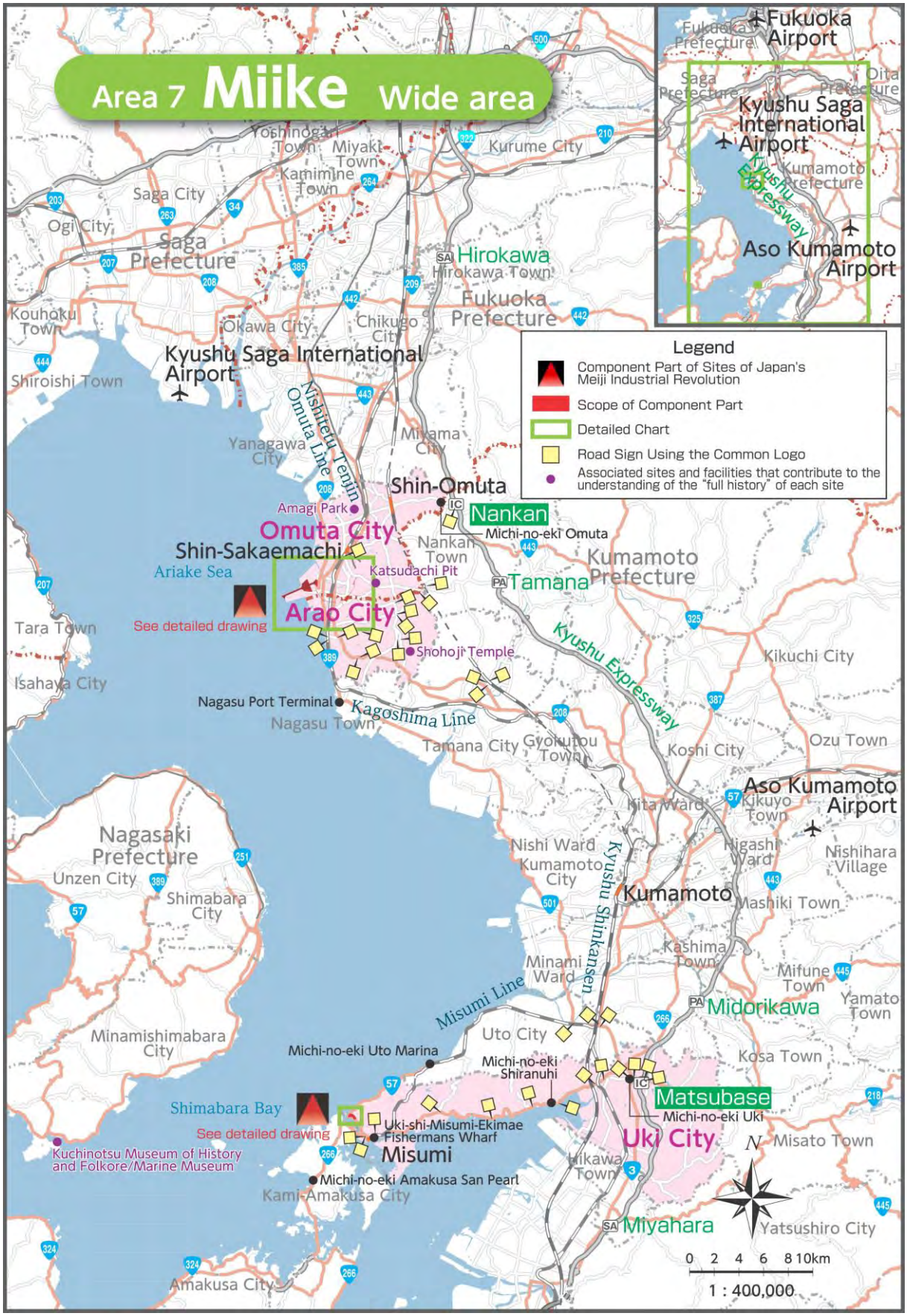
The uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations. They are clear, and work extremely effectively.

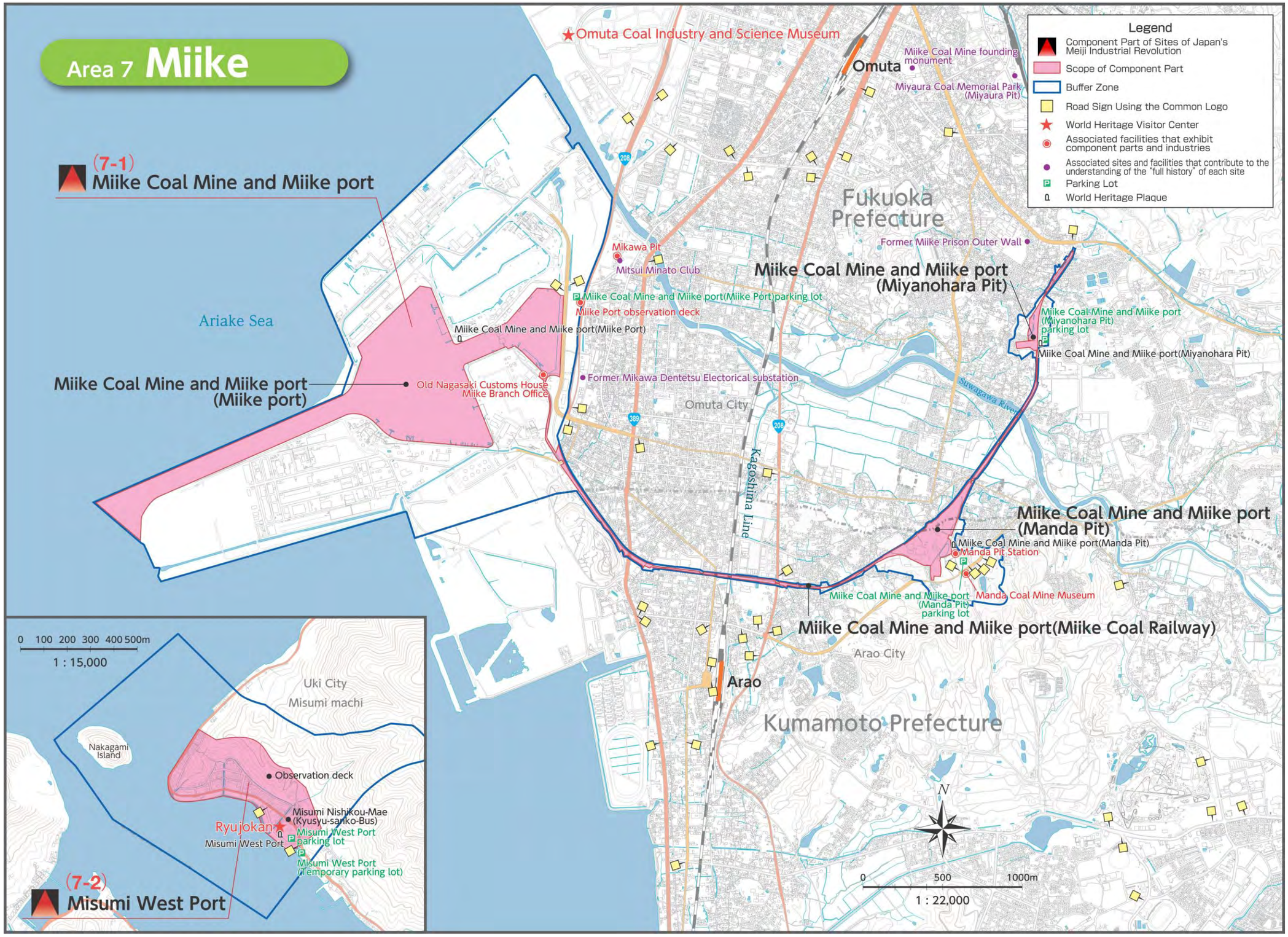
Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Omuta Coal Industry and Science Museum
	Ryujokan
Associated facilities that exhibit component parts and industries	Miike Port observation deck
	Old Nagasaki Customs House Miike Branch Office
	Mikawa Pit
	Manda Pit Station
	Manda Coal Mine Museum

Associated sites and facilities that contribute to the understanding of the "full history" of sites	Former Mikawa Dentetsu Electorical Substation
	Mitsui Minato Club
	Former Miike Prison Outer Wall
	Miyaura Coal Memorial Park（Miyaura Pit）
	Miike Coal Mine founding monument
	Katsudachi Pit
	Amagi Park
	Shohoji Temple
	Kuchinotsu Museum of History and Folkore/Marine Museum


Area 7 Miike Wide area
Fukuoka Airport
Fukuoka Prefecture
Saga Prefecture
Oita Prefecture
Kyushu Saga International Airport
Kumamoto Prefecture
Kyushu Expressway
Aso Kumamoto Airport
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Road Sign Using the Common Logo
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Yoshinogari Town
Miyaki Town
Kurume City
Kamimine Town
Saga City
Ogi City
Saga Prefecture
Hirokawa
Hirokawa Town
Fukuoka Prefecture
Kouhoku Town
Okawa City
Chikugo City
Kyushu Saga International Airport
Shiroishi Town
Nishitetu Tenjin Omuta Line
Yanagawa City
Mizuma City
Shin-Omuta
Amagi Park
Nankan
Michi-no-eki Omuta
Omuta City
Shin-Sakaemachi
Nankan Town
Kumamoto Prefecture
Ariake Sea
Katsudachi Pit
Tamana
Arao City
See detailed drawing
Tara Town
Shohoji Temple
Kyushu Expressway
Kikuchi City
Isahaya City
Nagasu Port Terminal
Kagoshima Line
Nagasu Town
Tamana City
Gyokutou Town
Koshi City
Ozu Town
Aso Kumamoto Airport
Kikuyo Town
Kita Ward
Nagasaki Prefecture
Unzen City
Shimabara City
Nishi Ward
Kumamoto City
Higashi Ward
Nishihara Village
Kumamoto
Mashiki Town
Kyushu Shinkansen
Kashima Town
Minami Ward
Mifune Town
Misumi Line
Midorikawa
Yamato Town
Minamishimabara City
Uto City
Michi-no-eki Uto Marina
Michi-no-eki Shiranuhi
Kosa Town
Matsubase
Michi-no-eki Uki
Shimabara Bay
See detailed drawing
Uki-shi-Misumi-Ekimae Fishermans Wharf
Uki City
Misato Town
Kuchinotsu Museum of History and Folkore/Marine Museum
Misumi
Hikawa Town
Michi-no-eki Amakusa San Pearl
Kami-Amakusa City
Miyahara
Yatsushiro City
Amakusa City
0 2 4 6 8 10km
1 : 400,000


Area 7 Miike
(7-1)
Miike Coal Mine and Miike port
Ariake Sea
Miike Coal Mine and Miike port
(Miike port)
Old Nagasaki Customs House
Miike Branch Office
Miike Coal Mine and Miike port(Miike Port)
Omuta Coal Industry and Science Museum
Omuta
Miike Coal Mine founding monument
Miyaura Coal Memorial Park (Miyaura Pit)
Fukuoka Prefecture
Former Miike Prison Outer Wall
Mikawa Pit
Mitsui Minato Club
Miike Coal Mine and Miike port(Miike Port)parking lot
Miike Port observation deck
Miike Coal Mine and Miike port
(Miyanohara Pit)
Miike Coal Mine and Miike port
(Miyanohara Pit)
parking lot
Miike Coal Mine and Miike port(Miyanohara Pit)
Former Mikawa Dentetsu Electorical substation
Omuta City
Chikugo River
Kagoshima Line
Miike Coal Mine and Miike port
(Manda Pit)
Miike Coal Mine and Miike port(Manda Pit)
Manda Pit Station
Miike Coal Mine and Miike port
(Manda Pit)
parking lot
Manda Coal Mine Museum
Miike Coal Mine and Miike port(Miike Coal Railway)
Arao City
Arao
Kumamoto Prefecture
N
0 500 1000m
1 : 22,000
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Parking Lot
World Heritage Plaque
0 100 200 300 400 500m
1 : 15,000
Uki City
Misumi machi
Nakagami Island
Observation deck
Misumi Nishikou-Mae
(Kyusyu-sanko-Bus)
Ryujokan
Misumi West Port
Misumi West Port
parking lot
Misumi West Port
(Temporary parking lot)
(7-2)
Misumi West Port

Area 8 Yawata

The **Principal Interpretive Centre** for Area 8 Yawata is **Kitakyushu Innovation Gallery & Studio** located near the site. The remains of Higashida Blast Furnace No.1, and the preserved 1960s blast furnace also display materials that interpret Yawata Steel Works. Other amenities and guidance functions are under consideration.

In Nakama City, there is a small visitor centre (Onga River Pumping Station Information Center) 1.5km from the Onga River Pumping Station. This introduces the World Heritage Site as a whole, and the specific contribution of Yawata.

Access

As Yawata Steel Works is still used for industrial purposes, public access is limited and carefully controlled (it is not open to the public presently). Conservation work is in progress at the First Head Office following strengthening by earthquake proofing as a part of the long-term conservation plan. Regarding the First Head Office, the parties concerned have been considering the ways to open the building to public and the associated matters concerning the related roads and lands around it. Access to the Onga River Pumping Station is by car. There are parking spaces at the Onga River Pumping Station Information Center.

Site audit

The uniform WHS-wide, branded road signs using the common logo of the *"Sites of Japan's Meiji Industrial Revolution"* have been installed at all key locations, particularly Onga River Pumping Station. They are clear, and work extremely effectively.

The World Heritage Site Visitor Centre at the Kitakyushu Innovation Gallery & Studio is a new interpretive facility.

The site of the Imperial Steel Works, Japan, is an operational site and, as yet, only limited access has been granted for special visits. However, the existing Kitakyushu Innovation Gallery & Studio now serves as an interpretation centre for the cluster of component parts. An orientation area interprets the World Heritage Site as a whole, and Yawata's specific contribution. The Centre is conveniently located next to the impressive monument of the preserved Higashida Blast Furnace No.1(1962).

The Imperial Steel Works, Japan First Head Office Viewing Space
As the Imperial Steel Works, Japan remains an operational industrial site, there is limited viewing opportunities to the component parts within the active steelworks. However, a new viewing area has been constructed, with an overlook to the complex including the First Head Office. Volunteer guides are usually on hand to interpret the vista, whilst standalone interpretive panels explain component elements. Contents for interpretation such as old photos are available for download in the WH official app.

Regarding the First Head Office (unavailable to the public, as yet), local authorities and the property owners have been discussing how to utilise it while maintaining the current operations and to what extent they could make it open to the public.

Onga River Pumping Station

The pumping station itself is still operational, and not normally open to the public. For this reason, an overlook has been provided adjacent to the road. This carries a World Heritage plaque and interpretive panels.

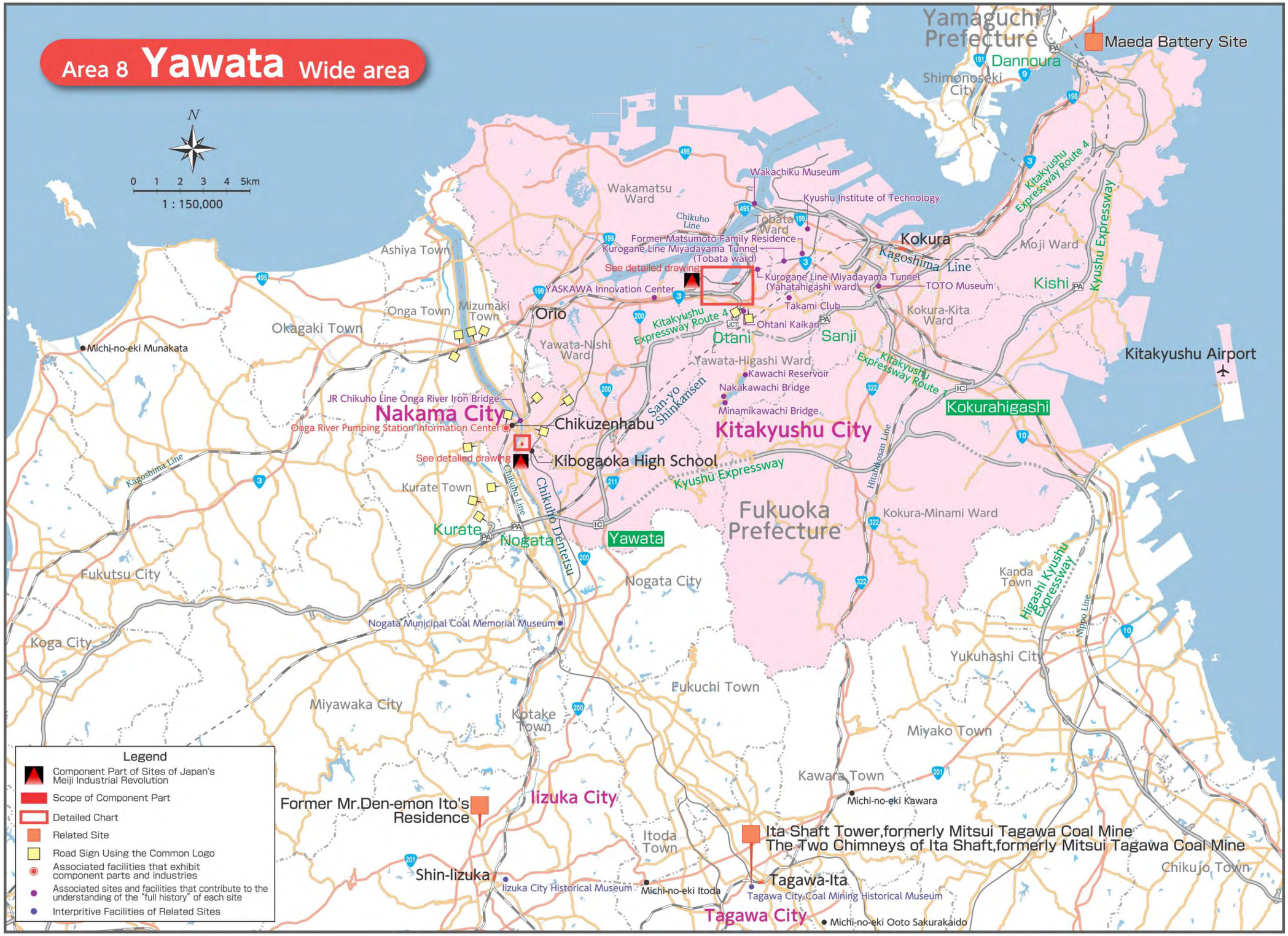
A smartphone or tablet enabled virtual reality programme is available.

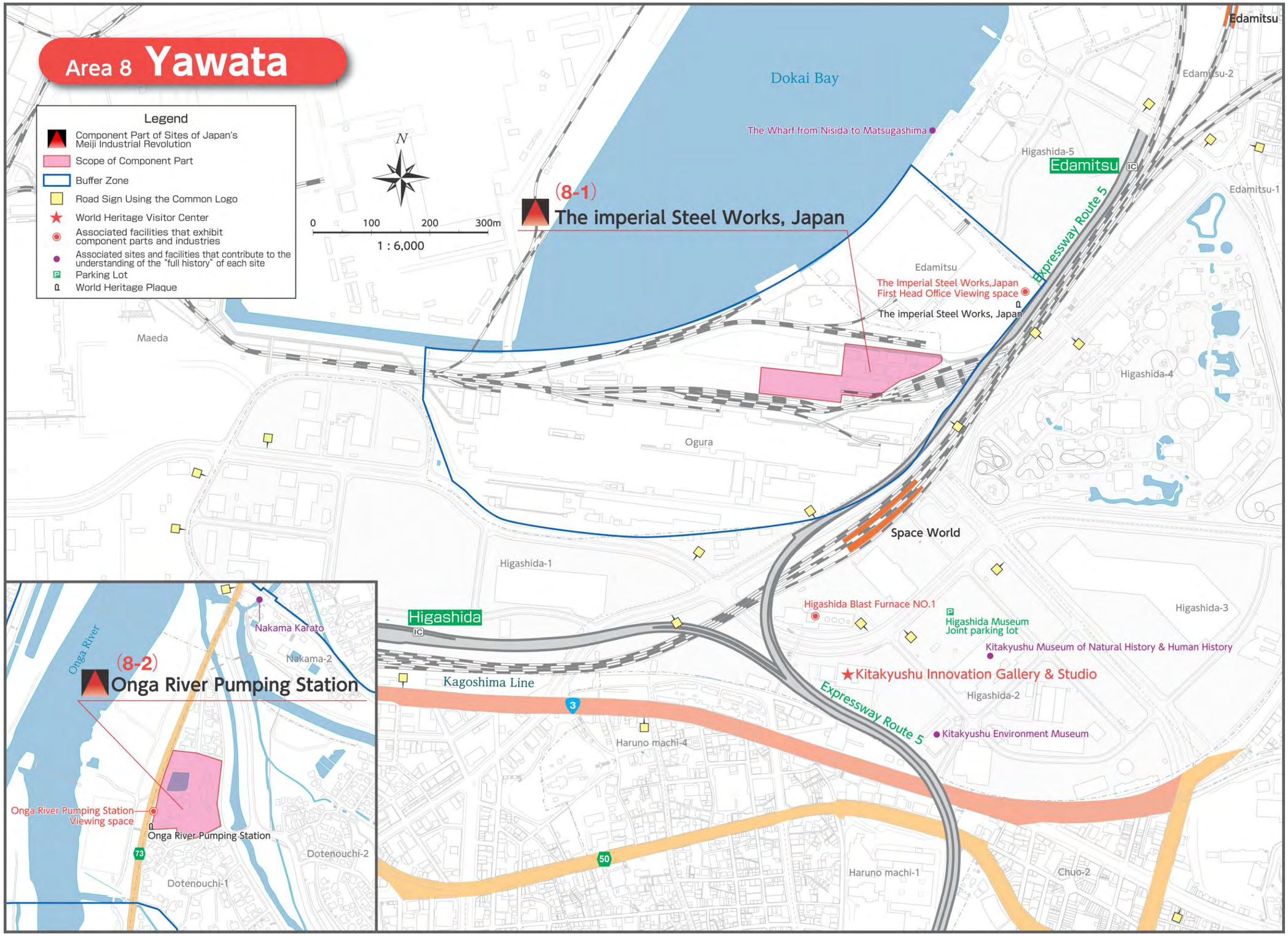
Maps of Interpretation Facilities

Maps (a broad map and a detailed map) are attached to indicate interpretation facilities on the following list and how to get there.

World Heritage Visitor Centre	Kitakyushu Innovation Gallery & Studio
	Onga River Pumping Station Information Center
Associated facilities that exhibit component parts and industries	The Imperial Steel Works,Japan First Head Office Viewing space
	Higashida Blast Furnace No.1
	Onga River Pumping Station Viewing space
Associated sites and facilities that contribute to the understanding of the "full history" of sites	Kurogane Line Miyadayama Tunnel（Yahatahigashi ward）
	Kurogane Line Miyadayama Tunnel（Tobata ward）
	Takami Club
	Kawachi Reservoir
	The Wharf from Nisida to Matsugashima
	Kitakyushu Environment Museum
	Kitakyushu Museum of Natural History & Human History
	Wakachiku Museum
	Minamikawachi Bridge
	Nakakawachi Bridge
	Ohtani Kaikan
	TOTO Museum
	YASKAWA Innovation Center

	Former Matsumoto Family Residence
	Kyushu Institute of Technology
	Nakama Karato
	JR Chikuho Line Onga River Iron Bridge


Area 8 Yawata Wide area
N
0 1 2 3 4 5km
1 : 150,000
Yamaguchi Prefecture
Maeda Battery Site
Dannoura
Shimonoseki City
Wakamatsu Ward
Wakachiku Museum
Kyushu Institute of Technology
Chikuho Line
Tobata Ward
Former Matsumoto Family Residence
Kurogane Line Miyadayama Tunnel (Tobata ward)
See detailed drawing
Kokura
Kagoshima Line
Kurogane Line Miyadayama Tunnel (Yahatahigashi ward)
TOTO Museum
Moji Ward
Kitakyushu Expressway Route 4
Kyushu Expressway
Kishi
Ashiya Town
YASKAWA Innovation Center
Takami Club
Kokura-Kita Ward
Onga Town
Mizumaki Town
Orio
Kitakyushu Expressway Route 4
Ohtani Kaikan
Okagaki Town
Otani
Sanji
Michi-no-eki Munakata
Yawata-Nishi Ward
Yawata-Higashi Ward
Kitakyushu Airport
Kawachi Reservoir
Kitakyushu Expressway Route 1
Nakakawachi Bridge
JR Chikuho Line Onga River Iron Bridge
Nakama City
Chikuzenhabu
San-yo Shinkansen
Minamikawachi Bridge
Kokurahigashi
Onga River Pumping Station Information Center
Kitakyushu City
See detailed drawing
Kibogaoka High School
Hitahikosan Line
Kurate Town
Kyushu Expressway
Fukuoka Prefecture
Kokura-Minami Ward
Kurate
Nogata
Yawata
Chikuho Dentetsu
Fukutsu City
Nogata City
Kanda Town
Higashi Kyushu Expressway
Nippo Line
Nogata Municipal Coal Memorial Museum
Koga City
Yukuhashi City
Fukuchi Town
Miyawaka City
Kotake Town
Miyako Town
Kawara Town
Michi-no-eki Kawara
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Detailed Chart
Related Site
Road Sign Using the Common Logo
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Interpritive Facilities of Related Sites
Former Mr.Den-emon Ito's Residence
Iizuka City
Ita Shaft Tower,formerly Mitsui Tagawa Coal Mine
The Two Chimneys of Ita Shaft,formerly Mitsui Tagawa Coal Mine
Itoda Town
Chikujo Town
Shin-Iizuka
Iizuka City Historical Museum
Michi-no-eki Itoda
Tagawa-Ita
Tagawa City Coal Mining Historical Museum
Tagawa City
Michi-no-eki Ooto Sakurakaido


Area 8 Yawata
Legend
Component Part of Sites of Japan's Meiji Industrial Revolution
Scope of Component Part
Buffer Zone
Road Sign Using the Common Logo
World Heritage Visitor Center
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Parking Lot
World Heritage Plaque
N
0 100 200 300m
1 : 6,000
(8-1)
The imperial Steel Works, Japan
Dokai Bay
The Wharf from Nisida to Matsugashima
Edamitsu
Edamitsu-2
Edamitsu-1
Higashida-5
Edamitsu IC
Expressway Route 5
Edamitsu
The Imperial Steel Works,Japan First Head Office Viewing space
The imperial Steel Works, Japan
Maeda
Higashida-4
Ogura
Space World
Higashida-1
Higashida Blast Furnace NO.1
Higashida Museum Joint parking lot
Higashida-3
Kitakyushu Museum of Natural History & Human History
★Kitakyushu Innovation Gallery & Studio
Higashida IC
Kagoshima Line
Higashida-2
Expressway Route 5
Kitakyushu Environment Museum
Haruno machi-4
Haruno machi-1
Chuo-2
Onga River
(8-2)
Onga River Pumping Station
Nakama Karato
Nakama-2
Onga River Pumping Station Viewing space
Onga River Pumping Station
Dotenouchi-2
Dotenouchi-1

8 AUDIENCES

Our audiences across the property are diverse. Audience research and analysis is integral to informing the ongoing development of WHS interpretation. Audience evaluation is important to understanding the needs of the local, domestic and international visitors for the ongoing development of interpretive experiences that attract new and diverse audiences as well as maintain existing audiences. This understanding should inform the development of all interpretive material and programmes. Ongoing audience research and analysis should be undertaken on a regular basis across all components to inform the ongoing development of interpretive material and experiences.

Through proactive steps to develop audiences we aim to:

1. Gain a greater understanding of what our visitors want.

2. Increase the commitment of existing audiences by maintaining our appeal and remaining relevant to them, with a greater number of people engaging more frequently, or getting more actively involved.

3. Attract new and wider audiences by engaging first-timers and people from under-represented groups that reflect the diversity of our visitors, and potential visitors, from local – regional – national - international sources.

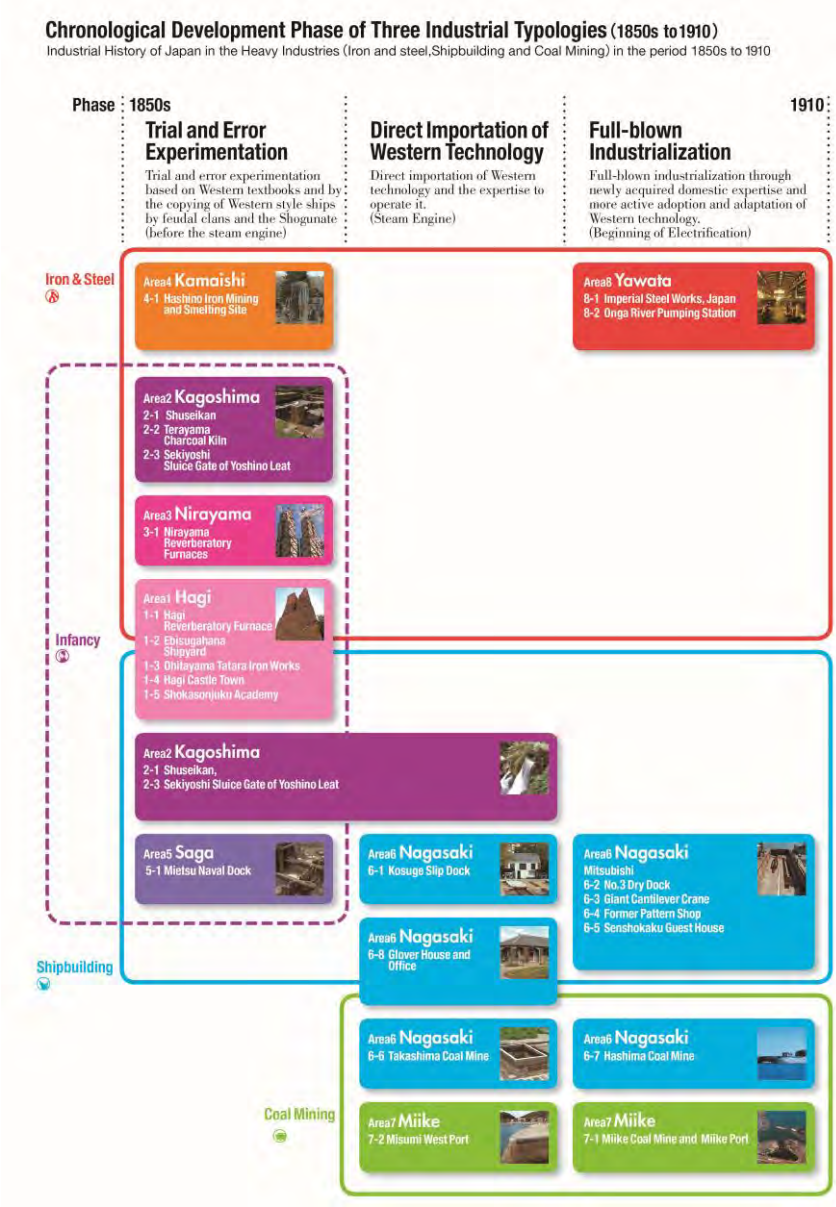
4. Build on-going relationships to encourage participation and support for protection, conservation and presentation of the property from as broad a range of people as possible, for the long-term.

5. Embed interpretation as a foundation for our marketing and communication activities.

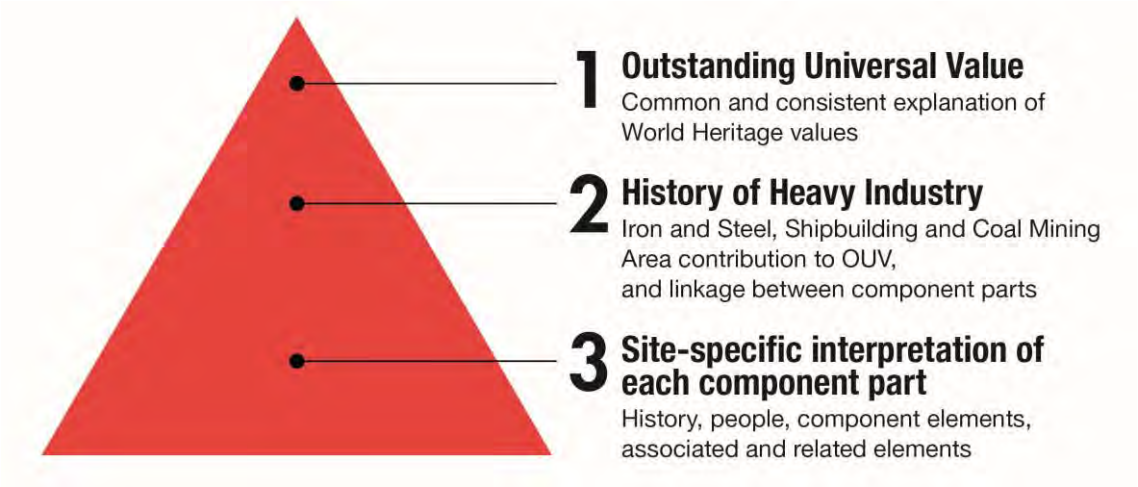
9 THEMES

When implementing the interpretation, themes and topics help to deliver the messages. Themes help to convey the main points or message by grouping related topics in a way that readily connects with the target audience. A topic is a particular subject matter, and a number of topics can support an individual theme. Interpretation will be organised around a hierarchy of themes and will offer an integrated message.

The World Heritage Site Statement of Outstanding Universal Value already identifies the major themes that connect component parts. Themes must be developed into a format that ensures that OUV is clearly understood by the WHS's audiences and is consistent and connected. The development of stories based on the themes will further enhance audience experience, making it more memorable and engaging.



Concepts for interpretation and presentation



Interpretation flow at each local visitor centre
Hierarchy of Interpretation



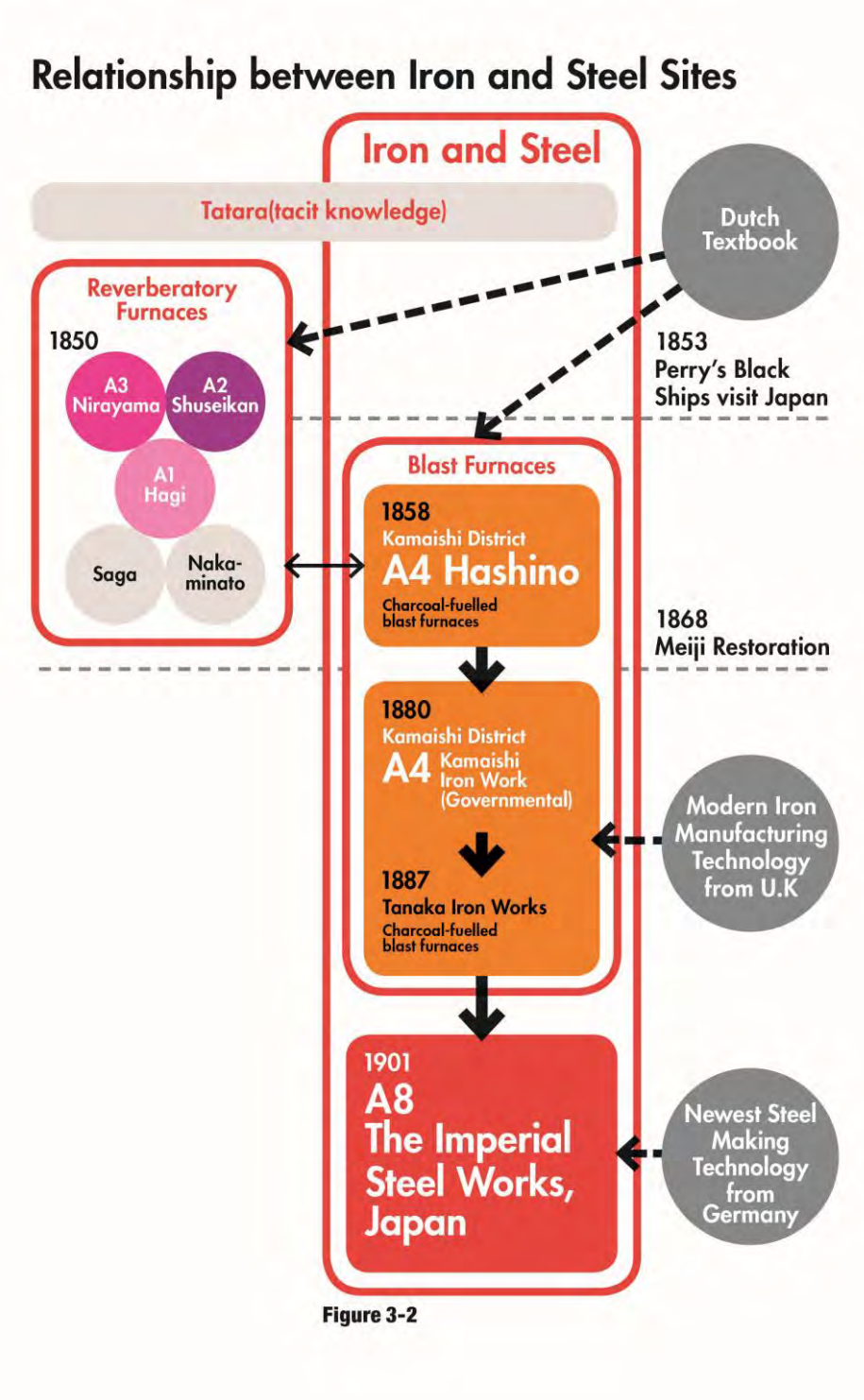

Relationship between Iron and Steel Sites
Iron and Steel
Tatara(tacit knowledge)
Dutch Textbook
Reverberatory Furnaces
1850
A3 Nirayama
A2 Shuseikan
A1 Hagi
Saga
Naka-minato
1853 Perry's Black Ships visit Japan
Blast Furnaces
1858
Kamaishi District
A4 Hashino
Charcoal-fuelled blast furnaces
1868 Meiji Restoration
1880
Kamaishi District
A4 Kamaishi Iron Work (Governmental)
Modern Iron Manufacturing Technology from U.K
1887
Tanaka Iron Works
Charcoal-fuelled blast furnaces
1901
A8
The Imperial Steel Works, Japan
Newest Steel Making Technology from Germany

Figure 3-2

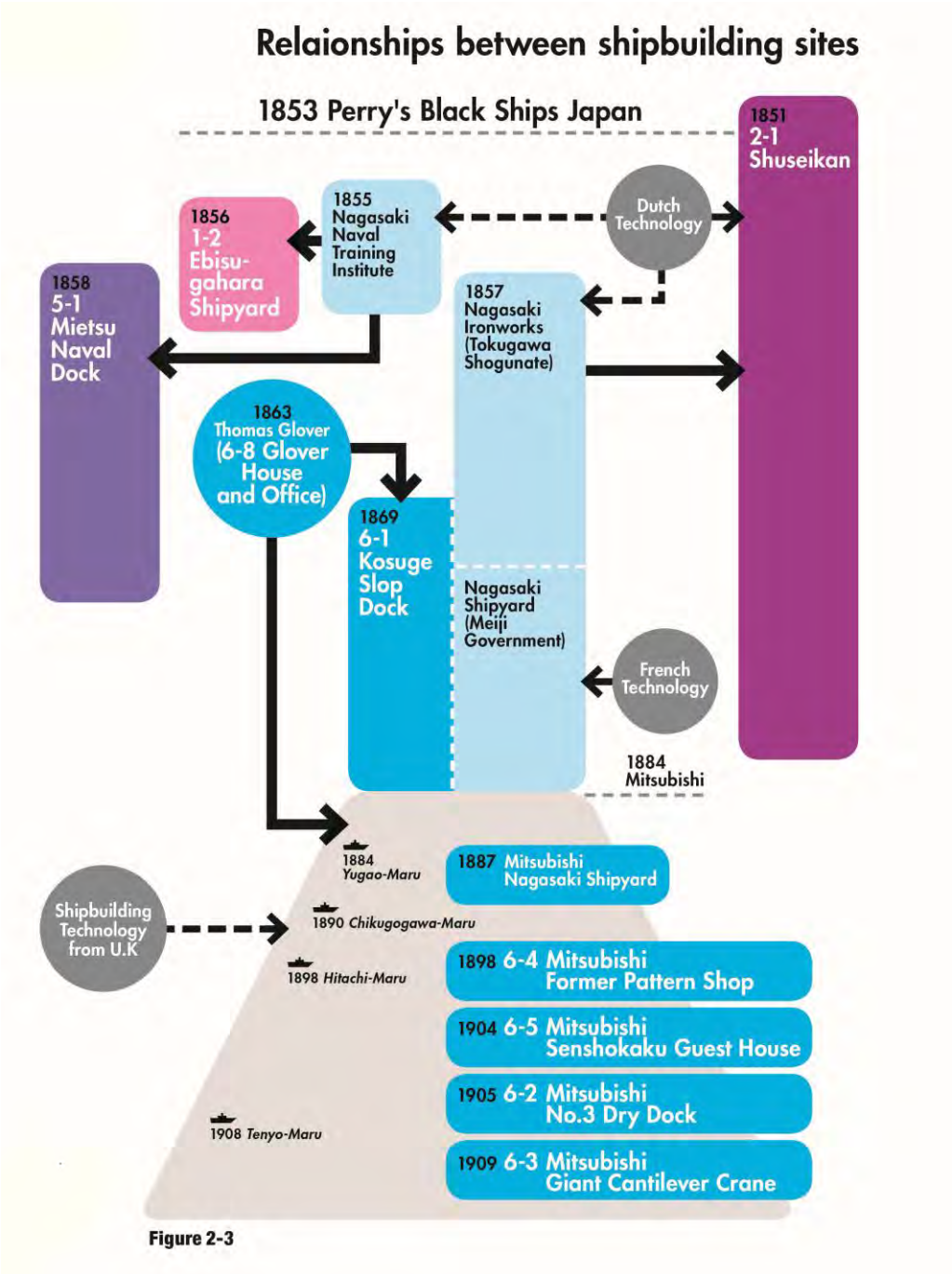
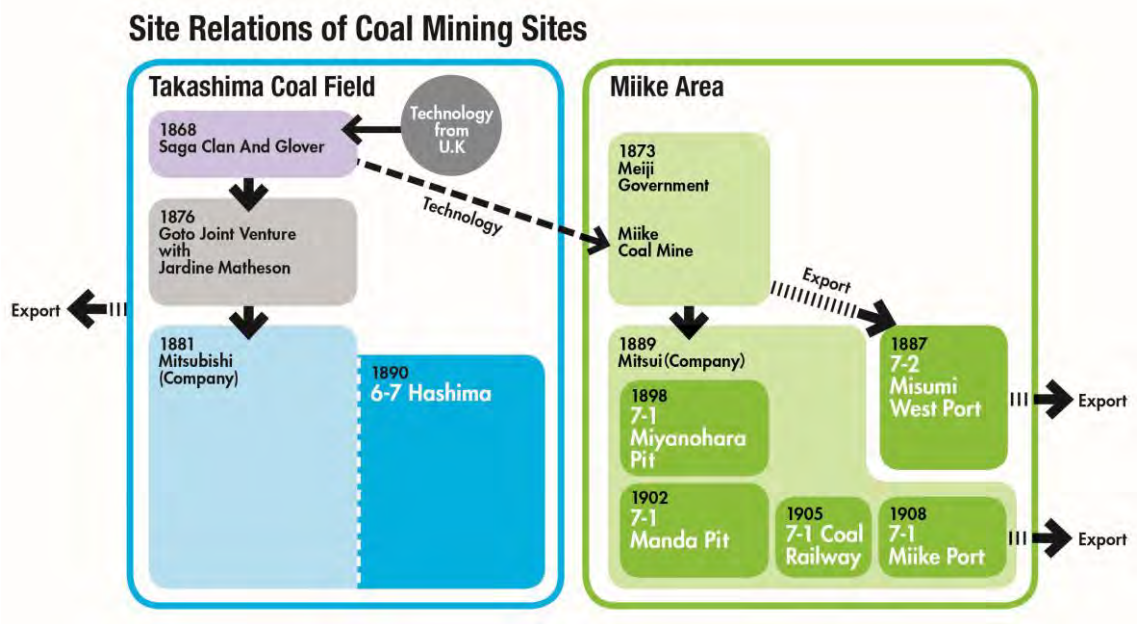

Relaionships between shipbuilding sites
1853 Perry's Black Ships Japan
1851
2-1
Shuseikan
1855
Nagasaki
Naval
Training
Institute
Dutch
Technology
1856
1-2
Ebisu-
gahara
Shipyard
1858
5-1
Mietsu
Naval
Dock
1857
Nagasaki
Ironworks
(Tokugawa
Shogunate)
1863
Thomas Glover
(6-8 Glover
House
and Office)
1869
6-1
Kosuge
Slop
Dock
Nagasaki
Shipyard
(Meiji
Government)
French
Technology
1884
Mitsubishi
1884
Yugao-Maru
1887 Mitsubishi
Nagasaki Shipyard
Shipbuilding
Technology
from U.K
1890 Chikugogawa-Maru
1898 Hitachi-Maru
1898 6-4 Mitsubishi
Former Pattern Shop
1904 6-5 Mitsubishi
Senshokaku Guest House
1905 6-2 Mitsubishi
No.3 Dry Dock
1908 Tenyo-Maru
1909 6-3 Mitsubishi
Giant Cantilever Crane

Figure 2-3


Site Relations of Coal Mining Sites
Takashima Coal Field
1868
Saga Clan And Glover
Technology from U.K
Technology
1876
Goto Joint Venture with Jardine Matheson
Export
1881
Mitsubishi (Company)
1890
6-7 Hashima
Miike Area
1873
Meiji Government
Miike Coal Mine
Export
1889
Mitsui (Company)
1887
7-2
Misumi West Port
Export
1898
7-1
Miyanohara Pit
1902
7-1
Manda Pit
1905
7-1 Coal Railway
1908
7-1
Miike Port
Export

AREA THEMES are derived from the contribution each area makes to OUV:

Area 1 Hagi
Cradle of the Meiji Restoration

Area 2 Kagoshima
Defending Japan's Southern Gateway / Samurai's Challenge in Science and Technology / Cradle of Industrial Japan

Area 3 Nirayama
Defending Edo / Challenge of the Iron Cannon

Area 4 Kamaishi
Birthplace of Japan's Modern Iron and Steel Industry

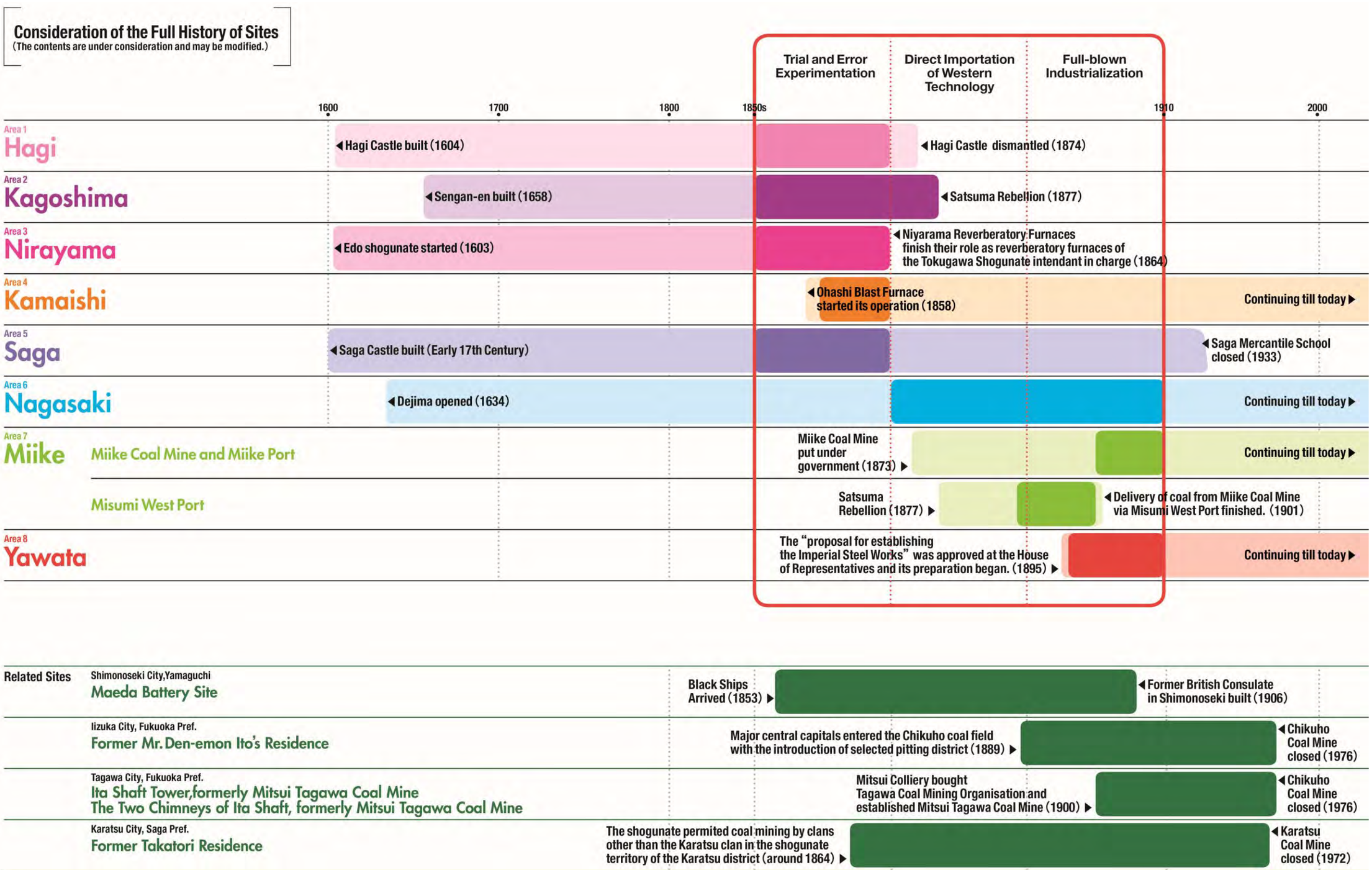
Area 5 Saga
Defending Nagasaki / Samurai's Challenge in Technology / Developing Skills for Naval Defense

Area 6 Nagasaki
From Clan to Company / Mitsubishi Goshi Kaisha / Technology as the Spirit for Developments for the Sea and Land

Area 7 Miike
Mitsui, Miike, Coal Industry and Logistics / to Japan's First Coal-Based Chemical Industry Complex

Area 8 Yawata
The Imperial Steel Works and the Emergence of Industrial Japan / Japan's Industrial Revolution

Consideration of the Full History of Sites
(The contents are under consideration and may be modified.)



Related Sites

Shimonoseki City,Yamaguchi
Maeda Battery Site

Black Ships Arrived (1853)
Former British Consulate in Shimonoseki built (1906)

Iizuka City, Fukuoka Pref.
Former Mr. Den-emon Ito's Residence

Major central capitals entered the Chikuho coal field with the introduction of selected pitting district (1889)
Chikuho Coal Mine closed (1976)

Tagawa City, Fukuoka Pref.
Ita Shaft Tower,formerly Mitsui Tagawa Coal Mine
The Two Chimneys of Ita Shaft, formerly Mitsui Tagawa Coal Mine

Mitsui Colliery bought Tagawa Coal Mining Organisation and established Mitsui Tagawa Coal Mine (1900)
Chikuho Coal Mine closed (1976)

Karatsu City, Saga Pref.
Former Takatori Residence

The shogunate permited coal mining by clans other than the Karatsu clan in the shogunate territory of the Karatsu district (around 1864)
Karatsu Coal Mine closed (1972)

In the support of the understanding of the “full history” of each site, sites that are supplementary to component parts are to be interpreted and the following definition applies:

Associated sites and facilities = Sites and facilities that possess local/national values that contribute to the understanding of the full history of each site

Related sites = Sites that are closely connected to, or belong to the same “family group” as, component parts of the Sites of Japan’s Meiji Industrial Revolution, and that supplement the series to fully understand its World Heritage significance; although such sites do not necessarily meet UNESCO requirements to be included.

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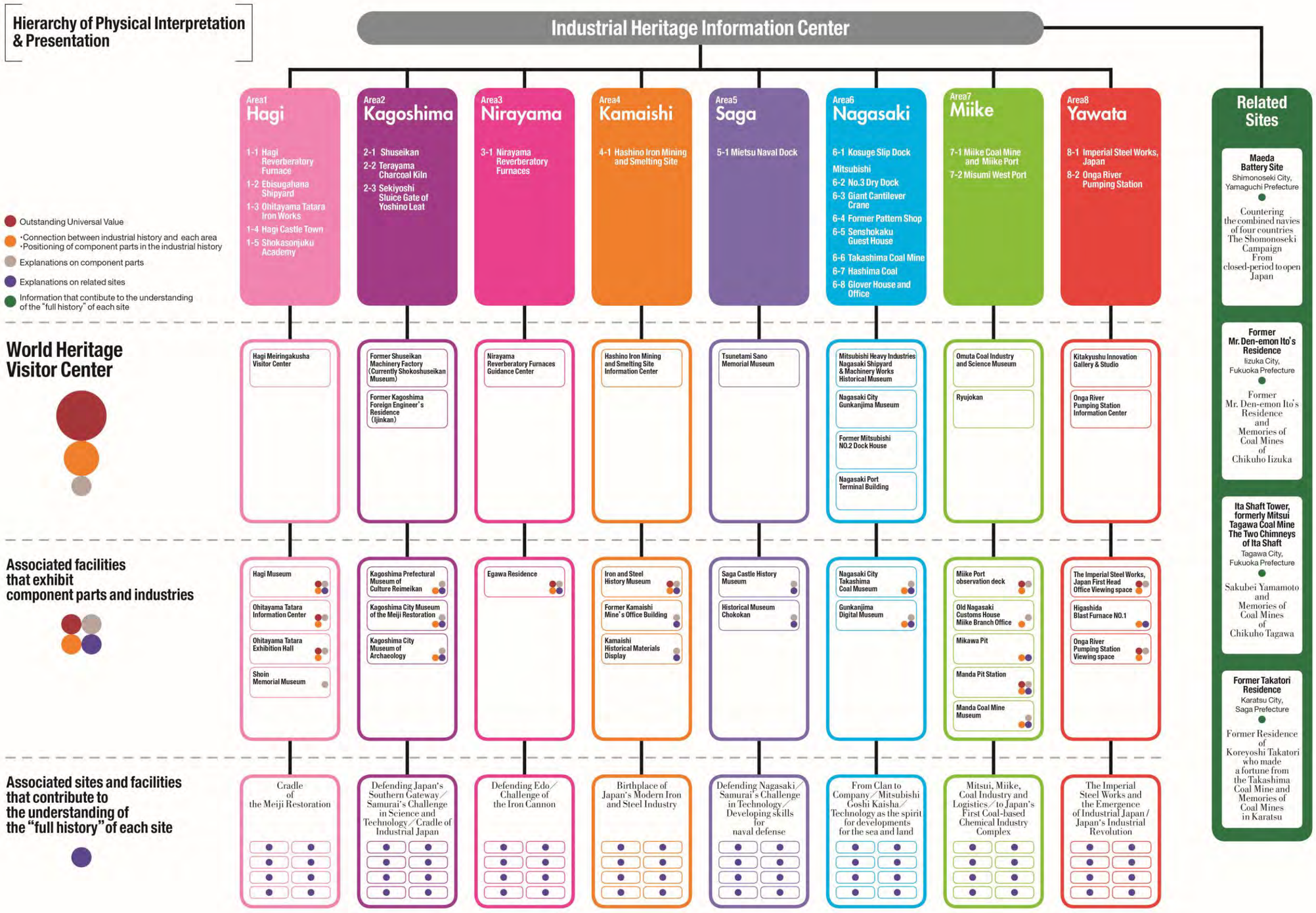
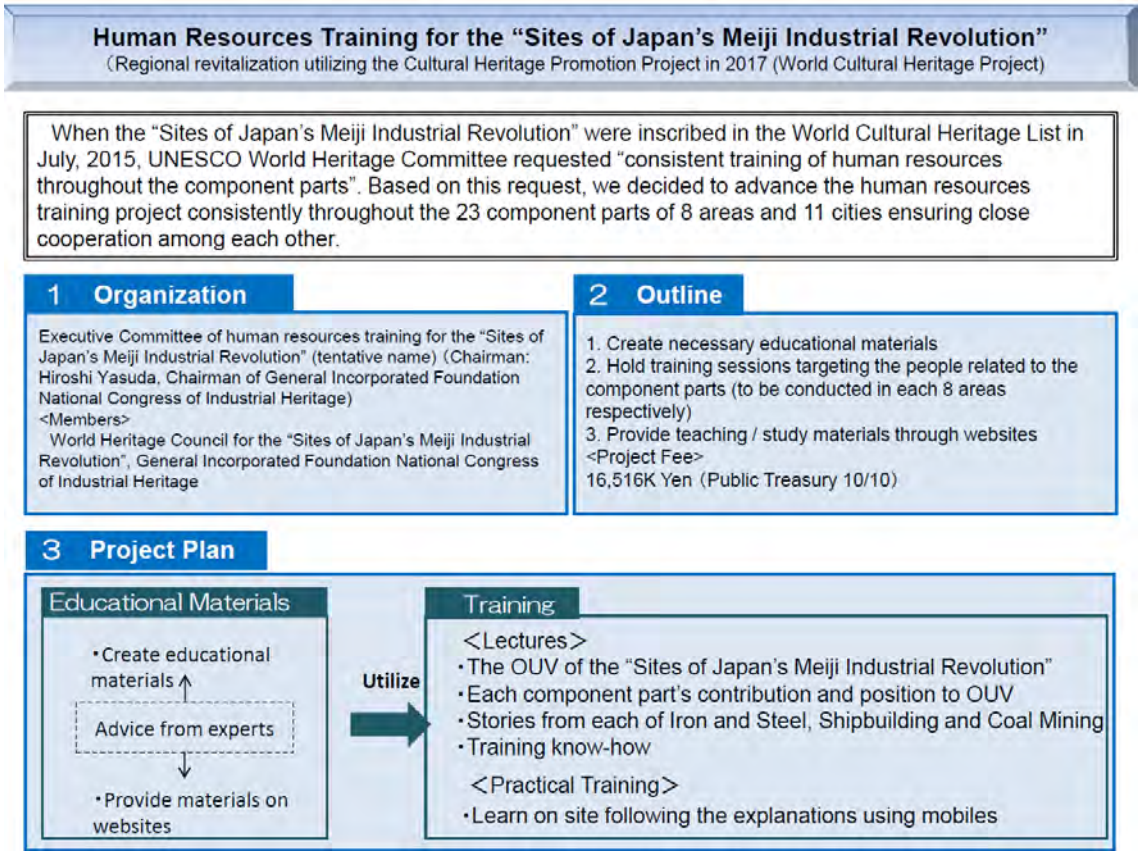

Hierarchy of Physical Interpretation & Presentation
Industrial Heritage Information Center
Outstanding Universal Value
・Connection between industrial history and each area
・Positioning of component parts in the industrial history
Explanations on component parts
Explanations on related sites
Information that contibute to the understanding of the "full history" of each site
World Heritage Visitor Center
Associated facilities that exhibit component parts and industries
Associated sites and facilities that contribute to the understanding of the "full history" of each site
Area1 Hagi
1-1 Hagi Reverberatory Furnace
1-2 Ebisugahana Shipyard
1-3 Ohitayama Tatara Iron Works
1-4 Hagi Castle Town
1-5 Shokasonjuku Academy
Area2 Kagoshima
2-1 Shuseikan
2-2 Terayama Charcoal Kiln
2-3 Sekiyoshi Sluice Gate of Yoshino Leat
Area3 Nirayama
3-1 Nirayama Reverberatory Furnaces
Area4 Kamaishi
4-1 Hashino Iron Mining and Smelting Site
Area5 Saga
5-1 Mietsu Naval Dock
Area6 Nagasaki
6-1 Kosuge Slip Dock
Mitsubishi
6-2 No.3 Dry Dock
6-3 Giant Cantilever Crane
6-4 Former Pattern Shop
6-5 Senshokaku Guest House
6-6 Takashima Coal Mine
6-7 Hashima Coal
6-8 Glover House and Office
Area7 Miike
7-1 Miike Coal Mine and Miike Port
7-2 Misumi West Port
Area8 Yawata
8-1 Imperial Steel Works, Japan
8-2 Onga River Pumping Station
Related Sites
Maeda Battery Site
Shimonoseki City, Yamaguchi Prefecture
Countering the combined navies of four countries The Shomonoseki Campaign From closed-period to open Japan
Former Mr. Den-emon Ito's Residence
Iizuka City, Fukuoka Prefecture
Former Mr. Den-emon Ito's Residence and Memories of Coal Mines of Chikuho Iizuka
Ita Shaft Tower, formerly Mitsui Tagawa Coal Mine The Two Chimneys of Ita Shaft
Tagawa City, Fukuoka Prefecture
Sakubei Yamamoto and Memories of Coal Mines of Chikuho Tagawa
Former Takatori Residence
Karatsu City, Saga Prefecture
Former Residence of Koreyoshi Takatori who made a fortune from the Takashima Coal Mine and Memories of Coal Mines in Karatsu
Hagi Meiringakusha Visitor Center
Former Shuseikan Machinery Factory (Currently Shokoshuseikan Museum)
Former Kagoshima Foreign Engineer's Residence (Ijinkan)
Nirayama Reverberatory Furnaces Guidance Center
Hashino Iron Mining and Smelting Site Information Center
Tsunetami Sano Memorial Museum
Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Historical Museum
Nagasaki City Gunkanjima Museum
Former Mitsubishi NO.2 Dock House
Nagasaki Port Terminal Building
Omuta Coal Industry and Science Museum
Ryujokan
Kitakyushu Innovation Gallery & Studio
Onga River Pumping Station Information Center
Hagi Museum
Ohitayama Tatara Information Center
Ohitayama Tatara Exhibition Hall
Shoin Memorial Museum
Kagoshima Prefectural Museum of Culture Reimeikan
Kagoshima City Museum of the Meiji Restoration
Kagoshima City Museum of Archaeology
Egawa Residence
Iron and Steel History Museum
Former Kamaishi Mine's Office Building
Kamaishi Historical Materials Display
Saga Castle History Museum
Historical Museum Chokokan
Nagasaki City Takashima Coal Museum
Gunkanjima Digital Museum
Miike Port observation deck
Old Nagasaki Customs House Miike Branch Office
Mikawa Pit
Manda Pit Station
Manda Coal Mine Museum
The Imperial Steel Works, Japan First Head Office Viewing space
Higashida Blast Furnace NO.1
Onga River Pumping Station Viewing space
Cradle of the Meiji Restoration
Defending Japan's Southern Gateway／Samurai's Challenge in Science and Technology／Cradle of Industrial Japan
Defending Edo／Challenge of the Iron Cannon
Birthplace of Japan's Modern Iron and Steel Industry
Defending Nagasaki／Samurai's Challenge in Technology／Developing skills for naval defense
From Clan to Company／Mitsubishi Goshi Kaisha／Technology as the spirit for developments for the sea and land
Mitsui, Miike, Coal Industry and Logistics／to Japan's First Coal-based Chemical Industry Complex
The Imperial Steel Works and the Emergence of Industrial Japan / Japan's Industrial Revolution

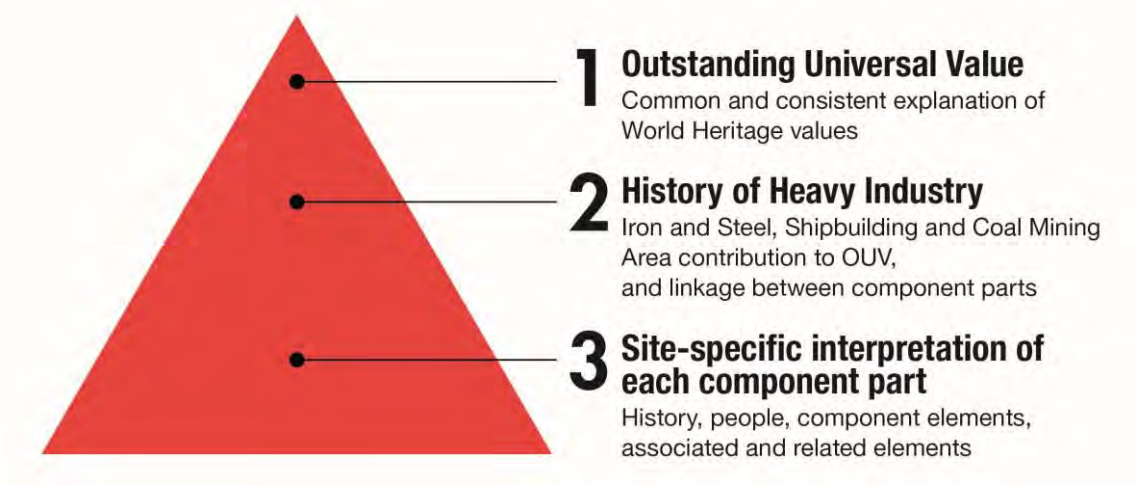
10 INTERPRETATION MANUAL AND STYLE GUIDE

A resource manual is being be developed to explain how interpretation can be used and implemented across the WHS in a consistent and cohesive manner. It will also assist in developing interpretation skills for those responsible for creating experiences and materials to present the WHS outstanding universal value, from staff to volunteers. A style guide and a series of site-based interpretation workshops will supplement the manual.

In the meantime, training of site staff and volunteers has been ongoing, guided by the following framework:



Human Resources Training Program for the "Sites of Japan's Industrial Revolution"



Main Textbooks for the Training

Textbook that explains all the component parts and their conservation and interpretation, mainly dealing with OUV and the contributions and the positions of each component part (to be completed in December, 2017).

Guidebooks that explain industrial history (the part on "Iron & Steel" is to be completed in December, 2017)

Contents of the Training

Day 1: Lecture-style Training

1. The importance of "Outstanding Universal Value"
2. About Iron & Steel, Shipbuilding and Coal Mining
3. How to interpret and tell visitors stories
4. How to use app by smartphones

Day 2: On-site Training

1. Concrete method of telling OUV and each component part
2. Function and special feature of the app as a supporting tool

Schedule

2017	October 31	Area 4. Kamaishi
	November 29	Area 8. Yawata
	December 4-5	Area 3: Nirayama
2018	January 18	Area 2: Kagoshima
	January 23	Area 1: Hagi
	January 29	Area 7: Miike
	February 6	Area 5: Saga
	February 8	Area 6: Nagasaki

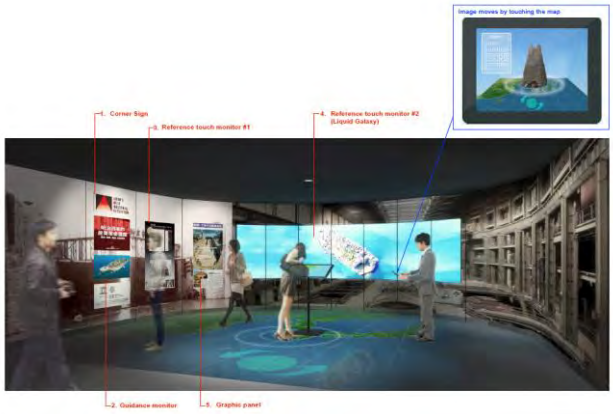
11 INTERPRETATION PLAN

Task	Description	Responsibility	Timescale (Fiscal Year)
(1)	Consistent OUV rollout across all component parts	Cabinet Secretariat, local authorities	From FY 2018
(2)	Updates of the full history of each site	Cabinet Secretariat, local authorities	From FY 2018
(3)	Information gathering related to workers, including Korean workers	General Incorporated Foundation National Congress of Industrial Heritage	Continued from FY 2016
(4)	Establishment of the "Industrial Heritage Information Centre", Tokyo	Cabinet Secretariat	During FY 2019
(5)	Consideration of certification programme for the interpretation of the "Sites of Japan's Meiji Industrial Revolution"	General Incorporated Foundation National Congress of Industrial Heritage	From FY 2018
(6)	Human resources training programmes and training manual	General Incorporated Foundation National Congress of Industrial Heritage, World Heritage Council	During FY 2017
(7)	World Heritage Route	World Heritage Route Promotion Council	Ongoing
(8)	Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Nagasaki sites with no public access: No.3 Dry Dock, and the Giant Cantilever Crane – especially virtual visits	General Incorporated Foundation National Congress of Industrial Heritage	Ongoing
(9)	Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Kosuge Slip Dock and Gunkanjima – notably digital reconstruction of the coal mine	General Incorporated Foundation National Congress of Industrial Heritage	Ongoing

Details of these steps are provided below.

(1) Consistent OUV rollout across all component parts

Based on the Interpretation Strategy, the consistent interpretation of OUV should be presented across all component parts. This will be agreed by all stakeholders, and coordinated and implemented commonly in a branded World Heritage style.



Concept visualisation for common exhibition plans

(2) and (3) Progress in dealing with the "full history" of each site, including information gathering related to workers

Advice from international experts who are members of the Expert Committee on the Industrial Heritage including Operational Properties (Cabinet Secretariat of Japan), from the international heritage expert who was the ICOMOS technical evaluation field assessor of the World Heritage nomination of the "Sites of Japan's Meiji Industrial Revolution", and from the President of the ICOMOS International Scientific Committee on Interpretation and Presentation, comprises the following four key policies:

1) Focus on the interpretation of Outstanding Universal Value; in conformity with the primary purpose of the World Heritage, OUV of the inscribed property should be presented clearly at each site, not confusing with other, albeit related, issues. Based on this, Recommendation g) should be implemented.

2) The scope of the "full history" of each site, except for the OUV period (from 1850s to 1910) as described on page 78, falls into two parts: prior to 1850s, and from 1910 to the present. The target of the full history should be narrowed down, considering the local values that supplement the understanding of the background of each component part. Where relevant, with regard to the interpretation of the full history on the location of each component part, high quality research such as collecting primary historical documents and recording oral testimonies should be carried out, and the result of this research should, at some stage, be made publicly available through appropriate media.

3) Given the focus on OUV, the interpretation of industrial workers' stories should focus on Japanese industrial workers during the OUV period, whilst the interpretation of those outside the OUV period may allow an understanding of the fact that the Government of Japan implemented its policy of requisition of workers under the National Mobilisation Law during World War II, and that there

were a large number of those from the Korean Peninsula who supported Japanese industries before, during, and after the War.

4) In view of the above guidance, research on Koreans in Japan before, during, and after the War, including research on the policy of requisition of Korean workers, should be undertaken.

From the above policies provided (against each of the above points 1) to 4), detailed progress and timescales are as follows:

1) A scheme has been developed in FY 2016-17, and the interpretation of OUV will be implemented at all sites, in a consistent manner, under the coordinated direction of the Cabinet Secretariat of Japan from FY 2018.

2) A specially commissioned "Interpretation Audit" noted that the "full history" as described on page 78 was already adequately interpreted at a number of sites. Those that require attention are planned for updates from FY 2018. In addition, the "Sakubei Yamamoto Collection" composed of annotated paintings and diaries is described on page 239 of the Nomination Document as materials to promote an understanding of industrial workers. The collection can be regarded as part of the Interpretation Strategy, since it was registered as the *Memory of the World* during the nomination process of the *"Sites of Japan's Meiji Industrial Revolution"*. The collection is of great significance in facilitating an understanding of the coal mine workers at that time in Chikuho Coal Mine that supplied coal to make coke at Yawata. Currently, the collection is exhibited at facilities such as Tagawa City Coal Mining Historical Museum established in the same premise as the Ita Shaft Tower and the Two Chimneys of Ita Shaft, formerly Mitsui Tagawa Coal Mine, one of the related sites of the WHS

3) As appropriate, workers' stories are planned for updates from FY2018, based on primary historical documents and oral testimonies.

4) The Cabinet Secretariat of Japan intends to share the primary historical documents regarding workers' stories with the public, ultimately in the "Industrial Heritage Information Centre" to be located in Tokyo during FY 2019. Numerous research targets have been pursued, including oral testimonies, reviews of published materials, together with the investigation of primary historical documents hitherto little consulted.

(4) Establishment of the "Industrial Heritage Information Centre", Tokyo

When the World Heritage Committee adopted the Decision (39COM 8B.14) at its thirty-ninth session, a record of the Government of Japan's statement was referred to as a footnote to Recommendation g).

Thus, the Government of Japan is planning the establishment of the "Industrial Heritage Information Centre" as a comprehensive information centre in Tokyo during FY 2019, and the construction cost is included in the draft budget for FY 2018. As a "think tank" that contributes to dissemination and enlightenment for industrial heritage conservation, the Centre will dispatch information mainly on the overall property of the "Sites of Japan's Meiji Industrial Revolution", as well as other information on industrial heritage, including workers' stories. The details of the

contents are under consideration.

(5) Consideration of a certification programme for the "Sites of Japan's Meiji Industrial Revolution"

Following the implementation of the Interpretation Strategy, in order to ensure a "quality assurance" of interpretation, a certification programme for a wide range of interpretive providers will be considered from FY 2018, promoting dissemination and enlightenment of interpretation at all component parts as well as at related sites.

(6) Human resource training programmes and training manual

Following the inception series of interpretation lectures given at all component parts during the Interpretation Audit, a further series of human resources training programmes are being provided at each site during FY 2017, together with the provision of a training manual to be used by sites' interpretive staff and volunteers.

(7) World Heritage Route

Promotion of the World Heritage Route, providing WH guidance and tourism infrastructure, is ongoing. This includes maps and apps, GPS navigation, traffic signage using the common logo, and other aspects, guiding visitors to all component parts, and related sites. The "World Heritage Route Promotion Council" comprises WHS stakeholders, tourism agencies, and transport agencies including railways, airlines, bus and taxi.



Promotion using Classic Car



Promotion at a Travel Fair in Taiwan, 2016







Special Promotion by JR Kyushu, Kumamoto Prefecture:
Special limited tours by Roman Cruise and 'A' Train for 80 people per day to visit Manda Pit and Misumi West Port.

(8) Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Nagasaki sites with no public access: No.3 Dry Dock, and the Giant Cantilever Crane – especially virtual visits

In 2014, the 3D digital documentation work by the Scottish Ten resulted in the laser scanning of both the Giant Cantilever Crane and No.3 Dry Dock in Nagasaki. Both these sites are operational and cannot be accessed by members of the public. For this reason, detailed 3D model created by these surveys is being developed as a content of official apps, providing virtual visits to the sites.

(9) Onsite and online interpretation generated from Digital 3D resources developed by the Scottish Ten for Kosuge Slip Dock and Gunkanjima – notably digital reconstruction of the coal mine

In 2014, the 3D digital documentation work by the Scottish Ten resulted in the laser scanning of both Kosuge Slip Dock and Gunkanjima in Nagasaki. Both these sites can be accessed by members of the public, but the enhanced digital resources provided by the detailed 3D record can be used to develop both onsite and online interpretation resources in the future.

12 PROGRESS MANAGEMENT

The responsible organisations of the Interpretation Plan will conduct each activity, working closely with the parties concerned and receiving advice from international and domestic experts who are knowledgeable on the WHS, and, in order to improve the status of interpretation, manage the progress at the Interpretation Working Group, a committee established under the National Committee of Conservation and Management for the "Sites of Japan's Meiji Industrial Revolution". In addition, the Working Group will monitor the progress of each activity, conducting a regular interpretation audit by international experts, and revise the Interpretation Plan in accordance with the progress and the outcome.

Annexe: Interpretation Audit



SITES OF JAPAN'S MEIJI INDUSTRIAL REVOLUTION: IRON AND STEEL, SHIPBUILDING AND COAL MINING

INTERPRETATION AUDIT 2017

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1. Introduction

In July 2015, the UNESCO World Heritage Committee inscribed the *Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining* as a World Heritage Site. As part of this inscription, it was recommended that the Japanese Government give consideration to:

> *Preparing an interpretive strategy for the presentation of the nominated property, which gives particular emphasis to the way each of the sites contributes to OUV and reflects one or more of the phases of industrialisation; and also allows an understanding of the full history of each site.*

In response, this World Heritage Site's (WHS) Interpretation Committee requested the following:

- an understanding of what the component managers are currently presenting or developing for the interpretation of their places.
- gathering of information about related tourism and travel products that could be used or modified.
- a full understanding on how each site or component relates to the overall series, particularly in terms of the way they reflect the one or more phases of Japan's industrialisation and convey their contribution to Outstanding Universal Value.

This audit aims to identify how each component is presenting the WHS outstanding universal values and the connections that exist between them. The audit makes recommendations to strengthen the interpretive connectivity and consistency between the components to foster a better appreciation of this WHS. The comments and recommendations will inform the finalisation of the Interpretive Strategy.

2. World Heritage Site

The Sites of Japan's Meiji Industrial Revolution comprises of a series of 23 component parts, mainly located in the southwest of Japan. It bears testimony to the rapid industrialisation of the country from the middle of the 19th century to the early 20th century, through the development of the iron and steel industry, shipbuilding and coal mining.

The WHS illustrates the process by which feudal Japan sought technology transfer from Europe and America from the middle of the 19th century and how this technology was adapted to the country's needs and social traditions. It testifies to what is considered to be the first successful transfer of Western industrialization to a non-Western nation.

The following table identifies each component of the site, their chronological development and the principal phases of Japan's industrialisation to which they belong.

CHRONOLOGY → SITE ↓	1850s Trial & error	Direct import of Western technology	Full-blown industrialisation to 1910
Area 1 HAGI			
1-1 Reverberatory Furnace			
1-2 Ebisugahana Shipyard			
1-3 Ohitayama Tatara Iron Works			
1-4 Castle Town			
1-5 Shokoasonjuku Academy			
Area 2 KAGOSHIMA			
2-1 Shuseikan			

2-2 Teryama Charcoal Kiln			
2-3 Sekiyoshi Sluice Gate			
A3 NIRAYAMA			
3-1 Reverbatory Furnaces			
A4 KAMIASHI			
4-1 Hashino Iron Mining & Smelting Site			
A5 SAGA			
5-1 Mietsu Naval Dock			
A6 NAGASAKI			
6-1 Kosuge Slip Dock			
6-2 Mitsubishi Dry Dock			
6-3 Mitsubishi Giant Lever Crane			
6-4 Mitsubishi Former Pattern Shop			
6-5 Mitsubishi Senshokaku Guest House			
6-6 Takashima Coal Mine			
6-7 Hashima Coal Mine			
6-8 Glover House and Office			
A7 MIIKE			
7-1 Miike Coal Mine and Miike Port			
7-2 Misumi West Port			
A8 YAWATA			
8-1 Imperial Steel Works			
8-2 Onga River Pumping Station			

3. Methodology

The audit was undertaken as follows.

1. Questionnaire – developed and circulated to each area for completion to identify each component's current state of interpretation.

2. Site visits – each component was visited to review the current state of interpretation in January and May 2017. The site visits were documented in an audit photo trail. (Note time constraints did not provide the opportunity to undertake a detailed review at each component).

3. Meetings – were held at each area after the site visits, to provide an overview of the purpose of the Interpretive Strategy currently being developed. These meetings also provided the opportunity to discuss and share ideas to further develop the WHS' interpretation.

4. Report – provides the responses to the questionnaire and a summary of the review. It then makes recommendations to inform the finalisation of the Interpretative Strategy.

4. Acknowledgements

This audit has been made possible with the information provided by and the assistance of:
- Koko Kato, Special Advisor to the Cabinet
- Takashi Imamura, Senior Deputy Director, Department of Industrial Heritage, Cabinet Secretariat
- Barry Gamble, International Expert
- Noriko Hanada, Project Manager, National Congress of Industrial Heritage
- Masaaki Hatakoshi, National Congress of Industrial Heritage
- Prefecture staff and volunteers at each area
- Interpreters

5. Existing interpretation

The Areas and components across the WHS have traditionally prepared their own interpretation. Several have designed and implemented new interpretation, both during the nomination process and since the WHS's inscription. This development has generally been *ad hoc* rather than resulting from a strategic, coordinated approach. It is also reflective of the differences in each Area's stage of interpretive development and resource availability, both financially and professional staff.

Each Area has either a museum or visitor (or both) which provide the principle interpretive centres. They are either located within the relevant city or within the component itself. For instance, the Kamaishi Iron and Steel History Museum is located in the centre of the Kamaishi City and Nirayama has recently opened the Furnaces Visitor Centre. Most of these centres provide convey the Area's history through various interpretive platforms, as well as visitor and guide amenities.

There is the appropriate use of different interpretative media at each of the components which in turn provides a variety of experiences at each place. The main media used are interpretive panels, and guided tours, audios and a smart phone application. This application provides pictorial information relating to each component. There are also various printed materials including brochures, maps and guides. These materials are mainly presented in Japanese, though some Areas offer English, Chinese and Korean translations such as at Misumi West Port.

The key consideration is that there should be a more cohesive and connected interpretive approach to present the full picture of the *Sites of Japan's Meiji Industrial Revolution* story and how each of the 23 components contribute to this WHS significance and values. The current development of the Interpretive Strategy will assist in achieving this.

A summary of the WHS existing interpretation elements based on the questionnaire responses and site visits is provided below. It provides a baseline for the WHS ongoing interpretive development. The completed questionnaires are provided at Appendix 1.

It must be noted that significant progress has been made in the WHS interpretation since its inscription which is demonstrated in the audit photo trail (see Appendix 2).

6. Comments

<u>World Heritage Plaque</u>
A uniform design for the plaque has been developed for placement at each of the components. The purpose of the plaque is to commemorate the WHS inscription and inform the visitors to the WHS of is of exceptional interest to the whole world.

To date, the plaque has yet to be installed at all the components. Where it has been installed, its placement varies, as does how it can easily be seen by the audience. Clearly it should be placed in a prominent and accessible position.

<u>Access</u>
Most of the components are easily accessible by car and bus. Limited access is provided at the Hashima Coal Mine, and the Miike coal mine railway which are open only for special occasions. The operational sites of the Mitsubishi Shipyards and Yawata Steelworks are not open to the public.

There is adequate parking at all the components. Directions to the components are also clearly sign posted.

Audience

The WHS has enjoyed a significant increase in visitor numbers since inscription. Detailed information on each components audience segments was not provided. However, it is understood that the current audiences consist mainly of local and national residents. International visitors seemingly make up only a small part of the market. Most of the Areas are targeting elementary and high school children as a key audience market segment.

Research to gain a more detailed understanding of the different audience segments will be very important to inform the ongoing development of interpretive experiences and to attract new and diverse audiences, as well as maintaining existing audiences.

Interpretive Media

As stated above there is the appropriate use of different interpretative media at each of the components which in turn provides a variety of experiences at each place. Examples of the different media is provided in Appendix 3.

Themes and stories

The WHS vision is to let visitors and residents correctly understand the value of the WHS and how each Area contributes to its outstanding universal values. The key information presented at each Area focuses on its history. Though there is some information on how the component relates to the WHS other components (based on the chart presented in the nomination document), the components' relationship and connectivity could be further developed.

Most of the Areas have created key messages to capture the history of their site. These should be reviewed to link those messages/themes with the WHS' outstanding universal values in ways that are more consistent and connected across the Areas and can be developed for identified target audiences. Some examples of the existing key messages are as follows.

- "As its high-quality and rich coal mines supported Japan during the eras of Meiji, Taisho and Showa", Misumi West Port is Japan's first authentic modern harbor facility that played a key role in exporting coals to other countries and is the only modern trading port that remains as it looked then".
- "The Origin of the Modernization of Japan – Hagi"
- "Kamaishi – the Birthplace of Modern Iron Manufacturing. The iron-making technology of Kamaishi as represented by the Hashino Iron Mining and Smelting Site contributed considerably to the modernization of Japan".
- "We are the first one in Asia that turned into an industrial country" – Yawata.

Printed material and digital platforms

The main media used for the WHS' components are strategically placed interpretive panels, guided tours, audios and the smart phone application. In addition there are two WHS websites, presented in both Japanese and English (see Appendix 3.3). Existing Prefecture and City websites makes reference to each Area's components.

There are also various printed materials including brochures, maps and guides, mainly presented in Japanese and English (see Appendices 3.1 and 3.4). Some components, eg Misumi West Port, also provides brochures and maps in English, Chinese and Korean. Refer to Appendix 3.6 for some examples. In addition, limited edition of stamps and coins celebrate the WHS inscription (see Appendix 3.7).

Tours and education programs
All the components provide a guided tours either by volunteers and/or former workers. In addition, there are self-guided digital platforms via audios and tablets. These add to the diverse interpretive experiences available throughout the WHS.

Educational material has been developed for elementary and high school children to explain the some Area's components history and significance. These is mainly delivered via printed material and through the governments' websites. In addition, some areas provide lectures such as at the Misumi West Port.

A touring exhibition which commence in January 2016 provides virtual access to all the WHS components. It is running for two years and will visit eight locations (see Appendix 3.5).

Resources
There are professional staff who support the WHS interpretation such as curators and education specialists. Not all Areas have access to this resource. However, all Areas use volunteers and/or former workers to present their places. This provides an engaging and authentic interpretive experience and create a sense of custodianship. Most Areas provide ongoing support and training for the volunteers.

Each Area's government provides a budget allocation for some interpretive experiences such as developing brochures and providing guides. However, in most cases, more comprehensive development of interpretive media will require seeking government financial support.

The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.

7. Recommendations

The following recommendations are made to continue to build on the WHS ongoing interpretive development since 2015. They also aim to strengthen the interpretive connectivity and consistency between the components to foster a better appreciation of this WHS and its outstanding universal values.

World Heritage Plaque
The *Operational Guidelines for the Implementation of the World Heritage Convention* identifies that the State Party should place a plaque wherever possible to commemorate inscription that informs the public 'that the property visited has a particular value which has been recognized by the international community.' The plaque should:

- be placed where it can easily be seen by visitors without disfiguring the property;
- include the World Heritage Emblem;
- have text that mentions the property's OUV and refers to the *World Heritage Convention* and the World Heritage List. (UNESCO 2015, clause 270, p. 58)

Though the template for the plaque has been designed and is currently being rolled out across all the components, guidance should be provided on its placement so that is easily viewed as a visitor enters a site to inform them that it is part of the WHS. Also, the installation of the plaques should be completed as soon as possible as it is two years since the WHS was inscribed.

Audience

Audience research and analysis is integral to informing the ongoing development of the WHS' interpretation. Audience evaluation is important to understanding the needs and desires of the local, domestic and international visitors for the ongoing development of interpretive experiences that attract new and diverse audiences as well as maintain existing audiences. This understanding should inform the development of all interpretive material and programs. Ongoing audience research and analysis should be undertaken on a regular basis across all components to inform the ongoing development of interpretive material and experiences.

Interpretive Media

Themes and stories

The WHS Statement of Outstanding Universal Values for the ACS already identifies the major themes that connect theAreas and their components. However, further work is required in distilling the themes into a format that ensures that OUV is made accessible for the WHS's audiences and is consistent and connected. The development of stories based on the themes will further enhance audience experience, making it more memorable and engaging. Such themes/stories could include "the defence of the nation" and "the story of labour through the life a miner".

Printed material and digital platforms

There should be more consistency and uniformity in the graphic look and feel, language and tone used across the media. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values. In addition, printed material and digital platforms would benefit from tight graphic design and a layered information structure.

All printed material should have a consistent look and feel to ensure consistency across all the components and clearly articulate the connections between them. This material should be informed by a style guide (see below).

The websites and other digital options provide interested audiences with the most comprehensive and connected form of media to learn about and experience the entirety of the WHS. As commented above the website could benefit with a more consistency and uniformity in the graphic look and feel, language and tone across all interpretive media to ensure that each form of media is clearly recognized as part of the overall WHS a.

In addition, the digital platforms need a strategy of Search Engine Optimisation to ensure the official websites are the first to be accessed.

Opportunities exist to link to social media and platforms such as GoUNESCO to promote the component sites both to locals and to international tourists which would amplify the message of the OUVs. (See http://www.gounesco.com/heritage/sites/meiji-industrial-revolution)

Style guide

The WHS would benefit from being united under a single brand to allow the audiences recognise the connections between all the components. A style guide provides uniform standards and styles including the graphic look and feel, mood, language, tone, and colour to be used in a range of applications including signage, print publications, media, digital media, social media and websites. It should also include a tagline that is a key phrase that identifies the WHS ie a 'brand' which is easily recognised and understood across all the components. An example of a style guide is provided at Appendix 4.

Tours and education programmes
Tours and education programs offer the opportunity to explore the big picture in a contained environment, including discussing concepts such as authenticity, complex ideas such as the outstanding universal values as well as explicitly addressing links across sites.

The existing tours and education programmes should be refined to align with the Interpretation Strategy upon its completion. Also, the WHS should build on its of success of utilising former works and volunteers as an integral and important of the interpretive experiences at the components. They should have the opportunity to contribute to the development of stories and messages and support by management with ongoing training.

Resources
Collaboration
Regular opportunities should be provided for the managers, staff and volunteers to meet to discuss joint interpretive projects and share ideas and opportunities. This will also enable the sharing of resources across the components and provide a consistency of interpretation and connectivity. It will also provide the opportunity to leverage of each others experiences.

Manual
A resource should be developed to explain how interpretation can be used and implemented across the WHS in a consistent and cohesive manner. It will also assist in developing interpretation skills for those responsible for creating experiences and materials to present the WHS outstanding universal values, from staff to volunteers.

8. Conclusion

This audit provides an overview of how the WHS and its components is currently presenting is outstanding universal values which has progressed significantly since its inscription in 2015. It highlights the complexity and challenges of interpreting a serial WHS, particularly in terms of scale, location, management, access and resources. There is a need for a more consistent, cohesive and coordinated approach to connect and present the 23 components to communication the outstanding universal values and how the components relate to each other.

The audit provides a key input into the finalisation of the Interpretive Strategy to present and engage a diverse audience with the WHS' outstanding universal values. Once the Strategy is finalised, this audit will inform its implementation across the WHS.

9. References

Australia ICOMOS, 2013, 'Practice Note: Interpretation', http://australia.icomos.org/publications/charters/.

ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites 2008, http://icip.icomos.org/downloads/ICOMOS_Interpretation_Charter_ENG_04_10_08.pdf.

UNESCO, 1972, *Convention concerning the Protection of the World Cultural and Natural Heritage*, viewed 16 May 2016, http://whc.unesco.org/en/conventiontext/.

UNESCO, 2015, *Operational Guidelines for the Implementation of the World Heritage Convention*, http://whc.unesco.org/en/guidelines/.

UNESCO, 2015, Decision 39 Com 8B.14, Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining, http://whc.unesco.org/en/list/1484.

APPENDIX 1 – QUESTIONNAIRES

Area 1 Hagi







The Hagi World Heritage Centre opened in March 2017. It provides the principal orientation experience for understanding this component's world heritage values. It provides an immersive and engaging multimedia experience. It coordinates access and information concerning all component parts in Hagi, and for the entire World Heritage Site (WHS).

Hagi Castle Town and *Shokasonjuku Academy* are already popular sightseeing destinations that are well equipped with amenities and visitor guidance functions. Interpretation panels provide information at the *Hagi Reverberatory Furnace*, *Ebisugahana Shipyard* and *Ohitayama Tatara Iron Works*. The Iron Works recently opened visitor centre also conveys this component's World Heritage values through various interpretive platforms and provides visitor and guide amenities.

The Hagi City Museum provides another visitor experience on the history of the town and its World Heritage Values.

Access

Each of the components are opened to the public at all times, except for the private residences the Hagi Castle Town.

Hagi Castle Town, Ebisugahana Shipyard, and Shokasonjuku Academy are mainly reached by car and a shuttle bus service is also available. There sufficient parking at the Hagi Castle Town and Shokasonjuku Academy, and nearby parking spaces are also available for visitors to the Hagi Reverberatory Furnace, Ebisugahana Shipyard, and Oitayama Tatara Iron Works.

The road leading to the Iron Works is very narrow which may limit access. Any proposals to widen the road will need to consider the impacts on the place's heritage values.

Comments

World Heritage Logo

The logo only been installed at some of the components. Where it has been installed, its placement varies on how it can easily be seen by the audience. It should be placed in a prominent and accessible position.

Replicas of the WHS inscription certificate are also on display.

Audience

This Area of the WHS enjoys healthy visitor numbers which have remained reasonable steady since the Site's inscription. There is a broad understanding of who is visiting the components from the local, national and international markets. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The vision for the Area is for the visitors and residents to understand the *Sites*

of Japan's Meiji Industrial Revolution and Hagi's five component parts in a simple and enjoyable way. The key interpretive message is "The Origin of the Modernization of Japan – Hagi".



There is the appropriate use of different interpretative media at each of the components which in turn provides a variety of experiences at each place. The main media used are interpretive panels, and guided tours and smart phone application. This application provides pictorial information relating to each component.



The WHS's website is presented in both Japanese and English. Existing Prefecture and City websites makes reference to these components. There are also various printed materials including brochures, maps and guides, mainly presented in Japanese.

The key information focuses on the Area's components' history. Though there is some information on how the component relates to the WHS other components (based on the chart presented in the nomination document), the components' relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and tone used across the media. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.

Resources

There are professional staff to support the ongoing development of the Area's interpretation e.g. curators. However it is not clear if they are available to each of the Area's components.

Hagi City has a budget allocation for some interpretive experiences such as developing brochures and providing guides. Further more comprehensive development of interpretive media will require seeing government financial support.

The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.

Hagi City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Vision Let visitors and local residents in Hagi City understand the "Sites of Japan's Meiji Industrial Revolution" and the 5 component parts in the Hagi area in a simple and an enjoyable way. Mission Hagi City opened the World Heritage Visitor Center in March, 2017 that provides explanations on the value of the "Sites of Japan's Meiji Industrial Revolution" and the positions and the significance of the 5 component parts in the Hagi area. From now on, we need to improve the quality of the interpretation at each component part. Key Message "The Origin of the Modernization of Japan – Hagi"
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	The Tourism Division of Hagi City has submitted to the Japan Tourism Agency a Japanese version of the DMO (Destination Marketing/Management Organization) Creation and Establishment Plan. In this plan, we have designated the area where there are 5 component parts of the "Sites of Japan's Meiji Industrial Revolution" as the center for marketing management. We plan to create a regional interpretation plan in accordance with the one created by the Cabinet Secretariat in the near future.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. - We have put the world heritage plaque, whose design is common for all the component parts in accordance with the UNESCO's Operational Guidelines, in each site of the 5 component parts. - We have put signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" at 39 places, mostly in major intersections in the city.

	- We have indicated that it is one of the "Sites of Japan's Meiji Industrial Revolution" with a logo of UNESCO along with a logo of the world heritage in the explanation boards that explain the component parts. We have such explanation boards for visitors in 19 places in Hagi City.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910). - We show this chart at the World Heritage Visitor Center and at the little exhibition and break room called "Ohitayama Tatara Center" at the Ohitayama Tatara Iron Works. - We intend to put this chart in the brochures we will create in the near future.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" consistently in each area. - We intend to put this chart in the brochures we will create in the near future.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- Hagi City utilizes the brochures created by the collective entity of local authorities, the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution". - Hagi City has created maps for visitors that explain the locations and the overviews of the 5 component parts. - The Education Committee of Hagi City has created supplementary reading materials of social studies for elementary school students and educational books on hometown for junior high school students that explain the 5 component parts in Hagi City.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and	- The Hagi Museum situated in one of the component parts, "Hagi Castle Town" has curators specialized in history who conduct research studies, give lecture courses and respond to questions from guides etc. - The treasure house of the Shoin Shrine, "Shiseikan" adjacent to one of the component parts, "Shokasonjuku Academy" has curators specialized in history who conduct research studies and exhibitions of the related documents.

communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- Among the 16 staff in the Preservation of Cultural Assets Division of Hagi City, 2 of them are specialized in constructions, 3 are specialized in excavation research and 1 is a curator specialized in history who write reports and respond to questions from guides. 1 is specialized in world heritage and 15 others concurrently take care of administrative tasks related to world heritage in addition to their primary administrative tasks for the preservation of cultural assets. The Preservation of Cultural Assets Division conducts enlightenment activities for world heritage, providing visiting lectures, painting and photo contests and brochures in response to requests from Hagi residents.

８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？
 	
Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?
	- The World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" has been creating brochures and movies that can be shared with all the component parts. Hagi City bears part of the costs.
	- Hagi City has a certain budget allocation to interpretation activities such as creating brochures and providing guides every year. As for development of new contents, we try to utilize the government's financial support.
	- We have enough resources since:
	  o Ancient documents and pictorial diagrams of Hagi (the Choshu Domain) are stored in the Yamaguchi Prefectual Archives and in the Hagi Museum.
	  o The specialist staff in both facilities conduct research studies.

９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- Regarding the conservation and utilization of the component part, they are discussed in the Expert Committee of each component part that Hagi City has set up. - We have a "Council for Conservation Management in Hagi Area" that consists of heritage owners, managers, government-related people, etc. that was created in accordance with "General Principles and Strategic Framework for Conservation and Management" of the "Sites of Japan's Meiji Industrial Revolution." After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed. - We make it a rule to have our curators specialized in history check the contents and expressions when we create new brochures and explanation boards that explain the component parts.

10. 現在、貴構成資産が対象としている観光客層や観光客数は？

What are the existing target audience and visitor numbers at the component?

1. Hagi City

   2014 : 2,301,054

   2015 : 3,065,999 (thanks to a historical TV drama featuring the life of Shoin Yoshida's sister, Fumi)

   2016 : 2,417,406

2. Hagi Reverberatory Furnace

   2014 : N/A

   2015 : 154,609 (May to December)

   2016 : 166,316

3. Ebisugahana Shipyard

   2014 : N/A

   2015 : 56,204 (April to December)

   2016 : 55,639

4. Ohitayama Tatara Iron Works

   2014 : N/A

   2015 : 14,869 (April to December)

   2016 : 10,028

5. Hagi Castle Town (Castle Ruin)

   2014 : 44,963

   2015 : 81,920

   2016 : 57,693

6. Hagi Castle Town (Former Upper Class Samurai Residences)

   2014 : 6,230

   2015 : 8,481

   2016 : 6,150

7. Hagi Castle Town (Former Merchant Residences)

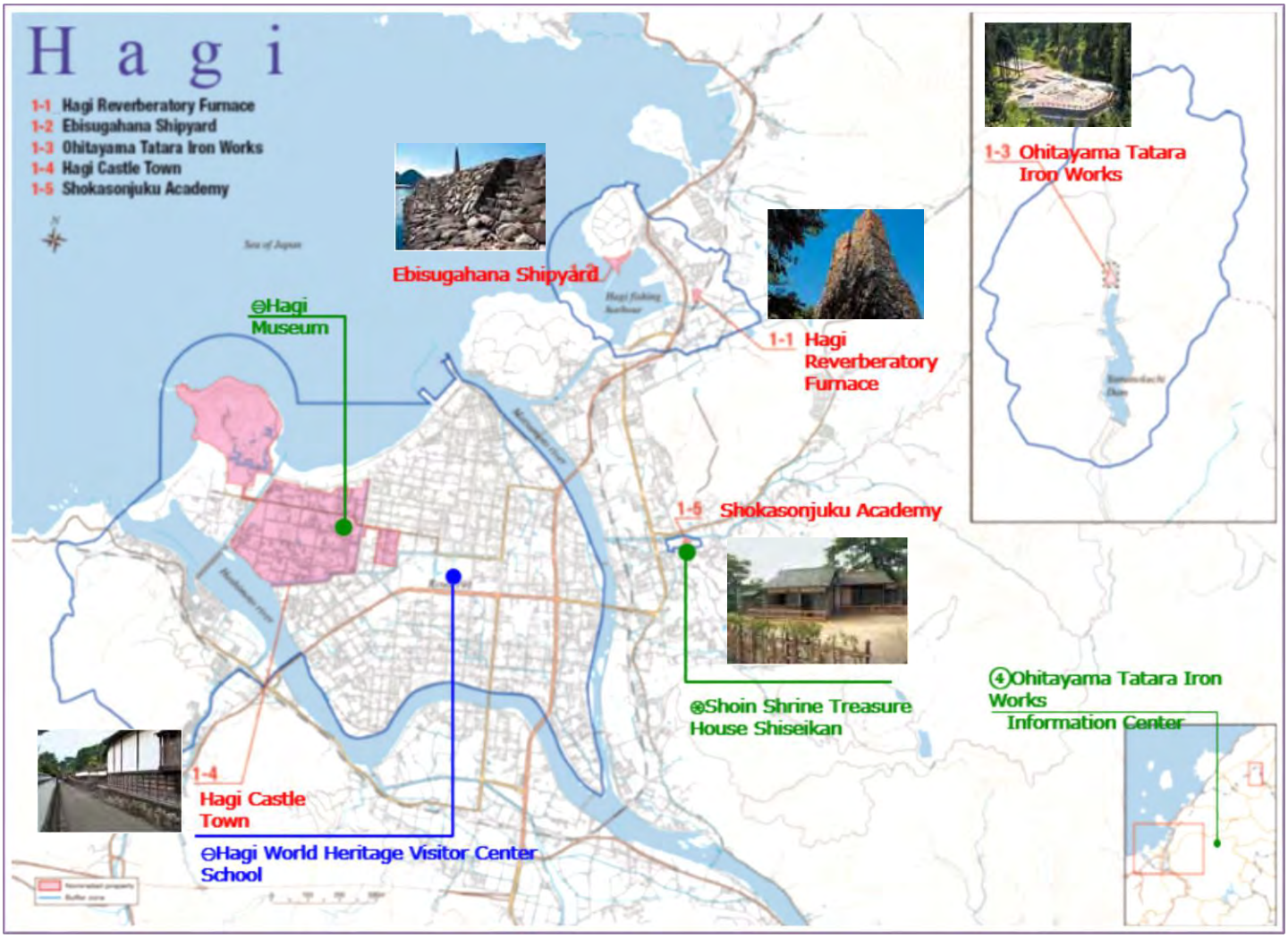
   2014 : 41,866

   2015 : 61,579

	2016 : 42,935 8. Shokasonjuku Academy 2014 : 462,206 2015 : 817,257 (thanks to a historical TV drama featuring the life of Shoin Yoshida's sister, Fumi) 2016 : 516,084
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	- We do not set any particular targets at each component part. - However, in our Japanese version of the DMO (Destination Marketing/Management Organization) Creation and Establishment Plan, we have defined the overall target visitor groups to Hagi City as follows: o Japanese people who live in the western part of Japan (the areas situated western than Kansai area) and in their 50's to 60's as well as 10's to 20's. (We have received most visitors from these areas and generations.) o Japanese people who live in Kanto and Tokai areas and in their 50's to 60's as well as 10's to 20's. (Those who live in a large metropolitan area. These generations have strong interests.) o Westerners mostly from the U.S. and France o (The visitor numbers from these countries have remained stable. Also it is easier to provide English and French explanations than other languages in terms of conservation.) o Eastern Asians mostly from Korea, Taiwan and China. (The government and the Yamaguchi Prefecture prioritize them. The number of visitors from these countries have increased in recent years.)
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	- Hagi Reverberatory Furnace o Open to the public all the time (no admission fee) - Ebisugahana Shipyard o Open to the public all the time (no admission fee) - Ohitayama Tatara Iron Works o Open to the public all the time (no admission fee) - Hagi Castle Town o The component part area is open to the public all the time except for the premises of private residences. The historical buildings are open only between 9:00 to

	17:00 (some of them charge admission fees). - Shokasonjuku Academy ○ Open to the public all the time (no admission fee) -

Map


Hagi
1-1 Hagi Reverberatory Furnace
1-2 Ebisugahana Shipyard
1-3 Ohitayama Tatara Iron Works
1-4 Hagi Castle Town
1-5 Shokasonjuku Academy
Ebisugahana Shipyard
⊖Hagi Museum
1-1 Hagi Reverberatory Furnace
1-3 Ohitayama Tatara Iron Works
1-5 Shokasonjuku Academy
⊛Shoin Shrine Treasure House Shiseikan
④Ohitayama Tatara Iron Works Information Center
1-4 Hagi Castle Town
⊖Hagi World Heritage Visitor Center School

Hagi World Heritage Visitor Center School



Established by	Hagi City World Heritage Utilization Promotion Group (Office: Hagi City Planning Policy Department)
Location	〒758-0041 Yamaguchi Prefecture Hagi City Emukai 602 Former Meirin Elementary School Gymnasium
Days Opened	Open 7 days a week
Hours of Operation	9:00 to 17:00
Admission Fee	300 yen
Exhibition Area	972㎡
Remarks	Planned to be established between February 2016 and February 2017. New facility is planned to be established on March 4th 2017. (Within Former Meirin Elementary School)

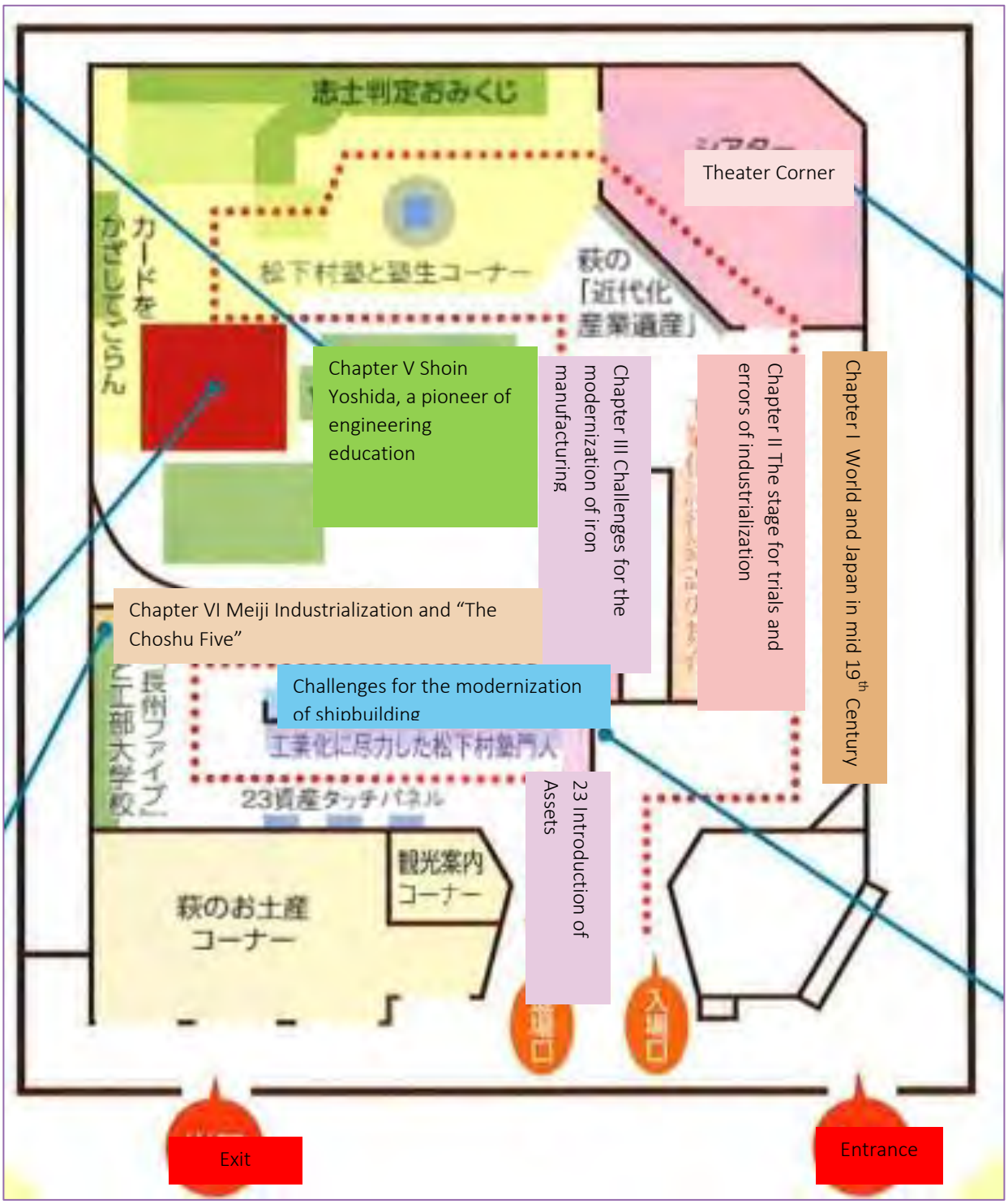
Exhibitions

- World and Japan in mid-19th century
- The stage for trials and errors of industrialization/Hagi Castle Town
- Challenges for the modernization of iron manufacturing/Hagi Reverberatory Furnace
- Challenges for the modernization of shipbuilding/Ebisugahana Shipyard & Ohitayama-tatara Iron Works
- Shoin Yoshida, a pioneer of engineering education/Shoka sonjuku
- Meiji Industrialization and "The Choshu Five"





Floor Plan


志士判定おみくじ
Theater Corner
カードをかざしてらくらん
松下村塾と誕生コーナー
萩の「近代化産業遺産」
Chapter V Shoin Yoshida, a pioneer of engineering education
Chapter III Challenges for the modernization of iron manufacturing
Chapter II The stage for trials and errors of industrialization
Chapter I World and Japan in mid 19th Century
Chapter VI Meiji Industrialization and "The Choshu Five"
Challenges for the modernization of shipbuilding
長州ファイブ 工部大学校
工業化に尽力した松下村塾門人
23遺産タッチパネル
23 Introduction of Assets
観光案内コーナー
萩のお土産コーナー
出口
入口
Exit
Entrance

Other Related Facilities

Hagi Museum



Established by	Hagi City
Location	Hagi City, Horiuchi 355
Hours of Operation	9:00 to 17:00
Admission Fee	Free (Paid zones exist)

Shoin Shrine Treasure House Shiseikan (Information Centre is located in "Ekinomichi Happiness Fukue")



Established by	Shoin Shrine
Location	Hagi City, Chinto 1537
Hours of Operation	9:00 to 17:00
Admission Fee	Adult: 500 yen

Ohitayama-tatara Iron Works Information Centre



Established by	World Heritage Registration Promotion Hagi City Council (Chair: Koji Nomura Mayor of Hagi City)
Location	Hagi City Fukuishimo 4014-2
Hours of Operation	Ekinomichi: 8:30 to 17:00 Restaurant: 11:00 to 15:00
Admission Fee	Free

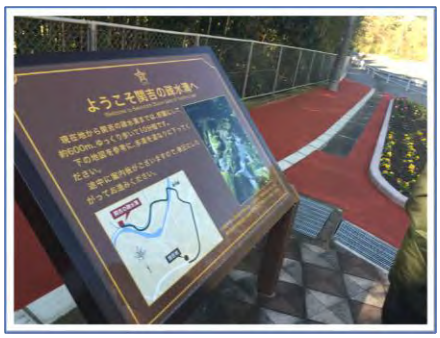
Ohitayama-tatara Iron Works Rest Area



Established by	Hagi City
Location	Hagi City, Shibuki 257-5
Hours of Operation	9:00 to 17:00
Admission Fee	Free

Area 2 Kagoshima









The *Shokoshuseikan*, located in the Former Shuseikan Machinery Factory building, together with the Foreign Engineers' Residence provide the principal interpretive centre for this Area. They visitor information about the site, buildings, its history and conservation as well as visitor amenities.

The *Terayama Charcoal Kiln* and *Sekiyoshi Sluice Gate of Yoshino Leat* are accessed by walking routes. Visitor amenities at the Kiln are available in the adjacent Children's Centre and Terayama Park.

Access
All the components are open year round. Shokoshuseikan and the Foreign Engineers' Residence charge a fee for entry.

Cars, and buses in service from various transport facilities, easily reach the Shuseikan. Pay parking spaces for 125 vehicles and 26 large-sized buses are currently available. However, traffic jams and a lack of parking spaces is anticipated for the future. The area is currently subject to traffic congestion and there is a proposal to construct a bypass to alleviate the issue.

Visitors to the Terayama Charcoal Kiln park at the nearby parking spaces at Children's Centre and Terayama Park and are directed on a walk to the site through the nature trails. The Sekiyoshi Sluice Gate of Yoshino Leat is mainly reached by cars and there is some parking available.

Comments
<u>World Heritage Logo</u>
The logo only been installed at some of the components, though a replica of the WHS inscription certificate was on display. Where it has been installed, its placement varies on how it can easily be seen by the audience. It should be placed in a prominent and accessible position.

<u>Audience</u>
This Area of the WHS has enjoyed a substantial increase in visitor numbers since the Site's inscription. No information on the visitor markets was provided. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

<u>Interpretive media</u>
The vision for the Area is to let visitors and residents correctly understand the value of the WHS and enhance how Shuseikan components contributes to the WHS values. The key message is "that our predecessors self-made passions and their cultivated technologies in Shuseikan contributed considerably to the modernization of Japan, pioneering the industrialization that occurred subsequently".

The main media used are interpretive panels and guided tours. A mobile phone COCOAR2 application provides pictorial information relating to each component. There are also various printed materials including brochures, maps and guides.

Educational material has been developed for primary school children to explain the Area's components history and significance which is available on line. Training has been provided to teachers in the use of this material. In addition, special classes are occasionally held to teach World Heritage at elementary and junior high schools.

The key information focuses on the Area's components history. Though there is some information on how the component relates to the WHS other components, the relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and tone used across the media. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.

Resources

There are professional staff to support the ongoing development of the Area's interpretation eg curators and education specialists. Volunteers also provide an invaluable interpretive resource.

Kagoshima City provides budgetary support to the WHS Interpretation Committee for the development of brochures and digital media. Shokoshuseikan and the Foreign Engineers' Residence revenue could be used for the ongoing development of its interpretation.

The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.

Kagoshima City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how Shuseikan contributes to OUV. Let people know the value of the cultural assets related to the Shuseikan project as regional tourism resources and promote regional revitalization mainly by increasing tourists. Preserve the heritages properly for the next generation as well as revitalize regional economy by promoting public awareness activities in partnership with local communities, governmental bodies, private organizations, property owners and related agencies. Our key message is that our predecessors' self-made passions and their cultivated technologies in Shuseikan contributed considerably to the modernization of Japan, pioneering the industrialization that occurred subsequently.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	No, it does not have one as of now except the following. However, we will consider detailed regional actions and undertake them on the basis of the interpretation strategy that the Cabinet Secretariat will create in cooperation with international experts. We state "utilizing the world cultural heritage" in the regional plans of Kagoshima Prefecture and Kagoshima City. We state "preserving the heritages properly for the next generation as well as revitalizing regional economy" in the Cooperative Action Plans for Modern Industrial Heritage Sites in Kagoshima.

	We set "increasing attractiveness of the world cultural heritage to enhance the value of the tourism resources that could draw more tourists" in the 3rd Stage of Tourism Strategic Plan of Kagoshima City that are currently being developed (to be completed in March, 2017).
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. Regarding the world heritage plaque compliant with the UNESCO's Operational Guidelines, the World Heritage Council has already made the common design for all the component parts of the "Sites of Japan's Meiji Industrial Revolution." In Kagoshima area, it is scheduled to be put up during the fiscal year of 2017. The guideboards and explanation boards inside the component parts state that it is a component part of the World Heritage Site. We have put signs that express "World Heritage Site" around the entrance of the component parts. We have put signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" at some points in the main roads that lead to the component parts. We have placed locally-designed world heritage flags on some of the roads that connect component parts. The websites of Kagoshima Prefecture, Kagoshima City and private heritage owners state that Shuseikan, Terayama Charcoal Kiln, Sekiyoshi Sluice Gate of Yoshino Leat have been inscribed as the component parts of the "Sites of Japan's Meiji Industrial Revolution," etc. The brochures that introduce the component parts in Kagoshima Prefecture state that they have been inscribed in the World Heritage List.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？	We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910).

What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	This chart can be found in the booklet of "Summary of Nomination to the World Heritage List" and consistently on the websites of each area. Former Kagoshima Foreign Engineer's Residence and Museum of the Meiji Restoration (local interpretation facility) also exhibit the chart, show it by DVD, and introduce it in brochures, etc.

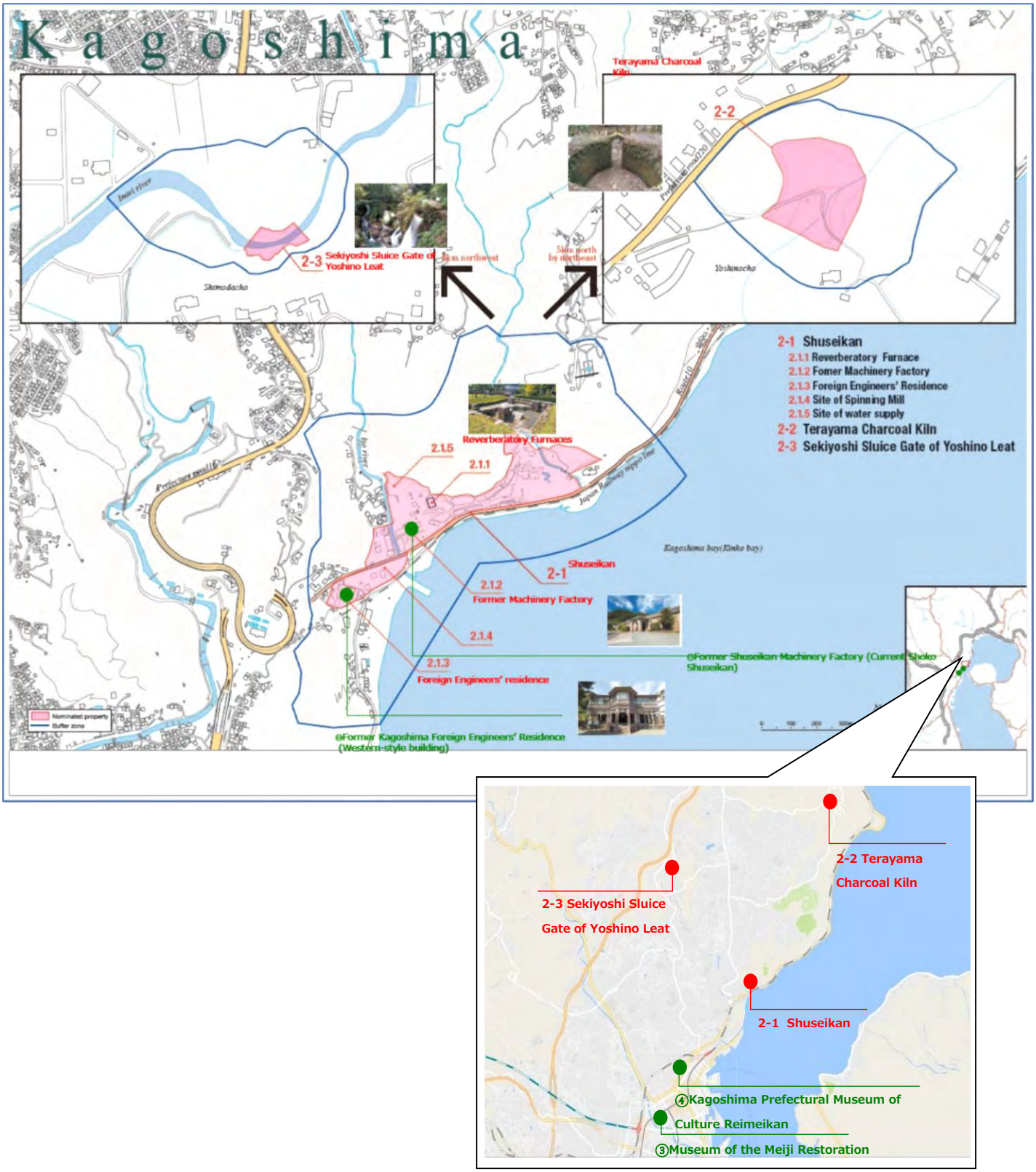
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination and in the Summary of Nomination to the World Heritage List. Former Kagoshima Foreign Engineer's Residence and Museum of the Meiji Restoration (local interpretation facility) explain the above through their exhibitions, brochures and websites, etc.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	Yes, there are. We utilize the brochures developed by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution that show public availability and introduce guidance facilities of all the component parts. Kagoshima Prefecture created a supplementary reading material called "Kagoshima Time Travel" that explains Kagoshima's component parts in a plain way for 5th grade school children. This supplementary reading material has been distributed to all the elementary school in Kagoshima Prefecture for school children's studies. In addition, we have held trainings for teachers so that they could utilize this material in their classes. The material is also available on the prefectural website so that they could utilize it as they like. Kagoshima City created brochures that explain the sites of Japan's Meiji Industrial Revolution and the overview of component parts in Kagoshima area as educational reference materials. The city not only distributed them to all the elementary schools in Kagoshima city, but also promote teaching world heritage in classes by holding explanatory excursions to the sites for teachers. In addition, the city also provides occasional special classes to teach world heritage, etc. targeting all the elementary and junior high schools in Kagoshima City.

	Private heritage owners have published books that explain Shuseikan project to increase awareness on the value of the component part and its activities.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	Shokoshuseikan (Former Shuseikan Machinery Factory) has 4 specialized curators who conduct research studies, show around visitors, and teach courses targeting teachers and elementary and junior high school students. Department of Cultural Asset at Kagoshima City Education Committee has 3 specialized curators who conduct research studies and excavation researches.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする にあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	The World Heritage Council for the Sites of Japan’s Meiji Industrial Revolution has been creating brochures, movies and smartphone application that can be shared with all the component parts. Kagoshima Prefecture and Kagoshima City bear the costs every year as part of its members. Offering financial resources every year, Kagoshima City has been running an organization called “Partnership Conference of Industrial Heritages that Contributed to Modernization” to increase awareness and understanding on component parts in Kagoshima area and also to train human resources. Sengan-en, Shokoshuseikan (Former Shuseikan Machinery Factory) and Former Kagoshima Foreign Engineer’s Residence charge admission fees that will be used for brochures, etc. that could enhance people’s understanding. Shimazu Limited, a scion of Lords of Satsuma who promoted Shuseikan project and also the owner of the component part, takes care of related ancient documents in terms of their preservation, research studies and exhibition, thus owns enough information resources. Department of Cultural Asset at Kagoshima

	City Education Committee also collects related materials and conducts document investigation in a carefully planned way.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	Regarding maintenance of a component part such as improving guidance function, the Expert Committee held by Kagoshima City takes care of its decision making. Also we have a Council for Conservation Management in Shuseikan Area that consists of heritage owners, managers, government-related people, etc. that was created in accordance with "General Principles and Strategic Framework for Conservation and Management of "Sites of Japan's Meiji Industrial Revolution." After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed. When we create new brochures and explanation boards that are related to explaining the component parts, we have our curators check them from experts' point of views.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	N/A
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	N/A
12・貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	Shuseikan Sengan-en (excluding a part that has not been arranged to allow public access: Site of Sluice), Shokoshuseikan (Former Shuseikan Machinery Factory) and Former Kagoshima Foreign Engineer's Residence are open from 8:30 to 17:30, 365 days a year (admission fees required).

	Other component parts are accessible all the time (free of charge). Terayama Charcoal Kiln All the areas of the component part are accessible all the time (free of charge). Sekiyoshi Sluice Gate of Yoshino Leat All the areas of the component part are accessible all the time (free of charge).

Map


K a g o s h i m a
Terayama Charcoal Kiln
2-2
2-3 Sekiyoshi Sluice Gate of Yoshino Leat
Shimodacho
Yoshinocho
2-1 Shuseikan
2.1.1 Reverberatory Furnace
2.1.2 Fomer Machinery Factory
2.1.3 Foreign Engineers' Residence
2.1.4 Site of Spinning Mill
2.1.5 Site of water supply
2-2 Terayama Charcoal Kiln
2-3 Sekiyoshi Sluice Gate of Yoshino Leat
Reverberatory Furnaces
2.1.5
2.1.1
Shuseikan
2-1
2.1.2
Former Machinery Factory
2.1.4
2.1.3
Foreign Engineers' residence
⑤Former Shuseikan Machinery Factory (Current Shoko Shuseikan)
⑥Former Kagoshima Foreign Engineers' Residence (Western-style building)
Kagoshima bay(Kinko bay)
2-2 Terayama Charcoal Kiln
2-3 Sekiyoshi Sluice Gate of Yoshino Leat
2-1 Shuseikan
④Kagoshima Prefectural Museum of Culture Reimeikan
③Museum of the Meiji Restoration

Other Related Facilities

Former Shuseikan Machinery Factory (Current Shoko Shuseikan)



Established by	Shimadzu Limited
Location	Kagoshima City, Yoshinochō 9698-1
Hours of Operation	8:30 to 17:30
Admission Fee	Adult: 1,000 yen
Remarks	Price includes visit to Sengan-en

Former Kagoshima Foreign Engineers' Residence (Western-style Building)



Established by	Kagoshima City
Location	Kagoshima City, Yoshinochō 9685-15
Hours of Operation	8:30 to 17:30
Admission Fee	Adult: 200 yen
Remarks	Open 7 days

Kagoshima Prefectural Museum of Cultural Reimeikan



Established by	Kagoshima Prefecture
Location	Kagoshima City, Shiroyamacho 7-2
Hours of Operation	9:00 to 18:00
Admission Fee	Adult: 310 yen

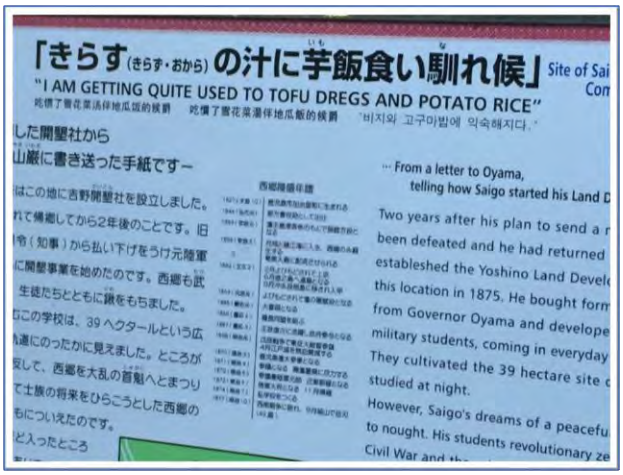
Museum of the Meiji Restoration



Established by	Kagoshima City
Location	Kagoshima City, Kajiyacho 23-1
Hours of Operation	9:00 to 17:00
Admission Fee	Adult: 300 yen

Additional Site Photos

Terayama Charcoal Kiln







Sekiyoshi Sluice Gate of Yoshino Leat





Shokoshuseikan







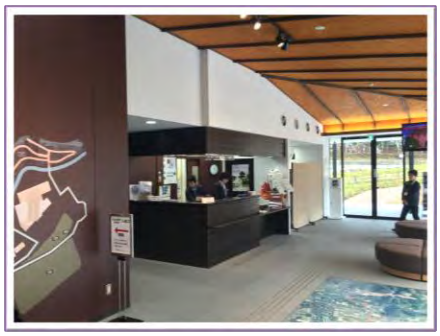




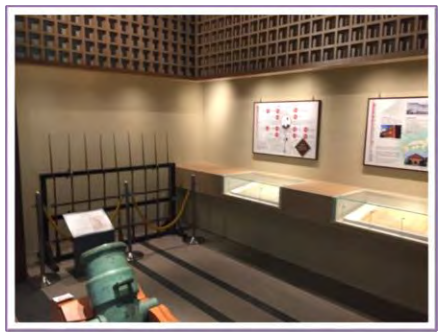


Area 3 Nirayama









The Nirayama Reverberatory Furnaces Visitor Centre opened in 2016. It provides the principal orientation experience for understanding this component's world heritage values. It provides an immersive and engaging multimedia experience. It provides visitor and staff amenities. Local people continue to offer goodwill guides for visitors.

Access

Visitor numbers were not presented at the site visit. However the place has enjoyed an increase in visitors since inscription and the opening of the new visitor centre.

The site is mainly accessed by car, with major routes well developed and signed. There are free parking spaces for 10 buses and 40 cars, but the spaces will be expanded since an increase of visitors is anticipated. Based on further consideration, road signs will be set up from public transportation nodes and at main intersections en-route to the Nirayama Reverberatory Furnaces.

Comments

World Heritage Logo

At the time of the site visit, the logo was yet to be installed, though a replica of the WHS inscription certificate was on display. When it is installed, it should be placed in a prominent and accessible position where it can be easily be seen by the audience

Audience

This Area of the WHS has enjoyed a substantial increase in visitor numbers since the Site's inscription and with the opening of the new visitor centre. No information on the visitor markets was provided. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The vision for the Area is to let visitors and residents correctly understand the value of the WHS and enhance how the Furnaces contributes to the WHS values. The key message is detailed below in the questionnaire. It provides a detailed statement of the furnaces and their significance.

In addition to the visitor centre's multimedia experience, the main media used around the place are interpretive panels and guided tours. A mobile phone COCOAR2 application provides pictorial information relating to each component. There are also various printed materials including brochures, maps and guides.

The key information focuses on the component's history. Though there is some information on how the component relates to the WHS other components, the relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and

tone used across the media and across all the WHS components. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.



Resources

Though there is staff to manage the component's conservation work programs, it was not clear if there is professional staff to support the ongoing development of the Area's interpretation e.g. curators and education specialists. Volunteers provide an invaluable interpretive resource.

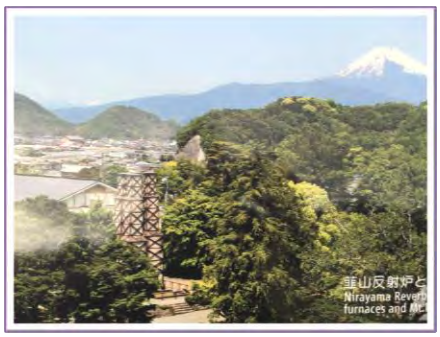


Izunokuni City provides budgetary support to the WHS Interpretation Committee's development of brochures and digital media. The visitor centre's revenue is used for the development of brochures and the centre's maintenance.



The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.





Izunokuni City

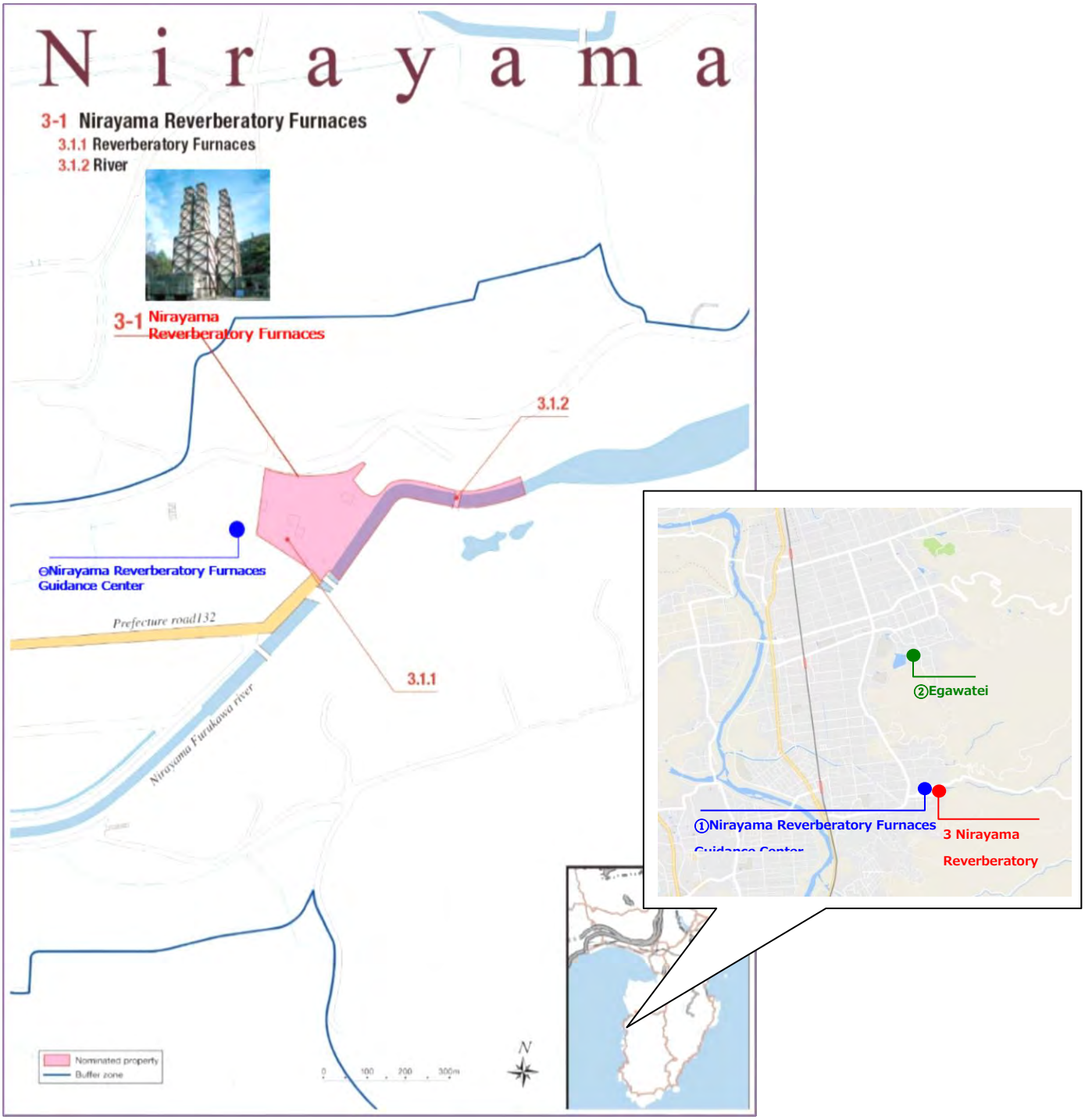
Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission, and key message are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the Nirayama Reverberatory Furnaces contributes to OUV. - Promote regional revitalization by informing people on the value of the cultural and tourism resources of the region. - Our key message is as follows: "Since Nirayama Reverberatory Furnaces are the only existent reverberatory furnaces that used to operate, they are an outstanding evidence for the challenges to import modern iron-making technologies and the trial and error experimentations to modernize Japan at the end of Edo period. The reverberatory furnaces constructed for the purpose of producing iron cannons were made possible by the efforts of the people who deciphered the Dutch books and the technological exchanges within Japan on the basis of the knowledge from such Dutch books, making a huge step toward the industrialization of Japan.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	No, it does not have one as of now. However, we aim to develop our regional specific strategy in accordance with the interpretation strategy that the Cabinet Secretariat will develop in cooperation with international experts
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	- We have put a replica of the World Heritage Certificate at the entrance (admission gate) of the guidance center. - The explanatory boards inside the component part state that it is a component part of the World Heritage Site. - We will put the world heritage plaque by within the fiscal year of 2017. - We have put a road sign designed specifically for the "Sites of Japan's Meiji Industrial Revolution" on the main road that leads to the component part. We intend to put more road signs one by one in due course. - The websites Shizuoka Prefecture and Izunokuni City provide some basic information on the component part and state that it has been inscribed in the World Heritage List.

４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910) in the guidance facility and in the booklet of "Summary of Nomination to the World Heritage List".
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination and in the booklet of "Summary of Nomination to the World Heritage List".
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- We utilize the brochures developed by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that show public availability and introduce guidance facilities of all the component parts. - We plan to create specific brochures on the component part within the fiscal year of 2017. - We are in the process of creating educational booklets in the fiscal year of 2017.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (eg curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- There are three staff in the World Heritage Division of Izunokuni City. They are engaged in planning the Restoration, Conservation and Utilization Plans (conservation work programmes), delivery lecture courses and management and maintenance of the guidance center. - There are five staff (of which four are specialist staff) in the Cultural Properties Department of Izunokuni City Education Committee. They are in charge of the operation and management of the component part.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- We have borne part of the costs for the common materials for all the component parts - brochures and movies made by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that is a collective organization consists of each region. The costs are funded by Izunokuni City and Shizuoka Prefecture. - We utilize the funds from the admission fees to the component part for operation and maintenance of the guidance center and brochures to promote education to the general public.

	- We have enough information resources since the Public Interest Incorporated Foundation EGAWA-bunko, which is a management body of Egawa Family who was involved in constructing the component part, preserves, investigates and research the ancient documents. - Izunokuni City and Shizuoka Prefecture also cooperate with them in the investigation and research on such ancient documents.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- For the maintenance of the component part, we have the Expert Committee of Izunokuni City. - We have also established the "Council for Conservation Management in Nirayama Area" composed of property owners, managers, government-related people, etc in accordance with the "General Principles and Strategic Framework for Conservation and Management" for the "Sites of Japan's Meiji Industrial Revolution". After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	N/A
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	N/A

12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？
 	
Is the component open to the public? If so, when and what areas can be accessed?
	Yes, it is open to the public. The details are as follows.
	- When
	  ○ (Apr-Sep) 9:00-17:00
	  ○ (Oct-Mar) 9:00-16:30
	- Closed on the 3rd Wed every month starting from April this year.
	- What areas: All the areas of the component part.
	- Admission fees: 300 yen (50 yen for elementary and junior high school pupils)
	- It will be a flat fare of 500 yen from April this year

Map


Nirayama
3-1 Nirayama Reverberatory Furnaces
3.1.1 Reverberatory Furnaces
3.1.2 River
3-1 Nirayama Reverberatory Furnaces
3.1.2
⊖Nirayama Reverberatory Furnaces Guidance Center
Prefecture road132
3.1.1
Nirayama Furukawa river
Nominated property
Buffer zone
0 100 200 300m
N
②Egawatei
①Nirayama Reverberatory Furnaces
3 Nirayama Reverberatory

Nirayama Reverberatory Furnaces Guidance Center



Established by	Izunokuni City
Location	Shizuoka Prefecture, Izunokuni, Naka 260-1
Days Closed	Third Wednesday of each month
Hours of Operation	9:00 to 17:00 (Until 16:30 between October and March)
Admission Fee	General: 500 yen
Exhibition Area	Approximately 240㎡
Remarks	2016 December 11 newly opened

Exhibitions

- Prologue
- Challenges for modernization
- Road to reverberatory furnace
- Steps for the construction of reverberating furnace and Nirayama
- Full view of reverberating furnace
- Everything about reverberating furnace





Floor Plan


Exit Gate
Prologue Challenges for modernization
Road to reverberatory furnace Steps for the construction of reverberating furnace and Nirayama
Full view of reverberating furnace Everything about reverberating furnace
Entrance Hall
退出ゲート
テラス
消火ポンプ室
倉庫
準備室
地流し
坪庭
風除室2 FL±0
多目的室2 FL±0
事務室 FL±0
フロント FL±0
PS
廊下 FL±0
多目的室1（ロビー、ギャラリー） FL±0
D韮山反射炉と世界遺産
スロープ
風除室1 FL±0
清掃
HMC FL±0
WC (M) FL±0
WC (W) FL±0
展示室 FL±0

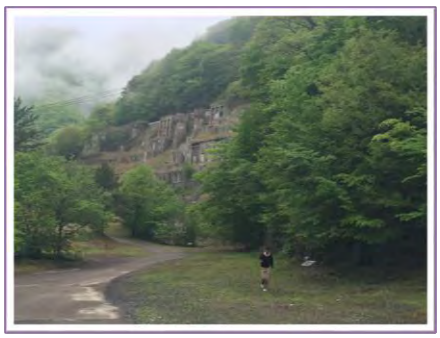
Other Related Facilities

Egawatei



Established by	Public Interest Incorporated Foundation EGAWA-bunko
Location	Shizuoka Prefecture, Izunokuni-shi, Nirayamanirayama 1
Hours of Operation	9:00 to 16:30
Admission Fee	General: 600 yen

Area 4 Kamiashi











The Kamaishi Iron and Steel History Museum is located in the centre of the Kamaishi City. It is the principal interpretive centre for this Area. This museum provides an immersive and engaging multimedia experience including a full-scale replica of one of the Hashino blast furnaces. It also provides visitor amenities.

The *Hashino Iron Mining and Smelting Site* visitor centre was constructed in the adjacent Aonoki Green Park. The centre conveys this component's World Heritage values through various interpretive platforms, and provides visitor and guide amenities. The Kamiashi Iron Mine Office also contributes to the interpretation of the place.

Access

Though the Hashino Iron Mining and Smelting Site is open all year round, only the former shaft furnace is open to the public. The former mining area and transport road are not open to the public.

Access is mainly by car via a well-developed road system. A parking area with a capacity for 80 cars is located adjacent to the visitor centre, just outside the property. Another parking area, for about 10 vehicles, is available at the entrance of the Site. There is as yet unused capacity in the Aonoki Green Park, so it is possible to expand the parking spaces depending on visitor demand.

Comments

World Heritage Logo

At the time of the site visit, the logo was yet to be installed, thought there is a flag with the logo at the place's entrance. When it is installed, it should be placed in a prominent and accessible position where it can be easily be seen by the audience.

Audience

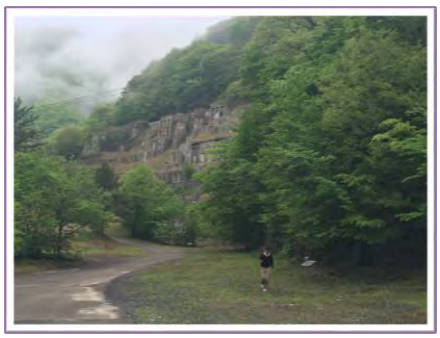
This place of the WHS has enjoyed a substantial increase in visitor numbers since the Site's inscription. However, place is subject to natural disasters which adversely impacted visitor numbers in 2016/17. The current visitor markets are local and national, mainly mature visitors or school children. There is a aim to increase the family market and attract an international audience in preparation for the 2019 Rugby World Cup. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The vision for the Area is to let visitors and residents correctly understand the value of the WHS and enhance how the place contributes to the WHS values. The key message is "Kamaishi – the Birthpalce of Moder Iron Manufactuing. The iron-making technology of Kamaishi as represented by the Hashino Iron Mining and Smelting Site contributed considerably to the modernization of Japan".

In addition to the visitor centre's experience, the main media used around

the place are interpretive panels and guided tours. Digital platforms include mobile phone COCOAR2 application provides pictorial information relating to each component and a handheld device. There are also various printed materials including brochures, maps and guides.



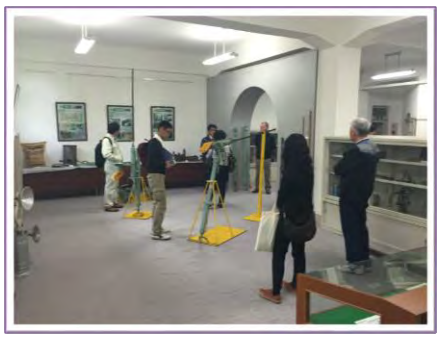
The key information focuses on the component's history. Though there is some information on how the component relates to the WHS other components, the relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and tone used across the media and across all the WHS components. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.



Resources

Though there is staff to manage the place, it was not clear if there is professional staff to support the ongoing development of the component's interpretation e.g. curators and education specialists. Volunteers provide an invaluable interpretive resource.



Kamaishi City provides budgetary support to the WHS Interpretation Committee's development of brochures and digital media. Any further development of interpretive material and experiences will require government financial support.

The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.





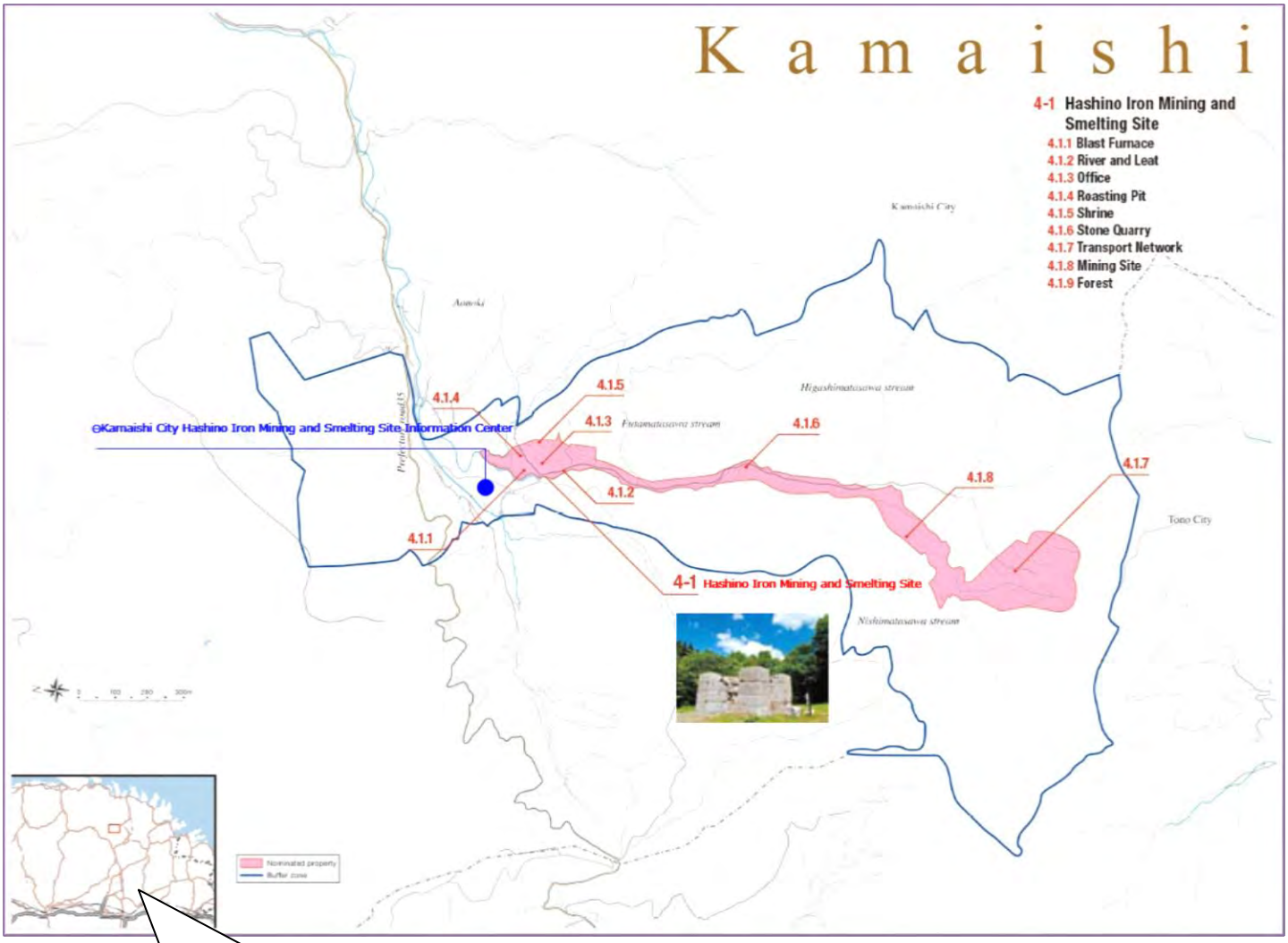
Kamaishi City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the Hashino Iron Mining and Smelting Site contributes to OUV. - Increase the number of tourists by publicizing the value of the cultural assets of the Hashino Iron Mining and Smelting Site as regional tourism resources, resulting in promoting regional revitalization. Our key message is: - "Kamaishi – the Birthplace of Modern Iron Manufacturing". The iron-making technology of Kamaishi as represented by the Hashino Iron Mining and Smelting Site contributed considerably to the modernization of Japan.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	No, it does not have one as of now. However, we will create detailed regional strategies on the basis of the interpretation strategy that the Cabinet Secretariat will create in cooperation with international experts. We state that we utilize world heritage sites in the "Regional Comprehensive Strategy" and in the "Kamaishi City Sightseeing Promotional Vision" that we have been creating.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. - We have placed a flag that states that it is a world heritage site at the entrance area. - We have placed a banner that states that the Hashino Iron Mining and Smelting Site is a world heritage site inside its Information Center. - The website of Kamaishi City has an article that shows that the Hashino Iron Mining and Smelting Site has been inscribed in the World Heritage List. - We have put signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" at some points in the main roads that lead to the world heritage sites.

４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910). - This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" and consistently on the websites of each area. In Kamaishi City, we also use this chart in the exhibitions in the Information Center of the Hashino Iron Mining and Smelting Site and in our brochures.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" consistently in each area.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	Yes, there are. - We have created and utilized the brochures that show public availability and introduce guidance facilities of all the component parts of the "Sites of Japan's Meiji Industrial Revolution". - Iwate Prefecture has created brochures that show two world heritage sites of Iwate (Hiraizumi and Hashino Iron Mining and Smelting Site) to attract tourists to visit both.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- We have an assistant manager who is also a researcher of cultural assets and conducts investigation research and visiting lectures. - The General Administration Division of the Educational Committee also has a staff who concurrently serves in the World Heritage Office.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- The collective entity of local authorities, the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" has been creating brochures and movies that can be shared with all the component parts. Kamaishi City bears part of the costs. - Kamaishi City has a certain budget allocation to usual brochures every year. As for development of new contents, we will ask the government for financial support.

９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- Regarding the conservation and utilization of the component part, they are discussed in the Historical Site Conservation Exploratory Committee that was set up by the Education Committee. - We have a "Council for Conservation Management in Kamaishi Area" that consists of heritage owners, managers, government-related people, etc. that was set up in accordance with "General Principles and Strategic Framework for Conservation and Management" of the "Sites of Japan's Meiji Industrial Revolution." After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	- Most of the tours to our component part are personal travels and group tours by middle-aged and older people. There are some educational travels by schools. - The number of visitors rose to 43,316 in 2015 from 6,036 in 2014. Due to the typhoon damage in the summer of 2016, the number of visitors went down to 17,181 in 2016. - We have only a few visitors from abroad.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	- We would like to create the demand for family trips in addition to the above. - We plan to increase foreign visitors in preparation for the Rugby World Cup in 2019 that will be held in Japan.
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	- Among the areas within the Hashino Iron Mining and Smelting Site, the former mining area and former transport road are not open to the public. Only the former shaft furnace is open to the public. - No time restriction. - During the winter time, it is difficult to visit the area due to the heavy snow.

Map


K a m a i s h i
4-1 Hashino Iron Mining and Smelting Site
4.1.1 Blast Furnace
4.1.2 River and Leat
4.1.3 Office
4.1.4 Roasting Pit
4.1.5 Shrine
4.1.6 Stone Quarry
4.1.7 Transport Network
4.1.8 Mining Site
4.1.9 Forest
Kamaishi City
Higashimatsuwa stream
Nishimatsuwa stream
Tono City
⊖Kamaishi City Hashino Iron Mining and Smelting Site Information Center
4.1.1
4.1.2
4.1.3
4.1.4
4.1.5
4.1.6
4.1.7
4.1.8
4-1 Hashino Iron Mining and Smelting Site


4 Hashino Iron Mining and Smelting Site
①Kamaishi City Hashino Iron Mining and Smelting Site Information Center
③Former Kamaichi Iron Mine Office
④Kamaishi City Local Museum
②Kamaishi City Steel Museum

Hashino Iron Mining and Smelting Site Information Center



Established by	Kamaishi City
Location	Iwate Prefecture, Kamaishi City, Hashinochō Dai 2, 6
Days Opened	April 1st to December 8th (Closed for winter)
Hours of Operation	9:30 to 16:30
Admission Fee	Free
Exhibition Area	Approximately 80㎡

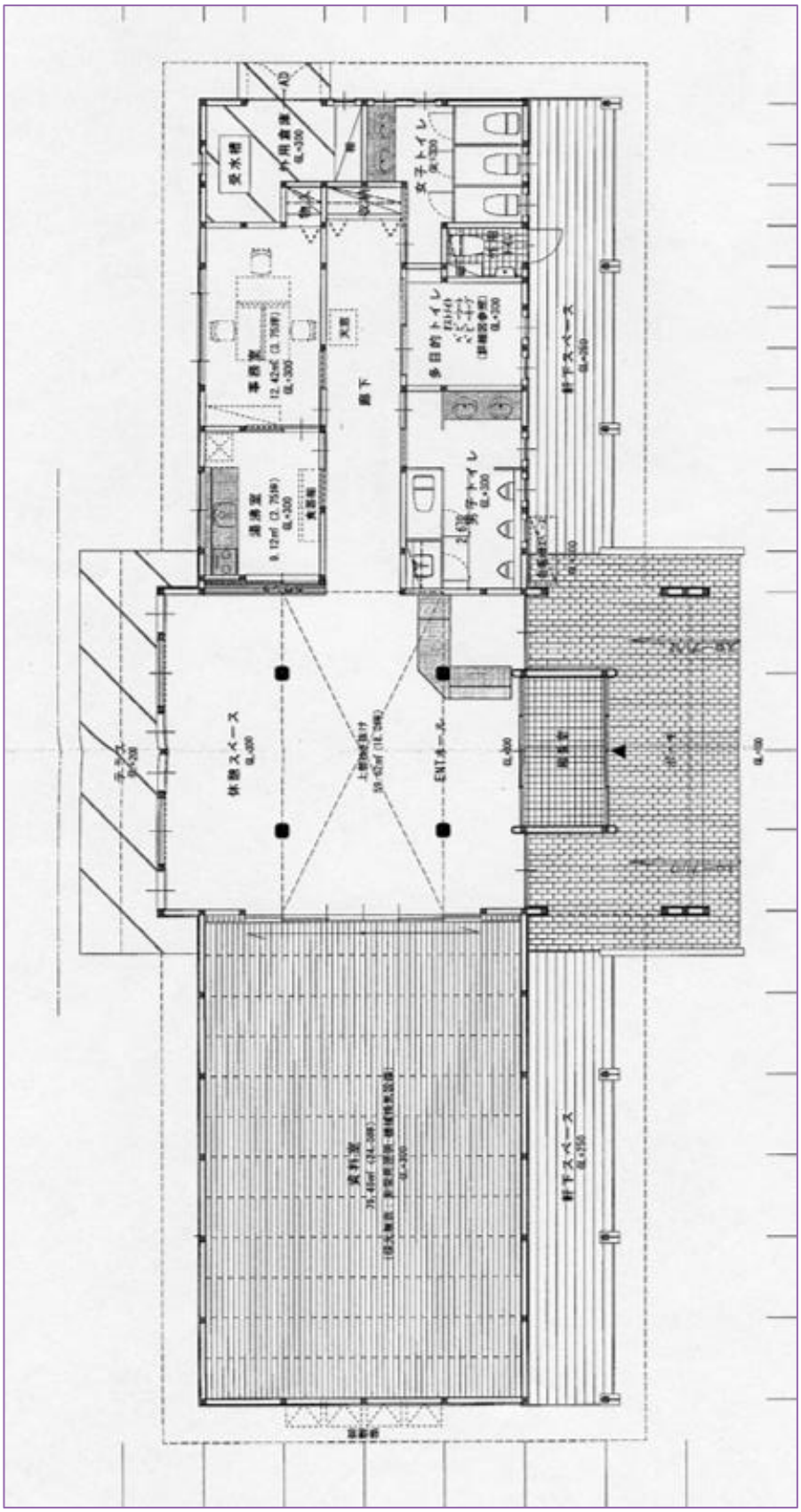
Exhibitions

- Panel exhibitions
- Authentic objects
- Images



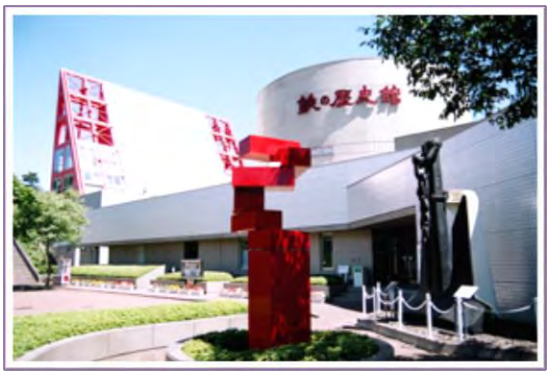


Floor Plan



Other Related Facilities

Kamaishi City Steel Museum



Established by	Kamaishi City
Location	Kamaishi City, Ōdairachō, 3 Chome 12-7
Hours of Operation	9:00 to 17:00
Admission Fee	General: 500 yen

Former Kamaishi Iron Mine Office



Established by	Kamaishi City
Location	Kamaishi City, Kasshicho, Dai 1 Chiwari, 90-2
Hours of Operation	9:30 to 16:30
Admission Fee	Adult: 300 yen

Kamaishi City Local Museum



Established by	Kamaishi City
Location	Kamaishi City, Suzukochō, 15-2
Hours of Operation	9:30 to 16:30
Admission Fee	Free

Area 5 Saga



The Tsunetami Sano Memorial Museum is located adjacent to the *Mietsu Naval Dock*. It is the principal interpretive centre for Saga. The modern and spacious museum provides an immersive multimedia interpretive experience. It provides observation deck that provides a comprehensive and wholistic view of this WHS component. The museum also provides visitor and staff amenities.

Access

The Mietsu Naval Dock is open to the public at any time.



This site is accessed by car as well as by bus from Saga station. There is free parking with the capacity for about 60 cars and several large-sized buses.

Comments

World Heritage Logo

At the time of the site visit, the logo was yet to be installed, though a replica of the WHS inscription certificate was on display. When it is installed, it should be placed in a prominent and accessible position where the place can be easily be seen by the audience.



Audience

This Area of the WHS has enjoyed a substantial increase in visitor numbers since the Site's inscription. No information on the visitor markets was provided. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The vision for the Area is to let visitors and residents correctly understand the value of the WHS and enhance how the Mietsu Naval Dock contributes to the WHS values. The key message is "you can slip back in time to Mietsu in the 19th century – the heritage that self-explains Saga Clan's pioneering trail and error experimentations to modernize Japan at the end of the Edo period".



In addition to the visitor centre's experience, the main media used around the place are strategically placed interpretive panels and guided tours. Digital platforms includes a smart phone COCOAR2 application which provides pictorial information relating to each component and existing websites are used to promote the components. There are also various printed materials including brochures, maps and guides. In addition, educational material targeting elementary school children has been developed.

The key information focuses on the component's history. Though there is some information on how the component relates to the WHS other components, the relationship and connectivity should be further developed.

Resources

There are professional staff to support the ongoing development of the Area's interpretation e.g. curators and education specialists. Volunteers also provide an invaluable interpretive resource.

Saga City provides budgetary support to the WHS Interpretation Committee's development of brochures and digital

media. There are plans to renew the visitor facility in the near future which will require government financial support.











Saga City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission, and key message are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the Mietsu Naval Dock contributes to OUV. - Utilize the Mietsu Naval Dock as one of the tourism resources in the southern area of Saga City and promote regional revitalization by letting people know its value and increasing tourists as a result. - Since Saga Clan's trial and error experimentations to modernize Japan at the end of Edo period contributed significantly to the modernization of Japan in later years, our key message has been "The origin of Japan's modernization, Saga". - Currently, we are developing the Restoration, Conservation and Utilization Plans (conservation work programmes, tentative name) on the Mietsu Naval Dock. In this plan, we set "You can slip back in time to Mietsu in 19th century. – the heritage that self-explains Saga Clan's pioneering trial and error experimentations to modernize Japan at the end of Edo period" as our goals for restoration, conservation and utilization of the Mietsu Naval Dock.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We mention the utilization of the world heritage in the Regional Comprehensive Strategy of Saga City. - We do not have our own interpretation strategy for the Mietsu Naval Dock. Therefore we will plan and undertake our interpretation actions for the Mietsu Naval Dock in accordance with the interpretation strategy that the Cabinet Secretariat will develop in cooperation with international experts

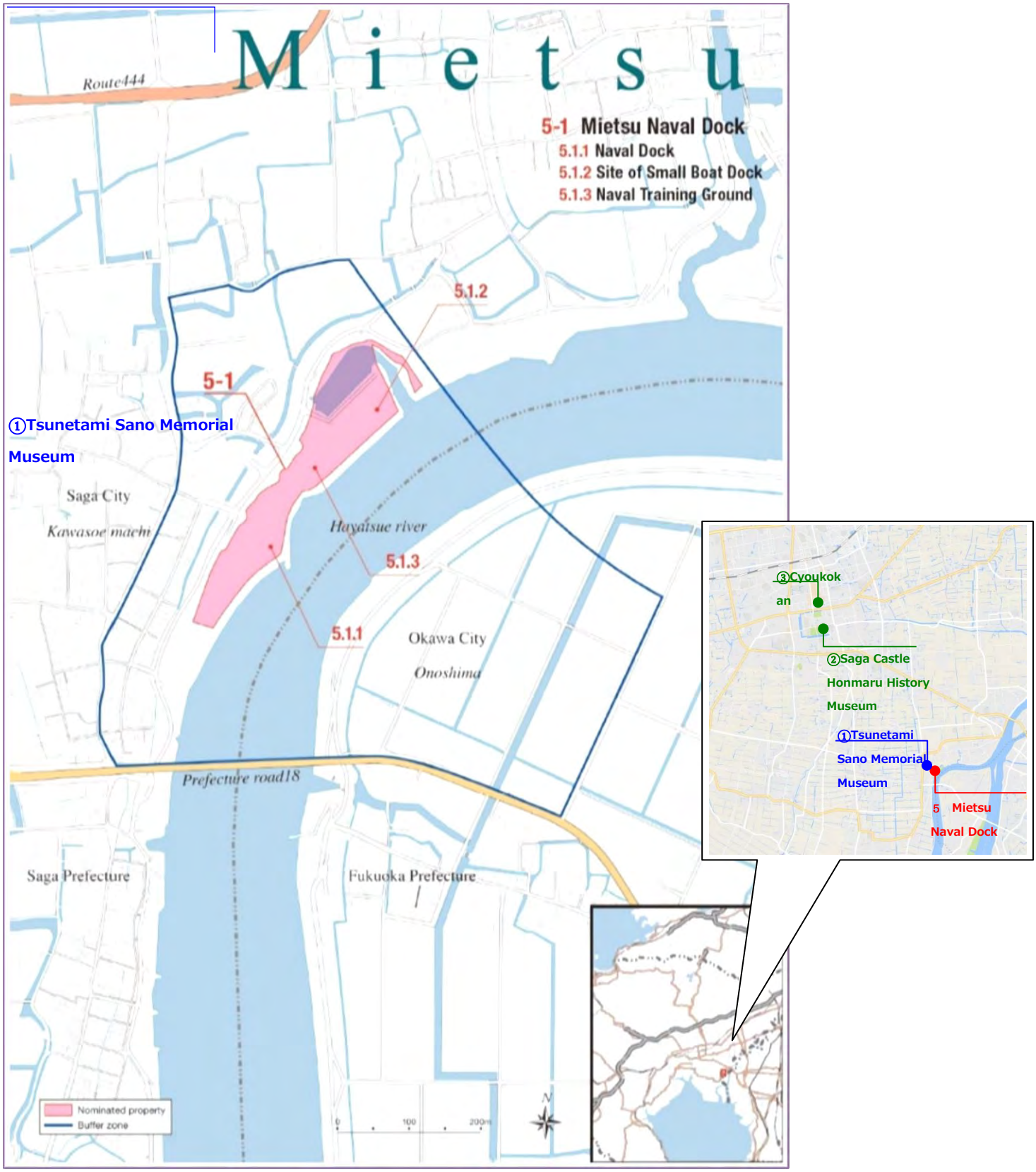
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど）
 	
Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)
	Yes, it does.
	- Within the site
	  o We have put a sign that explains that the Mietsu Naval Dock is a component part of the World Heritage Site at the entrance of the neighboring guidance facility (Tsunetami Sano Memorial Museum).
	  o We have agreed to design the world heritage plaque that is common for all the component parts of the "Sites of Japan's

	Meiji Industrial Revolution" in accordance with the UNESCO's Operational Guidelines. Currently, it is being created for all the component parts and is scheduled to be put in Saga City by March, 2017. o The brochures distributed to the visitors at the guidance facility explain that the Mietsu Naval Dock has been inscribed in the World Heritage List as a component part. - Outside the site o We have put road signs designed specifically for the "Sites of Japan's Meiji Industrial Revolution" on main roads that lead to the Mietsu Naval Dock. (25 places within the city) o We advertise the "Sites of Japan's Meiji Industrial Revolution" and their 23 component parts on the bodies of two Saga city buses,. o The enlightening DVDs that Saga City created state that the Mietsu Naval Dock has been inscribed in the World Heritage List as a component part. o The websites and facebook pages of Saga Prefecture and Saga City state that the Mietsu Naval Dock has been inscribed in the World Heritage List as a component part.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910). - This chart can be found consistently in the booklet of "Summary of Nomination to the World Heritage List" and on the websites of each area. - We explain it in the brochures of Mietsu Naval Dock created by Saga City. Additionally, our guides explain it to the visitors through a picture-story show. - When we give lectures to local citizens on the Mietsu Naval Dock at delivery lectures, we explain the chart to them.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found consistently in the Summary of Nomination to the World Heritage List.

６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- We utilize the brochures developed by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that show public availability and introduce guidance facilities of all the component parts. - We intend to modify the explanatory movies that are shown in the guidance facility upon the renewal of the facility in the near future. - We have created brochures targeting 5th grade school children that simply explain the "Sites of Japan's Meiji Industrial Revolution" and "Mietsu Naval Dock". They use these brochures when they visit the site and in their classes. - We are also working on a DVD targeting 5th grade school children that allow them to understand such subjects easily. - The social studies supplementary reading material created by Saga City Education Committee explains that the Mietsu Naval Dock in Saga City has been inscribed in the World Heritage List. (Currently, Saga City Education Committee is revising the material.)
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- There are six staff including two specialist staff in the world heritage department of Saga City. They are engaged in the educational activities such as explanations through exhibitions at the guidance facility, guide training, various public relations and delivery lectures to citizens. - There are also two specialist staff who investigate and research the Mietsu Naval Dock in the Cultural Activities Promotion Division of Saga City Education Committee. - There are seven staff including three specialist staff who are in charge of the world heritage. They are engaged in delivering information and various public relations activities. - The staff are trained by Training on Conservation and Management hosted by the World Heritage Council of the "Site of Japan's Meiji Industrial Revolution" etc.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- We have borne part of the costs for the common materials for all the component parts - brochures and movies made by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that is a collective organization consists of each region. The costs are funded by Saga Prefecture and Saga City. - We allocate a certain budget every year in creating our usual brochures in Saga City. - Regarding the Mietsu Naval Dock, we allocate a certain budget every year including some support from Saga Prefecture for Saga City's continuous excavation and document investigation.

	- We plan to renew our guidance facility in the near future. We seek for some financial support from the government to proceed with it.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- For examining the maintenance of the component parts and the guidance facilities, we have the Expert Committee of Saga City. We have also established the "Council for Conservation Management in Saga Area" composed of property owners, managers, government-related people, etc. in accordance with the "General Principles and Strategic Framework for Conservation and Management" for the "Sites of Japan's Meiji Industrial Revolution". After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	N/A
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	N/A
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	All the component parts are open all the time (free of charge).

Map


Mietsu
Route444
5-1 Mietsu Naval Dock
5.1.1 Naval Dock
5.1.2 Site of Small Boat Dock
5.1.3 Naval Training Ground
5.1.2
5-1
①Tsunetami Sano Memorial Museum
Saga City
Kawasoe machi
Hayatsue river
5.1.3
5.1.1
Okawa City
Onoshima
Prefecture road18
Saga Prefecture
Fukuoka Prefecture
Nominated property
Buffer zone
③Cyoukokan
②Saga Castle Honmaru History Museum
①Tsunetami Sano Memorial Museum
5 Mietsu Naval Dock

Tsunetami Sano Memorial Museum



Established by	Saga City
Location	〒840-2202 Saga Prefecure, Saga City, Kawasoe-machi Hayatsu Etsu 446-1
Days Closed	Monday (if it falls on a holiday or substitute holiday, then the following day is closed), Year-end and New Year holidays
Hours of Operation	9:00 to 19:00 (Exhibition room is open until 17:00)
Admission Fee	Free
Exhibition Area	Approximately 160㎡

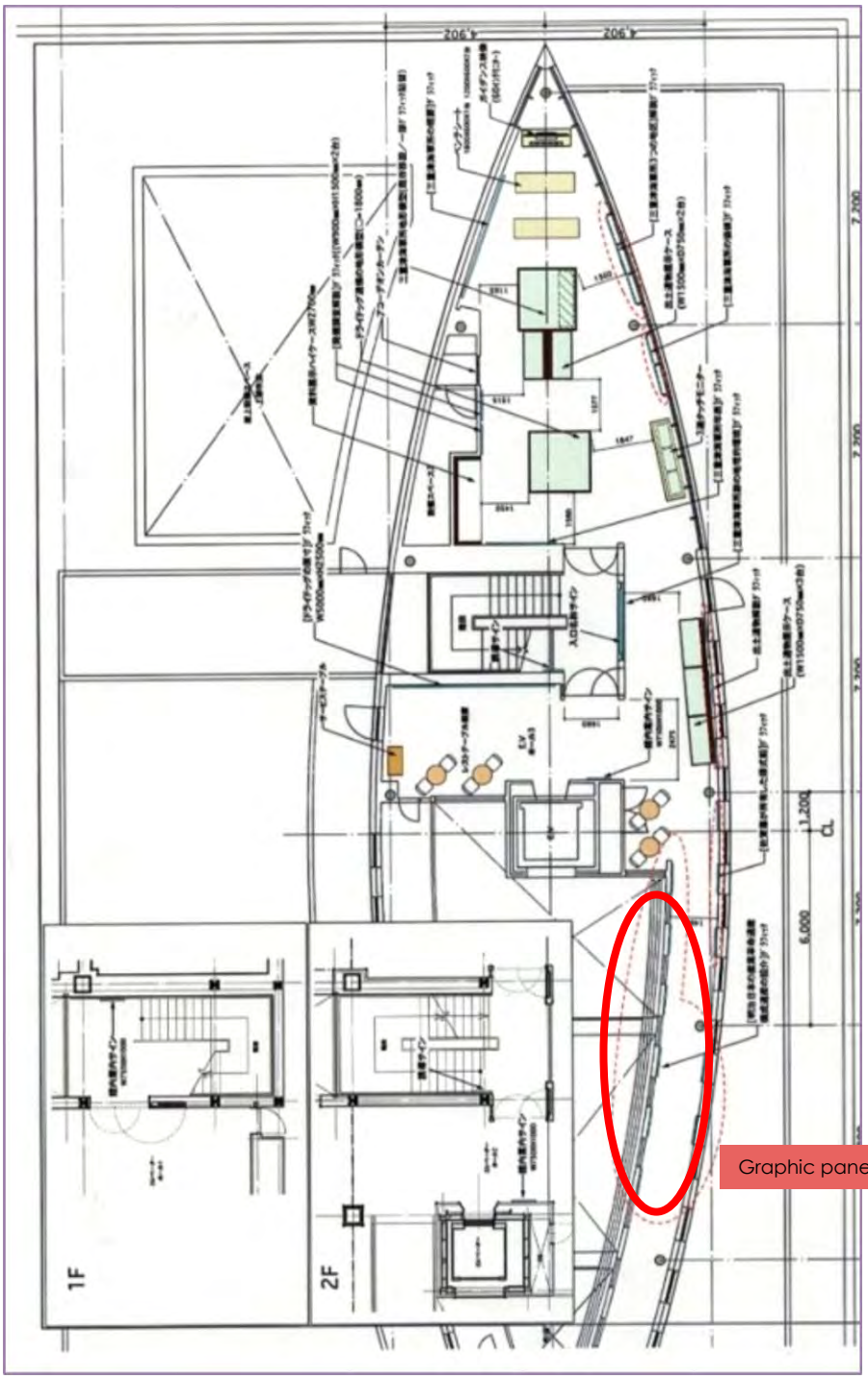
Exhibitions

- Guidance image
- Dry dock reconstructed model
- Information search device
- Dry dock panel (original size)
- Artifacts
- Exhibitions using virtual reality etc.





Floor Plan



Other Related Facilities

Saga Castle Honmaru History Museum



Established by	Saga Prefectural Government
Location	〒840-0041 Saga Prefecture, Saga City, Jōnai, 2−18−1
Hours of Operation	9:30 to 18:00
Days Closed	End of Year (12/29 to 12/31) Temporary closings may take place
Admission Fee	Free

Cyoukokan



Established by	Nabeshima Houkoukai (Public interest incorporated foundation)
Location	〒840-0831 Saga Prefecture, Saga City, Matsubara, 2-5-22
Hours of Operation	9:30 to 16:00
Days Closed	Sunday & Holidays, Exhibition Preparation Period (Only planned exhibitions will be closed), Year-end and New Year holidays
Admission Fee	300 yen

Area 6 Nagasaki



Each of the component parts have their own interpretive facility or function.

Nagasaki Shipyard

The **Principal Interpretive Centre** for Mitsubishi Nagasaki Shipyard is the Museum located in the Former Pattern Shop. It is open to public to introduce the shipbuilding history of Mitsubishi Nagasaki Shipyard and has a basic visitor information function. The museum is open to the public year around, but reservation is required.

Access

Access to the Museum (Former Pattern Shop) is mainly by bus and public transportation. In 2007, Mitsubishi Nagasaki Shipyard built a separate entrance gate to the Museum from outside the Shipyard so that visitors could directly enter into the Museum from the bus stop without disturbing industrial activities in the Shipyard. There is no public access to the three other (operational) component parts within the Shipyard.



Kosuge Slip Dock

The Slip Dock and the outside of the steam engine haulage house are open to public access. Both left and right banks (quays and wharves) are still used for industrial purposes, and the inside of the steam engine house is not presently open to the public because of conservation and safety issues. Because access to the site is difficult and limited at present, the Museum (Former Pattern Shop) at Mitsubishi Nagasaki Shipyard serves as a visitor facility to display relevant materials about Kosuge Slip Dock. There is an interpretation panel at the Site but the Conservation Management Plan foreshadows the development of an interpretative plan for Kosuge that would aim to increase and improve public access and interpretation.



Access

The Kosuge Slip Dock can be reached by public bus. Public parking is not available.



Takashima Coal Mine & Hashima Coal Mine

The **Principal Interpretive Centre** for Takashima Coal Mine is "The Takashima Coal Mine Museum" located near the Takashima Port Ferry Terminal.

The **Principal Interpretive Centre** for Hashima Coal Mine is the "Nomozaki Gunkanjima Museum" located in Nomozaki district on the Nagasaki Peninsula.

A model of Hashima is installed in the lobby of the first floor of Ohato Ferry Terminal. Each provides basic amenities and visitor guidance functions.



On Hashima Island, visitor access is strictly controlled. There are no amenities because it is necessary to secure the setting of Hashima Coal Mine. Some visitor information and history is given on the ferries/tour boats that provide guided public access to the island, where interpretation is by guide, and basic temporary interpretation panels are also used.

Access

Cruise ships operated by the ship companies are available for access to both Takashima and Hashima Islands. Guidance is offered to visitors on board, and both Nagasaki City and the ship companies are in the process of enhancing this.



Glover House and Office

The **Principal Interpretive Centre** for Glover House and Office is located in **The Glover Garden**. The World Heritage Site Area has good amenities and guidance functions, and is open to the public seven days a week, with a fee payable. Within Glover House and Office some information boards are provided, and planning is underway to improve visitor interpretation.



Access

Glover House and Office can be reached by car, tram, public bus and sightseeing bus. There is no parking space at the site, but a public parking area is located nearby. Moreover, lifts are installed so that visitors have direct access to the top part of Glover Garden. Road signs and pedestrian signs to the Site are already set up from public parking spaces and bus stops.



Review

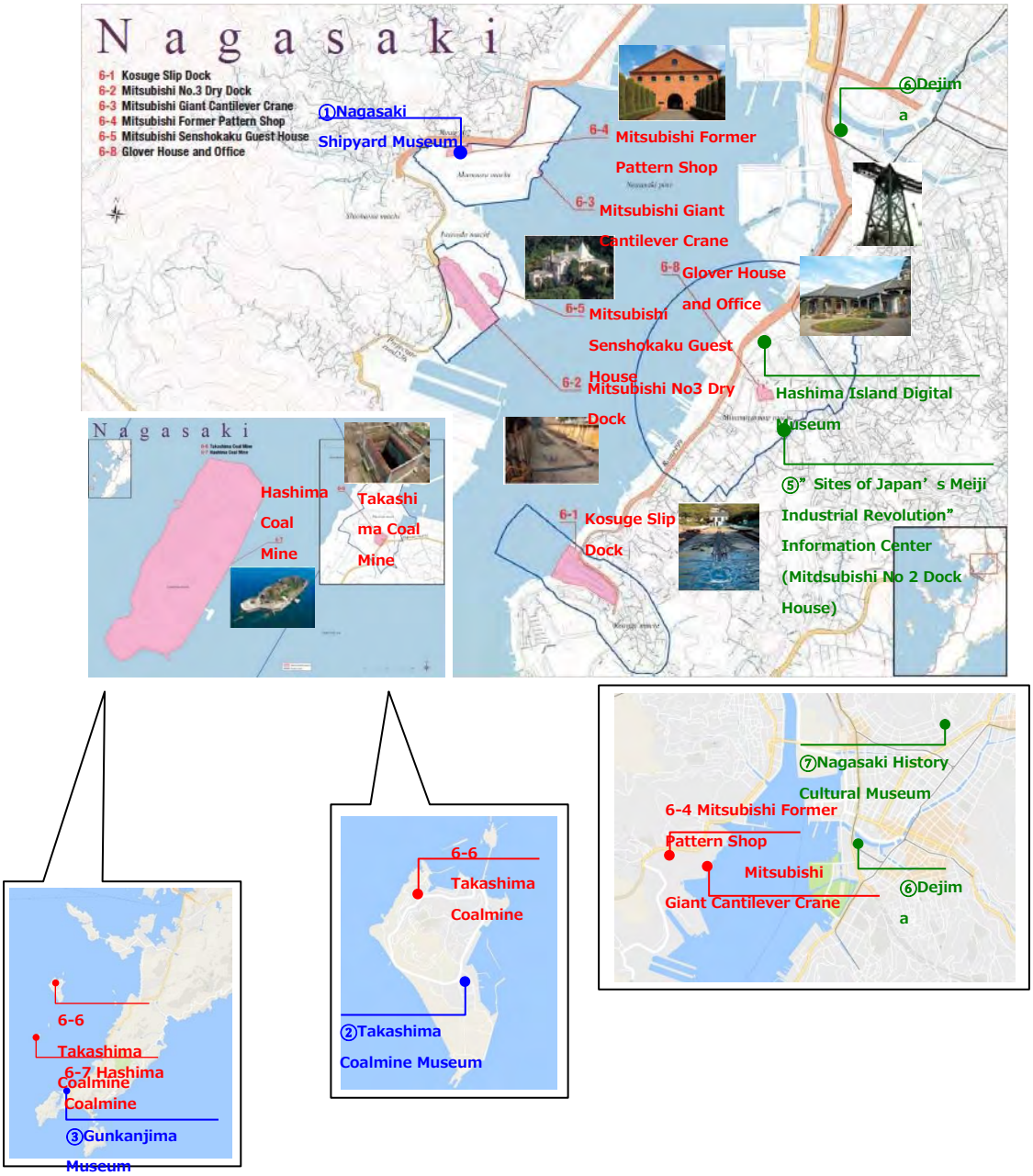
Nagasaki City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	**Vision** Under Consideration **Mission** Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the component parts in Nagasaki contribute to OUV. **Key Message** Under Consideration
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	We will follow the interpretation strategy that the Cabinet Secretariat will create on the basis of the recommendations by the 39th session of the World Heritage Committee.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. - We have put a world heritage plaque at each component part in Nagasaki City. - The website of Nagasaki City has explanations on the 8 component parts in Nagasaki City. - We have placed flags in our major facilities that publicize that our component parts have been inscribed in the World Heritage List. - We have put signposts designed by the National Congress of Industrial Heritage specifically for the "Sites of Japan's Meiji Industrial Revolution" with its logo at some points in the roads that lead to the Kosuge Slip Dock, the Former Glover House and the Gunkanjima Museum.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We use the chart in the booklet of the "Summary of Nomination to the World Heritage List" of the "Sites of Japan's Meiji Industrial Revolution" that explains chronological development phase of three industrial typologies (1850s to 1910) in the Nagasaki City's brochures. - In the information corner for the "Sites of Japan's Meiji Industrial Revolution" in the Former Mitsubishi No. 2 Dock House Glover Garden, we exhibit the explanations in the booklet of the "Summary of Nomination to the World Heritage List".

５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	We have created and distributed explanatory brochures that are based on the Summary of Nomination to the World Heritage List for the "Sites of Japan's Meiji Industrial Revolution."
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	Yes, there are. - We have created and utilized the brochures (both for adults and for school children in elementary and junior high schools) that explain the component parts in Nagasaki City. - The supplementary reading materials of social studies for elementary and junior high school students in Nagasaki City have some pages on the component parts in Nagasaki. We plan to increase more pages during the next 3 years from the fiscal year of 2017.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- There are 5 curators in the Cultural Asset Section of the Culture and Tourism Department in Nagasaki City who are in charge of maintaining the component parts in the city. - The Former Glover House has one officially-hired curator who works at the site.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする **にあたり、貴構成資産は十分な予算や情報源を有しているか？** Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- The World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" has been creating brochures and movies that can be shared with all the component parts. Nagasaki City bears part of the costs. - Nagasaki City has a certain budget allocation to usual brochures every year. - We have enough information sources such as related literatures and knowledgeable academic experts to develop "Conservation Management Plan" and "Restoration, Conservation and - Utilization Plans (conservation work programs)". The Cultural Assets section collects related information and conduct bibliographic survey if required.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？	- In Nagasaki City, the budget to introduce interpretation tools and products will be decided at the City Council after being evaluated by the finance authority and the mayor. - We make it a rule to have our specialist staff/curators check the contents and

What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	expressions when we create new brochures and explanation boards that explain the component parts. - Regarding the component parts owned by a corporation, we check with the corporation and take care of procedures and decision-making when required.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	We do not specify any target audience. The number of visitors to the Nagasaki Area increased by 12% from 1,297,317 before the inscription to 1,448,393 after the inscription to the World Heritage List.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	We do not specify any future target audience. However, since we expect the increase in the number of visitors from abroad as shown in the rise in the number of international cruise ships, we need to prepare receiving more visitors in the near future.
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	Open to the Public - Kosuge Slip Dock o Open anytime except for the hut that stores the lifting device. The hut is open only on weekends and national holidays when there are guides. - Mitsubishi Former Pattern Shop o Open to the public o Reservation needed (for a fee) o Open 9:00 – 16:30 - Takashima Coal Mine (Hokkeisei Pit) o Open anytime - Hashima Coal Mine o Only the limited designated area is accessible by visitors o Visitors are required to participate in a tour to visit it (for a fee) o There are 10 cruise ships per day for the tour from 9:00 to 17:00 - Former Glover House o Open to the public. o Admission tickets are required to enter the Glover Garden (for a fee). o Open from 8:00 to 18:00 (extended depending on the season) Not Open to the Public - Mitsubishi No.3 Dry Dock - Mitsubishi Giant Cantilever Crane - Mitsubishi Senshokaku Guest House

Map


Nagasaki
6-1 Kosuge Slip Dock
6-2 Mitsubishi No.3 Dry Dock
6-3 Mitsubishi Giant Cantilever Crane
6-4 Mitsubishi Former Pattern Shop
6-5 Mitsubishi Senshokaku Guest House
6-8 Glover House and Office
①Nagasaki Shipyard Museum
6-4 Mitsubishi Former Pattern Shop
6-3 Mitsubishi Giant Cantilever Crane
6-8 Glover House and Office
6-5 Mitsubishi Senshokaku Guest House
6-2 Mitsubishi No3 Dry Dock
6-1 Kosuge Slip Dock
⑥Dejima
Hashima Island Digital Museum
⑤" Sites of Japan' s Meiji Industrial Revolution" Information Center (Mitdsubishi No 2 Dock House)
Nagasaki
Hashima Coal Mine
Takashima Coal Mine
6-6 Takashima Coalmine
6-7 Hashima Coalmine
③Gunkanjima Museum
②Takashima Coalmine Museum
⑦Nagasaki History Cultural Museum
6-4 Mitsubishi Former Pattern Shop
Mitsubishi Giant Cantilever Crane
⑥Dejima

Nagasaki Shipyard History Museum (Mitsubishi Nagasaki Shipyard Former Pattern Shop Factory)



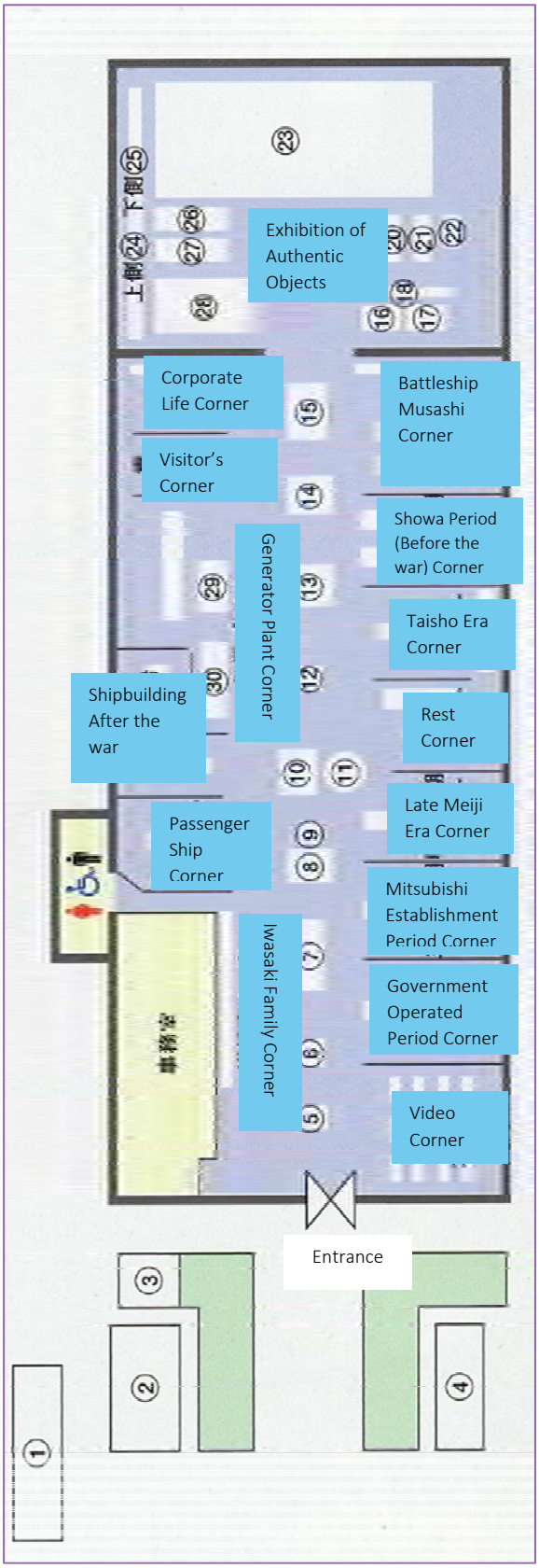
Established by	Mitsubishi Heavy Industrial
Location	〒850-8610 Nagasaki Prefecture, Nagasaki City, Akunouramachi 1-1
Hours of Operation	9:00 to 16:30
Days Closed	Second Saturday of each month, Year-end and New Year holidays
Admission Fee	Adult (high school student and older): 800 yen Elementary and middle school student: 400 yen Preschool Children: Free Discount system for disabled people
Exhibition Area	1562㎡
Remarks	Visitors may call to make reservations (same day reservation possible), Use special shuttle bus (from Nagasaki station to the museum)

Exhibitions

Approximately 900 materials are exhibited, which explain the history of the Nagasaki Shipyard since its original construction as the Nagasaki Iron Mill in 1857 to today. Assets contained are explained mainly in "Mitsubishi establishment period section" and "Later phase of Meiji section".



Floor Plan


Exhibition of Authentic Objects
Corporate Life Corner
Battleship Musashi Corner
Visitor's Corner
Showa Period (Before the war) Corner
Generator Plant Corner
Taisho Era Corner
Shipbuilding After the war
Rest Corner
Late Meiji Era Corner
Passenger Ship Corner
Mitsubishi Establishment Period Corner
Iwasaki Family Corner
Government Operated Period Corner
Video Corner
Entrance

Takashima Coalmine Museum



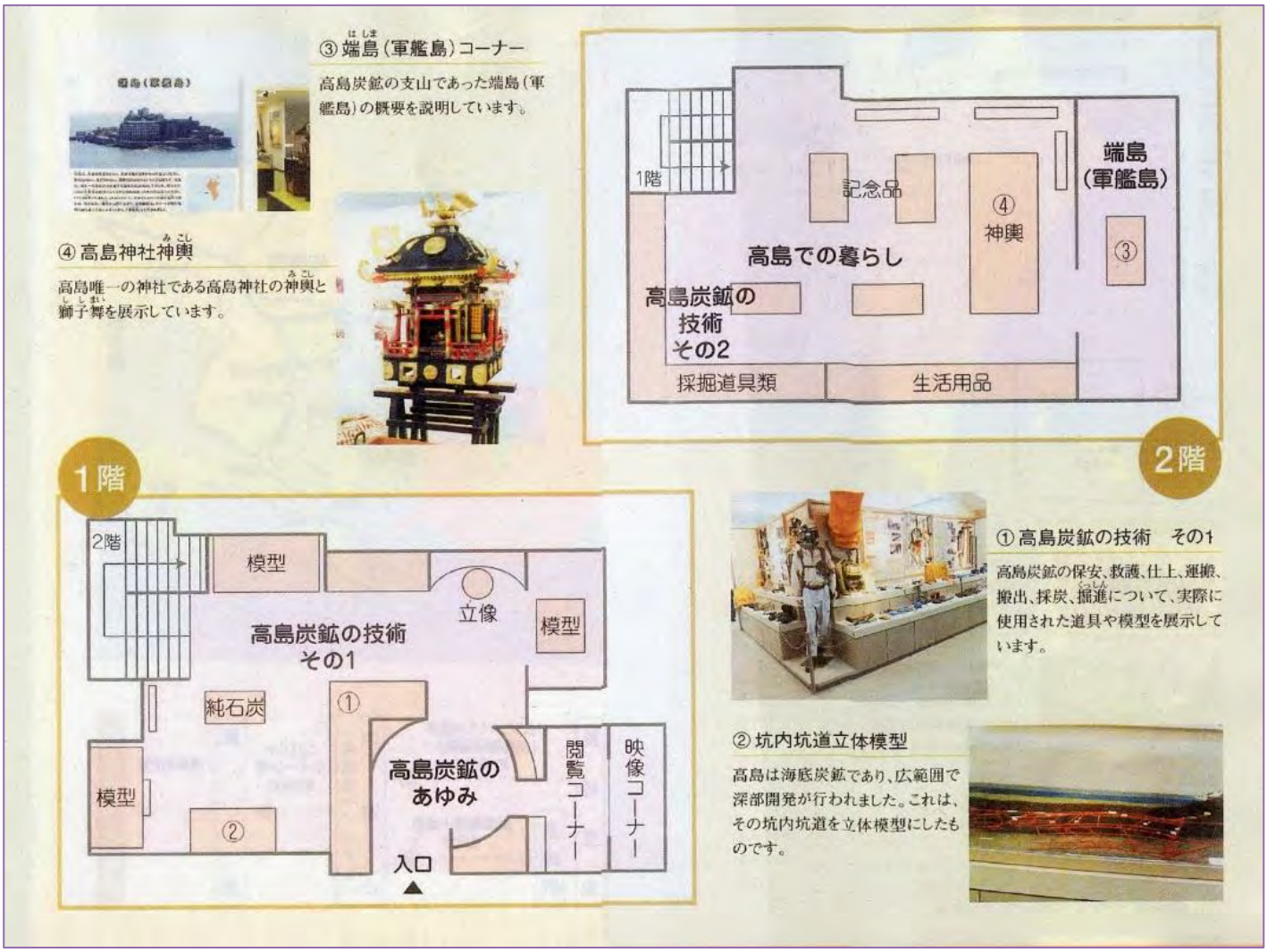
Established by	Nagasaki City
Location	〒851-1315 Nagasaki Prefecture, Nagasaki City, Takashimamachi 2706-8
Hours of Operation	9:00 to 17:00
Days Closed	Year-end and New Year holidays
Admission Fee	Free
Exhibition Area	511㎡

Exhibitions

- The course of Takashima coal mine
- The technology Takashima coal mine No. 1
- Life in Takashima
- The technology Takashima coal mine No. 2



Floor Plan


③端島(軍艦島)コーナー
高島炭鉱の支山であった端島(軍艦島)の概要を説明しています。
④高島神社神輿
高島唯一の神社である高島神社の神輿と獅子舞を展示しています。
1階
記念品
④神輿
端島(軍艦島)
③
高島での暮らし
高島炭鉱の技術その2
採掘道具類
生活用品
2階
2階
模型
立像
模型
高島炭鉱の技術その1
純石炭
①
模型
②
高島炭鉱のあゆみ
閲覧コーナー
映像コーナー
入口
①高島炭鉱の技術 その1
高島炭鉱の保安、救護、仕上、運搬、搬出、採炭、掘進について、実際に使用された道具や模型を展示しています。
②坑内坑道立体模型
高島は海底炭鉱であり、広範囲で深部開発が行われました。これは、その坑内坑道を立体模型にしたものです。

Nagasaki City Gunkanjima Museum

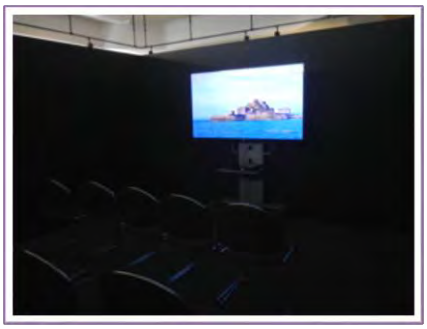


Established by	Mitsubishi Heavy Industrial Nagasaki City (Managed by Nagasaki City Nomozaki promotion corporation (General incorporated foundation))
Location	〒851-0505 Nagasaki Prefecture, Nagasaki City, Nomozaki 562-1 (Nomozaki Sport Park Administration Building 2F)
Hours of Operation	9:00 to 17:00
Days Closed	Year-end and New Year holidays
Admission Fee	Adult: 200 yen Elementary and middle school student: 100 yen Discount system for groups over 15ppl
Exhibition Area	Approximately 180㎡
Remarks	Gunkanjima Museum was established in 2003 by the NPO organization, called "Make Gunkanjima World Heritage" after former Nomozaki Chamber of Commerce Youth Group renovated the local museum

Exhibitions

It was established on the Mitsubishi Takashima Coal Mine Labor Union Site for the purpose of telling the history of the mine operated through the Meiji, Taisho, and Showa eras. Hashima Coalmine is also explained.





Floor Plan


館内のご案内
軍艦島資料館は、軍艦島(端島)の歴史や文化、世界遺産としての価値など、
他に類を見ない多様な魅力を、パネル展示や映像などで体感いただける施設です。
軍艦島の映像紹介
軍艦島・明治日本の産業革命遺産の
最新の4K映像によるムービーコーナーです。
(イメージ)
現在の軍艦島の空撮映像
時を刻む島
無人島となった現在の軍艦島の
写真パネルや、実際に島に残されていた実物資料の展示をしています。時空を超えた島の様子をご実感いただけます。
計算機
65号棟
残された電化製品
炭坑の島
地下600メートルより深い海底での過酷な作業。
その緊張感あふれる様子をご覧ください。
炭車を押す作業員
削岩機による採炭
端島炭坑の歴史・
端島の埋立の変遷
最新の研究資料をもとに、世界遺産
「端島炭坑」の歴史や、岩礁が切り立った
小島にすぎなかった軍艦島(端島)の
埋め立ての歴史を専門的に解説するコーナーです。
ロケ地としての軍艦島
レンズ越しの島(風景写真)
軍艦島模型
時を刻む島(現在の写真と展示物)
軍艦島の映像紹介(4K映像)
炭坑の島(古写真展示)
入口
軍艦島とは
軍艦島での暮らし
軍艦島での暮らし(古写真展示)
軍艦島とは
軍艦島とはどういう島だったのか?
なぜ軍艦島と呼ばれるようになったのか?
軍艦島の沿革をご紹介します。
明治末期頃の全景
昭和33年頃の全景
ロケ地としての
軍艦島
1948年公開の「緑なき島」
にはじまり、近年の「進撃の
巨人」など軍艦島が舞台と
なった映画をはじめとする
作品の一部をご紹介。
映画「進撃の巨人」ロケ風景
世界遺産としての
価値と歴史的背景
世界遺産「明治日本の産業革命遺産 製鉄・製鋼、造船、石炭産業」とは?
その中で軍艦島はどのような役割を果たしたのかをご紹介。
WORLD HERITAGE

Other Related Facilities

Gunkanjima Digital Museum



Established by	Gunkanjima concierge (Universal Workers Inc.)
Location	〒850-0921 Nagasaki Prefecture, Nagasaki City, Matsugaemachi 5-6
Hours of Operation	9:30 to 18:00 (Last admission 17:30)
Days Closed	Year-end and New Year holidays
Admission Fee	General: 1,800 yen (Group: 1,500 yen) Middle and High School Student: 1,300 yen (Group: 1,000 yen) Elementary School Student : 800 yen (Group: 600 yen) Preschool Children (3 to 6 years old) : 500 yen (Group: 300 yen) 2 years old or younger: Free ❖ Group Price: 15 people or more ❖ Group price is applied to the visitor with physical disability certificate and one accompanying person ❖ Half price for Nagasaki Prefecture (Certificate required)

"Sites of Japan's Meiji Industrial Revolution" Information Center (Mitsubishi No 2 Dock House)



Established by	Nagasaki City
Location	〒850-0931 Nagasaki Prefecture, Nagasaki City, Minamiyamatemach 8-1 Inside of Glover Garden
Hours of Operation	8:00 to 18:00
Days Closed	None
Admission Fee	General: 610 yen, High School Student: 300 yen, Elementary and Middle School Student: 180 yen ❖ Group discount (over 15ppl)

Dejima



Established by	Nagasaki City
Location	〒850-0862 Nagasaki Prefecture, Nagasaki City, Dejimamachi 6-1
Hours of Operation	8:00 to 18:00
Days Closed	None
Admission Fee	General: 510 yen High School Student: 200 yen Elementary and Middle School Student: 100 yen ❖ Group discount (over 15ppl)

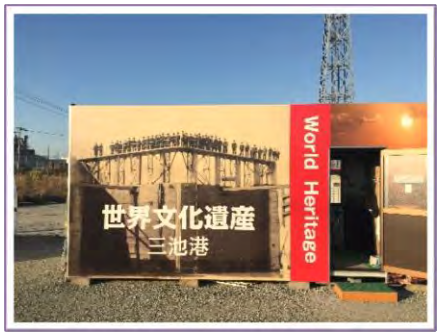
Nagasaki History Cultural Museum



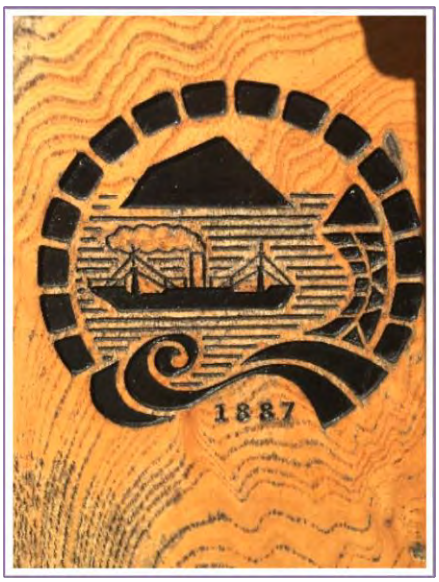
Established by	Nagasaki prefectural government, Nagasaki City government
Location	〒850-0007 Nagasaki Prefecture, Nagasaki City, Tateyama 1-1-1
Hours of Operation	8:30 to 19:00 (Last admission 18:30) ❖ 10:00 to 18:00 for 12/30 to 1/3
Days Closed	None (except for maintenance)
Admission Fee	Permanent Exhibition Adult: 600 yen (480 yen) Elementary, Middle and High School Student: 300 yen (200 yen) ❖ Advance ticket or Group discount (over 15ppl)

Area 7 Miike









This Area encompasses the *Manda and Miyanohara Pits, the Coal Railway, Miike Port* and *Misumi West Port*. Each of these components has their own interpretive facility or function.

Manda and Miyanohara Pits, and the Coal Railway

The Omuta City Coal Industrial Science Museum is the principal interpretive centre for the pits and railway. There is also a visitor centre at Manda Pit Station and the Manda Coal Mine Museum displays relevant materials and exhibitions of Miike Coal Mine. These facilities are equipped with basic amenities and visitor guidance functions to the components.

Access

The pits open to the public most of the year. The railway is not open to the public, except for special occasions.

The components can be reached by car and public bus. A parking area at the Manda Pit Station is available for 80 vehicles and buses, capable of 50,000 visitors a year. Miyanohara Pit has a parking area with the capacity of 5 large-sized buses and 57 vehicles in an area adjacent to the property.

Miike Port

The Old Nagasaki Customs House Miike Branch Office is the principal interpretive centre for the port. This displays historical materials of Miike Port and portrays the coal export story. There is a new interpretive observation space overlooking the port. A new information centre is expected to open in Mikawa coal mine next to Mitsui Miike Club, in walking distance of Miike port as well as the Omuta City Coal Industrial Science Museum.

Access

The Miike Port observation space is open all year round.

The Old Nagasaki Customs House Miike Branch Office and the observation space can be reached by car and public bus. There are parking spaces for cars and buses at both places.

Misumi West Port

The Urashima-ya is the principal interpretive centre for this component. It provides staff and visitor amenities and visitor guidance functions. Interpretive models and panels introduce the history of the port. Ryujo-kan another building, is also open to visitors.

Access

The port is open all year round with the exception of the private residences. It can be reached by car and public bus. There are ample parking spaces provided.

Comments

World Heritage Plaque

The plaque has yet to be installed at all the components. Where it has been installed, its placement varies on how it can easily be seen by the audience. It should be placed in a prominent and accessible position.

Audience

This Area of the WHS has experienced a significant increase in visitor numbers since the Site's inscription. No information on the visitor markets was provided. A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The Area's mission is to let visitors and residents correctly understand the value of the WHS and how the Area's component's contribute to the WHS values. The key messages are as follows.

- "As its high-quality and rich coal mines supported Japan during the eras of Meiji, Taisho and Showa", Misumi West Port is Japan's first authentic modern harbor facility that played a key role in exporting coals to other countries and is the only modern trading port that remains as it looked then".
- "Explain the coal industrial system of Miike Coal Mine that built the foundation for modern Japan and utilize the site that could offer first-hand experiences."

- "Utilize the facilities related to Miike Coal Mine such as Manda Pit that contributed enormously to the formation of the city of Arao . . ."

There is the appropriate use of different interpretative media at each of the components which in turn provides a variety of experiences at each place. The main media used are interpretive panels, and guided tours and a smart phone application. The interpretive panels have been largely updated since the Site's inscription and strategically place. However, the interpretive panels at Misumi West Port remain unchanged.

The smartphone application provides pictorial information relating to each component. The WHS's website is presented in both Japanese and English. Existing Prefecture and City websites makes reference to these components. Manda Pit Station offers audio guidance with four languages.

There are also various printed materials including brochures, maps and guides, mainly presented in Japanese. Misumi West Port also provides brochures and maps in English, Chinese and Korean.

Educational material has been developed for elementary and high school children to explain the Area's components history and significance.

The key information focuses on the Area's components' history. Though there is some information on how the component relates to the WHS other components (based on the chart presented in the nomination document), the components' relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and tone used across the media. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.

Resources

There are professional staff who provide educational activities. Support the ongoing development of the Area's interpretation e.g. curators who provide input into the development of brochures and interpretive panels.

Uki and Omuta Cities has a budget allocation for some interpretive experiences such as developing brochures and providing guides. Further more comprehensive development of interpretive media will require seeing government financial support. In addition, Omuta City has established a promotion council to training guides.

The difference level in resources available to interpret each component is reflected in their various interpretive media. There is the opportunity to facilitate the collaboration across each component to share ideas and opportunities to work towards a more cohesive and immersive interpretive experiences.

Fukuoka Prefecture

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how Miike Coal Mine and Miike Port contribute to OUV. - Provide information on how Miike Port has been functioning as an industrial port and on the world heritage value of the component parts including the related facilities (Mikawa Pit, Minato Club, etc.)
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We will consider utilizing them in accordance with the interpretation strategy that the Cabinet Secretariat will create and the related Restoration, Conservation and Utilization Plans (conservation work programmes) of Miike Coal Mine that Omuta City develops. - We state in the "Harbor Planning of Miike Port" that we aim to develop and utilize the port while managing proper conservation of the heritage.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	- We will put the world heritage plaque that was designed for all the component parts in accordance with the UNESCO's Operational Guidelines in the fiscal year of 2016 (March, 2017). - We have put road signs designed specifically for the "Sites of Japan's Meiji Industrial Revolution" in the main roads to state that it is a component part of the World Heritage Site.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain that the "Coal Industry" has contributed to OUV in the booklet of "Summary of Nomination to the World Heritage List" and in the official website of the Sites of Japan's Meiji Industrial Revolution. - We explain it in the brochures made by the World Heritage Council that consists of 11 cities and 8 prefectures. - We explain it in the brochures made by Liaison Council composed of Fukuoka Prefecture, Kita-Kyushu City, Nakama City and Omuta City.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- We explain that the "Coal Industry" has contributed to OUV in the booklet of "Summary of Nomination to the World Heritage List" and in the official website of the Sites of Japan's Meiji Industrial Revolution. - We explain it in the brochures made by the World Heritage Council that consists of 11 cities and 8 prefectures. - We distribute the brochures made by the Liaison Council composed of Fukuoka Prefecture, Kita-

	Kyushu City, Nakama City and Omuta City. We also display an explanatory panel made by the Liaison Council in the lobby of the prefectural office building. The panel is lendable upon request.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	We have some brochures made by the Tourism Department that provide information on the industrial heritages in Fukuoka Prefecture (the coal and iron/steel industries), adding information on neighboring facilities and restaurants.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (eg curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	We have specialist staff in the World Heritage Registration Promotion Division in the Fukuoka Prefectural Government, who oversee not only Miike Port, but also all the component parts in the prefecture. We also offer prefectural educational courses and lectures by sending those staff upon requests.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする **にあたり、貴構成資産は十分な予算や情報源を有しているか？** Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	We have organized the Liaison Council that composed of Fukuoka Prefecture, Kita-Kyushu City, Nakama City and Omuta City in order to preserve, utilize and promote the component parts in the region. We create brochures and provide symposiums funded by each region.

９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	Regarding Miike Port, the Council for Conservation Management in Miike Area (working properties) conducts decision-making with all the parties concerned. After the consensus is built in this Council, National Committee of Conservation and Management hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	Since it is a working industrial harbor, in principle, we do not plan to invite tourists to the site or to increase visitor numbers in a positive manner.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	In principle, our answer is the same as Q10. However, we aim to keep balance between operating the industrial harbor and providing information on its value as a world heritage by utilizing the neighboring facilities (Mikawa Pit) and observation deck, while limiting the number of visitors.
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	- Miike Port Observatory Deck is open all days from 9:30 to 17:00 except for the period from December 29 to January 3. - The old Nagasaki Customs House Miike Branch Office is open from 10:00 to 17:00 on Saturdays, Sundays and national holidays.

Uki City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 components and enhance their understanding of how Misumi West Port contributes to OUV. - Let people know the value of the cultural assets related to Misumi West Port as regional tourism resources and promote regional revitalization mainly by increasing tourists - Our key message is "As its high-quality and rich coal mines supported Japan during the eras of Meiji, Taisho and Showa", Misumi West Port is Japan's first authentic modern harbor facility that played a key role in exporting coals to other countries and is the only modern trading port that remains as it looked then.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We will consider detailed regional actions in accordance with the interpretation strategy that the Cabinet Secretariat will create in cooperation with international experts. - Also, we plan to launch DMO. Putting Misumi West Port as the core of the tourism strategy, we aim to increase more visitors by promoting attractive tourism schemes in cooperation with various stakeholders in the region.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance、 website etc.)	- Regarding the world heritage plaque compliant with the UNESCO's Operational Guidelines, the World Heritage Council has already made the common design for all the components of the "Sites of Japan's Meiji Industrial Revolution". In Uki City, it is scheduled to be put up during the fiscal year of 2017. - There are banners inside the Misumi West Part and signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" in the main roads and at the entrance that lead to Misumi West Port. Also, the websites of Uki City and Kumamoto Prefectures show an article (explanations) that Misumi West port has been inscribed in the World Heritage List. - We also plan to state that it is a world heritage on the explanation boards inside Misumi West Port.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910) in the booklet of "Summary of Nomination to the World Heritage List". - We also do the same through our brochures and guidance facility called "Ryujokan".

contribution to the OUV? How is this information provided?	
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. This chart can be found consistently in the Summary of Nomination to the World Heritage List in each area also in our brochures and guidance facility called "Ryujokan".
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- We utilize the brochures that show public availability and introduce guidance facilities of all the component parts. - We distribute brochures on Misumi West Port in Japanese, English, Chinese and Korean for visitors that are also used as educational materials. Guide maps of Misumi West Port are also available that inform visitors on how to walk around there and where they can find restaurants.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	Since Misumi West Port does not have staff on duty at all times, tour guides take care of showing around visitors. 2 of the staff (1 on maternity leave) out of 5 in the Department of Culture in Uki City Education Committee are specialist staff who conduct new staff training and educational activities to corporations and schools. They also hold workshops targeting 6th grade school children in Misumi municipal elementary school to teach them regional history and world heritage.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- Regarding the commonly-owned brochures and movies among all the component parts, Uki City bears part of the costs for the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution". Regarding our usual local brochures, we allocate some Uki City's budget upon needs. In case of developing new contents, we would like to utilize the government's budget. - We plan to start charging admission fees at our guidance facility, "Ryujokan" next year so that we could utilize them to manage the facility and to conduct promotional activities.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- Regarding restoration and maintenance of a component part, the Expert Committee held by Uki City Education Committee takes care of its decision making. Also, we have the Council for Conservation Management in Miike Area that consists of property owners, managers, government-related people etc that was created in accordance with "General Line for Conservation Management and Strategic Framework for the "Sites of Japan's Meiji Industrial Revolution". After the consensus is built

	in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed. - In case of implementing something on a large scale such as building a new information center, decision-making is done at a regional council that consists of property owners and government-related people. - When we create new brochures etc., we let our specialist staff take initiatives to create and check them from experts' point of views.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	Since we also target visitors from overseas regardless of their age, we provide brochures in English, Korean and Chinese. We had about 500,000 visitors in 2015.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	The target audience is the same as the Q10. As we stated in Q2, we plan to launch DMO. Putting Misumi West Port as the core of the tourism strategy, we aim to increase more visitors by promoting attractive tourism schemes in cooperation with various Stakeholders in the region.
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so、 when and what areas can be accessed?	Basically, all of them are always open for free. However, we do not promote public access to private lands and houses (although they are technically accessible). - Quay - West-end drainage channel - West drainage channel - East drainage channel - Ichino-hashi (Stone bridge No.1) - Nino-hashi (Stone bridge No.2) - Sanno-hashi (Stone bridge No.3) - Nakano-hashi (Middle stone bridge) - Rear water channel All the areas of the above are accessible all the time. - Old Misumi Marine Transportation Warehouse This has been used as a restaurant called "Misumi West Port Coffee Shop Dutch House". It is open from 11AM to 6PM. Closed occasionally. The building exterior is seeable at all times. - Old Takada Shipping Office Open from 9AM to 5PM. Closed on Tuesdays. - Town layout - Road gutters

	All the areas of the above are accessible all the time. However not promoting public access to private lands and houses (although they are technically accessible). - Wells The ones in public areas are accessible anytime. The ones in private lands require permissions from the land owners. - Hinterland It is accessible anytime since it is a natural trail and footpath.

Arao City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Provide correct information on the value of the serial heritage that consists of 23 component parts and on how Miike Coal Mine contributes to OUV. - Explain the coal industrial system of Miike Coal Mine that built the foundation for modern Japan and utilize the site that could offer first-hand experiences. - Utilize the facilities related to Miike Coal Mine such as Manda Pit that contributed enormously to the formation of the city of Arao as materials to teach local history and geography, preserving them properly for the next generation.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We plan to restore to preserve the component parts and expand the observation area in accordance with the interpretation strategy that the Cabinet Secretariat will create and with the Miike Coal Mine (Manda Pit, Industrial Railway) Restoration and Maintenance Plan that we are working on with Omuta City. - Convey the OUV of the component parts represented by Miike Coal Mine to the general public by including it into the Plan of Tourism Promotion in Arao City as its basic strategy, aiming to attract more tourists. - We plan to conduct the Common Exhibitions on the OUV of the component parts at the visitor center (Manda Pit Station).
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	- We have posted an article that explains that the Manda Pit and the Industrial Railway have been inscribed in the World Heritage List on Arao City's website. - We display sign boards and banners in the major places in the city (at around the entrance of the component parts, Arao City Office, Arao Station, shopping malls etc.). - We have put road signs designed specifically for the "Sites of Japan's Meiji Industrial Revolution" in the main roads that lead to the component parts, guiding visitors to the sites. - We will put the world heritage plaque that was designed in accordance with the UNESCO's Operational Guidelines by March, 2017.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910) (in the brochures made by the World Heritage Council). - We explain the contribution of the "Coal Industry" to OUV in the booklet of "Summary of Nomination

What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	to the World Heritage List" and in the official website of the Sites of Japan's Meiji Industrial Revolution. - We also explain it by DVD, in brochures and in panels (Please refer to the World Heritage Annual Report 2016).
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found in the booklet of "Summary of Nomination to the World Heritage List" consistently in each area. - It is also explained in the brochures and panels made by Arao City.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- We have made and utilized the brochures that show public availability of all the component parts of the Sites of Japan's Meiji Industrial Revolution and introduce guidance facilities. - In Arao City, we have made and utilize two kinds of brochures (one for adults and the other for children) that are distributed mainly to the visitors to the sites. - We have prepared and distributed below to all the elementary and junior high schools in Arao City so that they could utilize them for their education: o Two kinds of promotional videos of the component parts (one for general purposes and the other for educational purposes) o DVD of documentary video about World Heritage inscription process o Supplementary reading materials called "Treasures of Arao" that simply explain cultural assets including the component parts in Arao City to teach local history and geography to pupils - We lend the DVD to local citizens and various organizations for free. - Additionally, we have other brochures made by Tourism Department.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	There are three staff (of which one is a specialist staff on cultural assets) in the World Heritage Registration Promotion Division of Industry Promotion Division in Arao City. They conduct educational activities to teach how the serial heritage including the component parts contribute to OUV by giving visiting lectures whether inside Arao City or in another city.

８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする **にあたり、貴構成資産は十分な予算や情報源を有しているか？** Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- We have borne part of the costs for the common materials for all the component parts - brochures and movies made by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that is a collective organization consists of each region. The costs are funded by Arao City. - The tourism departments of Omuta City and Uki City where the component parts of Miike Area exist have taken initiatives to set up the "Miike Area Omotenashi Promotion Council", seeking human resource cultivation by training guides in new skills and training staff in better manners. - The council has also been creating new common brochures within the area. We plan to discuss with travel agencies to seek for possible activities with these brochures.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- Regarding maintenance of a component part, we have been developing Restoration, Conservation and Utilization Plans (conservation work programmes) by exchanging views with the Cabinet Secretariat, the prefectural government and the experts. In the near future, we aim to execute projects in sequence in accordance with the Plans. - We have established the "Council for Conservation Management in Miike Area" composed of property owners, managers, government-related people, etc. in accordance with the "General Principles and Strategic Framework for Conservation and Management" for the "Sites of Japan's Meiji Industrial Revolution". After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	N/A
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	- N/A - However, the "Arao-Tamana / Omuta Tourism Promotion Council" where we work together with Omuta City promote educational travels. - Also the "Miike Area Omotenashi Promotion Council" mentioned in Q8 aims to attract more tourists.
12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？ Is the component open to the public? If so, when and what areas can be accessed?	- Miike Coal Mine Manda Pit o It is open to the public excluding the areas inappropriate for public access such as Number 1 Shaft Pithead, Storage and Pump House (former fan house) and Office (current fan house) etc.

	○ Admission fees required, Closed during the period from December 29 to January 3 and every Mondays (if a public holiday falls on Monday, it will be closed on the subsequent Tuesday) - Miike Cola Mine Industrial Railway ○ It is not open to the public. ○ Although it is available to the public only on special occasions (e.g. events) as of now, we plan to make it open to the public gradually from the areas where we can ensure the safety measures.

Omuta City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how Miike contributes to OUV. - Utilize the component parts for the city development and pass down their attractiveness to the next generation. - Let people know the value of the cultural assets in Omuta City as regional tourism resources and promote regional revitalization mainly by increasing tourists.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- No, it does not have any concrete strategy as of now. However, as we clearly stated that we plan to utilize our component part effectively and to invite visitors from overseas in the "Omuta City Master Plan Concerning City Planning", we will develop some specific regional plans in accordance with the interpretation strategy that the Cabinet Secretariat will create from now on. - Regarding the Omuta Coal Industry and Science Museum that is a guidance facility, we aim to plan the changes and expansion of the displays within 2018 and to start showing new displays and exhibitions that could promote better understanding of the world heritage in 2019.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	- We have put road signs designed specifically for the "Sites of Japan's Meiji Industrial Revolution" on main roads that lead to the component parts. - Additionally, we have put out flags near the component parts and had our guides explain that they are a part of the World Heritage Site. - We have put explanatory boards that state that our component parts have been inscribed in the World Heritage List in the major facilities of our city such as parks and stations. - We have put banners that state that our component parts have been inscribed in the World Heritage List in all the elementary and junior high schools in Omuta City. - We have put up posters that state that our component parts have been inscribed in the World Heritage List in our city government office. We also mention it on our website. - We will put the world heritage plaque that was designed for all the component parts in accordance with the UNESCO's Operational Guidelines by March, 2017.

４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910) in the brochures made by the World Heritage Council. - We also explain it in the booklet of "Summary of Nomination to the World Heritage List" (created by the World Heritage Council), by DVD and in the exhibitions in the Omuta Coal Industry and Science Museum.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found consistently in the Summary of Nomination to the World Heritage List. - We once exhibited some charts that explained the relations between the component parts in Miike area and the ones in other areas in the Omuta Coal Industry and Science Museum.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	- We utilize the brochures developed by the World Heritage Council for the Sites of Japan's Meiji Industrial Revolution that show public availability and introduce guidance facilities of all the component parts. - For Miike area (Omuta City), we have developed a supplementary reading material called "Our Omuta" targeting the 3rd and 4th grade children to have them read and learn about our component part, the Miike Coal Mine. - Since We make it a rule to include questions on the world heritage to the "Certificate Exam for Students" targeting the elementary and junior high school students conducted in Omuta City in Miike area, those students can learn about the world heritage and the component parts through answering the quizzes. - All the elementary, junior high and special schools within Omuta City are the members of the UNESCO Associated Schools Project Network (ASPnet), promoting the Education for Sustainable Development (ESD). In addition to teaching world heritage to students, we also teach them public welfare and encourage international exchanges in order to foster future global talents. - As part of the activities of the UNESCO Associated Schools Project, we offer guided tours by elementary school students in Miyanohara Pit.

	- We have brochures published by the Omuta Coal Industry and Science Museum, visitor guide brochures created by Omuta City and travel guidebooks made in the private sector.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- There are two specialist staff in the Omuta Coal Industry and Science Museum, which is a guidance facility. There are three specialist staff in the World Heritage / Cultural Properties Department of Omuta City. - These staff are involved in planning exhibitions and creating brochures, offering technical advice. They also contribute to education the general public by delivering courses targeting local citizens, conducting site visits (as a guide) and offering lectures at several events.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートするにあたり、貴構成資産は十分な予算や情報源を有しているか？ Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- We have borne part of the costs for the common materials for all the component parts - brochures and movies made by the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" that is a collective organization consists of each region. The costs are funded by Omuta City. - We allocate a certain budget in creating our usual brochures of Miike area and supplementary reading materials for children every year in our city. We have also requested more budget for further activities. - We keep up to date with information on the history of Miike Coal Mine in cooperation with Mitsui Bunko (Business Archives and Museum of Art) by investigating and researching ancient photographs and documents in the city history editing room of Omuta City in a systematic way. - The cities in Miike area - Omuta City, Arao City and Uki City have set up an interpretation-related organization called "Miike Area Omotenashi Promotion Council" and our city bears a part of the costs to train guides and promote tourism. - Regarding gaining information on coals, we receive assistance from JCOAL (Japan Coal Energy Center)
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- Regarding maintenance of a component part, we have been developing Restoration, Conservation and Utilization Plans (conservation work programmes) by exchanging views with the experts. - We have established the "Council for Conservation Management in Miike Area" composed of property owners, managers, government-related people, etc. in accordance with the "General Principles and Strategic Framework for Conservation and Management"

	for the "Sites of Japan's Meiji Industrial Revolution". After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	N/A
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	N/A

12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？
 	
Is the component open to the public? If so, when and what areas can be accessed?
	- Miyanohara Pit, Miike Coal Mine
	  o Open to the public (guides available)
	  o When: 365 days a year / 9:30-17:00
	  o Free of charge
	  o What areas: all the areas that belong to the component part
	
	- Miike Coal Mine's exclusive railway line
	  o Open to the public (guides not available)
	  o When: open all the time / free of charge
	  o What areas: all the areas that belong to the component part

Map


Miike
7-1 Miike Coal Mine and Miike Port
7.1.1 Miyanohara Pit
7.1.2 Manda Pit
7.1.3 Coal Railway
7.1.4 Miike Port
7.1.4.1 The whole port area
7.1.4.2 The designed form of port
7.1.4.3 The harbour waters
7.1.4.4 Breakwaters and groin
7.1.4.5 Habeur wall
7.1.4.6 The mechanical systems and dockside facilities that supported the Meiji period port system
7.1.4.7 The connection of the port and the coal supply railway system
7.1.4.8 The old Nagasaki Customs House Miike branch office
7-2 Misumi West Port
7.2.1 Quay
7.2.2 Water Channel
①Omuta Coal Industry and Science Museum
⑥Mikawa Pit
⑦Miike Playing Cards and History Material Museum
④Miike Port Observatory
⑤Former Nagasaki Customs Miike Branch
7.1.2 Manda Pit
7.1.1 Miyanohara Pit
7.1.4 Miike Port
②Manda Pit Station
7.1.3 Miike Coal Railway
Misumi West Port
③Ryujokan Museum
Omuta City
Kumamoto Prefecture
Arao City
Misumi machi
Nakagamijima island
Miike port

Omuta Coal Industry and Science Museum



Established by	Omuta City
Location	〒836-0037 Fukuoka Prefecture, Omuta City, Misakimachi 6-23
Hours of Operation	9:30 to 17:00
Days Closed	Last Monday of each month, Year-end and New Year holidays
Admission Fee	Adult (high school student and older): 410 yen 4 years old to Middle School Student: 200 yen ❖ Group Discount
Exhibition Area	3242㎡

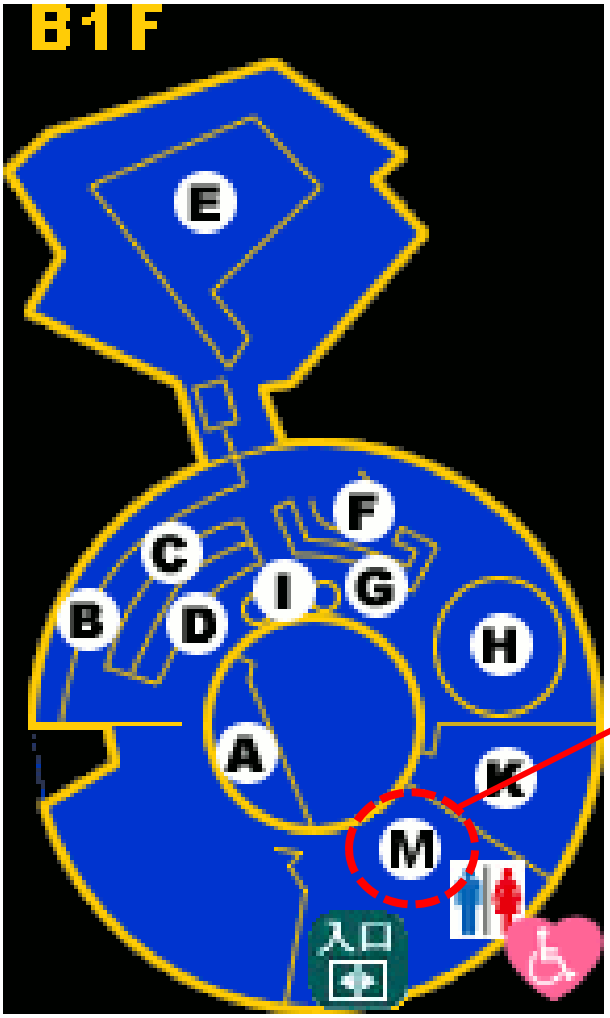
Exhibitions

- Memory of earth
- Beginning of coal industry
- The course of mining technology
- The course of Omuta and its history
- Utilization of coal energy
- Dynamic tunnel
- Let's play with energy
- Coal, supporting daily life
- Movie hall
    - Project exhibition room
    - Information corner for World Heritage





Floor Plan



Graphic panel
Image

Manda Pit Station

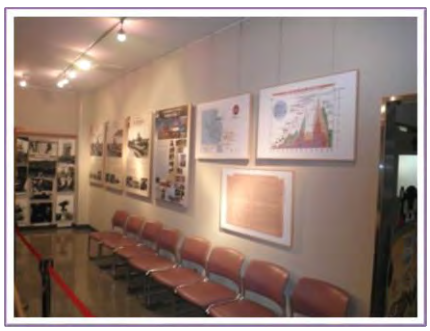


Established by	Arao City
Location	〒864-0001 Kumamoto Prefecture, Arao City, Manda 200-2
Contact	Manda Pit Station 0968-57-9155
Hours of Operation	9:30 to 17:00
Days Closed	Monday (If falls on holiday then the following day), Year-end and New Year holidays
Admission Fee	Adult: 410 yen Child: 200 yen ❖ Group discount exists
Exhibition Area	Approximately 90㎡

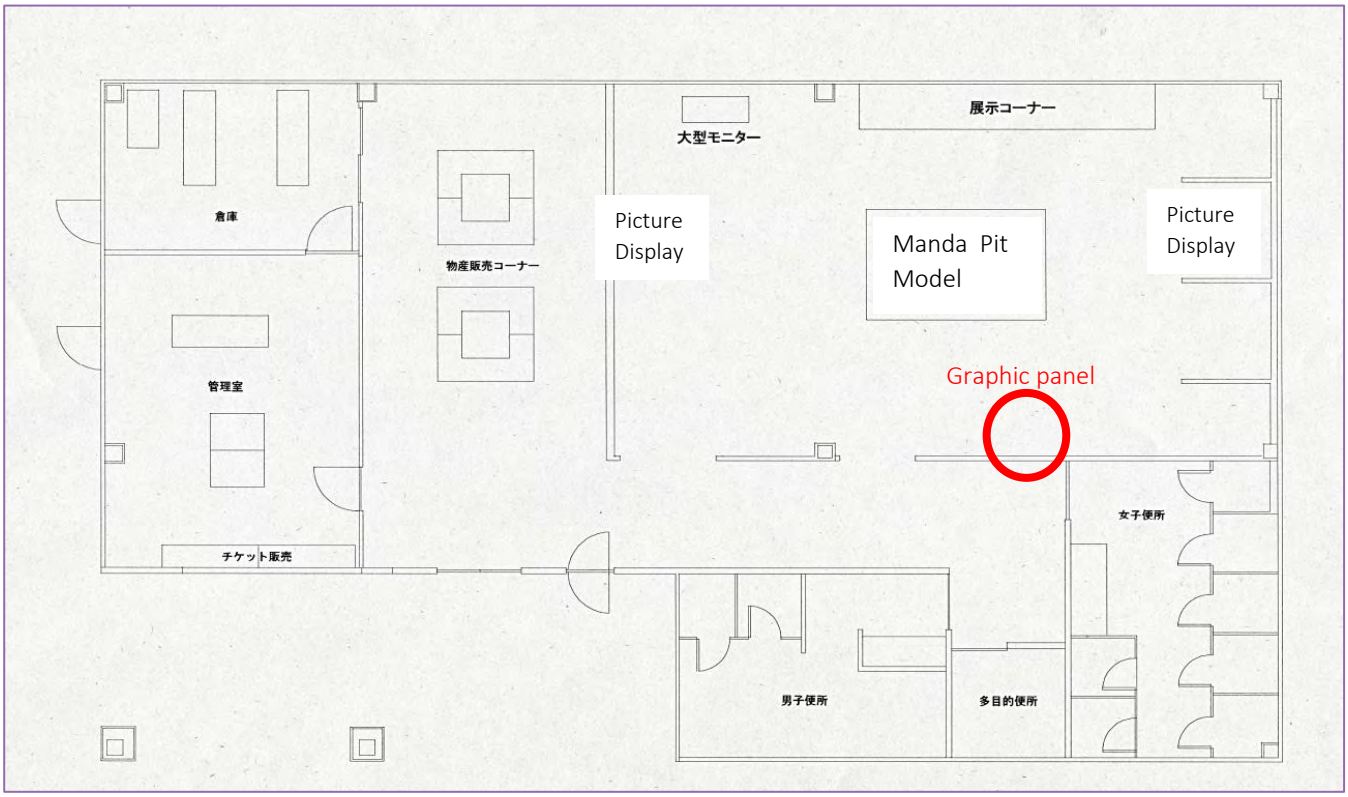
Exhibitions

- Read the history of the coalmine in Arao City and the course of Miike Coalmine and Manda Pit
- Facility Guide
  - Periodic (tour) guides
    - Total of six times from 10:00, 11:00, 12:00, 13:00, 14:00, 15:00
    - (Approximately 30 min)
    - Capacity: 120 people
  - "Fixed point guides" are located in four main facilities in paid area
- Download service for "Manda Pit Facility Guidebook"
  - Facilities by tour conductors and bus guides
  - Download Manda Pit Facility Guidebook from website and use it on the tour





Floor Plan


展示コーナー
大型モニター
倉庫
物産販売コーナー
Picture
Display
Manda Pit
Model
Picture
Display
Graphic panel
管理室
女子便所
チケット販売
男子便所
多目的便所

Ryujo-kan Museum



Established by	Uki City
Location	〒869-3207 Kumamoto Prefecture, Uki City, Misumimachi, Misumiura 1230-22
Hours of Operation	9:00 to 17:00
Days Closed	Tuesday, Year-end and New Year holidays
Admission Fee	Free
Exhibition Area	234㎡

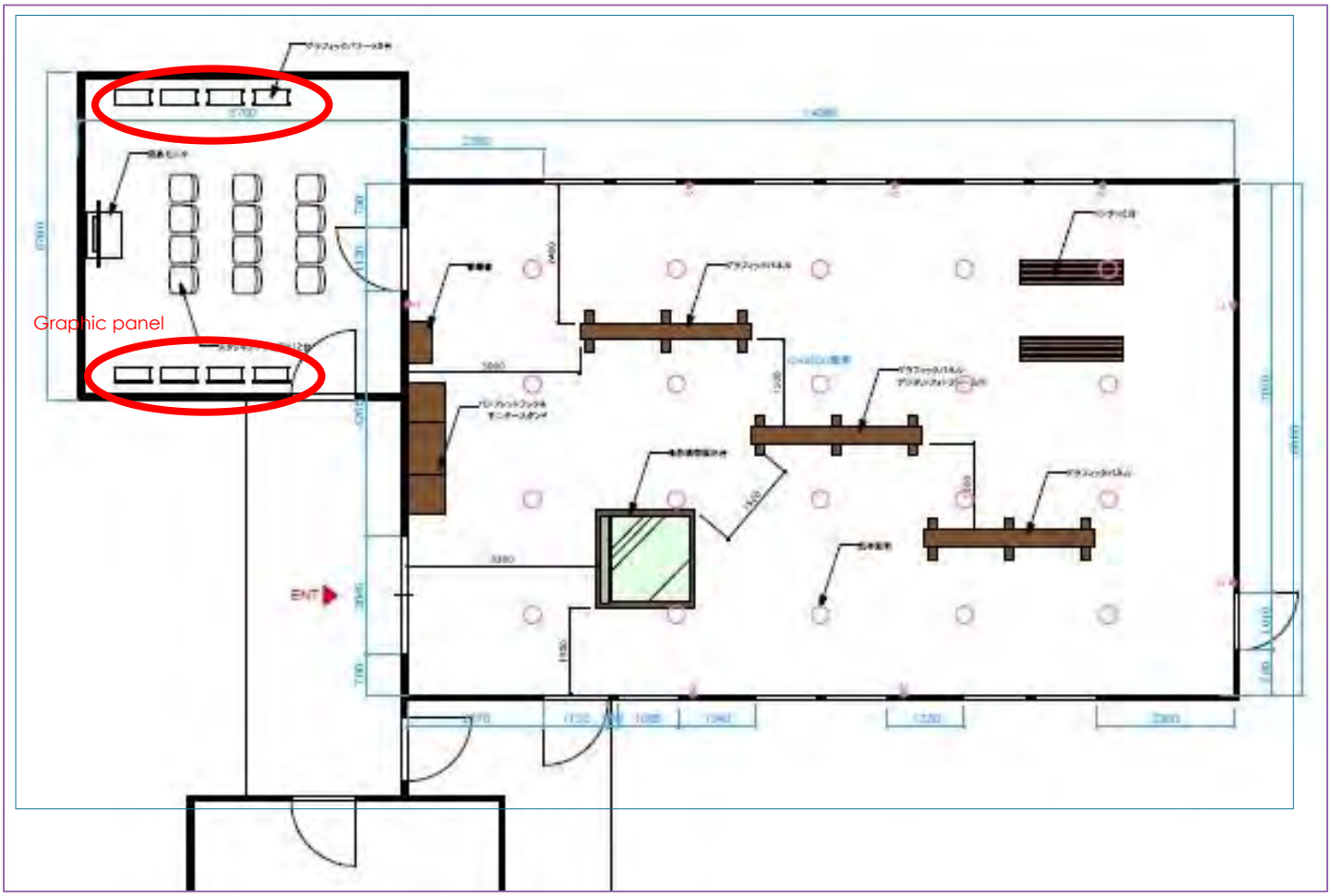
Exhibitions

- "Misumi West Port" History zone
- "Misumi West Port" Topics zone
- "Sites of Japan's Meiji Industrial Revolution" zone





Floor Plan



Other Related Facilities

Miike Port Observatory



Established by	Omuta City Government
Location	〒836-0061 Fukuoka Prefecture, Omuta City, Shinkōmachi 1
Hours of Operation	9:30 to 17:00
Days Closed	Year-end and New Year holidays
Admission Fee	Free

The Old Nagasaki Customs House Miike Branch



Established by	Omuta City Government
Location	〒836-0061 Fukuoka Prefecture, Omuta City, Shinkōmachi 1-25
Hours of Operation	9:30 to 17:00
Days Closed	Weekdays, Year-end and New Year holidays
Admission Fee	Free

Mikawa Plt



Established by	Omuta City
Location	〒836-0062 Fukuoka Prefecture, Omuta City, Nishiminatomachi 2-4
Hours of Operation	9:30 to 17:00
Days Closed	Weekdays, Year-end and New Year holidays
Admission Fee	Free

Miike Playing Cards and History Museum



Established by	Omuta City
Location	〒836-0861 Fukuoka Prefecture, Omuta City, Takarazakamachi 2-2-3
Hours of Operation	10:00 to 17:00
Days Closed	Monday (If falls on holiday then the following day), Last Thursday of each month, Year-end and New Year holidays
Admission Fee	Free

Additional Site Photos

Miike Coal Mine







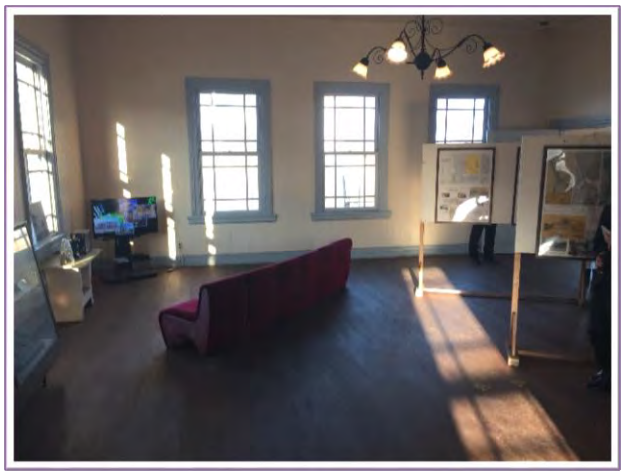


Miike Port









Misumi West Port



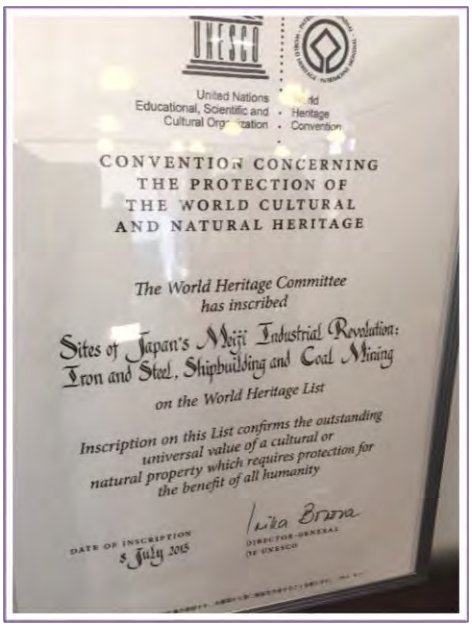











United Nations
Educational, Scientific and
Cultural Organization
Heritage
Convention
CONVENTION CONCERNING
THE PROTECTION OF
THE WORLD CULTURAL
AND NATURAL HERITAGE
The World Heritage Committee
has inscribed
Sites of Japan's Meiji Industrial Revolution:
Iron and Steel, Shipbuilding and Coal Mining
on the World Heritage List
Inscription on this List confirms the outstanding
universal value of a cultural or
natural property which requires protection for
the benefit of all humanity
DATE OF INSCRIPTION
5 July 2015
DIRECTOR-GENERAL
OF UNESCO

Area 8 Yawata



The Kitakyushu Industrial Technology Aggregation & Preservation Centre (Kitakyushu Innovation Gallery) is located near the *Yawata Steel Works*. It is the principal interpretive centre for the Area. An observation space has recently been constructed near the Steel Works, providing an interpretive experience. It is located about 80 meters away from this component.

The *Onga Pumping Station* has also recently developed a viewing area to provide an interpretive experience of this component.



Access

The Yawata Steel Works observation space is open during business hours for most of the year. As the place is still used for industrial purposes, public access is limited and carefully controlled. There are proposals to open the Yawata First Head Office as a public education hub for this Area, subject to resolving the safe and secure access to the building.

The Onga Pumping Station's viewing area is open all year round.



Comments

World Heritage Logo

The logo has been installed at the Yawata Steel Works observation space. ONGA STATION?

Audience

Though access to this Area is restricted, the Steel Works observation space has enjoyed a substantial increase in visitor numbers since the Site's inscription. No information on the visitor markets was provided, nor were visitor numbers at the Pumping Station supplied. The Area wants to focus on engaging with a local and national audience as well as with school children.



A more detailed understanding of the difference visitor segments will inform the ongoing development of interpretive experiences to attract new and diverse audiences, whilst maintain existing audiences.

Interpretive media

The vision for the Area is to let visitors and residents correctly understand the value of the WHS and enhance how the Imperial Steel Works contributes to the WHS values. The key message is "we are the first one in Asia that turned into an industrial country".



In addition to the visitor centre's experience, the main media used around the place are strategically placed interpretive panels in two languages. Digital platforms include smart phone COCOAR2 application which provides pictorial information relating to each component and existing websites are used to promote the components. There are also various printed materials including brochures, maps and guides. In addition, regular lectures are provided to the local community on the component's significance as well as educational material targeting elementary school children.

The key information focuses on the component's history. Though there is

some information on how the component relates to the WHS other components, the relationship and connectivity should be further developed.

There should be more uniformity in the graphic look and feel, language and tone used across the media and across all the WHS components. This will ensure that each component is clearly recognized as part of the overall WHS and how they connect to each other the WHS heritage values.

Resources

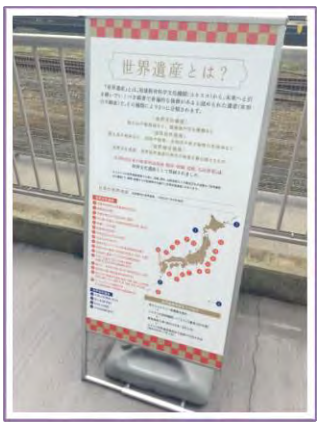
There are professional staff available who conduct public relations activities as well as providing lectures. Volunteers also provide an invaluable interpretive resource.

The City of Kitakyushu provides budgetary support to the WHS Interpretation Committee's development of brochures and digital media. Any further development of interpretive materials and experiences will require government financial support.









Kitakyushu City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the Imperial Steel Works contributes to OUV. - Continue production activities as a working property and increase the number of tourists by publicizing its value as an industrial heritage, promoting regional revitalization. Our key message is "We are the first one in Asia that turned into an industrial country". After importing technology from Germany, the Imperial Steel Works developed Japanese steel technology by its own continuous technological development, contributing to the industrial modernization in Japan and laying the foundation for making it a technology-oriented nation.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We will create detailed regional strategies on the basis of the interpretation strategy that the Cabinet Secretariat will create in cooperation with international experts. - We state that we utilize world heritage sites in the "City of Kitakyushu Comprehensive Strategy for Regional Development and Population." - We state that we consider utilizing the "Heritage of Industrial Modernization Series" including the related facilities of the Imperial Steel Works as our own tourism resources in the "City of Kitakyushu Sightseeing Promotional Plan".
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. - We have placed the world heritage plaque that is compliant with the UNESCO's Operational Guidelines and is common for all the component parts of the "Sites of Japan's Meiji Industrial Revolution" in the observation space of the First Head Office. - We have put signs in the observation space of the First Head Office, the Kitakyushu Innovation Gallery & Studio that is a related facility nearby, Kitakyushu Airport and major stations in the city. - We have put signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" at some points in the main roads that lead to the world heritage sites.

	- The websites of Fukuoka Prefecture and City of Kitakyushu have an article that shows that the Imperial Steel Works has been inscribed in the World Heritage List. - The brochures that introduce the Imperial Steel Works state that it has been inscribed in the World Heritage List.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	- We explain how the component parts contribute to OUV by showing a chart that explains chronological development phase of three industrial typologies (1850s to 1910). - This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" and consistently on the websites of each area. It is also exhibited in the Kitakyushu Innovation Gallery & Studio and used in brochures, etc.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" consistently in each area.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	Yes, there are. - We have created and utilized the brochures that show public availability and introduce guidance facilities of all the component parts of the "Sites of Japan's Meiji Industrial Revolution". - The City of Kitakyushu has created and distributed to elementary schools in the city educational materials targeting the 4th to 6th graders called "Let's learn about the world heritage sites in the City of Kitakyushu together!" that explain mainly the Imperial Steel works.

７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (eg curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- The World Heritage Division of Planning and Coordination Bureau in the City of Kitakyushu has 3 staff. They provide visiting lectures and send lecturers upon requests. - The 2 staff in the Culture and Planning Division of the Citizen Services, Culture and Sports Bureau and the 2 staff in the Tourism Division of Industry and Economics Bureau in the City of Kitakyushu concurrently serve as staff in the World Heritage Division who conduct public relations activities for industrial heritage, collaborating closely with the staff in the division.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする **にあたり、貴構成資産は十分な予算や情報源を有しているか？** Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	- The collective entity of local authorities, the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" has been creating brochures and movies that can be shared with all the component parts. The City of Kitakyushu bears part of the costs. - The City of Kitakyushu has a certain budget allocation to usual brochures every year. As for development of new contents, we will ask the government for financial support. - The owner of the related facilities of the Imperial Steel Works, which is Nippon Steel and Sumitomo Metal, Yawata Works has enough resources such as relevant ancient documents etc. - The City of Kitakyushu also continues research on the technological transfer from Germany.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	Regarding the conservation of the component part, we consider by consulting relevant experts such as the heritage owners and government-related people. In addition, we have a "Council for Conservation Management in Yawata Area" that consists of heritage owners, managers, government-related people (the Cabinet Secretariat is the organizer), etc. that was set up in accordance with "General Principles and Strategic Framework for Conservation and Management" of the "Sites of Japan's Meiji Industrial Revolution." After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed.

10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	- Situated inside the premise of the Imperial Steel Works, the component part is not open to the public. We created an observation space to view the First Head Office at the same time as the world heritage inscription with the cooperation of the heritage owners. - The number of visitors to the observation space of the First Head Office was 56,284 in the fiscal year of 2015 and 27,563 in the fiscal year of 2016. - We provide explanation boards in English for foreign visitors at the observation space of the First Head Office. (Some of the explanation boards in the Kitakyushu Innovation Gallery & Studio have English translations.) - Fukuoka Prefecture World Heritage Liaison Council (that consists of local authorities within the prefecture) has created brochures in English, Chinese and Korean. - We plan to start providing multi-language explanations using smartphones and tablets at the observation space of the First Head Office during the fiscal year of 2017.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	- For a wide range of age-groups inside and outside the city, we intend to make the First Head Office more attractive where people can learn with pleasure and to lure them to visit other industrial heritage sites including the neighboring ones, thus increasing the number of visitors to the First Head Office. - Focusing especially on the young generation, we plan to conduct social studies field trips in cooperation with Nakama City for the elementary school students in the city to enhance their understanding on the component parts from the fiscal year of 2017.

12. 貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？
 	
Is the component open to the public? If so, when and what areas can be accessed?
	- It is not open to the public.
	- The observation space is open to the public. It is about 80 meters away from the component part.
	  - Open: 9:30-17:00
	  - Closed on Mondays and during the year-end and New Year holidays (From December 29 to January 3)
	  - No admission fee
	  - There is a designated volunteer guide there.

Nakama City

Questions	Answers
１．（インタープリテーションに関して）貴構成資産の現在のビジョンとミッション、及びキーメッセージは何か？ What is the component's current vision and mission, and key messages?	Our current vision and mission are as follows: - Let visitors and local residents correctly understand the value of the serial heritage that consists of 23 component parts and enhance their understanding of how the Onga River Pumping Station contributes to OUV. - While maintaining the value as a working property as the first priority, increase tourists and nurture civic pride by explaining the characteristics and values as an industrial heritage. Our key message is "It is the culmination of modern industrial designs that supported the rapid development of the Imperial Steel Works". Also a working property, the Onga River Pumping Station itself shows the historical transformation of industrial technology since it used to be driven by steam before the introduction of electricity.
２．貴構成資産にはインタープリテーション且つ/もしくはマーケティングの戦略があるか？ Does the component have an interpretation and/or marketing strategy?	- We state that we utilize world heritage sites in the "Nakama City Comprehensive Strategy for Regional Development and Population." - We conduct marketing targeting the tourists to Nakama City in 2017 so that we could implement effective interpretation on the basis of the interpretation strategy that the Cabinet Secretariat will create.
３．貴構成資産が世界遺産であるということは明記されているか？その場合どこに記されているか？（例：施設入口、ウェブサイトなど） Does the component state that it is a WHS? If so where is it located (e.g. site entrance, website etc.)	Yes, it does. - The website of Nakama City has an article that shows that the Onga River Pumping Station has been inscribed in the World Heritage List as a component part of the "Sites of Japan's Meiji Industrial Revolution" and introduces other component parts every month. - We have put signposts designed specifically for the "Sites of Japan's Meiji Industrial Revolution" at some points in the main roads and walking paths in the city that lead to the world heritage sites. - We put the world heritage plaque that is compliant with the UNESCO's Operational Guidelines and is common for all the component parts of the "Sites of Japan's Meiji Industrial Revolution" in March, 2017.
４．各構成資産がどのように顕著な普遍的価値に貢献しているかということを説明するキーメ	- We have put an explanation board at the information center and the observation space that explains how the Onga River Pumping Station contributes to OUV by showing a chart

ッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents on its own contribution to the OUV? How is this information provided?	that shows chronological development phase of three industrial typologies (1850s to 1910). - We exhibit an explanation board at the information center and at the site that explains the relation of the Onga River Pumping Station with the Imperial Steel Works and their positional relations with photos and maps.
５．各構成資産と他の構成資産とのつながりを説明するキーメッセージや情報にはどのようなものがあるか？それらの情報はどのように提供されているか？ What are the key messages and information that each component interprets and presents that links it to the other components? How is this information provided?	- The relations with other components in each area of iron and steel, shipbuilding and coal mining are clearly stated with a chart in the 2b section of the book of the World Heritage Nomination. - This chart can be found in the booklet of the "Summary of Nomination to the World Heritage List" consistently in each area.
６．世界遺産や各構成資産の説明や紹介に使用できる、あるいは手直しすれば使用できる既存の観光/旅行や教育関連の製品（冊子等含む）はあるか？ Are there any current tourism/travel and education products that could be used or modified to assist in interpreting and presenting the WHS and its components?	Yes, there are. - We utilize the brochures that show public availability and introduce guidance facilities of all the component parts of the "Sites of Japan's Meiji Industrial Revolution". - We have created leaflets on the Onga River Pumping Station targeting school children (elementary school pupils) and have utilized them for site visits and visiting lectures.
７．世界遺産のインタープリテーションの作成や今後の導入にあたり、貴構成資産には資格要件を満たし知識のあるふさわしい職員(例：専門職員、広報担当職員、教育担当職員など)がいるか？ Does the component have appropriately qualified and experienced personnel (e.g. curators and communication and education specialists) for the ongoing development and implementation of the WHS interpretation?	- There are 3 staff in the World Heritage Promotion Office that oversee interpretation. They strive to gain required knowledge by participating actively in training workshops held by the World Heritage Council. - The Information Center is inside the Nakama City Museum of History and Folklore managed by the Lifelong Learning Division of the Education Committee. The museum has one specialist staff on cultural assets who is a curator and concurrently serves in the World Heritage Promotion Office. Regarding the research on historical records and exhibitions in the Onga River Pumping Station, we conduct educational activities liaising with the specialist staff on cultural assets. - Our PR staff conduct promotional activities liaising with the PR staff in the General Policy Department in the same team as the World Heritage Promotion Office.
８．世界遺産のインタープリテーションを作成し今後導入していくのをサポートする **にあたり、貴構成資産は十分な予算や情報源を有しているか？**	- The collective entity of local authorities, the World Heritage Council for the "Sites of Japan's Meiji Industrial Revolution" has been creating brochures and movies that can be shared with all the component parts. Nakama City bears part of the costs. - We allocate a certain required budget to our historical research on the Onga River Pumping

Does the component have adequate resources to support the ongoing development and implementation of the WHS interpretation?	Station that we have been continuing with the cooperation of the heritage owners.
９．新規のインタープリテーションのツールや製品を開発、導入あるいは手直しして使用するにあたり、各構成資産ではどのような過程や手続き（意思決定も含む）が必要となるか？ What are the processes and procedures, including decision making, that the component is required to follow to develop and implement modified or new interpretation tools and products?	- We have a "Council for Conservation Management in Yawata Area" that consists of heritage owners, managers, government-related people, etc. that was set up in accordance with "General Principles and Strategic Framework for Conservation and Management" of the "Sites of Japan's Meiji Industrial Revolution." After the consensus is built in this Council, National Committee of Conservation and Management (and its Interpretation Working Group) hosted by the Cabinet Secretariat will be informed. - We make it a rule to have university researchers check them when we create new materials to exhibit in the Information Center such as new brochures and explanation boards.
10. 現在、貴構成資産が対象としている観光客層や観光客数は？ What are the existing target audience and visitor numbers at the component?	- We created a temporary observation space at the same time as the world heritage inscription with the cooperation of the heritage owners, river and road management authorities. - The number of visitors to the observation space at the year of the world heritage inscription was 7,981. - The number of visitors during the fiscal year of 2016 (From April, 2016 to March, 2017) was 7,069. - We have prepared English explanations on the component part for foreign visitors such as English brochures, exhibitions at the Information Center and explanation boards at the site (as partial translations of the Japanese explanations). - Fukuoka Prefecture World Heritage Liaison Council (that consists of local authorities within the prefecture) has created brochures in English, Chinese and Korean.
11. 今後、対象とする観光客層や観光客数は？ What are the future target audience and visitor numbers for the component?	- The City of Kitakyushu and Nakama City plan to conduct social studies field trips targeting local elementary school children to enhance their understanding on the component parts, utilizing the government subsidies to accelerate regional revitalization during the fiscal year of 2017. - We plan to increase tourists to the site from 7,981 in the year of world heritage inscription by enhancing interpretation and promoting tours around the area including related component parts in the Chikuhoh Area. - We plan to increase visitors to the Onga River Pumping Station by luring visitors who came to

	the observation area of the Imperial Steel Works.
12. **貴構成資産は一般公開されているか？その場合、公開時間と公開範囲は？** Is the component open to the public? If so, when and what areas can be accessed?	- It is not open to the public. - We allow an observation space in the area facing the border of the component part. - The observation space is free of charge. Guides are available from 10AM to 4PM during weekends and national holidays.

Map


Yawata
8-1 The Imperial Steel Works, Japan
8.1.1 First Head Office
8.1.2 Repair Shop
8.1.3 Former Forge Shop
8-2 Onga River Pumping Station
Dokai bay
The Imperial Steel Works, Japan
8-1
8.1.1
First Head Office
Repair Shop 8.1.2
Former Forge Shop 8.1.3
③Higashida 1st furnace
⑤Ichinotabi museum
Onga river
Onga River Pumping Station
8-2
Nakama City
Route 3
Kitakyushu Urban Expressway 5
Prefecture road50
①Kitakyushu Innovation Gallery and Studio
②Onga River Pumping Station Information Center (Inside the Nakama City Regional Exchange Center)
8-2 Onga River Pumping Station
④Wakachiku
8-1 The Imperial Steel Works, Japan

Kitakyushu Innovation Gallery and Studio (Kitakyushu Industrial Technology Aggregation & Preservation Center)



Established by	Kitakyusyu City
Location	〒805-0071 Fukuoka Prefecture, Kitakyusyu City, Yahatahigashi-ku, Higashida 2-2-11
Hours of Operation	Weekday: 9:00 to 19:00 Saturday, Sunday and Holidays: 9:00 to 17:00
Days Closed	Monday (If falls on Holiday then the following day), Year-end and New Year holidays
Admission Fee	Free ❖ Project exhibition requires pay
Exhibition Area	Approximately 2687.35㎡

Exhibitions

The facility is established to cultivate the power for creating new innovations and to preserve the history of innovations in Kitakyusyu Higashida, which is the birthplace of modern iron manufacturing. Permanent exhibition of themed industrial technology and innovation, and periodical project exhibitions of many themes are shown. At the multipurpose space, there are exhibition of World Heritage, Sites of Japan's Meiji Industrial Revolution. The Exhibition composed of explanation panel, model, and DVD.





Onga River Pumping Station Information Center (Inside the Nakama City Regional Exchange Center)



Established by	Nakama City
Location	〒809-0001 Nakama City, Habu 660-1
Hours of Operation	9:00 to 18:00
Days Closed	Tuesday (If falls on holiday then the following day), Year-end and New Year holidays
Admission Fee	Free
Exhibition Area	Approximately 50㎡

Exhibitions

- Museum of History and Folklore
  - The beginning of modernization
  - What is Onga River Water Resource?
  - Engineers who worked on Onga River Water Resource
  - Pumps and boiler of Onga River Water Resource
  - Value of Onga River Water Resource?
- Exchange space
  - Brochures on Onga River Pumping Station, The Imperial Steel Works, Japan, and Sites of Japan's Meiji Industrial Revolution





Other Related Facilities

Higashida 1st Furnace



Established by	Kitakyushu City
Location	〒805-0071 Kitakyusyu City, Yahatahigashi-ku, Higashida 2-3-12
Hours of Operation	9:00 to 17:00
Days Closed	None
Admission Fee	Free

Wakachiku Museum



Established by	Wakachiku construction Co.Ltd
Location	〒808-0024 Kitakyusyu City, Wakamatsu-ku, Hamamachi 1-4-7
Hours of Operation	10:00 to 16:00
Days Closed	Monday, Holidays, Year-end and New Year holidays
Admission Fee	Free

Inochinotabi Museum



Established by	Kitakyushu City
Location	〒805-0071 Kitakyusyu City, Yahatahigashi-ku, Higashida 2-4-1
Hours of Operation	9:00 to 17:00 (Last admission 16:30)
Days Closed	Year-end and New Year holidays, End of June every year (For pest control)
Admission Fee	Adult: 500 yen (400 yen) High school student and older: 300 yen (240 yen) Elementary and middle school Student: 200 yen (160 yen) ❖ ( ) Indicates the group price, which consists of 30 or more people ❖ Free on Children's Day (Second Sunday of each month) Preschool children: Free

Additional Site Photos

Onga Pumping Station













Yawata Steel Works













APPENDIX 2 – AUDIT PHOTO TRAIL

Area 1 Hagi

1. Pre-visit, highway signage













The New uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively.

2. Arrival, facilities, welcome, signage, sites

Hagi WHS Visitor Centre

View from visitor centre to car/coach park (higher right), with internal grounds area available for additional facilities to be determined.

The principal visitor centre for the Hagi area is located centrally (immediately adjacent to Hagi Castle Town), in an unused and very attractive historic building (former domain school) that now hosts a new custom-made visitor centre for the World Heritage Site and the orientation and interpretation of its Hagi component parts. In its other 'half', it includes a complementary Bakumatsu Museum that tells the precursor relevant context of Hagi; in other words the 'full relevant history' of the component part, except some post-1910 conservation history. Carrying capacity is high and there is ample car and coach parking, and bus service links. There is a charge.

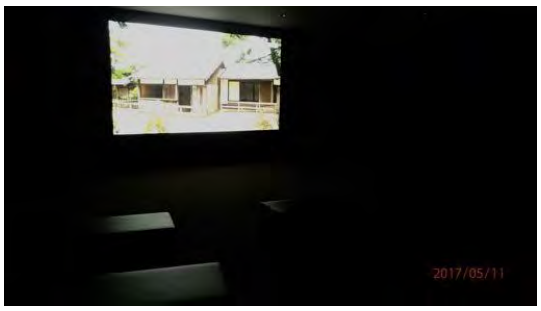


Visitor centre external entrance area, foyer and visitor welcome, and galleries walkway.

The arrival experience is personal and welcoming, efficient, and elegant.









Orientation and introduction is efficient, an audio-visual theatre setting the scene; although the film showing at the time focussed on the 'Choshu 5' in response to visitor expectations following a well-televised recent drama series. A general introduction to the WHS series as a whole, as at other sites, can be shown here of course. Materials and workmanship, quality and interpretive content are exceptional.









The WHS as a whole receives effective interpretive treatment, with chronological, functional and socio-technical links well expressed.









An excellent diverse range of appropriate media combines with rich and meaningful interpretive content to provide an interactive, engaging and worthwhile experience.









Displays range from low-tech interactives to high-tech virtual reality experiences, and from interpretive reconstructions to conventional high-quality museum showcases of authentic artefacts that relate to the sites.







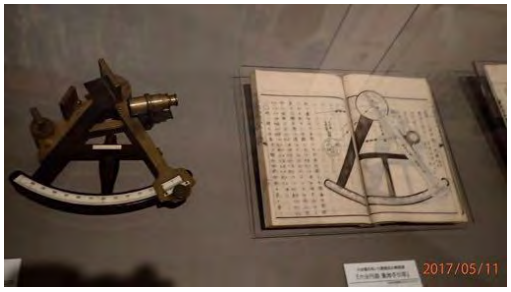














The last three photos are in the Bakumatsu Museum. Together, the two distinctive exhibitions create an exemplary facility.

3. Arrival, sites/component parts:

Hagi Reverberatory Furnace















A new World Heritage Plaque (uniform style for all Hagi component parts, with format and content template applicable to the series) has been installed at the foot of the entrance steps, and a new disabled access route (and ramp suitable for pushair/buggies) created and signed. There is new allocated car and small bus parking.
At the top of the steps (and the end of the all-access ramp), visitors are met by a volunteer-staffed welcome kiosk, appropriate to the nature of the site and visitor numbers. Interpretation by graphic panels is in place but we are informed that this is going to be updated/replaced by new signage. Presentation of the site is immaculate for a historic technical monument, and a visual sightline has been opened with the Ebisugahana Shipyard site across the water by sensitive tree management. New IT- based interpretation includes hand-held virtual reality media. There is no charge.
With updated of replacement interpretive panels, no further action necessary.

Ebisugahana Shipyard









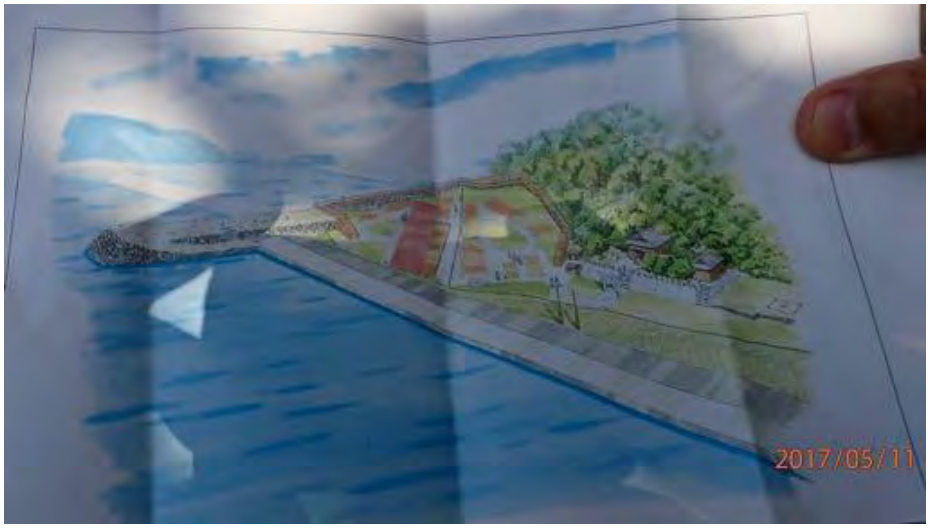




This archaeological site, formerly occupied by two reasonably modern residential houses, has now been cleared and archaeologically excavated. The public were invited to observe the excavations performed by Hagi City archaeologists. There is parking for a small number of cars (the quay area near the property is used actively by fishermen), and parking/turning area for the public bus service.

The property is marked with a World Heritage plaque (uniform style for all Hagi component parts, with format and content template applicable to the series). The entrance to the excavated site is presently attended by a volunteer-staffed kiosk to assist visitors.

Presentation of the site has been greatly enhanced, the previously obscured landward half of the original breakwater now revealed in its fullest extent.



Future presentation of the archaeological site is planned, including the installation of an elevated timber walkway to give an interpretive overview of the site. Once implemented, no further action is necessary. However, the character of the site (containing buried archaeology) would lend itself to seasonal interpretive reconstructions or light-touch structures to enable interpretive or other such activity on site.

Castle Town, including castle

World Heritage plaques, and some interpretive/information panels have been installed around the town, but the main interpretive point is the Hagi Visitor Centre, supported by the existing Hagi Museum (pictured here).



















Museum exhibits numerous authentic artefacts and historic illustrations, picture scrolls etc., many of which relate to component parts. A multi-media presentation features substantial historic background to the series as a whole, and Hagi's contribution to OUV.
Within the Castle Town, and Hagi Castle, there are opportunities to update interpretive panels, and we understand this to be programmed in the near-future. A key message for the apparently 'ruined' castle is its dismantlement in the early Meiji.

Ohitayama Tatara Ironworks

A key issue for visitor management addressed by Hagi authorities is that the ironworks is remote and not easily accessed along a narrow single-track road. The solution has been to provide a shuttle bus service. This operates from the town and from a small visitor centre (associated with a shop and with ample parking) not far from the property. A new appropriately scaled visitor centre has also been built, along with bus turning and parking, adjacent to the property.





Visitor centre/shop at 'bus stop' (left) and new property visitor centre (right)







Visitor centre (left) and property entrance (right) with new World Heritage Site plaque.





Parking and bus turning area, with view from visitor centre to reservoir.









Interpretive techniques include hand-held virtual reality, and see through Perspex screens with former building outlines matched to archaeology. A new presentation scheme is planned, including some new walkways. Once implemented, no further action is necessary.

Area 2 Kagoshima

1. Pre-visit, highway signage









The new, uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively. Additionally, World Heritage promotional signage appears at the railway station (top left) and bus station.

2. Arrival, facilities, welcome, signage, sites

Visitor Centres (in historic buildings within component parts)





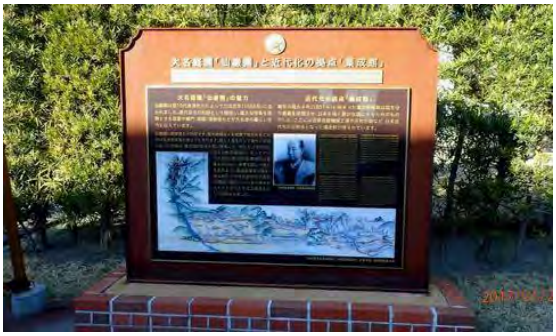








The key visitor facilities are Shoko Shuseikan (top left) a pre-existing high-quality museum and interpretive facillity, and the Foreign Engineers' Residence (top right), followed by Sengan-en. All have new World Heritage Site plaques (shown top left and lower left at Shoko Shuseikan) stylishly made from metallic plaques set on corten steel. Historic clan motifs are artistically and effectively used. Entrance fees apply.





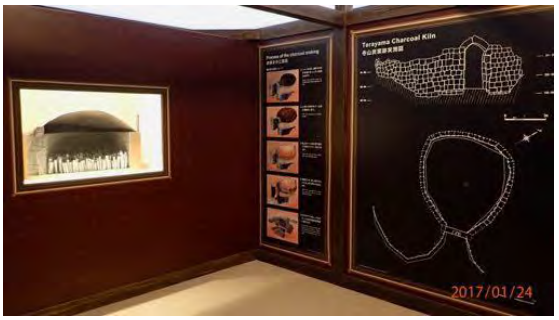
World Heritage Site plaque (left) and interpretive plaque and interpretive model reconstruction (right) at Sengan-en.

3. **Arrival, sites/component parts:**

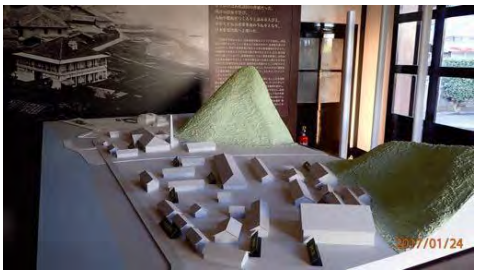
Foreign Engineers' Residence

New World Heritage Site interpretation (site-wide) has been installed together with high-quality site-specific interpretation within this building. There is an entrance fee.









An additional, major intervention in the presentation of the Foreign Engineers' Residence is the removal of a modern inappropriately placed tower block of flats, now demolished (lower far right) and the area planned for sensitive remediation.





4. **Arrival, sites/component parts:**

Terayama Charcoal Kiln





There is ample car and coach parking at a nearby facility, and visitors are directed on a short walk along the footpath that accesses the site. Much work has been implemented towards the presentation of the site, and a new World Heritage plaque has been installed. There is no entrance fee.

5. Arrival, sites/component parts:

Sekiyoshi Sluice Gate of Yoshino Leat











New coach and car parking has been created at this difficult to access site (top left), and additional car parking for volunteers ((top right). At the site entrance a new World Heritage plaque has been installed together with high-quality directional signage and interpretive panels. There is no entrance fee.

Area 3 Nirayama

1. Pre-visit, highway signage

The new, uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively.

2. Arrival, facilities, welcome, signage, sites

Visitor Centre

A new visitor centre (referred to as 'guidance centre, because all site tours are guided by volunteers) has been sensitively constructed (low height, new overlooks to the furnaces and high-quality materials such as corten steel, metal and wood), and strategically situated. It has been provided with ample coach and car parking.



















The quality of internal architecture, finishes and interpretive content is very high (some further progress to be completed including an overall introduction to the World Heritage Site, series-wide, as an introductory film, to be shown prior to the excellent site-specific film), and further English-language (plus Chinese and Korean) translations on excellent Japanese language graphic panels.









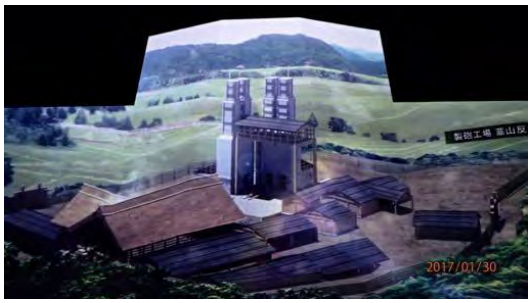




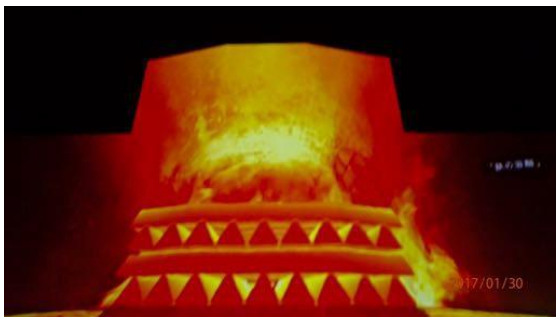




The highlight of the visitor centre is the impressive mulita-media show, which (noting the above comment) gives an excellent interpretation (in Japanese) of Nirayama Furnaces.













3. Arrival, site/component part:

Improvements to the presentation of the site and its facilities have been substantial. From the new visitor centre, visitors walk up a new approach path with views into the property and a fine elevation to the furnaces (previously obscured by buildings, now demolished). Visits are guided by volunteers, and a fee is charged.













Other major improvements include removal of a former intrusive toilet block (middle left photo) now allowing further views to the furnaces, and the opening of a riverside walk (with interpretation to the river as a power source for the boring mill) with a trail to a new observatory in the extant tea garden, from where there is an overlook to the furnaces with a distant backdrop of Fuji-san, another World Heritage Site. With the exception of the items mentioned to be

completed, no further action is necessary.

Egawa's House, an historic property nearby, and the former home of the Shogunate intendent that built the furnaces (completed by his son) is shown as part of an interpretive trail.

Area 4 Kamaishi

1. Pre-visit, highwaysignage



The new, uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively.

2. Arrival, facilities, welcome, signage, sites

There are three principal visitor centres: The Museum of Iron, the Mining Museum, and the Hashino site visitor centre. All three make an individual contribution.

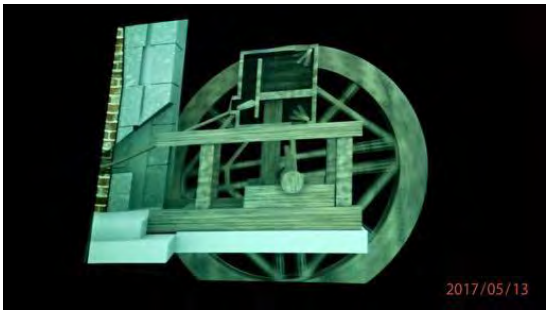
Museum of Iron

The existing Museum of Iron is an excellent principal interpretation centre for the property.















The centrepiece of the Museum of Iron is a full-scale replica section of one of the Hashino blast furnaces, brought to life in a multi-media show that explains its function, operation and ends with putting it in the context of the series-wide World Heritage Site. Links are made with other component parts.

Mining Museum

Located at the site of the former Kamaishi Ironworks (which still has interesting industrial archaeology and also offers an underground mine tour), there is an interesting exhibition with many original artefacts and archives, put together by volunteers under Museum staff guidance. The geology of the magnetite deposit is expertly explained.





3. Arrival, sites/component parts:

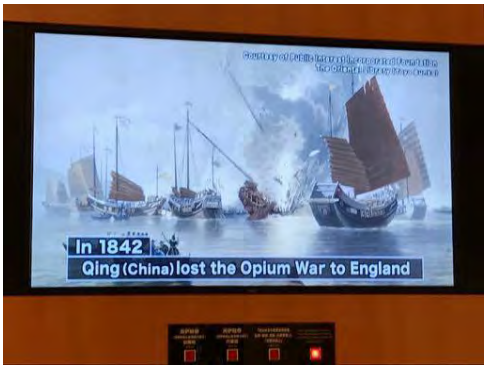
Hashino Visitor Centre

A new visitor centre, with ample parking for coaches and cars, has been constructed adjacent to the property.













On site there are new interpretive panels to explain the archaeology. 'Audio-pens' may be used in conjunction with trail leaflets and graphic panels.





Area 5 Saga

1. **Pre-visit, highway signage**

The new, uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively.

2. **Arrival, facilities, welcome, signage, sites**



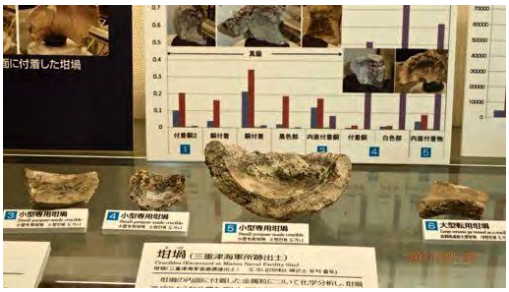
The principal visitor centre is the existing Mietsu Museum that overlooks the property. This is staffed all year round and visitors are greeted at reception. The Museum contains many exhibits related to Mietsu and also displays artefacts recovered during archaeological campaigns on site. Recently, updated exhibitions and World Heritage Site displays have been installed, together with IT-based interactive experiences, including virtual reality (VR). VR glasses are available at the Museum for use exploring the property.





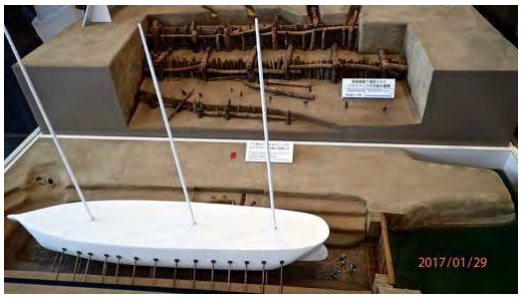








Mietsu Naval Dock is extensively interpreted in the Museum, together with numerous artefacts recovered during archaeological works on the site.

















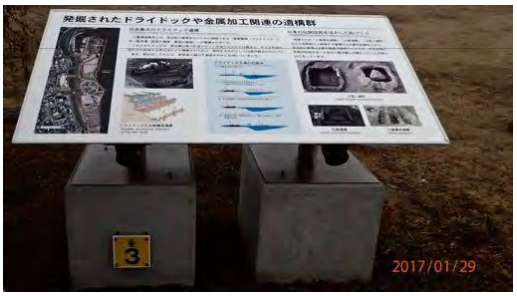




Mietsu Naval Dock is interpreted with the use of scale models, graphic illustrations and even actual- size photography taken during archaeological excavation during the World Heritage nomination process. A seated motion pod virtual reality experience interprets the history and development of the site.

3. **Arrival, sites/component parts:**









On site, the challenge is one of buried archaeology and little for visitors to see, except the site's form and context. A range of interpretive techniques has been developed, from interpretive panels with numbered locations that cue virtual reality experiences, to actual size photographic plan views of real archaeology exposed in excavations.

A challenge remains in that the buried wooden dock, the first dry dock in Japan, is an impressive piece of archaeology, well preserved in waterlogged silt but not on view. The open and relatively sparse site could allow for interpretive reconstructions, perhaps seasonal, to be placed on the site to allow for better understanding and, perhaps more importantly, for a range of activity to be performed.

Area 6 Nagasaki

1. Pre-visit, highwaysignage

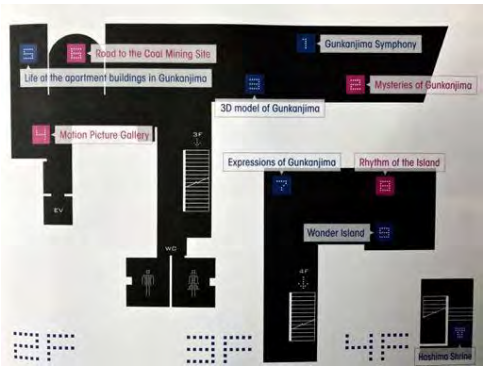
The new, uniform series-wide, branded road signs have been installed at all key locations. They are clear, and work extremely effectively.

2. Arrival, facilities, welcome, signage, sites

Gunkanjima Digital Museum
Pre-visit facility for boat trips to Hashima (Gunkanjima) Island

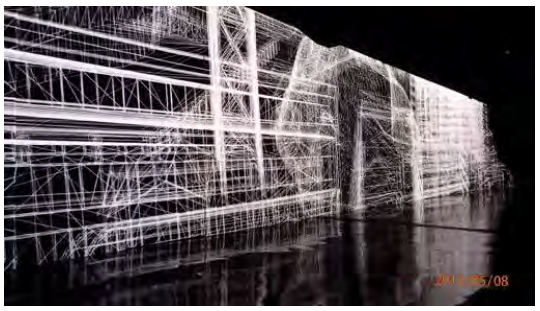
An innovative new 'digital museum' has been created as a visitor facility to complement boat trips to the island (especially useful if rough seas prevent a visit on the day; if such visits are not possible then tickets are either refunded or alternatives issued). The Museum is privately owned and located close to the boat dock, not far from Glover House.





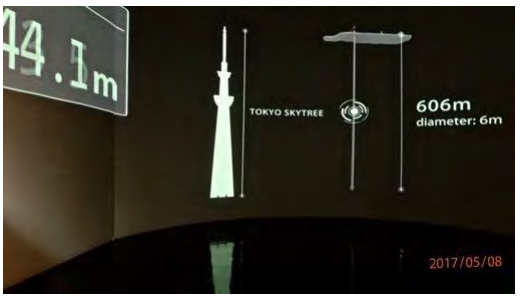




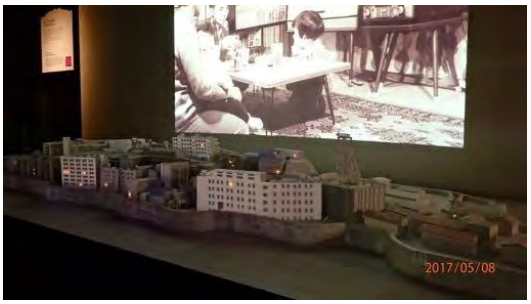
















Digital displays and experiences are varied and impressive, and are, importantly, highly authentic in terms of interpretive content which helps to deliver key messages.

Gunkanjima Museum

There is another interpretive facility for Hashima Island (Gunkanjima), near the boat dock on the peninsula to the south of the Island, a museum run by Nagasaki City.
There is plenty of coach and car parking. On the adjacent hill, accessed via several flights of steps, is an interpretive overlook to Hashima (Gunkanjima) itself, provided with some graphic panels and picnic facilities.


2017/05/08


2017/05/08


軍艦島資料館
Gunkanjima Museum
2017,05,08


Value as a World Heritage Site
and Historic Background
作为世界遗产的价值和历史背景
세계유산으로서의 가치와 역사적
端島炭坑(1890年)[長崎]
2017/05/08


NAGASAKI
Gunkanjima
(Hashima)
Gunkanjima
Museum
2017/05/08


炭坑の島
2017/05/08


The Island Which Marks
the Passage of Time
铭刻时间的岛
시간을 새기는 섬
2017/05/08











Exhibitions comprise a range of interpretive material delivered by graphic panels, artefact case displays, audio-visual presentations (including the WHS series) and even live web-cam on top of the island itself.

3. **Arrival, sites/component parts:**

Takashima Island, Hokkei Pit

Takashima is mostly accessed by ferry service, or small boat, from Nagasaki Harbour. The main interpretive facility is Takashima Coal Mine Museum, a short walk from the boat terminal. A bus service, or another short walk, takes visitors from the Museum to the property of Hokkei Pit and its historic surroundings, including the former harbour and the archaeological site of Glover's summer villa.















Artefacts recovered from recent archaeological excavations are displayed in the Museum, together with numerous objects from, or related to, the mine. There are a number of historic photographs, interpretive graphic panels, models, audio-visual and other media that interprets both Takashima and Hashima (Gunkanjima) mines, part of the same coalfield and embraced together as Takashima.









Hokkei Pit (component part) is the site of Japan's first Western-style vertical shaft and steam engine, archeologically excavated as part of the nomination process. It is free access and interpreted with a guide leaflet, interpretive panels, actual-size photo plans of discovered archaeology, and an internet-based virtual reality experience that can be downloaded with the free wifi point installed.

Plans for a small visitor facility in an existing building would provide a covered interpretive point that could also house an existing model and other displays. The archaeological site, with its open (flooded) mine shaft, is of a nature that could host some accurately informed interpretive reconstruction.

Hashima (Gunkanjima) Island









Hashima is accessed by guided boat trips only. A commentary is provided on the journey, including a background to the World Heritage Site as a whole. Once landed, visitors are personally guided on a concrete access route that gives overlooks to key parts of the site, including the main mining facilities. Historic photographs and maps are used to assist in understanding the site.
Plans for extending the visitor route (using timber decking) to traverse the coal sorting and loading area towards the school and other buildings (bottom left) will give visitors a more in-depth experience, and enhance the carrying capacity of the site for other boat tours.

Glover House & Office

Glover House experienced over a million visitors per year even prior to inscription as part of the World Heritage Site. The house is in need of contents re-display, a depiction of the way it looked when Glover and various samurai were here. Subtle interpretation, as part of the reconstruction, can be included to reveal key messages.

However, in terms of more conventional interpretation of the World Heritage Site as a whole, and Nagasaki's and Glover House's contribution to it, the former Mitsubishi Dock House (relocated to Glover Gardens some time ago) now serves as an interpretive facility. There is also an overlook above Glover House and garden, across the Bay to Mitsubishi Nagasaki Shipyard.













From the Dock House, visitors quickly arrive at Glover House, the boundary of the property marked with a World Heritage plaque.

Kosuge Slip Dock

This property has limited access and is suitable mostly for guided tours by volunteers who periodically open up the steam engine house at the head of the slip dock. Free wifi on site allows for smartphone based interpretation to be used, supplemented by interpretation panels, when guides are unavailable.





Mitsubishi Nagasaki Shipyard

This cluster of four component parts has access limited to booked bus tours to the Mitsubishi Museum located in the historic Former Pattern Shop within the operational shipyard. Due to operational and security factors, Mitsubishi No 3 Dry Dock, the Giant Cantilever Crane, and Shenkokaku Guest House are only able to be viewed from boat trips in the Bay.







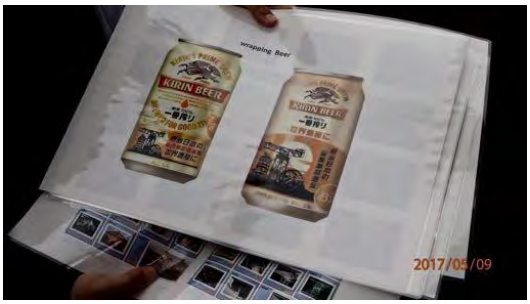


The Museum includes an orientation area with an audio-visual presentation of the whole World Heritage Site, followed by the specific contributions of Nagasaki and of Mitsubishi Shipyard itself. Display cases with numerous historic artefacts, models, photographs etc, then trace the full chronological history of the site (including Kosuge Slip Dock) to from its 19th century origins to the present day.









Within the operational shipyard (no public access), World Heritage plaques mark the component parts whilst interpretive IT-based media enables stories and explanations to be shown via tablets to guests. The Giant Cantilever Crane appears on special postage stamps and cans of Kirin Beer.

Area 7 Miike

1. Pre-visit, highway signage





2. Arrival, facilities, welcome, signage, sites

Visitor sequence: Omuta Museum of Coal and Science > Manda Pit > Miyanohara Pit > Miike Coal Railway/Miike Port/Miike Coal Railway Museum/Mikawa Mine/Mitsui Port Club.
The principal visitor centre is Omuta Museum of Coal and Science, located outside the property and near the sea/Miike Port. This provides orientation and an introduction to the World Heritage series, before the presentation of a complete story of Miike coal – in museum object displays supported by a wide range of interpretive media.





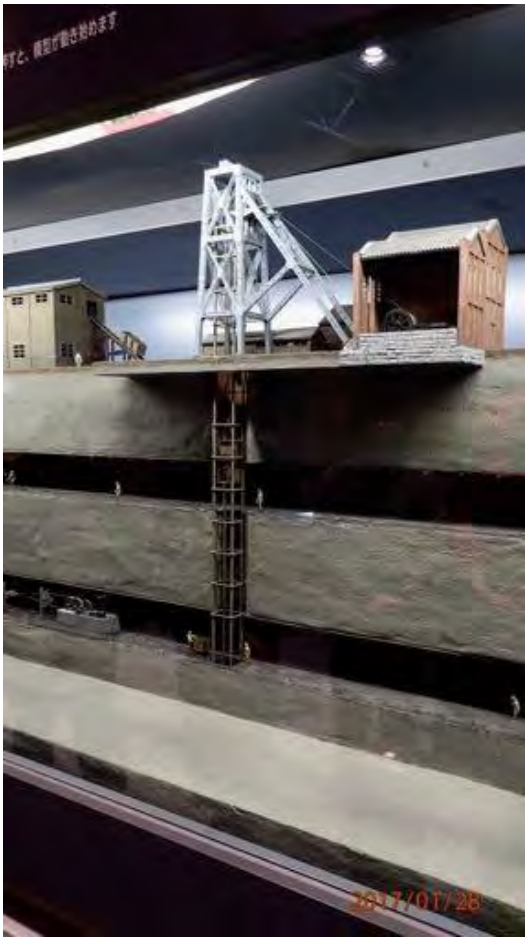
















In addition to the story of the Miike coalfield, and of each of the component parts of the World Heritage Site, the full history of the property is brought up to date with technological achievements highlighted by original equipment such as coal-cutting machinery displayed in mock mining contexts.

There is another visitor centre in the World Heritage Site, at Manda Pit, and there are interpretive points at

Miyanohara Pit, Miike Coal Railway, and at the Customs House, Miike Port. A new interpretive overlook has also been constructed at Miike Port that allows a view along the axis of the 'hummingbird' (inner dock, lock gates, and outer harbour/breakwater groins).

3. Arrival, sites/component parts:

Manda Pit 'Station' visitor centre has an orientation room with an audio-visual presentation about the World Heritage Site and its component parts. The main gallery deals with the specific contribution of Miike and its component parts, particularly Manda Pit. The full history of Manda is covered here (and on site). There is a large mine model (to scale), archive films and photographs, complemented by objects displayed from the mine.









The tour of Manda Pit starts here and tablets (on hire) or personal smartphones may be used when on site, cued by interpretive panels to retrieve data. Multiple languages are available and wifi hotspots are free. Most rewarding first person interpretation is also available around the site, many of the trained guides being ex-miners that worked here (a project in collaboration with the University of Fukuoka is currently underway to record the voices and stories of ex-miners, to be made available on site).









Manda closed only in the 1990s, so a continuous and associated history is told to complement the principal period of OUV.

Miyanohara Pit

Located across the railway from the mine, a new spacious coach and car park (with toilets) has been constructed. World Heritage interpretive panels have been installed to provide a welcome and brief overview of the site.









Archaeological work on site continues, and for the season a temporary welcome area (marquis) operates with volunteer guides. At key points/features around the mine, permanent World Heritage Site interpretive panels have been installed.

Miike Coal Railway

Miike Coal Railway has been extensively cleared to reveal a continuous run of track-bed with sleepers still in place. At the Miike Port end, Miike Coal Railway Museum has been set up, next to the Mitsui Port Club historic building and Mikawa Pit. There is huge potential for further development here: along the railway (for revelation and experience of the railway route/visitor movement) and at Mikawa Pit with its very rich socio-technical mining heritage).





Miike Port

A new interpretive overlook has been constructed where railway embankments once stood. This gives a perfect axial view along the shipping lane of Miike Port – from the Ariake Sea down the long approach to the harbour, lock gates and inner basin – where activity may still be observed daily in this still-operational industrial port. Boat tours are also offered, dependent on tides and weather.

















Miike Customs House contains interpretive displays and has views straight into the inner basin (top left and right). Elsewhere around the perimeter of the port there is generous public access, including car parking and interpretive panels.

Misumi West Port

The principal visitor interpretation facility is provided in a historic building in the 'centre'/focal area of the small port town, adjacent to the waterfront and its historic buildings. Inside, an orientation room shows a film about the World Heritage Site and its serial components. A separate gallery interprets Misumi West Port and its connection with Miike Mine, using models, historic illustrations and photos and graphics.





Around the port there are various interpretive panels. Guided tours are available with a trained corp of volunteers. A steep walk up through the forest leads to an attractive overlook built by local people. It provides a wonderful panorama over the bay and channel, the port and its built plan and heritage. This would be an ideal location for some interpretation.

In general, interpretation needs updating and refreshment.

Area 8 Yawata

1. Pre-visit, highway signage

The new, uniform series-wide, branded road signs have been installed at all key locations, particularly Onga River Pumping Station. They are clear, and work extremely effectively.

2. Arrival, facilities, welcome, signage, sites

World Heritage Site Visitor Centre/Kitakyushu Innovation Centre











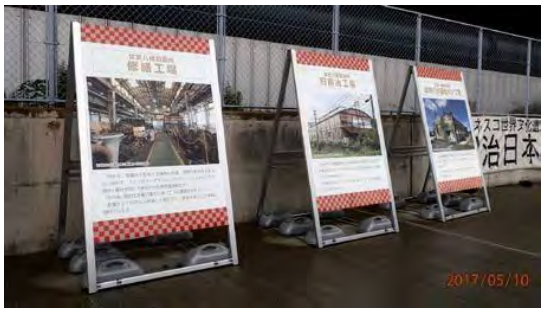


The Imperial Steelworks, Yawata, is an operational site and, as yet, only limited access has been granted for special visits. However, the existing Kitakyushu Innovation Centre now serves as an interpretation centre for the cluster of component parts. An orientation area interprets the World Heritage Site as a whole, and Yawata's specific contribution. The Centre is conveniently located next to the impressive monument of the preserved Higashida blast furnace (1962).

3. Arrival, sites/component parts:

Visitor overlook First Head Office

As Yawata remains an operational industrial site, there is limited viewing opportunities to the component parts within the active steelworks. However, a new viewing area has been constructed, with an overlook to the complex including the First Head Office. Volunteer guides are usually on hand to interpret the vista, whilst standalone interpretive panels explain component elements. Smartphone enabled interpretation is available for download.















The First Head Office (unavailable to the public, as yet) could make an excellent Museum and Archive (and interpretive facility) for the component parts.

In Nakama City, there is a small visitor centre adjacent to the Onga River Pumping Station. This introduces the World Heritage Site as a whole, and the specific contribution of Yawata.





Onga River Pumping Station

The pumping station itself is still operational, and not normally open to the public. For this reason, an overlook has been provided adjacent to the road. This carries a World Heritage plaque and interpretive panels.













A smartphone or tablet enabled virtual reality programme is available.

APPENDIX 3 – INTERPRETIVE MATERIAL EXAMPLES

3.1 Access Guide Map
3.2 Application
3.3 Websites
3.4 Booklet
3.5 Exhibition – Liquid Galaxy
3.6 Site Specific Material
3.7 Commemorative stamps and coins

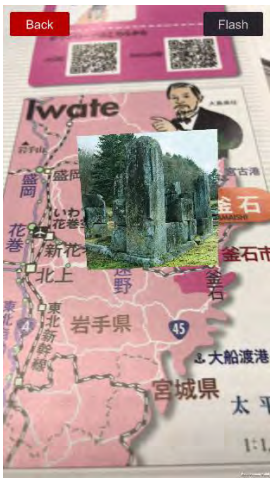
3.1 Access Guide Map

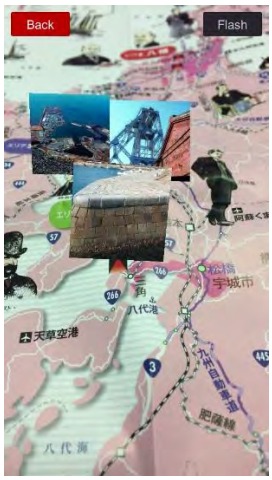
This access guide map, both in Japanese and English, enables let visitors understand all the component parts across Japan and encourages them to visit as many as possible. It is linked to the Application (see 3.2).

By scanning a smart phone over the MapQR codes, users can easily access information on how to access each component part. Using the AR camera function, pop-up photos of each component are provided.









MapQR Codes *Pope-up photos by the AR camera function of the app*

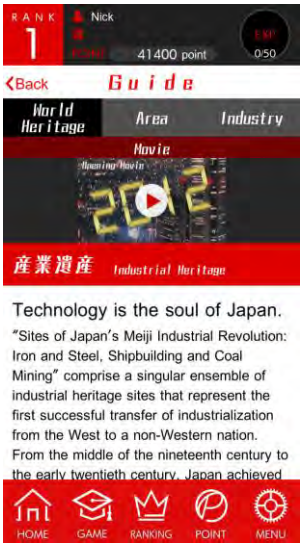
3.2 Application

Overview

The *Sites of Japan's Meiji Industrial Revolution* World Heritage Council (Chairman: Mr. Satoshi Mitazono, the governor of Kagoshima Prefecture / Organizer: Kagoshima Prefecture) has developed a guiding application available in Japanese, English, Korean, simplified Chinese and traditional Chinese. It aims to promote and raise awareness of the WHS. The application was released on 20 March 2017 and it is available in several languages.



Japanese



English



Korean



Simplified Chinese

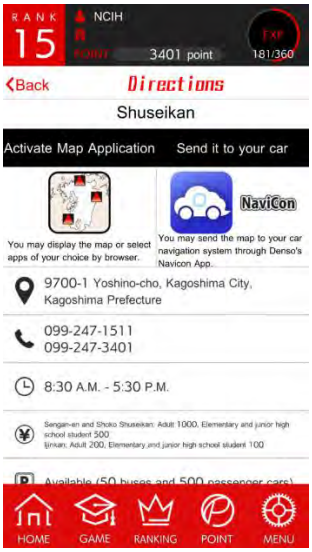


Traditional Chinese

Guidance

The application provides guidance to the WHS through detailed stories and explanations on each component with their historical background, movies, CG animations and photos. It also provides easier access to each component part by linking with car navigation and with the access guide map.

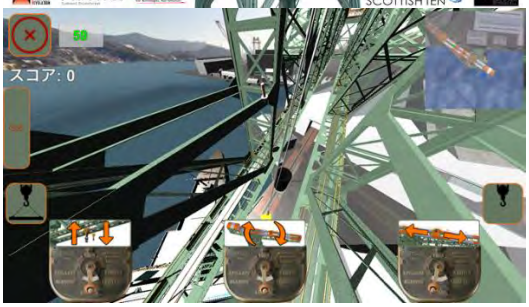




As some of the component parts are not open to the public because they are operating facilities, visitors can view those component parts via this application. One example is the Mitsubishi Giant Cantilever Crane. Using the data measured through The Scottish Ten Project (a joint project with the Scotland Government), the application offers a "3D view" that can be activated only at the site and a "simulator" that allow users to intuitively learn the structure of the Crane.

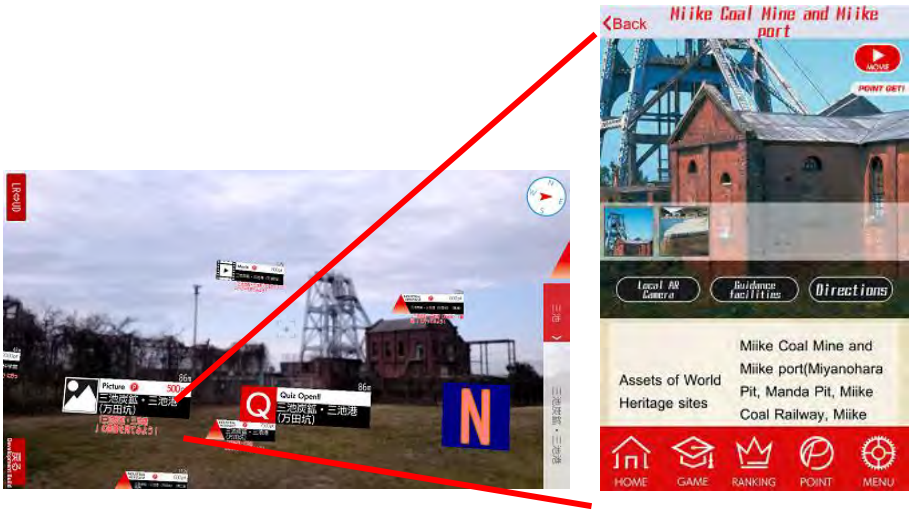

Nagasaki Giant Cantilever Crane
Simulator
Easy
Hard
Exit
内閣官房
SCOTTISH TEN


Instructions
Score: 0
OK


スコア: 0

Augmented Reality Effect

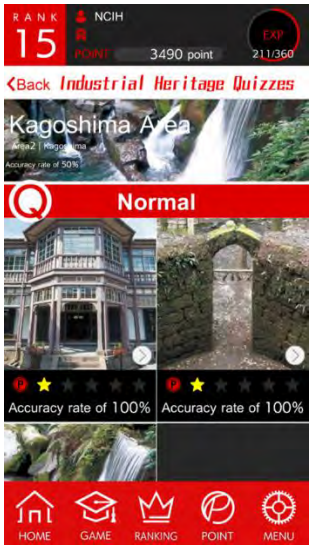
When the camera is activated, some tags appear. These provide information such as movies, photos and explanations on the component parts. For example, at Miike Port, a drone 360 degree view movie is available by adjusting by changing the angle of the mobile.

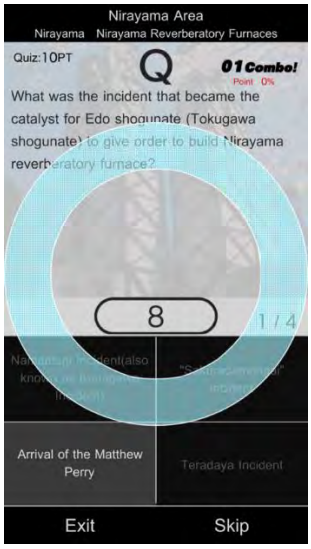


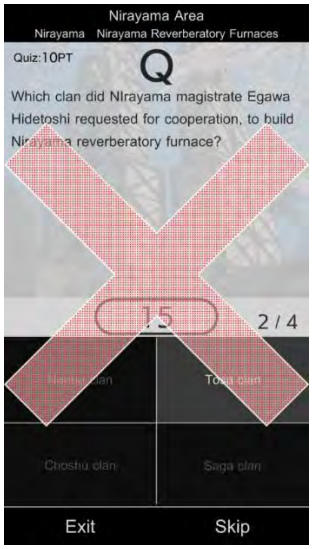
Quizzes

The application's quizzes allow users to learn about each component. Users earn points by giving correct answers and by visiting the components and related facilities.









When points are earned, users can exchange points with additional quizzes and a daily fortune teller.









Users can move up or down in the ranking by the number points earned.



Partnerships

For Glover House, a partnership campaign with the Nagasaki Branch of KIRIN Brewery Company has been developed for a limited period within the application (commenced April 2017). By holding the application over the limited edition of canned and bottled beer of KIRIN, a movie about Thomas B. Glover who was based in the Glover House and played a critical role during Japan's emergent period of industrialization is provided.



3.3 Websites

Two different websites have been developed:

- National Congress of Industrial Heritage
- Sites of Japan's Meiji Industrial Revolution

The updated version of the Sites of Japan's Meiji Industrial Revolution website is being launched in November 2017.

National Congress of Industrial Heritage
https://sangyoisankokuminkaigi.jimdo.com/

This website was launched in 2013. It provides information on the National Congress of Industrial Heritage, and its news and activities.



It also includes:

- comments from Sir Neil Cossons and Dr Stuart Smith
- Dr Dietrich Soyez's thesis
- Joint ICOMOS TICCIH Principles



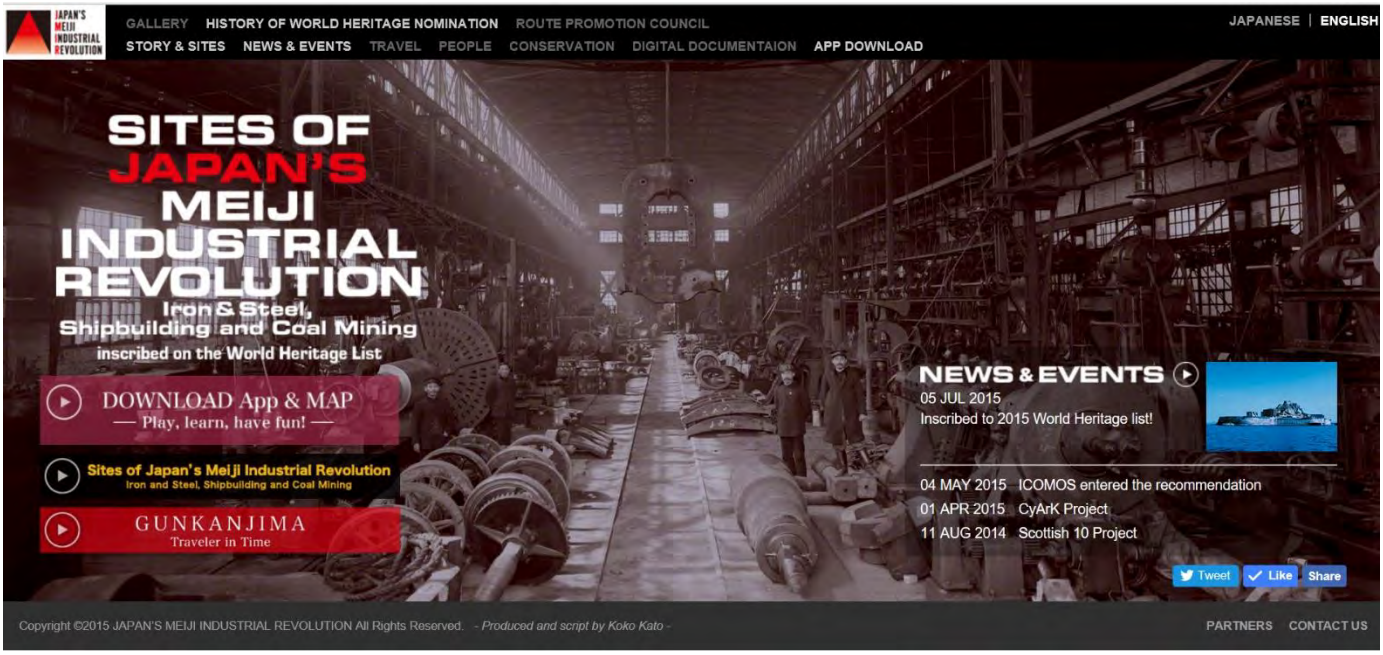



ホーム
ニュース
産業遺産国民会議について
世界遺産登録までの道のり
世界の声
応援しよう
出版物
デジタルアーカイブス
産業遺産国民会議
NATIONAL CONGRESS OF INDUSTRIAL HERITAGE
トップ > 政府の検討状況 > ICOMOS-TICCIH共同原則
ＩＣＯＭＯＳ－ＴＩＣＣＩＨ共同原則
日本語・英語 ICOMOS-TICCIH共同原則14.01.2011.pdf
PDFファイル 614.0 KB
ダウンロード
閣議決定
協議会活動
有識者会議
産業遺産の世界遺産登録推進室
これまでの経緯
港湾ＰＴ
製鉄ＰＴ
造船ＰＴ
ＩＣＯＭＯＳ－ＴＩＣＣＩＨ共同原則
JAPAN'S MEIJI INDUSTRIAL REVOLUTION
賛助会員募集
産業遺産を応援しよう
産業遺産国民会議は
真実の歴史を追求する
端島島民の会
を応援しています。

Sites of Japan's Meiji Industrial Revolution
http://www.japansmeijiindustrialrevolution.com/en/

This website has been online since 2015. An update is due to be launched at the end of October 2017. It includes:

- the access guide map and the application
- a *Gallery* page which has an assortment of educational videos
- latest articles and interviews of *people* (including international experts) and *News and Events*
- *Story and Sites* (1 OUV 2 Historical Background 3 Chronological Development Phase 4 Location)
- *Travel* (1 Photos of classic car marketing on SNS 2 Links with travel agencies) NEW
- Conservation (Homework from UNESCO) NEW
    1. Strategic Management Framework
    2. Records (Date, place and a photo) of Council for Conservation Management, Miike Meetings, Yawata Meetings
    3. Conservation Work – Michael's presentation in Nagasaki in March
    4. Interpretation Strategy – international meetings, industrial PTs, site visits
- *Digital Documentation* (CyArk, Scottish Ten, Liquid Galaxy etc) NEW
- *History of the World Heritage Nomination*
- *Route Promotion Council*



History of World Heritage Nomination

DATE	ARTICLE
Sep 2000	Koko Kato introduced Takashima Coal Mine in the 5th International Mining History Congress, Milos island, Greece
15 Jul 2005	Symposium of "The Modern Industrial Heritage Sites in Kyushu" was held in Kagoshima. "Kagoshima Declaration" was adopted.
02 Jun 2006	Kyushu Prefectural Governors Conference adopted the preservation and practical use of "The Modern Industrial Heritage Sites in Kyushu" as a policy objective.
27 Nov 2006	An application of "The Modern Industrial Heritage Sites in Kyushu and Yamaguchi" to be listed in the World Heritage Tentative List was submitted to the Agency for Cultural Affairs.
23 Jan 2007	Post entry to the World Heritage tentative list was unachieved.

PEOPLE

2017.08.10
Vol.25
「ICOMOS－TICCHI共同原則」の真価問われる"世界の実験場"~日本政府が推進する新たな保全へのチャレンジ~
ヘリテージ・モントリオール政策部長
ディヌ・ブンバル(Dinu Bumbaru)氏



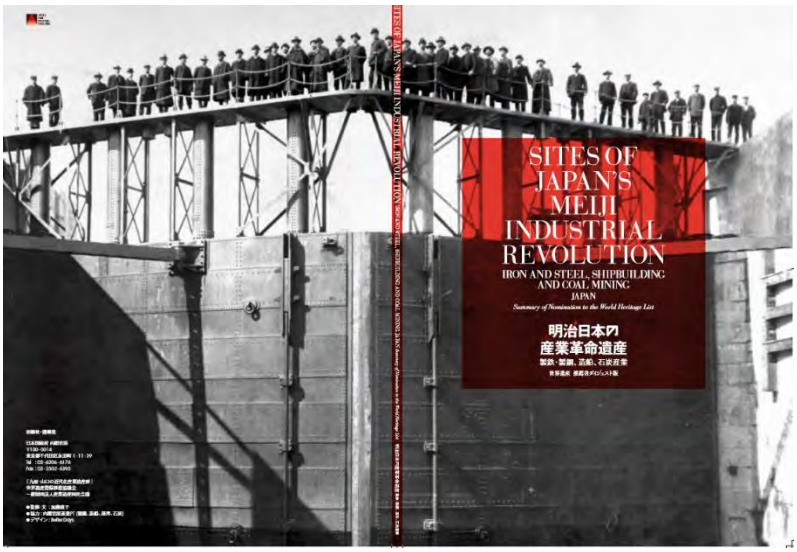
2017.07.19
Vol.24
忘れ難いＳ・スミス氏との激論の日々 ~異文化の中で出会った"なじみ深い19世紀の産業遺産"~
世界遺産コンサルタント
バリー・ギャンブル(Barry Gamble)氏



3.4 Booklet – Summary of Nomination to the World Heritage List

This booklet summarises the World Heritage Nomination document that was submitted to UNESCO. Although the book was originally written in English, the booklet is now published both in English and in Japanese. Translation into other languages is planned

Official Pamphlet for the Public



The booklet was not aimed for general readers. Therefore the official pamphlet for the public, "Mini Pamphlet", was created by the World Heritage Council in order to educate them on the stories of the WHS.

It consists of 24 pages explaining the Site's OUV and the stories of each component parts with easy-to-understand language. The pamphlet is available at each component parts and at their visitor centers.



3.5 Exhibition – Liquid Galaxy

The Platform

The Liquid Galaxy[1] is an immersive multi-display platform. It utilises several servers showing Google Earth[2] and panoramic images that surround the viewer in an immersive display setting. Seven (55 inch to 60 inch) display shows a full HD 1920 x 1080 resolution image, and each is adjusted for the correct viewing angle in an arc around the viewers.

Liquid Galaxy began as a Google project and is now an open source platform utilized in over 50 locations around the globe by large companies, universities, museums and aquariums, including the Air & Space Museum in Washington DC and the Musée Océanographique in Monaco.

With this platform, various locations of the "Sites of Japan's Meiji Industrial Revolution" as they appear on the globe, and combine photos and videos to give a full sense of a specific site.



First deployment in October 2015 at "Digital Documentation" exhibition at UNESCO headquarters in Paris.

The initial presentation of the system took place as part of the exhibition "Digital Documentation: Conservation and Preservation with Science and Technology" in October 2015 in UNESCO HQ (Paris).

Following the presentation in Paris, the National Congress of Industrial Heritage and the local authorities started a 24-month tour exhibition in each world heritage site city. The exhibition runs from January 2016 to January 2018 and will be shown in eight locations for a three month period. It aims to inform visitors of the WHS by providing a virtual visit of each component.

By using the touch screen monitor, users can search and view the 23 components by industry and chronologically. They learn about each place by reading the explanations on them supported by some photos and educational videos. The exhibition provides an experience to components not open to the public including the inside of Hashima Coal Mine. It also presents other world heritage sites all over the world for a reference.

[1] Liquid Galaxy is a trademark of End Point Inc, USA

[2] Google Earth and Street View is a trademark of Google, Inc, USA



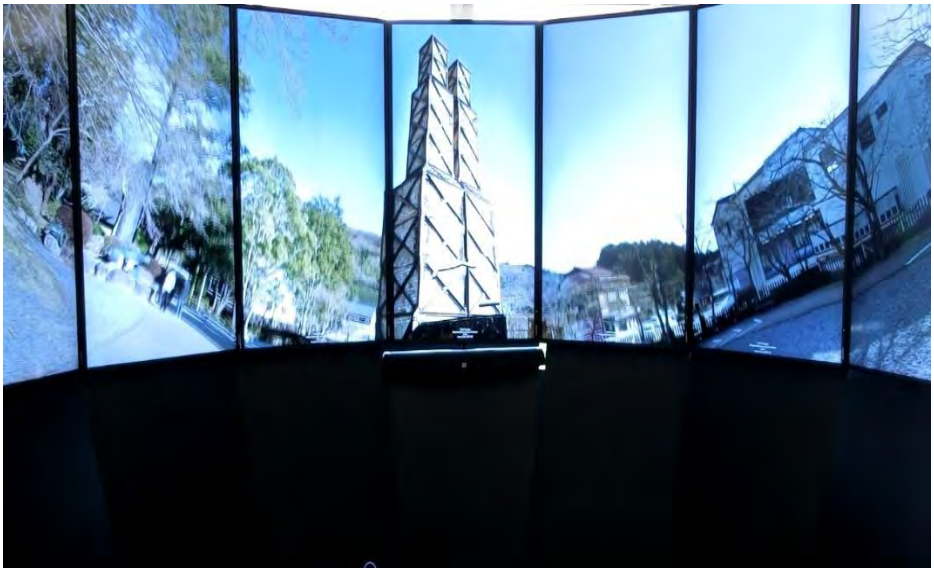
Seven 55-inch displays set vertically controlled by the central touch screen panel.



Top menu ("Home Screen") of the touch panel screen. The joystick type controller gives the user a simple and interactive presentation display.



The 23 sites are categorized by "Chronology" and by "Industry". Each box represents the access to the information of individual component.


Nirayama


Visitors can enjoy viewing the images of sites that are not open to the public. This is an example of Yawata Steel Works that belongs to Nippon Steel & Sumitomo Metal Corporation.



Mitsubishi Heavy Industry Group, Nagasaki Shipyard, No. 3 Dry Dock



Hashima (Gunkanjima), now closed because of the safety reason as well as the conservation and preservation strategy.

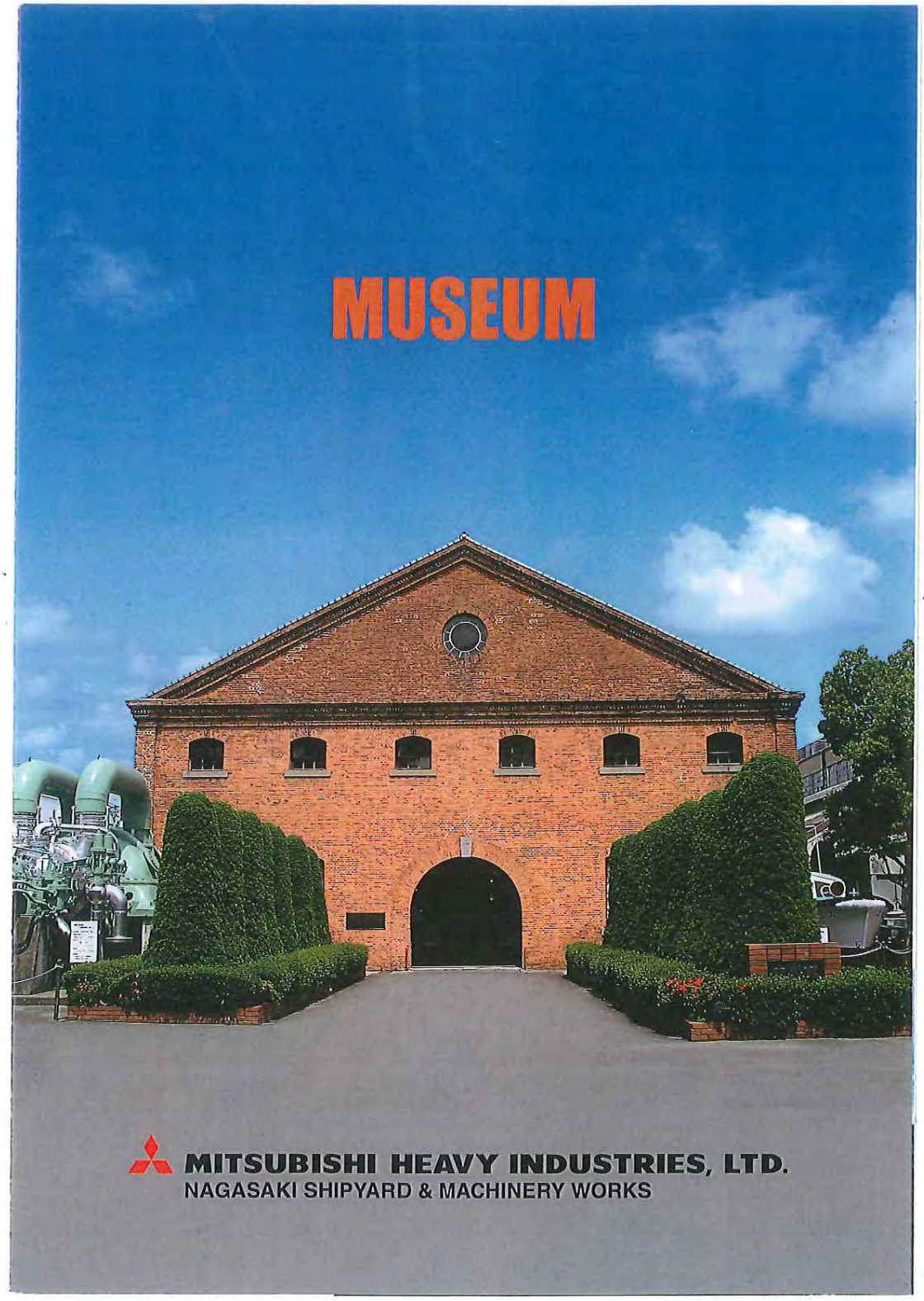


The system also has access to Industrial Heritage in the world. The image is a 3D image of the "Forth Bridge" which was inscribed on the world heritage list in 2015.

Exhibition Touring Schedule

	Duration	Area / Venue	Photos
1	Jan-Apr, 2016	Hagi City, Yamaguchi Prefecture Hagi World Heritage Visitor Center School (open since Jan)	
2	May-Jul, 2016	Kagoshima City, Kagoshima Prefecture Kagshima Prefectual Center for Historical Material Reimeikan	
3	Aug-Oct, 2016	Arao City, Kumamoto Prefecture Manda Pit Station	
4	Nov, 2016-Jan, 2017	Nagasaki City, Nagasaki Prefecture Glover House (No.2 Dock House)	
5	Feb-Mar, 2017	Kita-Kyushu City, Fukuoka Prefecre Prefecture Kita-Kyushu Innovation Gallery and Studio	
6	Apr-May, 2017	Omuta City, Fukuoka Prefecture Omuta Coal Industry and Science Museum	
7	Jun-Aug, 2017	Saga City, Saga Prefecture Tsunetami Sano Memorial Museum	
8	Sep-Nov, 2017	Kamaishi City, Iwate Prefecture The Kamaishi Iron and Steel History Museum	
9	Dec, 2017-Jan, 2018	Izunokuni City, Shizuoka Prefecture Prefecture Nirayama Reverberatory Furnaces Guidance Center	

3.6 Site specific printed material


MUSEUM
MITSUBISHI HEAVY INDUSTRIES, LTD.
NAGASAKI SHIPYARD & MACHINERY WORKS

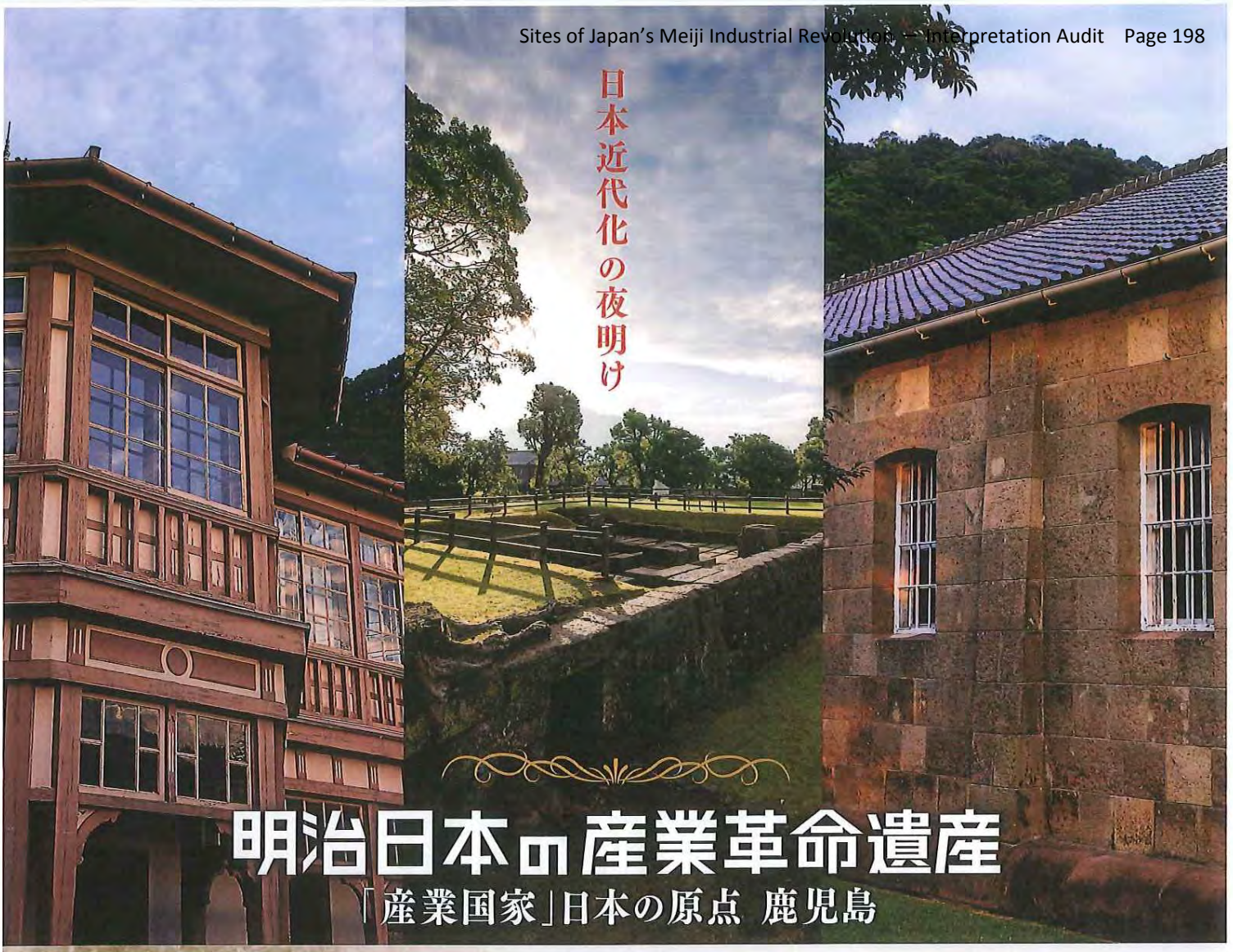
OMUTA

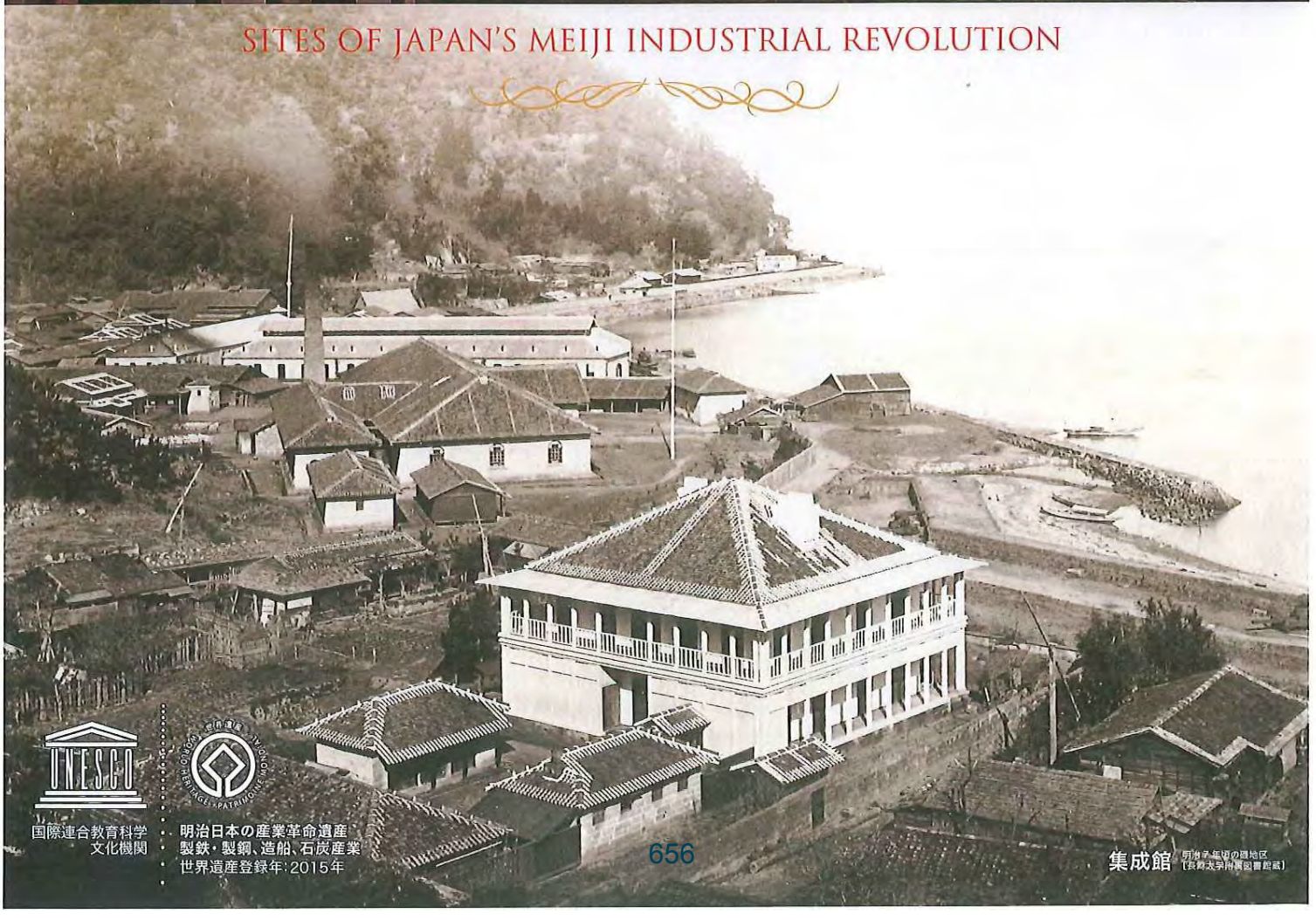
~ A City with World Heritages ~

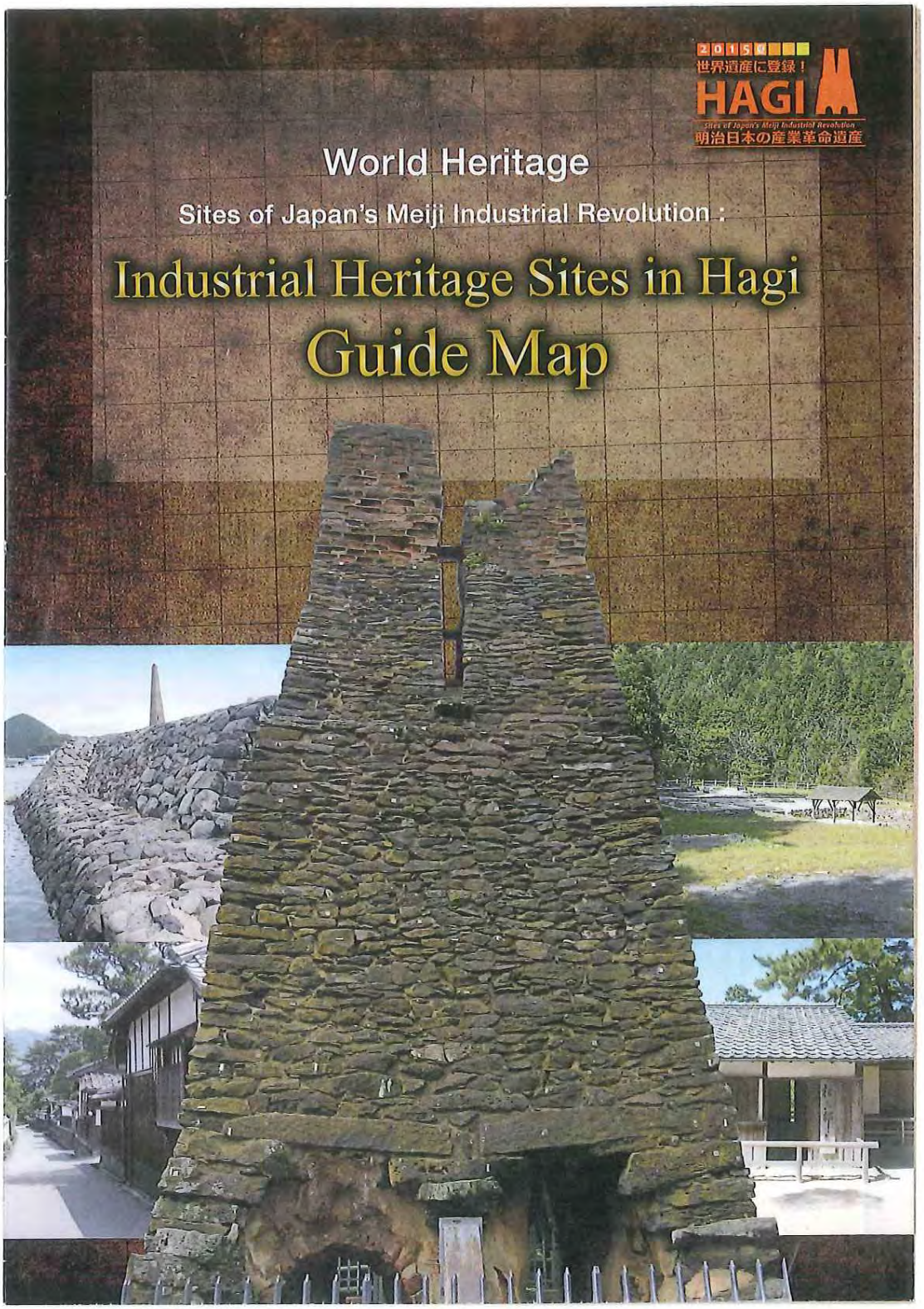
OMUTA FUKUOKA KYUSHU JAPAN

Travel Guide Book



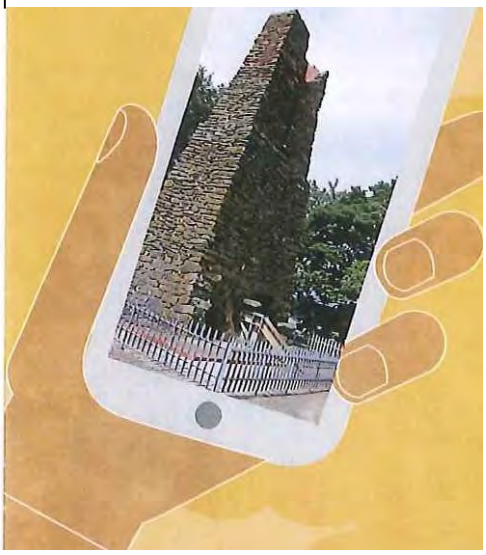

日本近代化の夜明け
明治日本の産業革命遺産
「産業国家」日本の原点 鹿児島

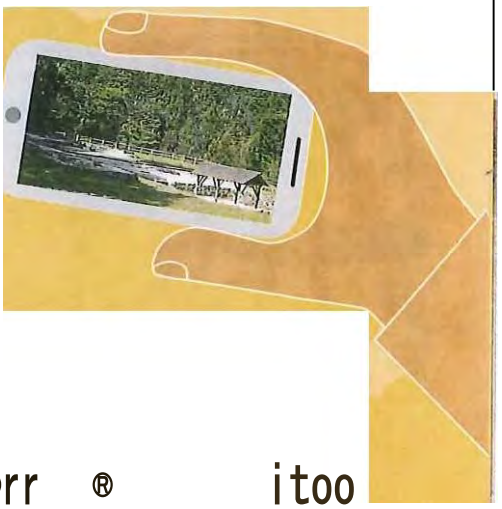

SITES OF JAPAN'S MEIJI INDUSTRIAL REVOLUTION
国際連合教育科学文化機関
明治日本の産業革命遺産
製鉄・製鋼、造船、石炭産業
世界遺産登録年:2015年
集成館 明治子年頃の園地区【長崎大学附属図書館蔵】


2015
世界遺産に登録！
HAGI
Sites of Japan's Meiji Industrial Revolution
明治日本の産業革命遺産
World Heritage
Sites of Japan's Meiji Industrial Revolution :
Industrial Heritage Sites in Hagi
Guide Map









[p) @rr® filh® ¥YAY/@rr ©1 ®rr ® itoo

IndustriaHeritage Sites inHagi



@ruJ0@1

®

Watch the photos in this guide come to life

oad, see inside.

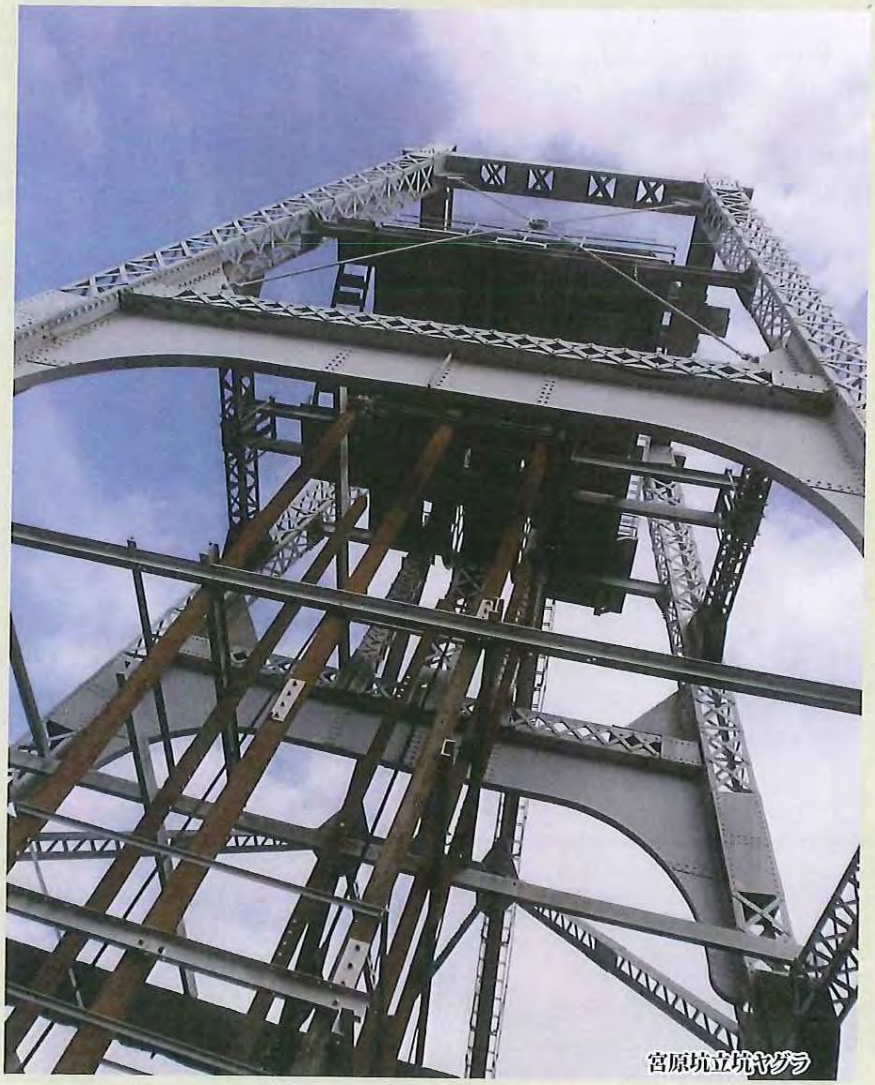
Download the COCOAR2 application for free and scan the marked photos to play the videos.



世界遺産巡り

三池炭鉱関連の近代化産業遺産ガイドマップ

Guide Map of Miike Coal Mining Heritage



宮原坑立坑ヤグラ

大牟田市
石炭産業科学館
OMUTA COAL INDUSTRY AND SCIENCE MUSEUM

【宇城市】


三角西港の世界文化遺産への登録が決定しました
登録決定に当たっての宇城市長コメント
平成27年7月5日
宇城市長　守田憲史


地震関連情報まとめ
2016年12月9日
【更新】熊本地震に伴う雇用・労働関係の特例措置について
三角西港
「明治日本の産業革命遺産」
世界文化遺産、三角西港の公式プロモーションビデオが完成!


三角西港
MISUMI WEST PORT
三角西港について
歴史・文化財指定
おすすめ散策コース
ガイドについて
交通アクセス

3.7 Commemorative Stamps & Coins

Commemorative Stamps





World Cultural Heritage Coin Set



Name: World Cultural Heritage Coin Set
The Sites of Japan's Meiji Industrial Revolution
Contents: 6 new Japanese coins in a plastic case with a special booklet that explains the component parts of the Sites of Japan's Meiji Industrial Revolution in detail.
Issue Date: July, 2015
Price: 2,300 yen (including tax and shipping cost)
Expected Sales Volume: 70,000 set
Point of Sales: Japan Mint or its online shop https://www3.mint.go.jp/

World Cultural Heritage Proof Medal Set



Name: World Cultural Heritage Proof Medal Set

The Sites of Japan's Meiji Industrial Revolution

Contents: 3 medals with a design of a representative component part on each and a special booklet that explains the component parts of the Sites of Japan's Meiji Industrial Revolution in detail.

Issue Date: July, 2015

Price: 20,000 yen (including tax and shipping cost)

Expected Sales Volume: 10,000 sets

Point of Sales: Japan Mint or its online shop https://www3.mint.go.jp/

APPENDIX 4 – STYLE GUIDE EXAMPLE

Australian Government

National Heritage List



BRANDING STYLE GUIDE

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Contents

Introduction 1
Identity overview 2
Layout and design elements 3
The Australian Government logo 4
Colour palette 5
Fonts 6
Examples of NHL products 7

Introduction

Welcome to the National Heritage List *Branding Style Guide*.

This style guide has been developed by the Department of the Environment, Water, Heritage and the Arts to:

- illustrate key aspects of the National Heritage List identity and brand, and
- ensure the integrity and consistency of the identity across sites and products.

The identity is made up of a colour palette, logo, fonts and general layout conventions: all of which give a consistent, professional appearance to National Heritage List (NHL) visual communications and products.

The Department of the Environment, Water, Heritage and the Arts (the Department) works to raise the profile of NHL sites through a comprehensive national and international promotional strategy. This identity (or 'branding') is a part of that overall strategy, and aims to help Australians easily identify and connect with our most outstanding heritage sites.

This guide is a quick and simple reference which briefly outlines the main elements of the NHL identity.

Key elements of the NHL identity (including photographs) are available online for use by sites in their own promotions. Visit: www.heritage.gov.au.

For more information

Heritage Division
Australian Government Department of the Environment,
Water, Heritage and the Arts
GPO Box 787, Canberra ACT 2601 Australia

Identity overview

The NHL corporate identity has been developed as an arrangement of simple elements. Blocks of background colour are separated horizontally by a montage strip of images and an illustration element: the golden thread. The golden thread is the centrepiece of our heritage branding.

"Our heritage provides an enduring golden thread that binds our diverse past with our life today and the stories of tomorrow."

The main document title and subheadings may appear above or below these central elements.

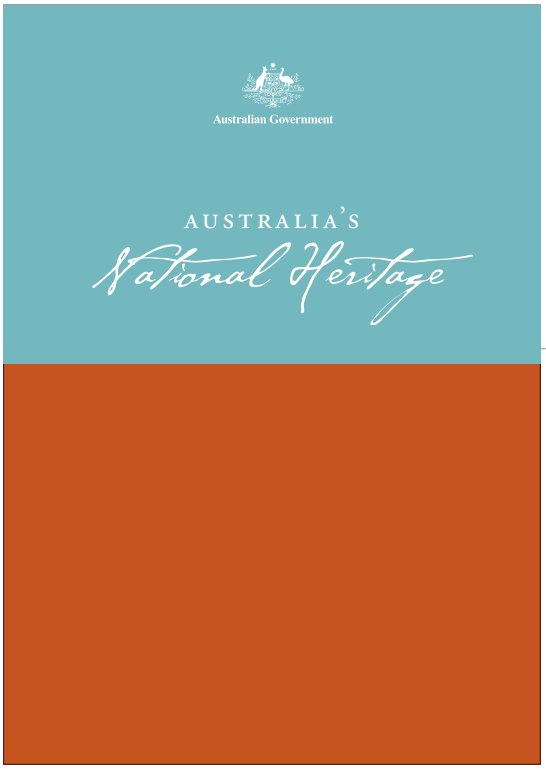
The Australian Government logo must always appear at the top of the page, above the title, in the most prominent position.

The arrangement of photographic images can adapt in shape, size and the number of images used. The intention of the montage is to allow scope to illustrate the diversity of NHL sites, or multiple aspects of one site.

The golden thread element sits above the images.



Layout and design elements



Top colour block

- The Australian Government logo must appear in the most prominent position
- Document title
- Ornate script font should be used judiciously
- Colour may be selected from the colour palette (see page 5)

Golden thread illustration

Montage of images

- Any arrangement or number of images is acceptable. Images should represent the variety of places on the NHL (where appropriate)
- Images sit beneath the golden thread element

Bottom colour block

- Subtitle may be placed here
- Watermark image may appear here
- Colour may be selected from the colour palette (see page 5)

Golden thread illustration





The golden thread element may also be incorporated as a large graphic watermark element.

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The Australian Government logo

All NHL communications produced by the Department must include the Australian Government logo.

The Australian Government logo is available in two forms:

- a vertical ('stacked') version, and
- a horizontal ('inline') version.

The logo should always have prominence over other images and graphic elements on the page. Where possible, the logo should be placed at the top of the product in the most prominent position.

The Australian Government logo must be reproduced with the Coat of Arms (crest) element at no less that 20mm width. A reasonable isolation zone should be established around the logo to ensure it is not crowded by other elements.

Logo files and a more detailed guide to use of the Australian Government logo is available from the Department.





Colour palette

The colour palette is an integral part of the NHL identity. Colours have been chosen to echo tones from the natural Australian environment: terracotta, gold, orange, red and brown of the central and desert areas; eucalypt, green, steel and navy blue of the mountains and coasts.

PMS (Pantone Matching System) colours are made from colour pigments which printers mix to a consistent formula to make a 'spot' colour. PMS colors are commonly used in the printing of one-two or three colour jobs like stationery. Printing in limited colours is often a cost-effective option for large print runs.

CMYK or full-colour printing uses a combination of four process inks: cyan (c), magenta (m), yellow (y) and black (k) which combine to make all colours. Materials which feature colour photographs are always produced in CMYK, as is most fast turnaround digital printing.

Web (hexadecimal) colours are used to describe onscreen monitor colours.

Where possible CMYK colours should be used. The PMS references below are the best available match.

Terracotta
CMYK = 0 / 75 / 95 / 20
PMS 167
Web #B8322D

Navy
CMYK = 100 / 50 / 0 / 40
PMS 540
Web #00315B

Gold
CMYK = 0 / 35 / 95 / 5
PMS 130
Web #D9922D

Mid blue
CMYK = 50 / 15 / 0 / 20
PMS 7454
Web #5182AD

Eucalypt
CMYK = 45 / 0 / 15 / 15
PMS 5493
Web #65A3A3

Orange
CMYK = 10 / 50 / 100 / 0
PMS 1385
Web #D1710D

Green
CMYK = 60 / 0 / 100 / 30
PMS 370
Web #3C7527

Brown
CMYK = 0 / 40 / 80 / 35
PMS 1395
Web #8F5910

Red
CMYK = 0 / 85 / 85 / 10
PMS 179
Web #B8322D

Cream
CMYK = 0 / 5 / 15 / 0
PMS 7401
Web #F2E9BF

Fonts

The NHL corporate identity uses three fonts:

- Adobe Garamond (serif)
- Frutiger (sans serif), and
- P22 Cezanne (ornate script).

These fonts have been chosen for their combination of classic style, readability, and artistic appeal.

The ornate script style font P22 Cezanne should be used judiciously as a decorative element only. It is not suitable for typesetting large amounts of body text and is most effective when used for key words, short phrases or as a watermark.

Adobe Garamond Regular
Adobe Garamond Italic
Adobe Garamond Semibold
Adobe Garamond Semibold

Frutiger Light
Frutiger Light Italic
Frutiger Roman
Frutiger Roman Italic
Frutiger Bold
Frutiger Bold Italic

P22 Cezanne

Alternatives to these fonts for in-house word processing applications are Times New Roman and Helvetica.

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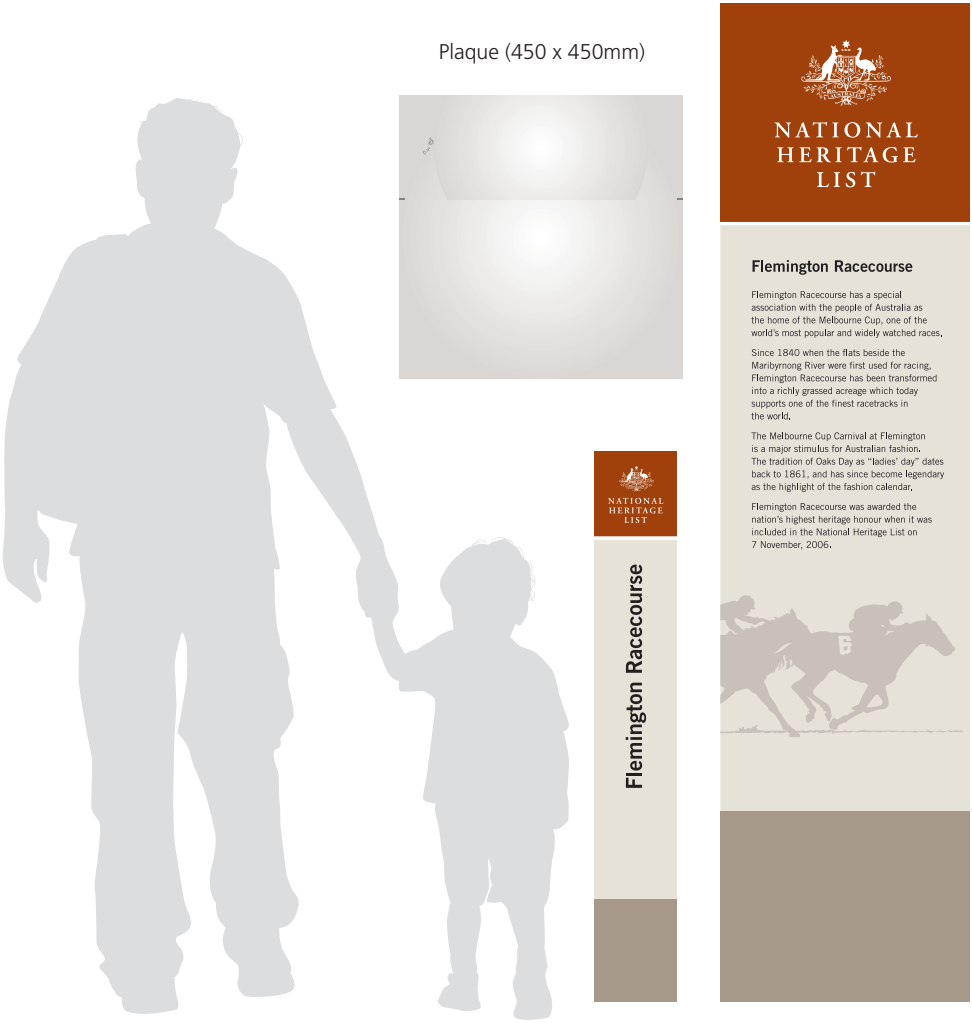
Signage

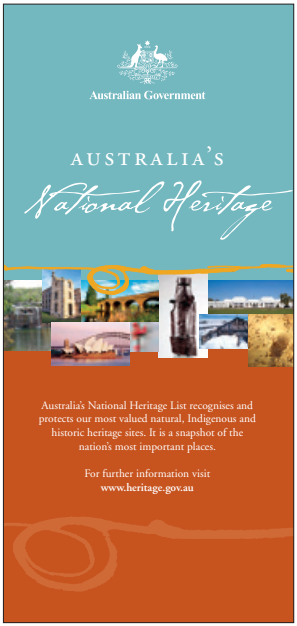
To date we have worked with several sites to develop eye catching plinths, plaques and directional posts that promote these significant places and their importance on the National Heritage List.



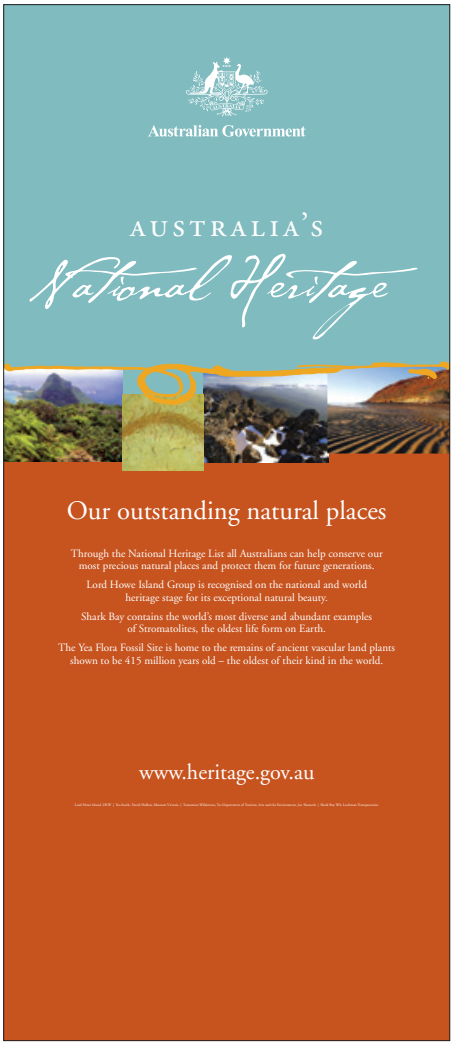
Examples of NHL products



Heritage values brochure



DL brochure



Large scale display banner



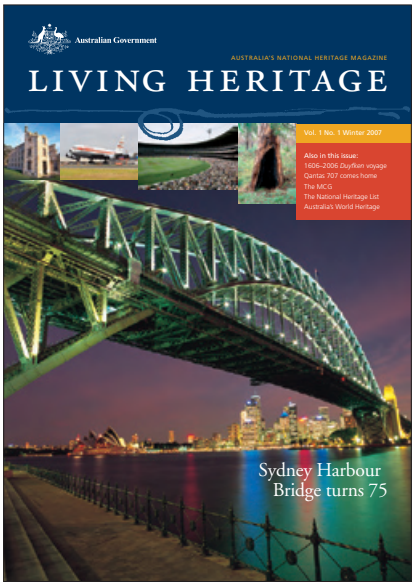
A4 brochure



A4 fact sheet



Full page magazine advertisement



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Progress report on the urban planning project road construction plan in the vicinity of Shuseikan

Summary

This document reports the progress on the road construction plan in the vicinity of Shuseikan (Component Part 2-1), one of the Component Parts that comprises the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" inscribed on the World Heritage List.

We looked into the possibility of constructing a road outside of the Component Part along the seashore to the southeast of Shuseikan or in the hilly area to the northwest of it. Taking into account views from the Component Part, however, we have decided to construct an underground tunnel through the hilly area on the northwest side around the Component Part. Accordingly, the Kagoshima Prefectural Government is currently working toward an urban planning decision on the construction of the tunnel route within 2015.

The new road will run partly through the edge of the Buffer Zone as an underground tunnel in the hilly area to the northwest of the Component Part. It will have no adverse effect on the Outstanding Universal Value of the Component Part, in terms of views from inside the Component Part or on the Buffer Zone designed to protect the property's setting.

Following the Prefectural Government's decision of the aforementioned location of the new road on the urban planning as an official project, the Ministry of Land, Infrastructure, Transport, and Tourism will work on the detailed design, budget for the construction, and take other necessary courses of action in stages. During the process, we will decide whether a Heritage Impact Assessment (HIA) will need to be conducted according to prevailing circumstances, and submit a progress report again.

1. Summary of the urban planning decision to construct a new road

(1) The new road (Figures 2 and 3) is to be planned as a bypass of National Route 10, which runs through part of the Component Part. The Kagoshima Prefectural Government is working toward an official decision to determine the route as an urban planning project within 2015.

(2) The new bypass will be constructed as a tunnel through part of the Buffer Zone outside of the Component Part, and is principally outside of the Buffer Zone.

(3) National Route 10 connects major cities in Eastern Kyushu, playing a significant role in the local economy, including industries, culture, and tourism. Topographical constraints along the route, however, have long been a cause of chronic traffic congestion during commuting hours. The new bypass will reduce traffic congestion, improve the mobility of vehicles, and ensure road safety through the smooth flow of traffic. Furthermore, since the bypass will help reduce traffic dramatically on Route 10, which runs through part of the Component Part, this project is also expected to reduce the adverse effects traffic may have on the Component Part.

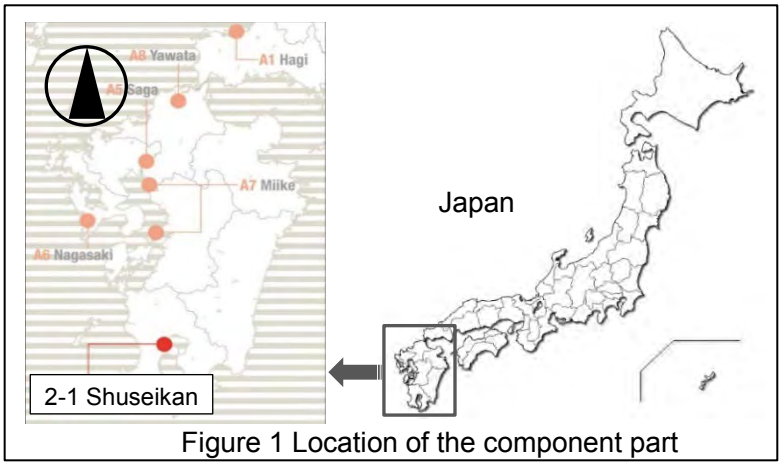


Figure 1 Location of the component part

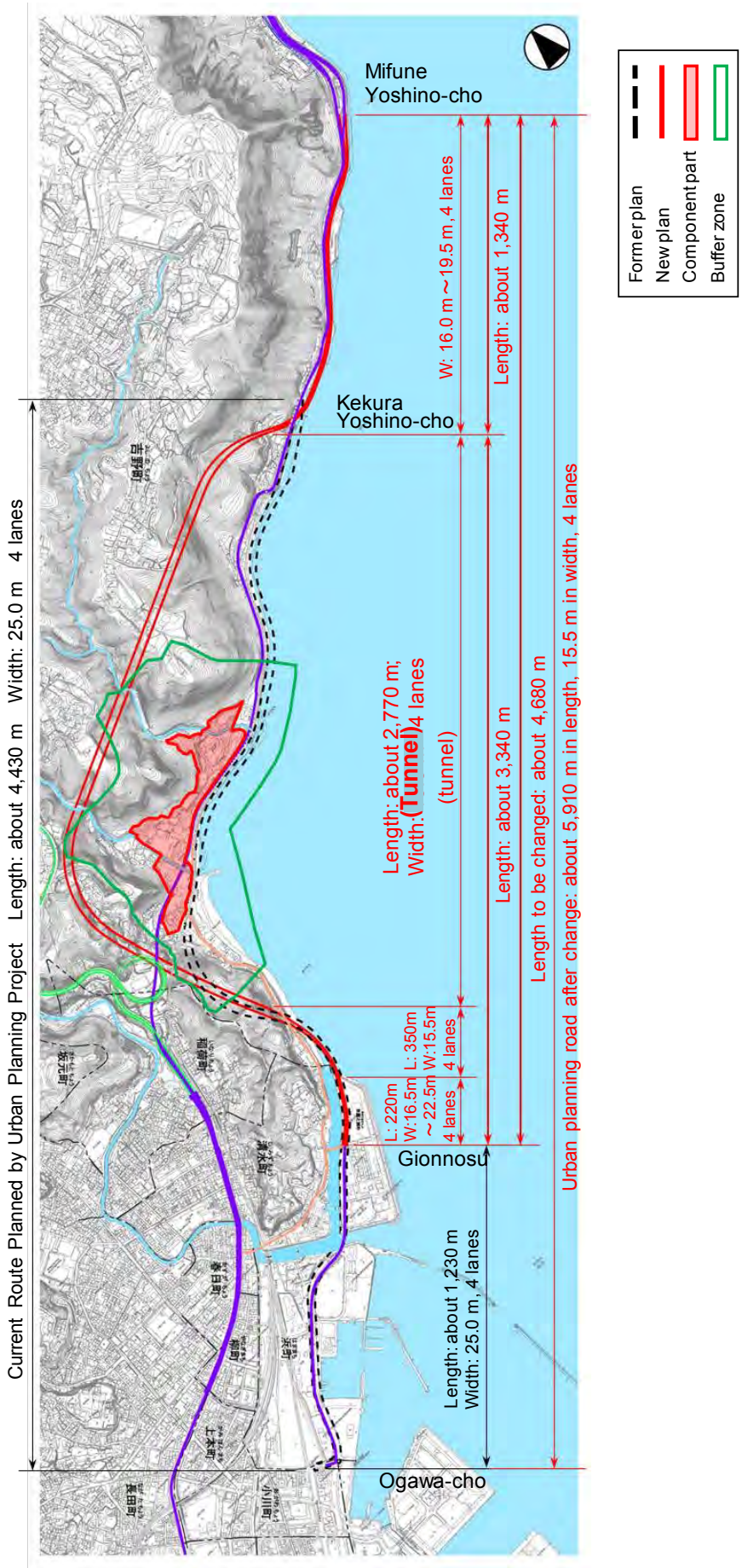


Figure 2: Planned Bypass Route to be Decided on the Urban Planning (wide area)

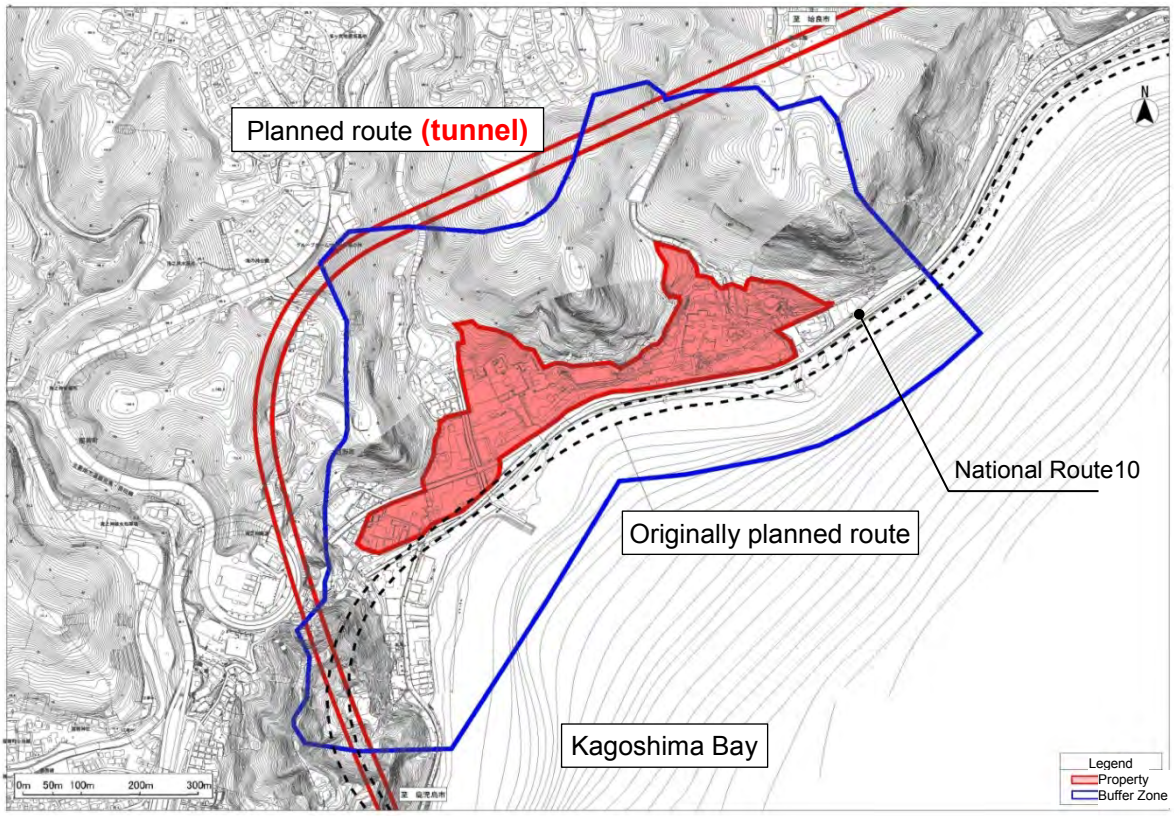


Figure 3: Planned Route to be Decided on the Urban Planning (detailed)

2. Outstanding Universal Value of the heritage sites

(1) The Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" is stated as follows: (Excerpts from the Statement of Outstanding Universal Value in the Decision adopted by the World Heritage Committee at its 39th session):

A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of southwest of Japan, represent the first successful transfer of industrialisation from the West to a non-Western nation. The rapid industrialisation that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialisation achieved over a short space of just over fifty years between 1850s and 1910.

The first phase in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialisation was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.

The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialisation achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors.

(2) Shuseikan is categorised as the remains from the first phase of the three that reflect the aforementioned Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution," that is, the period of experimentation in iron and steel making. In terms of shipbuilding, it belongs to the first phase as well as the second phase that was the beginning of industrialisation when Western technology was directly imported.

(3) The elements (attributes) of Shuseikan that convey the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution" are the aboveground and underground remains of the reverberatory furnace, the Former Shuseikan Machinery Factory, the Former Kagoshima Foreign Engineers' Residence, and the leat, as well as the underground archaeological remains of the Site of the Kagoshima Spinning Mill.

3. Adverse effect of the route proposed for the urban planning project on the Component Part and its Buffer Zone

(1) Impacts on the Component Part

- The new bypass that this urban planning project is to build will be an underground national route through the hilly area to the northwest of the Component Part. It will be away from the Component Part itself, and thus the route will have no adverse effect on the elements (attributes) of Shuseikan that convey the Outstanding Universal Value, or on any other physical elements (attributes) of the Component Part. Therefore, it will not damage the Outstanding Universal Value of Shuseikan, which is one of the component parts of the "Sites of Japan's Meiji Industrial Revolution".

(2) Impacts on the Buffer Zone

- In this project, the bypass will be constructed outside of the Component Part. Part of the route will be set out underground skirting the outer edge of the Component Part's Buffer Zone, and its length will be very limited. The section running through the lush hills behind the Component Part will be built by the tunnelling method, and thus the new road will have no adverse effect on the Outstanding Universal Value in terms of views from inside the Component Part, or on the Buffer Zone designed to protect the setting of the Component Part.
- If any adverse effect unforeseen at the moment starts to loom on the Component Part or its Buffer Zone, we will look into it as an additional required task and take appropriate remedial actions.

4. Management process

- The road plan has been discussed by a committee consisting of scholars and experts. To determine the route, interviews have been conducted with relevant government agencies and a wide range of private citizens.
- The plan was also discussed by the "Shuseikan Conservation Council" organised in accordance with the "General Principles and Strategic Framework of the Conservation and Management of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

  The "Shuseikan Conservation Council" is a body in which those engaging in the project exchange information and opinions, and make decisions regarding the "Conservation Management Plan, Shuseikan", ways to improve approaches to implementation of the plan, and the monitoring for the state of conservation of the Component Part.
- The Kagoshima National Highway Office at the Kyushu Regional Development Bureau of the Ministry of Land, Infrastructure, Transport, and Tourism is also a member of the "Shuseikan Conservation Council" as the administrator of the road. As it moves ahead with the project in stages, the Council will continue to share information and conduct adequate discussions with the owner of the land, the Kagoshima Prefectural Government, and the Kagoshima City Government. It will also ask the "Industrial Heritage Expert Committee including Working Properties" organised by the Government of Japan (the Cabinet Secretariat) for advice as necessary.

5. Conclusions

- At the present moment, the route planned by the road construction project in the vicinity of the Component Part, Shuseikan will not have any adverse impact on the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution" inscribed on the World Heritage List nor on the Buffer Zone designed to protect the setting of the Component Part.
- The Kagoshima National Highway Office at the Kyushu Regional Development Bureau of the Ministry of Land, Infrastructure, Transport, and Tourism, the Kagoshima Prefectural Government, the Kagoshima City Government, and the Cabinet Secretariat of the Government of Japan will continue to meet for discussions at the "Shuseikan Conservation Council" as the construction plan progresses.

Heritage impact assessment report on the road bridge construction project in the vicinity of Mietsu Naval Dock

Executive Summary

This paper is a Heritage Impact Assessment report drawn up by the Government of Japan on the road bridge construction project at a site outside of and adjacent to the Buffer Zone of Mietsu Naval Dock, a Component Part (Component ID: 5-1) of the World Heritage property, the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

Because the elements (attributes) of Mietsu Naval Dock that hold the Outstanding Universal Value of the World Heritage property are of underground archaeological remains and the geographical features integrated therewith[1)], construction outside the property presents no potential direct impact. In addition, the impact on the landscape is minimized by the design changes that have been made based on the assessment of the impact on the views from the Component Part. Sustained discussions and collaborative work shall be made by and between the road administrator (Ministry of Land, Infrastructure, Transportation and Tourism) and the heritage administrator (Saga City).

1) Attributes: The elements that hold the Outstanding Universal Value (attributes) are documented for each Component Part in the paper submitted to the ICOMOS (International Council on Monuments and Sites) in November 2014, in response to the additional information request therefrom. Please refer to the attachment to this Heritage Impact Assessment report.

1 Introduction

(1) The object of this Heritage Impact Assessment report is the Component Part, Mietsu Naval Dock (Component ID: 5-1), of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining," which were inscribed on the World Heritage List in July 2015.

(2) This Heritage Impact Assessment was conducted in accordance with the road bridge construction and urban development plans and so forth, and with reference to the items set out in the "Conservation Management Plan (CMP) of Mietsu Naval Dock" as a Component Part of the World Heritage property and the opinions of experts from both Japan and overseas.

(3) In the process of formulating the above-mentioned plans and so forth, experts in the related fields including landscape engineering, transportation engineering, structural engineering, structure analyses, bridge engineering, ground engineering and so forth, participated in addition to experts in the road construction and cultural property conservation.

(4) The central body of drawing up this Heritage Impact Assessment report is the Department of

Industrial Heritage World Heritage Inscription, the Cabinet Secretariat of Japan.

2 Overview of the proposed project

(1) The proposed project is the construction of the Hayatsue River Bridge (Fig.2,3), which is to be built at a site to the north of and adjacent to the Buffer Zone so as to constitute a part of the Ariake Coastal Road, the commencement of the work of which is scheduled for December 2015.

(2) The construction work is to take place at a site outside of the area of the Component Part and outside of the Buffer Zone as well.

(3) The newly constructed road section that includes the Hayatsue River Bridge is aimed at supporting the smooth urban activities in the Fukuoka-Saga Urban Development Zone, enhancing convenience for urban residents and ensuring a positive urban environment. It is expected that this project will contribute enormously to energizing the industry, economy and culture of the entire Ariake Sea Coastal Region by creating a wide operation zone through integration with other sections (Fig.2).

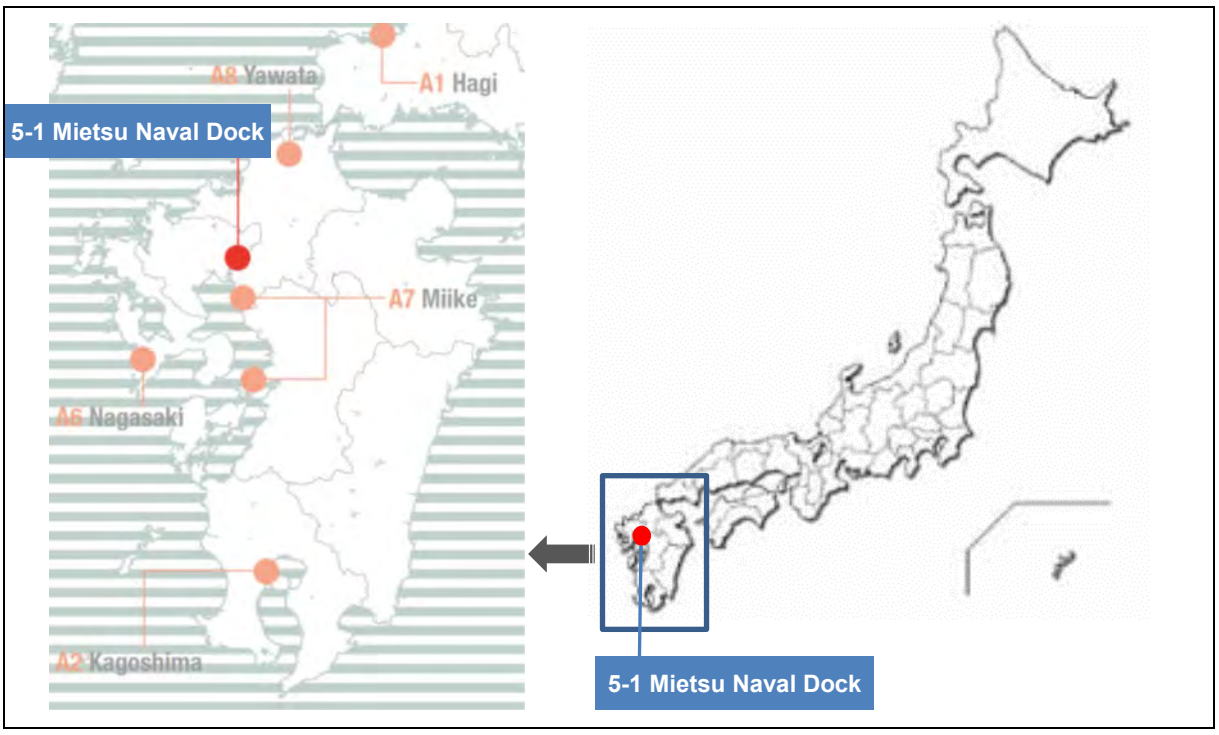


Fig.1: Saga Area Location Map

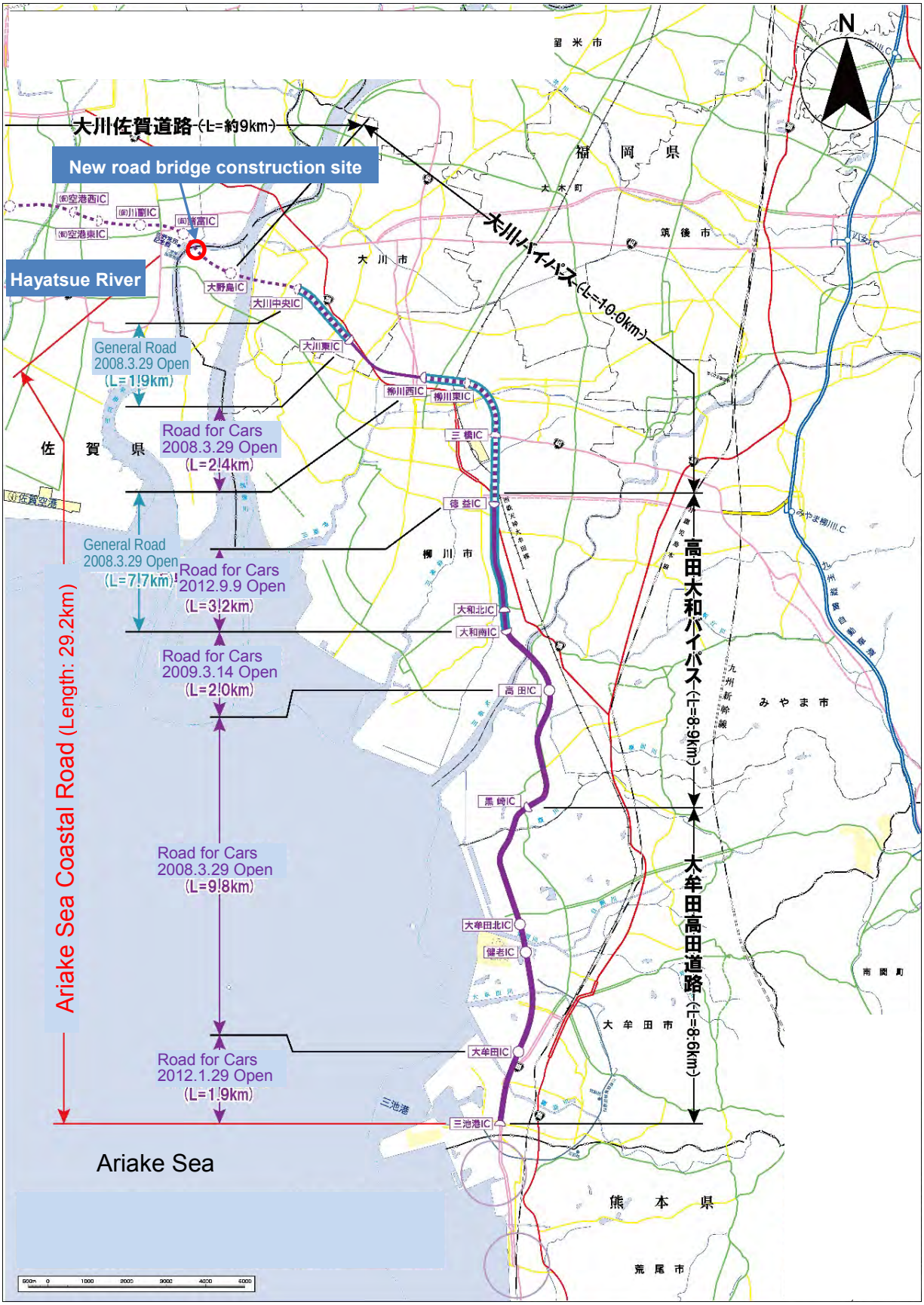


Fig.2: Ariake Sea Coastal Road Explanatory Overview

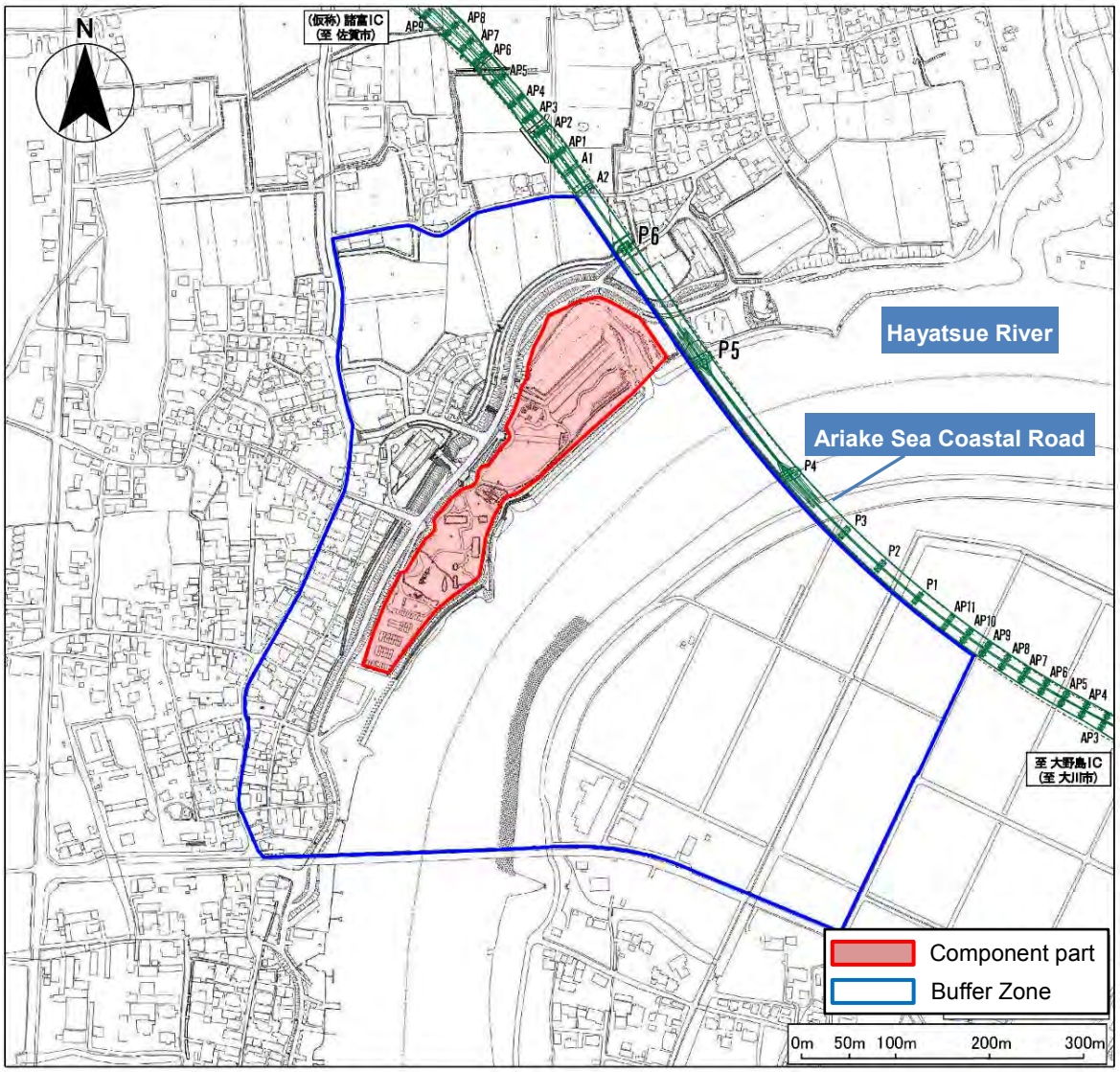


Fig.3: Hayatsue River Bridge Location Map

3 Heritage Values

(1) The Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" is stated as follows (excerpt from the Statement of Outstanding Universal Value in the Decision adopted by the World Heritage Committee at its 39th session)

> A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of southwest of Japan, represent the first successful transfer of industrialization from the West to a non-Western nation. The rapid industrialization that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialisation achieved over a short space of just over fifty years between 1850s and 1910.
>
> The first phase in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialization was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.
>
> The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialization achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors.

(2) The Mietsu Naval Dock is a shipbuilding site in the first phase and the remains of the initial phase of the industrialisation where trial-and-error attempts were made in shipbuilding and repair. It equipped the oldest dry dock in Japan used for training and the repair of Western-style ships and operated from 1858 to 1871. The Mietsu Naval Dock was operated based on knowledge and technologies that were acquired at the Nagasaki Naval Training Institute, which was established by the Tokugawa Shogunate in 1855 after the opening of the country following the arrival of Commodore Perry. (The Nagasaki Naval Training Institute no longer exists.)

(3) The elements (attributes) of Mietsu Naval Dock that hold the Outstanding Universal Value of

the World Heritage property are archaeological remains of the wooden dry dock (the shipbuilding/repair dock and metal work section), the training ground section and the small boat dock section as well as the geographical features integrated with those remains. The Conservation Management Plan of the Component Part sets out the daily maintenance of these elements (attributes) as follows:

[Management by Saga City and Saga City Board of Education]

Elements (attributes) of the Component Part that will be conserved and managed date to the period when Mietsu Naval Dock was in operation. These elements (attributes) provide direct evidence of activities relating to shipbuilding and repair work as part of Saga Clan's goal to modernize through its own independent efforts. They consist of both buried remains and geographical features, each of which is to be maintained and managed as follows.

As the Component Part has been designated as a National Historic Site based on the Law for the Protection of Cultural Properties, all conservation and management work will comply with the Plan for the National Historic Site Mietsu Naval Facility Site Property Management Plan, which sets out guidelines on dealing with such things as changes to the Component Part's current state in areas where there are historic remains. In addition to this, all work will be implemented in liaison and coordination with Saga City Board of Education, the site's administrator. ("Conservation Management Plan, Mietsu Naval Dock", pp. 83 –84.)

■Buried remains

•Shipbuilding/repair docks and metal works section:
Stone remains, furnace remains (1.2), ditch remains, double–stranded furnace (crucible furnace), scrap pit revetment remains (main dock area), revetment remains (dock entrance area), river side revetment remains, construction soil

•Training ground section: Construction soil

•Small boat docks section: Construction soil, embankment

All buried remains have been secured with a sufficiently thick protective layer of 60 - 100 cm from the current ground surface, and are being maintained and managed so that nothing can harm them. Therefore, as they will continue to be preserved in this good buried state, measures will be taken for conservation and management which seek to maintain their current state. In regard to remains that are made of wood in particular, such as revetment remains, other than for the purpose of surveys, these remains will be left unexposed so as to prevent deterioration.

■Geographical features

•Small boat docks section: Geographical features of inlet

The geographical features of the inlet give insights into the nature of small boat docks in the past. Therefore, in order to preserve this landscape, measures will be taken for

conservation and management which seek to maintain their current state on the assumption of the area's ongoing use as a fishing port.

(4) Additionally, the regulations applied to the Buffer Zone are set out as follows: ("Conservation Management Plan, Mietsu Naval Dock", p. 87.)

5.4.1 Conditions of the Buffer Zone that are to be maintained (benchmark of regulation and protection)

The Buffer Zone contains land use divisions and geographical formations that evoke the landscape when Mietsu Naval Dock was in operation. In order to protect the surrounding area as the appropriate setting as the appropriate setting as seen from the Component Part, controls will be placed on the establishment of structures that obstruct the visibility of this setting.

5.4.2 Regulation and protection policy and overall plan in the Buffer Zone

In order to maintain the conditions set out in 5.4.1, which aims to protect the Component Part, conservation measures will be taken along with the setting of appropriate boundaries for the Buffer Zone.

In order that development activities which take place within the Buffer Zone do not harm the Component Part's value, appropriate regulations are to be put in place in accordance with the River Act, the City Planning Act, the Landscape Act, the Act Concerning Establishment of Agricultural Promotion Areas, and the Agricultural Land Act.

4 Assessment of the overall impact of the proposed construction work

(1)The proposed construction work in no way makes adverse impacts on the buried remains or the geographical features integrated with those remains which constitute the elements (attributes) of the Outstanding Universal Value, and their integrity and authenticity, because the construction is to be carried out at a site outside of the Component Part.

(2) The view from the Component Part has been examined as part of the assessment although it is not an element (attribute) of the Outstanding Universal Value. This is because the construction work is planned at a site adjacent to the Buffer Zone, for which the Conservation Management Plan sets out the consideration requirements concerning the conservation of the Buffer Zone landscape.

(3) For the section of the Ariake Sea Coastal Road that includes the Hayatsue River Bridge, in March 2003, the Saga Prefectural and Saga City Governments began environmental assessment on the urban planning in accordance with the Environmental Impact Assessment Act. Through public hearings, deliberations by experts, public notices and access to the plan and so forth, which are all proceedings stipulated in the City Planning Act, Saga Prefecture made a decision on the urban planning in February 2008. The following assessment was

made on the "landscape", which the Environmental Impact Assessment Act requires to include as an environmental assessment item:

In regard to the major view (landscape), a part of the bridge across the Hayatsue River will be visually noticeable, while the embankment part will be assimilated into the scenery of the main urban area, thus, not visually noticeable. In any case, neither are presumed to block the skyline.

(4) Toward the inscription of the property on the World Heritage List, the "Advisory Committee for the Consortium for the World Heritage inscription of Modern Industrial Heritage (Kyushu-Yamaguchi)", established in December 2008 with experts from both Japan and overseas, carried out site surveys at the Mietsu Naval Dock in April 2009 and April 2010. The statement, "The construction project of the Ariake Coastal Road does not make any impact on the values worthy of the World Heritage that the Mietsu Naval Dock holds," was made by council member experts from overseas. Similar statements presuming no impact were made during the 3rd Advisory Committee meeting mentioned above held in April 2009.

(5) In June 2009, the Ministry of Land, Infrastructure, Transport and Tourism and the Cultural Property Division of the Saga Prefectural Board of Education began collaborative studies and discussions on the design of the Hayatsue River Bridge. The Cultural Property Division of the Saga Prefectural Board of Education conducted archaeological surveys in the area including the periphery of the site where the construction of bridge piers was planned in parallel to discussions with the Ministry of Land, Infrastructure, Transport and Tourism. The results of the archaeological surveys at present are described below. The archaeological survey for the site where the construction of the P5 bridge pier was planned was judged not necessary because the site was within the water flow area and the existence of archaeological remains there was unlikely.

(6) The P6 bridge pier is located in the north edge of the Buffer Zone of the Component Part. The construction site for this bridge pier is currently occupied by a community road, an irrigation channel and a housing area. In the archaeological surveys, remains were not found in the survey zone 1. In the survey zone 2, a landform gently inclined toward the north was found, but any archaeological remains of structures were not. (Fig.4) This survey zone 2 is the location of farmland and a water channel shown in pictorial materials drawn in the 18th century, from which the landform is thought to be a part of the vestige of the causeway or water channel that were built at the edge of the farmland. While roof tiles and 17th-century ceramicware were excavated from the periphery, none of artifacts related to the Mietsu Naval Facility Site were excavated. From the above-described results of the archaeological survey, the majority of the sites where the bridge piers are planned is thought to coincide with the farmland and water channel that existed before the construction of the Mietsu Naval Dock

(1858-1871), a consideration supported by the fact that no artifacts related to the Mietsu Naval Dock were excavated. Therefore, it is thought that construction of the bridge piers will have no impact on any archaeological remains related to the dock, which in any case would be outside the Component Part.

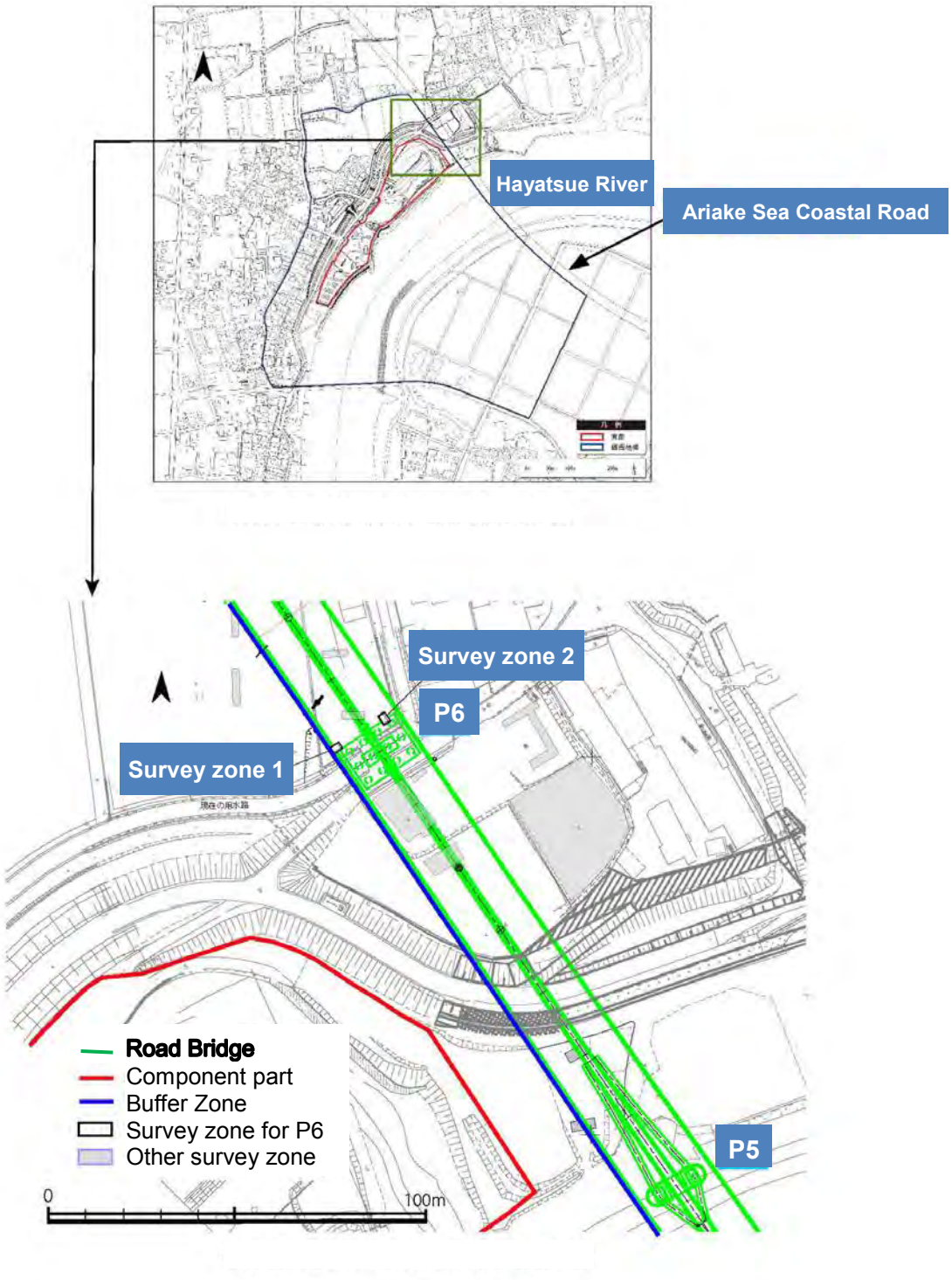


Fig. 4: Location Map of Archaeological Surveys Conducted in Conjunction with the Construction of the Bridge Piers for the Ariake Sea Coastal Road

(7) In July 2009, the Fukuoka National Highway Office of the Kyushu Regional Development Bureau of Ministry of Land, Infrastructure, Transport and Tourism established a conference on “Discussions on the Basic Design” concerning the bridges across the Chikugo/Hayatsue rivers that included experts, and held a total of four meetings by July 2011. Based on the outcome of the conference and thorough consideration for the peripheral environment and landscape of the site, the Fukuoka National Highway Office drew up its basic policy on the design of the bridges as a “Design Concept.”

(8) In order to develop the “Discussions on the Basic Design” conference and scrutinize technical matters comprehensively, the Fukuoka National Highway Office set up the “Ariake Sea Coastal Road, Chikugo/Hayatsue River Bridges Design Study Committee” (hereinafter referred to as “Committee”) in September 2011, together with the “Landscape Subcommittee” and “Ground/Structure Subcommittee” for intensive technical studies. A total of eight Committee meetings, five Landscape Subcommittee meetings, and four Ground/Structure Subcommittee meetings were held. In those meetings, in-depth discussions were conducted on the selection of the bridge types that fit the bridging conditions and the design of each bridge pier from the perspective of landscape, ground, and structure. In October 2014, a report was drawn up, and the process and outcome of the work were released to the public. In the selection of the recommended bridge type in June 2012, two open-houses were held to inform residents living along the road of the studies and works, in which mock-ups and display panels were used to facilitate understanding.

(9) In the above Committee, six bridge types applicable to the bridging position: 1. Steel plate deck box girder bridge; 2. Steel arch bridge; 3. Cable-stayed bridge; 4. PC (Prestressed concrete) Rahmen box girder bridge; 5. Extradosed bridge; 6. PC Cable-stayed bridge (Fig. 5), were subjected to comprehensive evaluations from the standpoint of economy, landscape, structure, workability, maintainability and manageability. In January 2012, they were narrowed down to the following three types: 1. Steel plate deck box girder bridge; 2. Steel arch bridge; 3. Cable-stayed bridge.

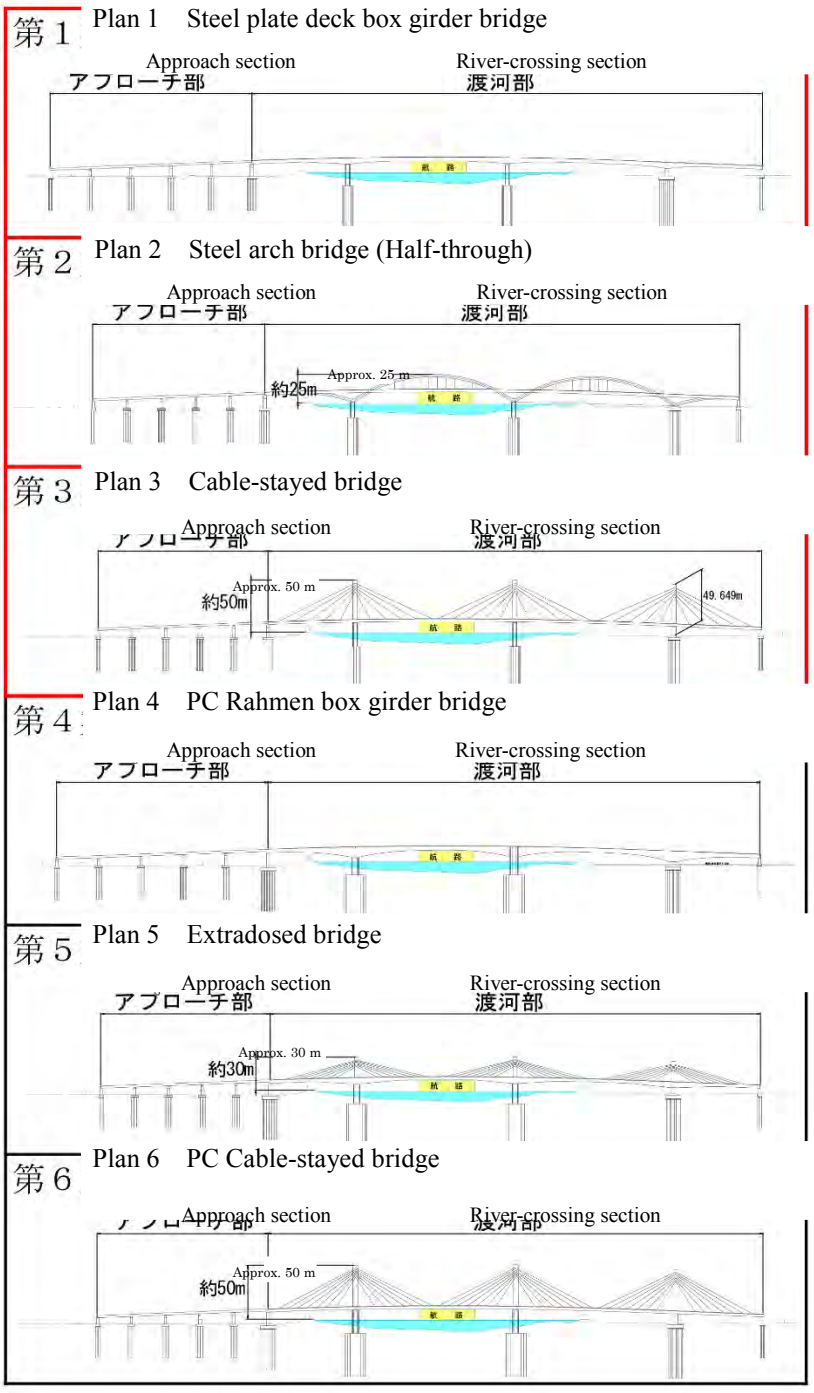


Fig. 5: Six Bridge Types Applicable to the Bridging Position

(10) In June 2012, the Committee assessed the impact on the landscape as follows in choosing the Steel arch type (Plan 2) as the recommended bridge type (Fig.6).

The steel arch bridge (Plan 2) is a lightweight steel-made bridge and its bridge pier structure can be made small by taking a half-through arch design. On account of those benefits, the visual

impact given by the bridge pier will be minimised. In addition, the section that crosses over the river near Mietsu Naval Dock is designed using girders with a constant cross-section and minimized height so as to mitigate visual impact.

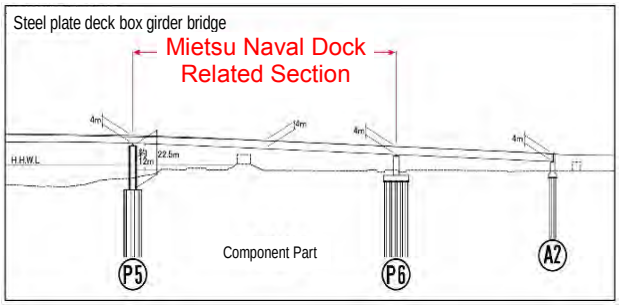
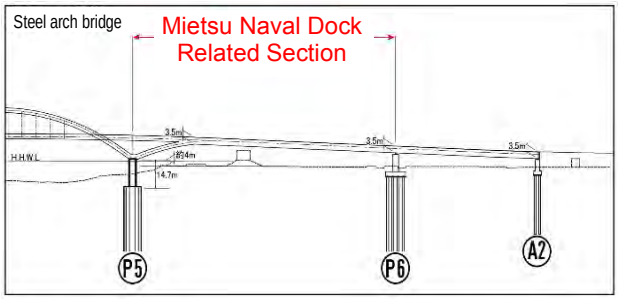
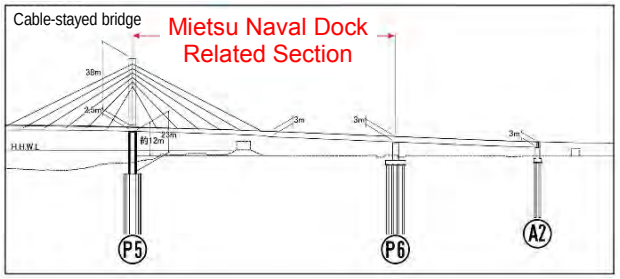
Front cross-sectional view of the road bridge	Visual impact to Mietsu Naval Dock
	1. Steel plate deck box girder bridge Girder height is about 4 m, and the upper structure gives a greater sense of visual impact. Pier height is about 4 m, giving a greater sense of visual impact to Mietsu Naval Dock.
	2. Steel arch bridge Girder height is controlled at about 3.5 m which mitigates the visual impact. Half-through type arch design contributes to keep pier height at about 4 m and reduce the visual impact.
	3. Cable-stayed bridge While girder height is controlled at about 3 m, pier height is about 12 m with main tower (about 40 m) built on top of it, which gives a great sense of visual impact.

Fig. 6: Landscape Impact Assessment Conducted in the Selection of the Bridge Types

(11) History of main studies and works

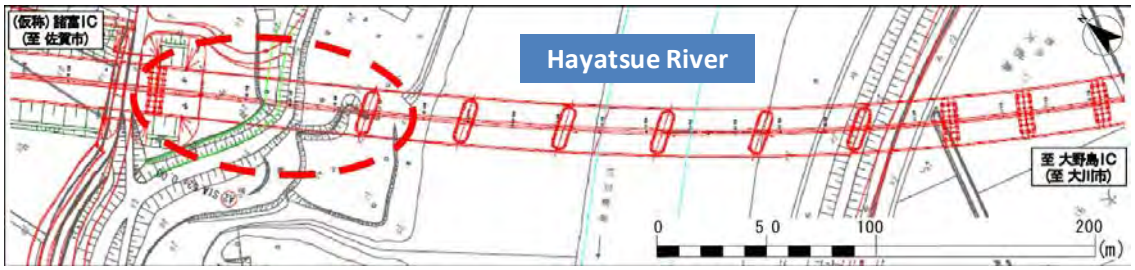
Discussions on the basic design of the Chikugo/Hayatsue river bridges	
1st meeting	July 22, 2009
2nd meeting	February 9, 2010
3rd meeting	February 22, 2011
4th meeting	July 28, 2011

Ariake Sea Coastal Road, Chikugo/Hayatsue River Bridges Design Study Committee	
1st meeting	September 29, 2011
2nd meeting	December 1, 2011
3rd meeting	February 3, 2012
Open House	February 6 –10, 2012
4th meeting	March 8, 2012
Open House	June 23 –July 1, 2012
5th meeting	November 7, 2012
6th meeting	March 22, 2013
7th meeting	August 1, 2013
8th meeting	June 18, 2014
Open House	October 5–10, 2014

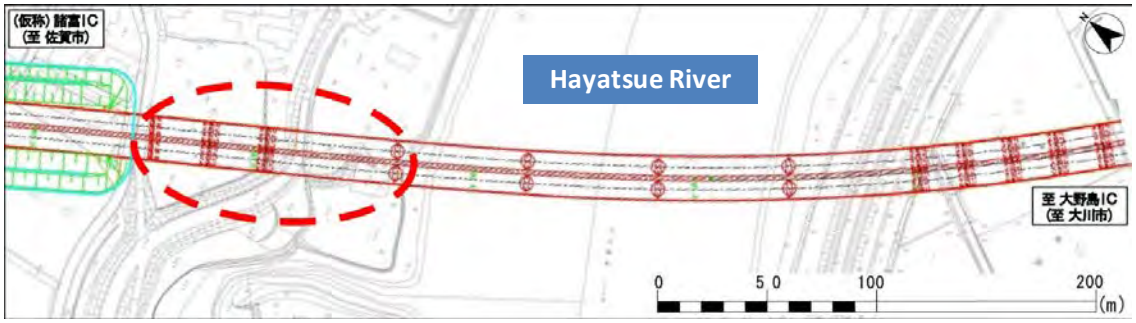
Landscape Subcommittee	
1st meeting	October 30, 2011
2nd meeting	December 28, 2011
3rd meeting	February 22, 2012
4th meeting	July 18, 2013
5th meeting	March 17, 2014
Ground/Structure Subcommittee	
1st meeting	November 17, 2011
2nd meeting	December 28, 2011
3rd meeting	July 23, 2013
4th meeting	March 18, 2014

(12) As an additional measure to further alleviate the impact, the position of the bridge piers has been reviewed as well. As a result, by extending the span between the piers, two bridge piers located near the Component Part have been moved as follows: one has been moved into the water flow area where the probability of the existence of archaeological remains is zero (P5); the other to a position farther away from the Component Part (P6) (cf. the bottom figure in Fig.7).

Design in the Urban Planning in 2005-2007 (with embankment)



Design at the Beginning of the Project in 2008 (with bridge piers)



Present Design in 2015 (without bridge pier)

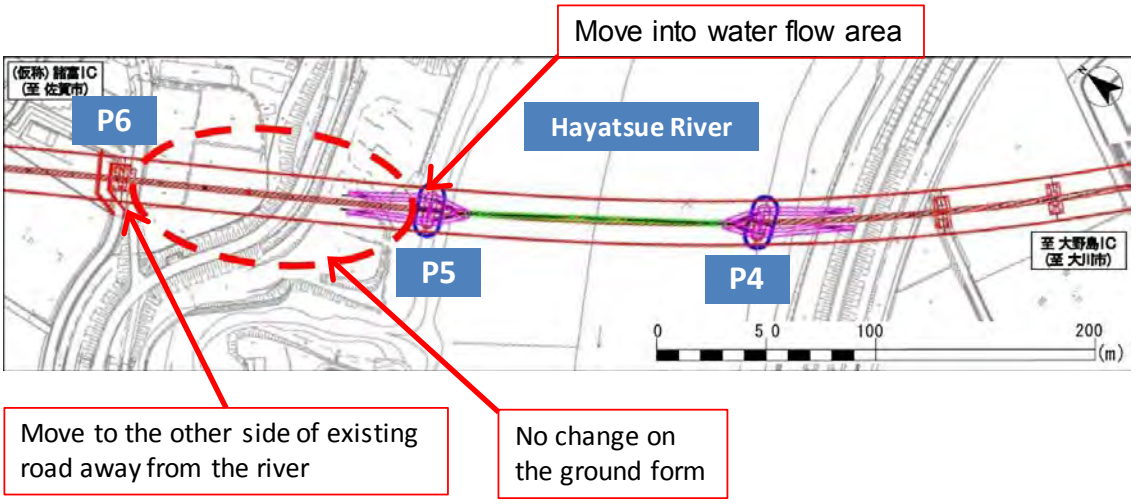


Fig.7: Review on the pier positions

(13) As a result of above-described design changes and so forth, the view from the Component Part to the bridge and its periphery has been improved as illustrated below (Fig. 8-1–8-5).

View location: Hayatsue River Bridge (Completion Drawing)

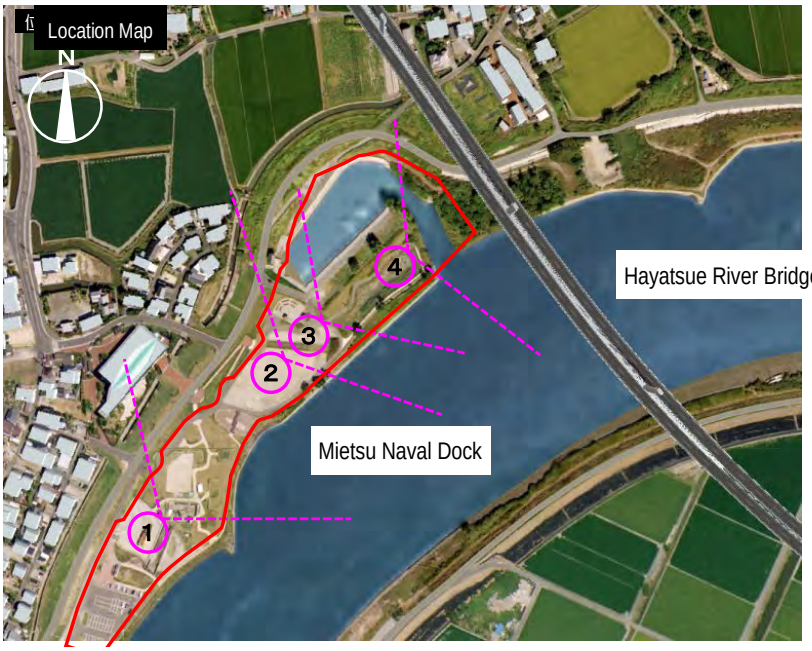


Fig. 8-1: View Point Location

Point 1. View from the Wooden Dry Dock
(Shipbuilding/Repair Dock and Metal Work Section)



Fig. 8-2: View from the Wooden Dry Dock (Shipbuilding/Repair Dock and Metal Work Section)

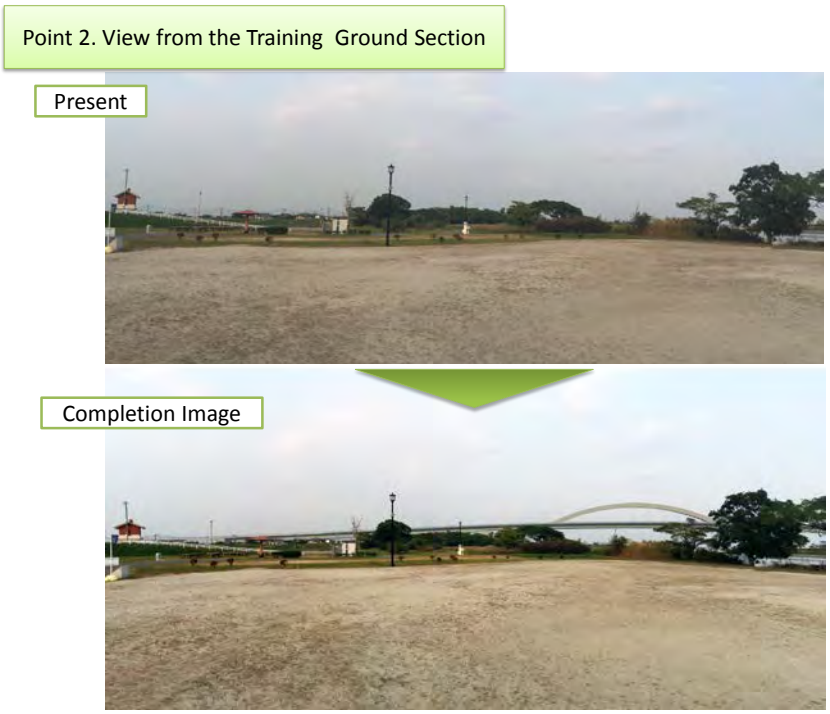


Fig. 8-3: View from the Training Ground Section



Fig. 8-4: View from the Small Boat Dock Section

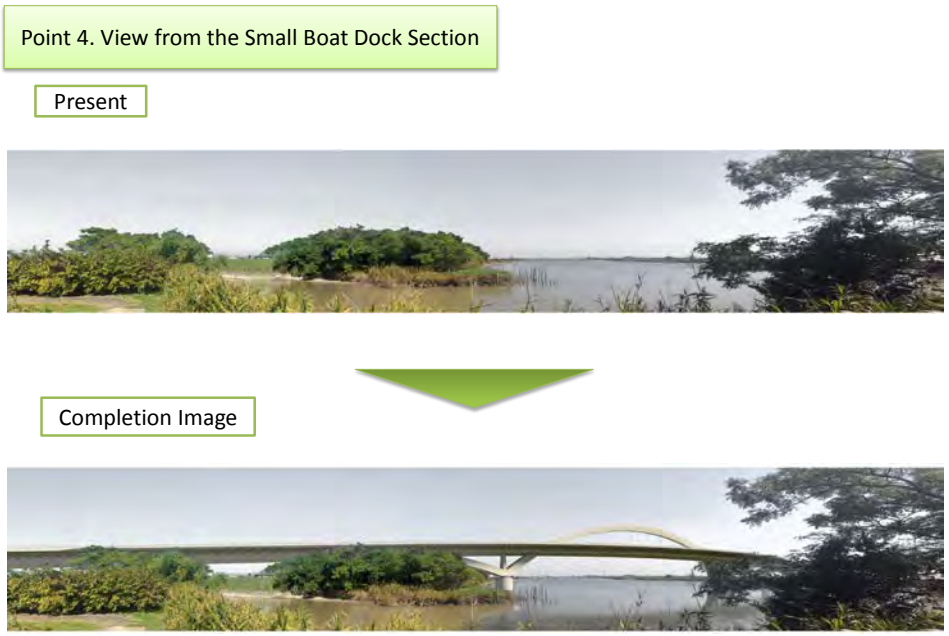


Fig. 8-5: View from the Small Boat Dock Section

(14) Based on the results of surveys on the environmental colors of the bridge site and its periphery, the color of the bridge was narrowed down based on three main characteristics of color: 1. hue (name of color); 2. value (lightness); and, 3. chroma (intensity). Studies were made utilizing an on-site check with painted plates and photomontage, and the color 5GY represented by Munsell color system code and considered to fit in well with a green zone (which has colors within the GY series) was found to match best. Thus, the bridge color matching up best with the characteristics of the location's environment was chosen.

(15) According to guidelines set forth below in the "Conservation Management Plan, Mietsu Naval Dock" (page 21), the heritage administrator (Saga City) has been adequately discussing matters with the road administrator (Ministry of Land, Infrastructure, Transport and Tourism) to avoid any potential impact of the bridge on the Component Part.

> The northern area includes the river, agricultural land and embankment. And the Ariake Sea Coastal Road (planned construction), which will run through the northern area of the Component Part, is designated as the boundary. The road is the appropriate boundary to clearly show the change of views. Since the Ariake Sea Coastal Road will become a structure adjacent to the Buffer Zone, the design and colour of the bridge across the river should be carefully considered not to affect the value of the Component Part in discussion with the road administrator (Ministry of Land, Infrastructure, Transport and Tourism). ("Conservation Management Plan, Mietsu Naval Dock", pp. 20-21)

5 Management Process

(1) As mentioned above, thorough and in-depth discussions and studies on the impact of the Ariake Sea Coastal Road Hayatsue Bridge of which construction is planned in the vicinity of Mietsu Naval Dock and the measures to alleviate any impact have been made for many years among the road administrator (Ministry of Land, Infrastructure, Transport and Tourism), the heritage administrator (Saga City), experts, and others.

(2) A local conservation council has been set up in each district under the managing framework of the World Heritage property, "Sites of Japan's Meiji Industrial Revolution," where information and opinions shall be communicated and decisions shall be made concerning conservation management of the heritage and related matters. It is certain from the scheme illustrated below that the "Saga Conservation Council" (one of the "Local Conservation Councils" indicated in the Fig.9) is a body capable of performing an adequate role in the process of implementing this road-bridge construction project.

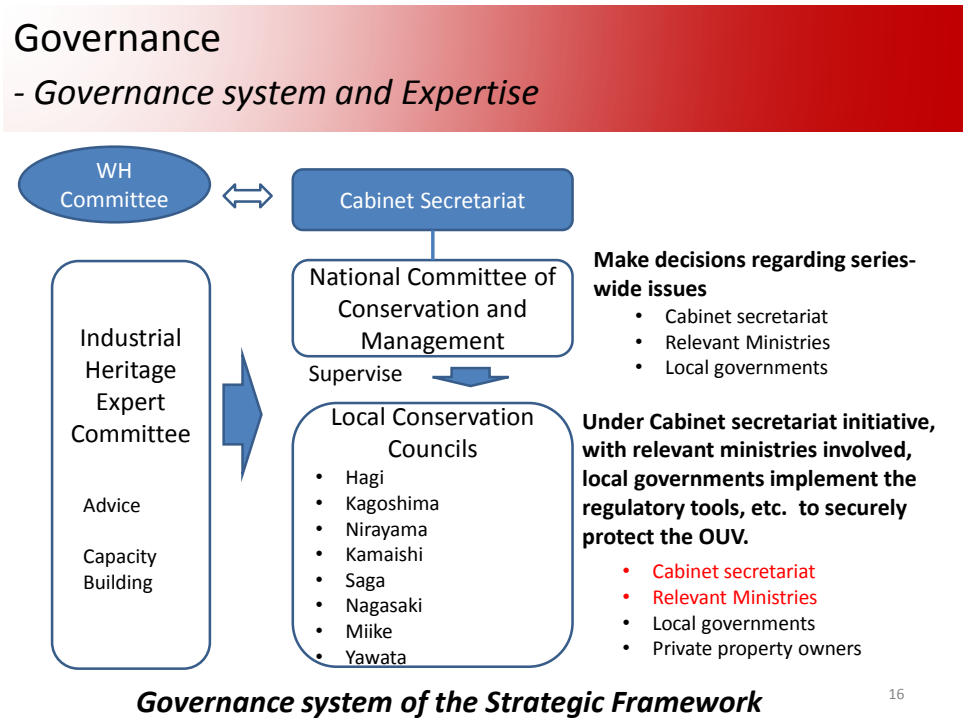


Fig. 9: Governance System of the Strategic Framework [2)]

2) Additional Information of the Nomination Document submitted to the World Heritage Centre in November 2014)

(3) Both the Fukuoka and the Saga National Highway Offices of the Kyushu Regional Development Bureau of Ministry of Land, Infrastructure, Transport and Tourism collaboratively participate in the Saga Conservation Council as the road administrator, appoint

themselves to maintain sufficient information-sharing and discussions with the heritage administrator for future construction work. In addition, the Council is arranged to obtain advice from the "Industrial Heritage Expert Committee (including Working Properties)" organized by the Government of Japan (the Cabinet Secretariat) when needed.

(4) The "Saga Conservation Council" has made the assessment described below in past meetings, and the contents of this Heritage Impact Assessment report have been discussed during the November 16, 2015 meeting as well.

With regard to the construction of the Ariake Sea Coastal Road planned at a site outside of and adjacent to the Buffer Zone of the Mietsu Naval Dock, the road administrator, Ministry of Land, Infrastructure, Transport and Tourism shall proceed with road design with the bridge structure in which the landscape is also taken into account. At present, no factor that potentially impacts on the value of the Component Part has been found, thus the construction of the bridge does not constitute a major environmental threat.

6 Conclusion

(1) The construction project of the Ariake Sea Coastal Road Hayatsue Bridge will not have any adverse impact on the Outstanding Universal Value, the integrity or authenticity of the World Heritage property, the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

(2) The effort in design work to minimize the impact on the view from the Mietsu Naval Dock to the proposed bridge has been made through the expert studies and the discussions between the road administrator (Ministry of Land, Infrastructure, Transport and Tourism) and the heritage administrator (Saga City). The framework for continuous collaboration has been established as well.

(3) As is stated above, the risk posed to the World Heritage Component Part by the project has been assessed at zero.

7 Cited References

Ariake Coastal Road Chikugo/Hayatsue River Bridges design study committee. (October 2014). *Report of the Ariake Coastal Road Chikugo/Hayatsue River Bridges design study committee*

Saga Prefecture, and Fukuoka Prefecture. (November 2007). *Environmental Impact Assessment Report*

Attachment

The elements that hold the Outstanding Universal Value (attributes) of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining"

Area 1 Hagi	**Attributes**
1-1 Hagi Reverberatory Furnace	Twin chimneystacks and archaeological remains.
1-2 Ebisugahana Shipyard	Breakwater-quay, and slipway and workshop area containing archaeology.
1-3 Ohitayama Tatara Iron Works	Archaeological site of a traditional ironworks.
1-4 Hagi Castle Town	Original layout of feudal planned Castle Town, containing hierarchical zones of deconstructed castle, moats, streets and differentiated residential districts.
1-5 Shokasonjuku Academy	Small wooden academy buildings.
Area 2 Kagoshima	**Attributes**
2-1 Shuseikan	Garden setting containing a technological ensemble: 2.1.1 Reverberatory Furnace – Lower masonry section. 2.1.2 Former Machinery Factory – Stone-built hybrid Western-Japanese style turnery building. 2.1.3 Foreign Engineers' Residence – British colonial style house. 2.1.4 Site of Spinning Mill – Buried archaeological evidence. 2.1.5 Water supply – Stone-lined leats.
2-2 Terayama Charcoal Kiln	Traditional Japanese horseshoe-shaped masonry charcoal kiln.
2-3 Sekiyoshi Sluice Gate of Yoshino Leat	Sekiyoshi Sluice Gate of Yoshino Leat – river catchment point and inflow end of the leat.
Area 3 Nirayama	**Attributes**
3-1 Nirayama Reverberatory Furnaces	Two twin masonry and brick furnaces together with river and leat off take point, plus archaeological potential.
Area 4 Kamaishi	**Attributes**
4-1 Hashino Iron Mining and Smelting Site	4.1.1 Blast Furnaces – masonry lower sections of three furnaces. 4.1.2 River and Leat – natural watercourse and stone lined leats 4.1.3 Office – stone-built foundation. 4.1.4 Roasting Pits – archaeological, excavated. 4.1.5 Shrine – stone monuments in forest setting (wooden gate is 'modern'). 4.1.6 Stone Quarry –cleaved stone outcrops. 4.1.7 Transport Network – ore pack-road and associated features. 4.1.8 Mining Site – opencast mine workings. 4.1.9 Forest – species restoration areas planned.
Area 5 Saga	**Attributes**
5-1 Mietsu Naval Dock	Archaeological site incorporating buried, preserved, wooden dry dock, area of naval training ground and the site (currently used by fishing boats) of a traditional boat dock.
Area 6 Nagasaki	**Attributes**
6-1 Kosuge Slip Dock	Intact masonry-faced quays, wharfs and slip dock elements including rails and hauling engine house (brick and timber built) containing original winch, steam engine and boiler.
6-2 Mitsubishi No.3 Dry Dock	Landform dock structure, underground chamber with pumps and electric motors, still in operation.
6-3 Mitsubishi Giant Cantilever Crane	Steel crane, still in operation.

6-4 Mitsubishi Former Pattern Shop	Brick pattern shop.
6-5 Senshokaku Guest House	Guest house, original contents and garden.
6-6 Takashima Coal Mine	Shaft and archaeological foundations.
6-7 Hashima Coal Mine	Island including artificial land apron, revetments and seawall, mineshafts, adits/levels and fragmentary primary mining facilities.
6-8 Glover House and Office	House and garden.
Area 7 Miike	**Attributes**
7-1 Miike Coal Mine and Miike Port	7.1.1 Miyanohara Pit –Shaft, steel headframe, brick-built winding house (winding equipment in situ), buried archaeology of the Davey pump engine house and open, stone-lined, discharge channel.
	7.1.2 Manda Pit –Two shafts, steel headframe, brick winding house (winding equipment in situ), brick fan houses, workshop and ancillary buildings and structures, standing and archaeological.
	7.1.3 Coal Railway – Track bed, embankments and bridges.
	7.1.4 Miike Port –Port design ('hummingbird' shape, enclosing channel, harbour and inner basin), breakwaters-groins, quays and lock-sluice ensemble (including engine houses and in situ equipment), customs house and railway track bed connection. Port still operational.
7-2 Misumi West Port	Extensive stone quay frontage to reclaimed port land with drainage channels and bridges, roads, residential and commercial buildings, leading back to excavated mountainside.
Area 8 Yawata	**Attributes**
8-1 The Imperial Steel Works, Japan	8.1.1 First Head Office – Brick building and setting. 8.1.2 Repair Shop – steel framed building, including cranes, still in use. 8.1.3 Former Forge Shop –steel framed building.
8-2 Onga River Pumping Station	Onga River Pumping Station – brick pumping station still in use.

Progress report on the visitor facility (guidance facility) being constructed in the adjacent area of the Nirayama Reverberatory Furnaces

Outline

This is a progress report drawn up by the Government of Japan and describes the state of progress in construction of the visitor facility, or the guidance facility (hereinafter referred to as the "Guidance Facility"), which is under construction in the Buffer Zone adjacent to the Nirayama Reverberatory Furnaces (ID 3-1), one Component Part of the World Heritage property, "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

1. Introduction

The report describes the outline of the construction project of the Guidance Facility as a facility for providing information to visitors. It also represents the positioning of the Nirayama Reverberatory Furnaces in the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining." Moreover, the report evaluates how the Guidance Facility construction project will impact the Outstanding Universal Value and clarifies the management process, and then come to a conclusion.

2. Outline of the Guidance Facility construction

- The Guidance Facility construction project is being carried out with the objective of constructing a main facility capable of more appropriately sending out information, including the positioning of the Nirayama Reverberatory Furnaces in the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" as well as the findings of research studies made thus far.
- The building site for the Guidance Facility is located on the land adjacent to the southeast side of the Component Part, within the Buffer Zone.
- The building site had long been private land with two privately-owned buildings built on the site.
- To ensure that the Nirayama Reverberatory Furnaces will continue to be properly conserved in the future, the Izunokuni City government decided to take possession of the building site, held consultations with the landowner, and completed conversion of the site from private to public ownership in August 2014.
- Out of the two privately-owned buildings that had existed formerly, one was a private sales facility (partially three-story, steel-frame building). This building tended to significantly impair the front view of the Nirayama Reverberatory Furnaces due to aging of the building itself which was constructed in 1989 and deterioration of the environment.
- The other was a two-story, steel-frame building that was rented and utilised by the Izunokuni City government as the property's administration office engaged in such activities as the acceptance of visitors and the displaying exhibits. However, the building of approximately 70 m^2 in area used for service was small and inadequate to serve as a main facility capable of smoothly accepting visitors to the Component Part of the World Heritage property and properly providing information.
- In light of the situation described above, having examined possible utilization policies as the landowner, the Izunokuni City government decided to demolish both private buildings to launch the construction project of the new Guidance Facility.
- Outline of the new Guidance Facility is as follows:
  - One-story, steel-frame building
  - Building area 608.51 m^2, Total floor area 510.34 m^2

- Height 7.3m, Height of the building's eaves 4.8m
- Museum utilities (exhibition room, multipurpose rooms, an office, restrooms)
- Costs of land acquisition and property compensation: 404,958 (thousand yen)
- Construction work cost (including production cost of exhibition): 475,200 (thousand yen)
- Demolition of the existing buildings completed: September 2015
- Construction started: September 2015 (under construction)
- Operation is scheduled to start: December 2016

3. Outstanding Universal Value as the World Heritage Sites and the Positioning of the Nirayama Reverberatory Furnaces

(1)The Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" is stated as follows. (Excerpt from the Statement of Outstanding Universal Value in the Decision adopted by the World Heritage Committee at its 39th session)

> A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of southwest of Japan, represent the first successful transfer of industrialization from the West to a non-Western nation. The rapid industrialisation that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialization achieved over a short space of just over fifty years between 1850s and 1910.
>
> The first phase in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialisation was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.
>
> The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialization achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors.

Out of the three phases reflecting the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining", the Nirayama Reverberatory Furnaces are one Component Part belonging to the first phase (a period of experimentation in iron making and shipbuilding in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850's and early 1860's) and represent the iron and steel making elements.

The elements (attributes) of the Nirayama Reverberatory Furnaces consist of three sections, (1) the reverberatory furnaces themselves, (2) the underground archaeological remains, and (3) the river section, which all contribute to the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

4. Evaluation of the Overall Impact of the Guidance Facility Construction on the Component Part

- The construction of the Guidance Facility is underway outside of the Component Part area. Therefore, there

will be no physical effect on the three sections, (1) the reverberatory furnaces themselves, (2) the underground archaeological remains, and (3) the river section, which are elements (attributes) contributing to the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."

- The Guidance Facility being constructed meets the standards of size, height, colors of outer walls, etc. set forth in the Izunokuni City Landscape Ordinance.
- When drawing up the plan for the Guidance Facility, utmost consideration was given to its impact on the Component Part's landscape as follows. As a consequence, the surrounding environment including the front view of the Nirayama Reverberatory Furnaces will be significantly improved compared with the environment before the construction of the Guidance Facility.
  - Since the front view of the Nirayama Reverberatory Furnaces was significantly impaired by the private sales facility and the administration office that previously existed, Guidance Facility is being constructed in the westernmost area of the building site and in front of the Guidance Facility a green lawned area would be established for landscaping.
  - While the height of the sales facility previously existed was 12.7m, that of the Guidance Facility under construction is 7.3m, thereby leading to a considerable reduction in both height and volume of the building.
  - The outer walls of the conventional sales facility were mostly white with high brightness and had a lot of writing, signs, and so on representing the store name on their surfaces. On the other hand, with a view to harmonizing with the surrounding environment, the outer walls of the Guidance Facility being built are dark brown using corten steel without any writing or signs.
- The Guidance Facility is situated on the path visitors follow when moving from the parking lot to the Component Part. Therefore, exhibitions in the Guidance Facility should enable visitors to receive and fully understand information about the Nirayama Reverberatory Furnaces contributing to the Outstanding Universal Value of the World Heritage property before touring it.
  - As the Guidance Facility is characterized by its function of guiding visitors to the Reverberatory Furnaces and offering information and displaying exhibits to visitors beforehand, the basic policies for the exhibition are to arouse the interest of the visitors, to convey a viewpoint visitors are supposed to take when touring, and to deepen their understanding of the Component Part.
  - To reflect the latest findings of research studies in the exhibits, exhibition methods that can be updated will be employed.
  - Using approaches including theater direction positioned as a "three-dimensional theater of the reverberatory furnaces", the exhibition is aimed at deepening the understanding of visitors visually.
- Decisions on the Guidance Facility, the contents of its exhibitions, etc. mentioned above were made under the guidance and advice of the Agency for Cultural Affairs of the Government of Japan during the decision-making process, reflecting discussion with experts and advice from the viewpoint of those experts who are members of the "Izunokuni City Historic Site, Etc. Maintenance Investigation Committee" and its relevant subcommittees, namely the "Nirayama Reverberatory Furnaces Maintenance Subcommittee" and the "Nirayama Reverberatory Furnaces World Heritage Subcommittee".

5. Management process

- As mentioned above, the Guidance Facility construction project is being carried out by Izunokuni City under the guidance and advice of the Agency for Cultural Affairs and based on full discussions such as those held at above mentioned expert committee meetings.

- At the same time, the construction project is approved by the "Nirayama Conservation Council" established under the "General Principles and Strategic Framework for Conservation Management of the 'Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.'" [1] The "Nirayama Conservation Council" is an organisation to exchange information and opinions with relevant parties on any matters related to the "Conservation Management Plan, Nirayama Reverberatory Furnaces", its implementation methods, improvement methods when an issue arises, and monitoring of the condition of the Component Part, and to render pertinent decisions.

- Thus, the Guidance Facility construction project is being carried out under proper management from the initial planning phase to the current implementation phase of the project.

6. Conclusion

- As mentioned above, the Guidance Facility construction project is of a great help in understanding the Nirayama Reverberatory Furnaces that contribute to Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining", and there is no problem with the evaluation of the overall impact of the Guidance Facility construction on the Component Part and the management process.
- Consequently, the Guidance Facility construction project will not have any negative impact on the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining."
- Furthermore, implementing this project will greatly contribute to restriction of development in the adjacent area of the Reverberatory Furnaces as well as improvement of the landscape of the component part through efforts in taking the building site into public ownership and demolishing the aging buildings, and so on.



[1] Described in the "General Principles and Strategic Framework for Conservation Management of the 'Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining '"; Conservation Management Plan (CMP) attached to the nomination document

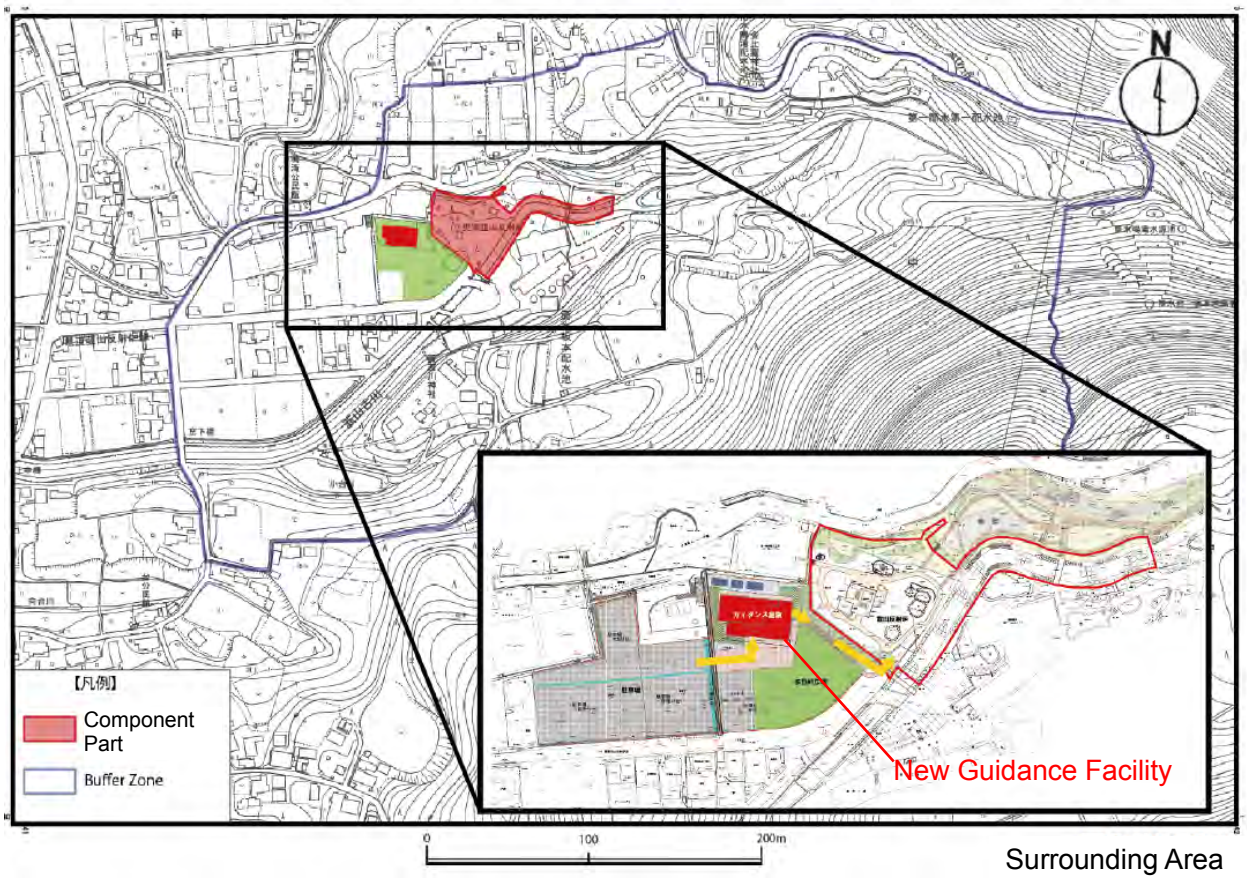


Figure 1: Location

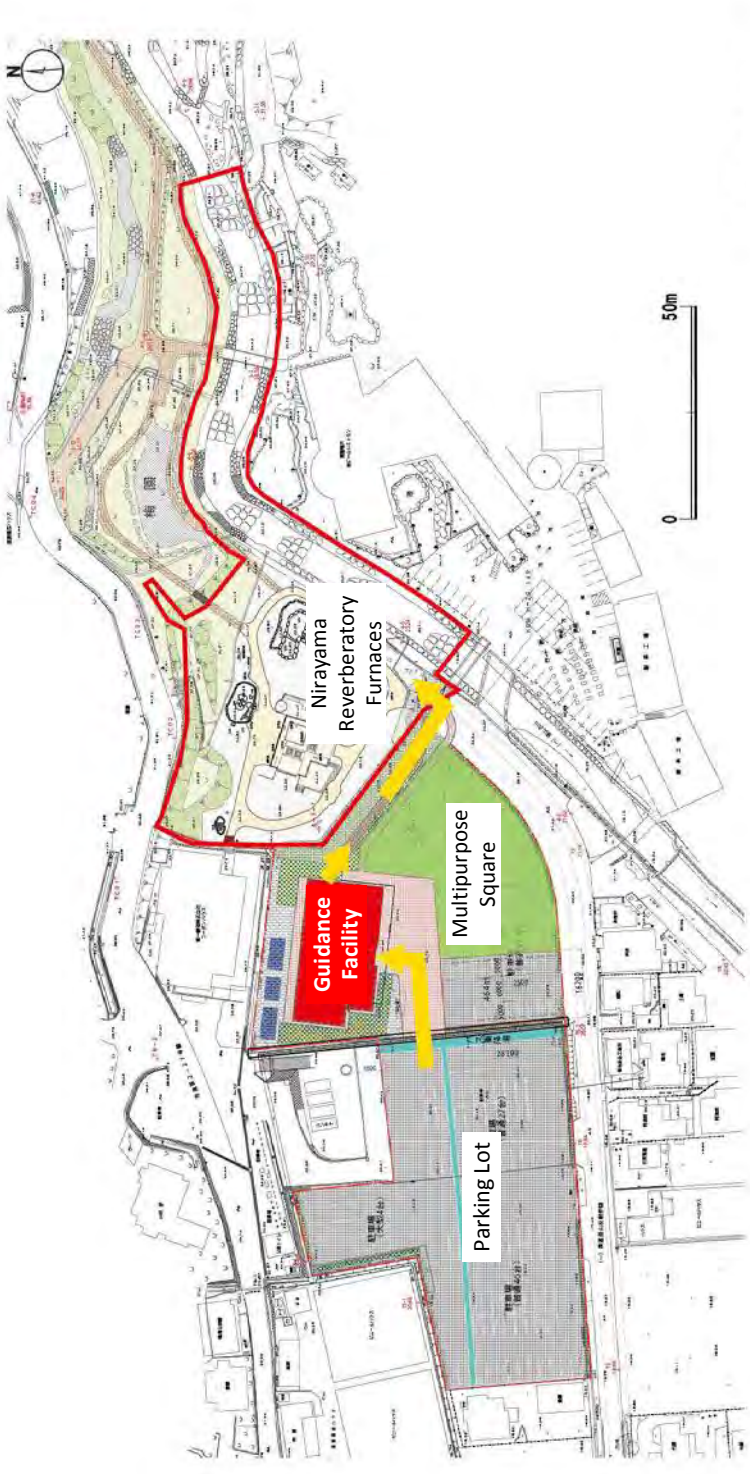
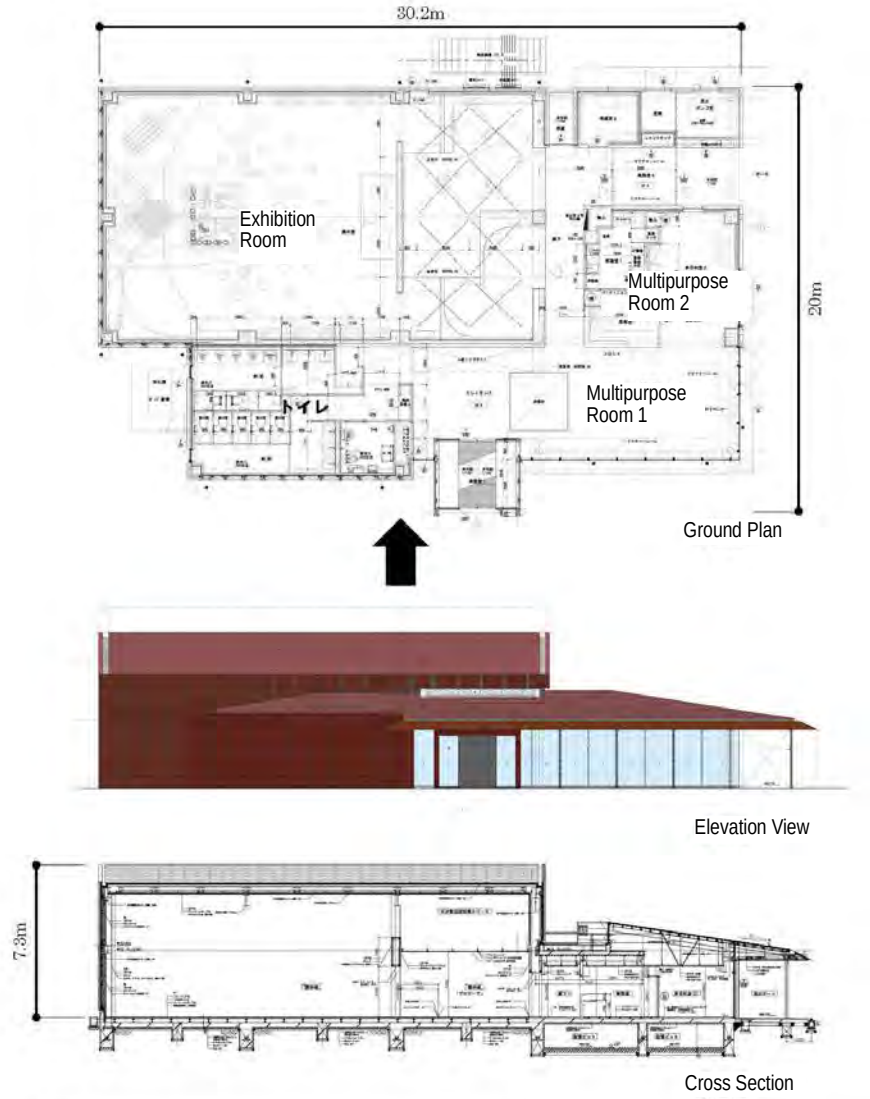


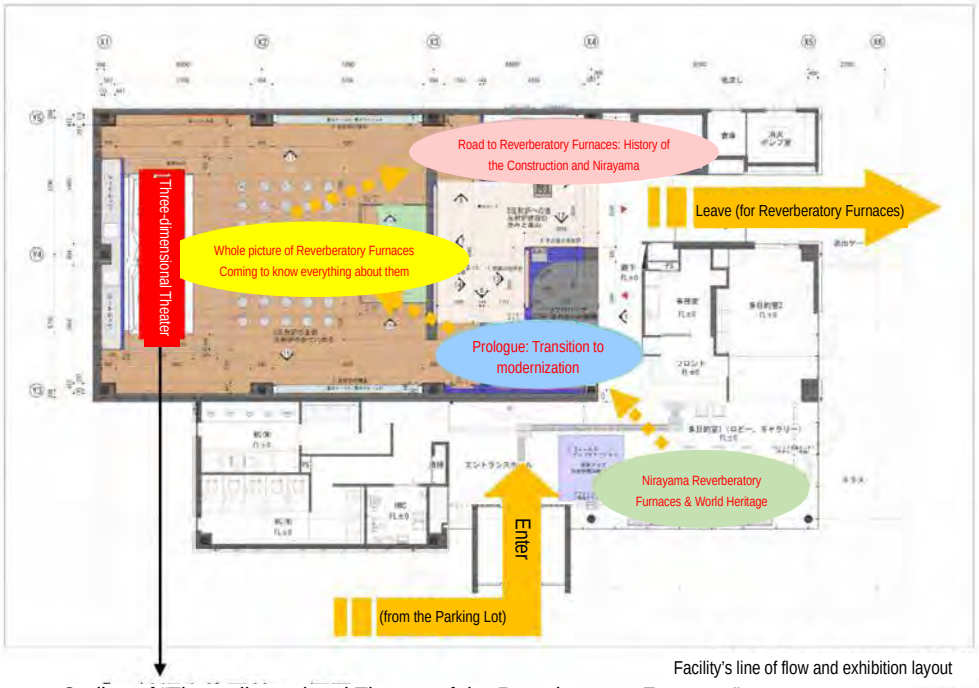
Figure 2: Layout of the Facilities in the Adjacent Area of the Component Part



【Outline of the Guidance Facility】

- One-story, steel-frame building
- Building area 608.51m^2, Total floor area 510.34 m^2
- Height 7.3m, Height of the building's eaves 4.8m
- Museum utilities (exhibition room, multipurpose rooms, an office, toilets)
- Construction started: September 2015 (under construction)
- Operation is scheduled to start: December 2016

Figure 3: Plan, Elevation and Section of the Guidance Facility



Facility's line of flow and exhibition layout

Outline of "Three-dimensional Theater of the Reverberatory Furnaces"



- **Powerful direction utilizing architectural space**
  Using architectural space, the history and technologies of the Nirayama Reverberatory Furnaces are represented with dynamic and powerful image contents.
- **Direction through a "media mix" approach**
  Direction through media mix putting together image contents, modeling of the Reverberatory Furnaces, and lighting in the entire space enables visitors to experience the bodily sensation of the Reverberatory Furnaces.
- **Utilization of latest CG**
  The image contents are produced in consultation with a variety of experts on history and technological history. The Nirayama Reverberatory Furnaces are revived with

Figure 4: Outline of the Exhibition in the Guidance Facility



Picture taken before launching the project (in November 2014)



Perspective drawing after completing the project

Figure 5: Comparison Before and After Construction Completion

Visitor centre/facility (guidance facility) opened in December 2016 at the Nirayama Reverberatory Furnaces

Background and Outline

The World Heritage Committee brought up Recommendations a) to h) on Decision: 39 COM 8B. 14 related to the World Heritage listings for the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining. In Recommendation h), the Committee requested the Government of Japan to submit a state of conservation report in accordance with paragraph 172 of the Operational Guidelines for the Implementation of the World Heritage Convention on four development projects[1] for Buffer Zones and vicinities. The Government responded by submitting the state of conservation reports on three[2] of the four above projects on November 30, 2015, to the UNESCO World Heritage Centre.

This information augments the Progress Report on the Visitor Facility (Guidance Facility) being Constructed Adjacent to the Nirayama Reverberatory Furnaces that was submitted about a proposal to expand and build a visitor facility (Guidance Facility) in the Buffer Zone of Nirayama Reverberatory Furnaces (Area 3 Nirayama, Component part 3-1), presenting the current statuses of relevant facilities completed and opened in December 2016.

1. Background of new Guidance Facility construction

- The Guidance Facility construction project is being carried out with the objective of constructing a main facility for visitors capable of more appropriately sending out information, including the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining," the positioning of the Nirayama Reverberatory Furnaces in the Value, and the findings of research studies made thus far.
- The construction of Guidance Facility started on August 1, 2015, and was completed on November 30, 2016. It opened on December 11, 2016.

2. Before and after construction of Guidance Facility

- Prior to the Guidance Facility construction, a privately owned three-story sales facility and a two-story administrative office building were adjacent to the area of World Heritage component parts, significantly impairing the front view of the Nirayama Reverberatory Furnaces. To construct the Guidance Facility, however, these two buildings were demolished, with the height and capacity of the new Guidance Facility being dramatically reduced. As shown in **Photograph 1**, the surrounding environment that includes the front view of the Nirayama Reverberatory Furnaces was improved significantly after construction of the Guidance Facility, which included a new lawn space out front.
- Further, before construction of the new Guidance Facility an administrative office covering around 70 m^2

[1] World Heritage Committee Decision: 39COM 8B.14 4h) presented a development plan with four project proposals. These were (1) Shuseikan road construction, (2) Mietsu Naval Dock road construction, (3) a new anchorage facility at Miike Port, and (4) upgrading or developing visitor facilities, requesting the Government of Japan to submit a report in accordance with Paragraph 172 of the Operational Guidelines of Implementation of the World Heritage Convention.

[2] Projects (1), (2) and (4) mentioned in Note 1.

was used in such activities as accepting visitors and displaying exhibits. The new Guidance Facility devotes about 230 m^2 to exhibits and a video area out of a total floor space of 510.34 m^2, significantly increasing and improving information to visitors.



Before construction (November 2014)



After construction (June 2017)

Photo 1: Before and after new Guidance Facility construction

3. Interpretation (exhibits)

- The Guidance Facility distributes pamphlets at the reception desk, information including the Outstanding Universal Value of overall World Heritage sites and the positioning of the Nirayama Reverberatory Furnaces.
- Information also encompasses videos and exhibits presenting the historical background to the construction of the Nirayama Reverberatory Furnaces, the cannon manufacturing process, and conservation efforts since operations were suspended through today. The content provides a full history of component parts.
- After gaining knowledge by seeing the videos and exhibits at the Guidance Facility, visitors can tour the Nirayama Reverberatory Furnaces with local guides to learn more (**Fig. 1**).
- The memorial inscription of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining on the World Heritage List near the entrance of Guidance Facility contributes to visitor understanding.

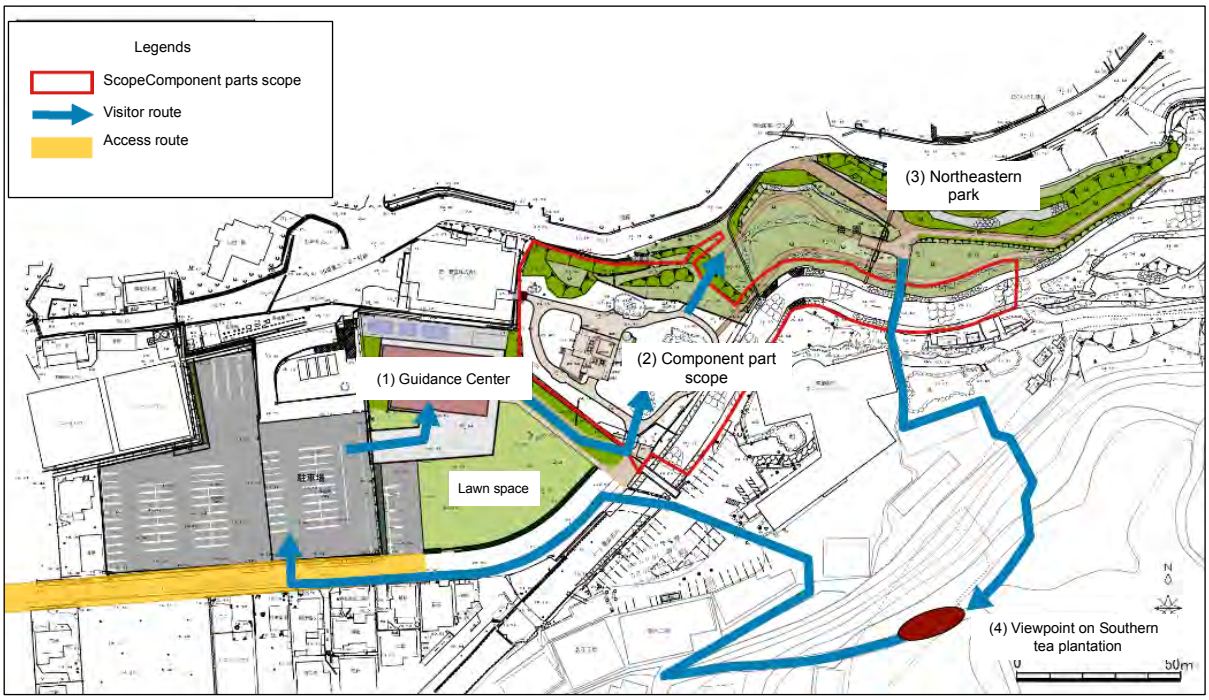


Figure 1　Visitor route



Photo 2: Exterior of Guidance Facility

Report on new Visitor Center in the buffer zone of Hagi Castle Town (Component Part 1-4, Area 1 Hagi)

The Government of Japan prepared this document on the new visitor center in the buffer zone of Hagi Castle Town (Component part 1-4) as a component part of World Heritage property, Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.

1. Introduction

This document first outlines the launch of the Visitor Center to provide visitors with information. It then clarifies the positioning of Area 1 Hagi and Hagi Castle Town in the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining. It also clarifies an assessment of the impact opening of the Visitor Center on the Outstanding Universal Value and the prior consensus-building process related to this project.

2. Outline of the Visitor Center

(1) Background to opening of the Visitor Center

- The Visitor Center was opened as a prime facility for visitors to better convey the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining, the positioning of five component parts in Area 1 Hagi in terms of the Outstanding Universal Value, their attributes, and other information.
- The Visitor Center opened on March 4, 2017, as part of Hagi Meiringakusha, a facility where tourists visiting Hagi City first encounter such information as city sightseeing spots, history and culture.
- The buildings of Hagi Meiringakusha are refurbished wooden buildings of Hagi City Meirin Elementary School, founded in 1885, whose classrooms are used as exhibitions spaces. It is also built on the area designated as National Historic Site of Hagi Meirinkan, a school of the Hagi Domain.
- The four two-story school buildings were built in 1935. As shown in **Figure** 4, the No.1 (main) and No.2 school Buildings were restored on this occasion. As well as maintaining the initial exterior appearance of the old school, restoration included undertaking seismic reinforcement and repairing outdoor structures. The former school playground was converted into a parking area for the facility.
- As part of restorations to two old school buildings, the following facilities were set up in the main building out front. They included: A) Tourist Information Center, B) Exhibition room for Hagi Meirinkan, C) Exhibition room for Meirin Elementary School, D) Reproduction of elementary school classroom interior with furniture and fixtures, E) Information center for Hagi Geopark Concept[1]. The east half of the second old school building (No. 2 Building) was refurbished as F) World Heritage Visitor Center, and the west half was turned into G) Bakumatsu Museum.

[1] **Hagi Geopark Concept:** In line with this concept, Hagi City is undertaking conservation, education, and local promotion initiatives with a view to certification as a Japanese Geopark in 2018.

The Bakumatsu Museum showcases such scientific and technological historical items as cannons and guns, as well as medical, astronomical and mechanical instruments from the end of the Edo period through the Meiji Restoration. It also serves to explain the historical background of five component parts in Area 1 Hagi of the Sites of Japan's Meiji Industrial Revolution.

- The outline of F) World Heritage Visitor Center is as follows:

Structure:	Wooden two-story building
Building area:	913.38 m^2 (total floor area; 1,770.32 m^2)
Facilities:	Exhibition space and bathroom
Project costs:	Refurbishment costs for No. 2 Building: 731,490,000 yen (of which the costs for exhibition space of World Heritage Visitor Center were 135,570,000 yen)
Refurbishment period:	FY2015 to FY2016

- Hagi City is looking into repairing the third and fourth old school buildings (Fig. 4).

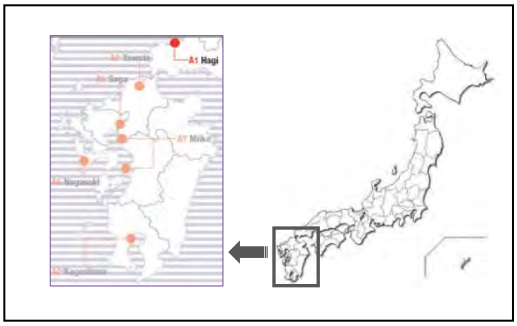


Figure 1:Location of Area 1 Hagi of Sites of Japan's Meiji Industrial Revolution



Figure 2:Front of refurbished World Heritage Visitor Center at Hagi Meiringakusha

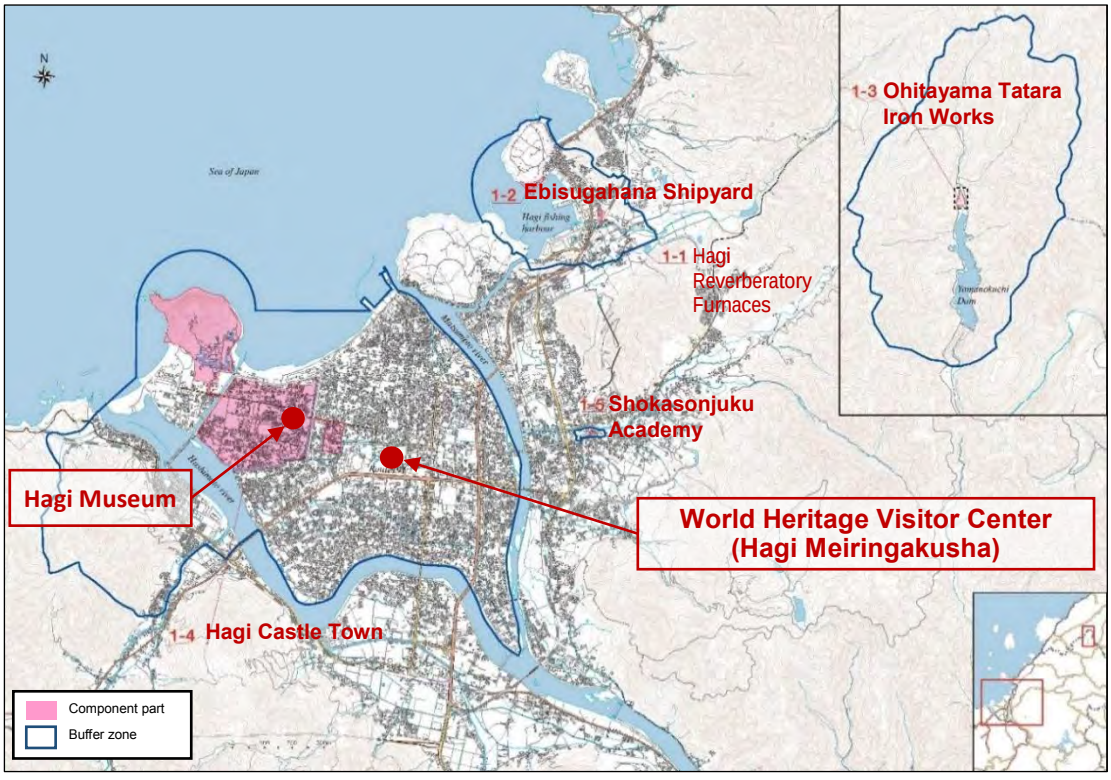


Figure 3 Location of component parts of Area 1 Hagi and the World Heritage Visitor Center



Figure 4 Four old wooden school buildings and World Heritage Visitor Center

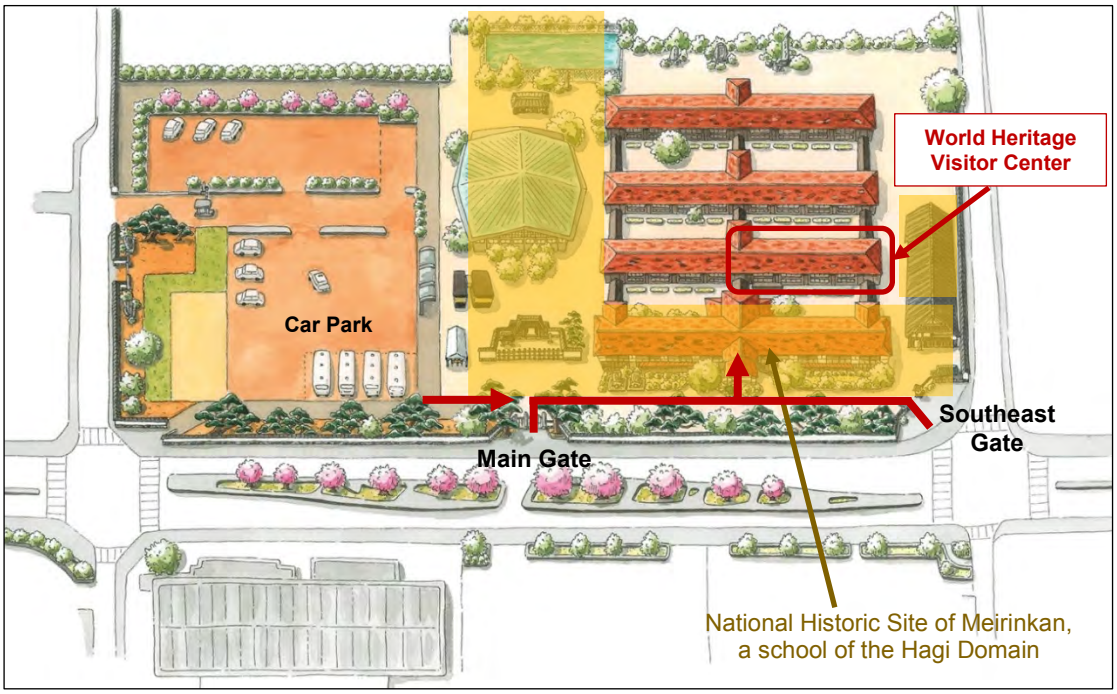


Figure 5 Site and building map of Hagi Meiringakusha, where World Heritage Visitor Center is located

- Overall route for Hagi Meiringakusha

  Visitors to Hagi Meiringakusha pass through the main building (Building No.1) entrance from the main gate or the southeast gate and obtain tourist information at the A) Tourist Information Center. They will then tour B) Exhibition room for Hagi Meirinkan, C) Exhibition room for Meirin Elementary School, D) Reproduction of elementary school classroom interior with furniture and

fixtures, and E) Information center for Hagi Geopark Concept. They will go to Building No. 2 (which charges an entry fee) to visit F) the World Heritage Visitor Center and G) the Bakumatsu Museum.

1. Route for visitors coming by car

   Park in car park ⇨ Walk ⇨ Main Building ⇨ Building No. 2

2. Route for visitors coming by foot

   Enter from the Southeast Gate or the main gate ⇨ Main Building ⇨ Building No. 2

(2) **Before and after opening**

The following photographs show before and after the World Heritage Visitor Center opened. To open that facility, the old school building was seismically reinforced, the building interior and exterior was refurbished, and exhibition fixtures were installed in each classroom.

	Before	After
Exterior		
Classroom interior		
Corridor interior		

Figure 6　Old Meirin Elementary School exterior and interior

(3) Interpretation (exhibits)

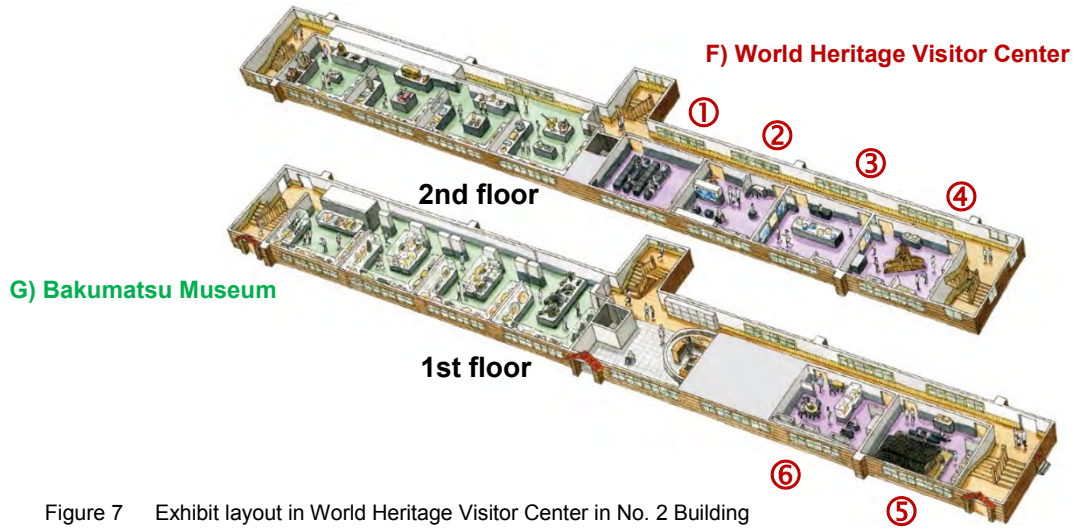
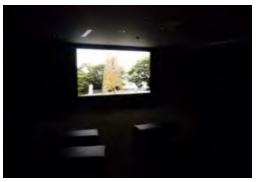


Figure 7 Exhibit layout in World Heritage Visitor Center in No. 2 Building

➢ **Outlines of exhibits** (see Figure 7 numbers)

① Hagi as the origin of the Meiji Restoration and the history of modernization of Japan Video presentation of how Hagi contributed to the Japan's modernization and industrial revolution.	
② World Heritage Sites of Japan's Meiji Industrial Revolution Introducing the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution and the positioning of the 23 Component Parts and Area 1 Hagi.	
③ Mid 19th century industrialization around the world and in Japan: A platform for experimentations Explaining Japan's situation at the time and how Hagi Castle Town was a place of experimentation early in the nation's industrialization.	
④ Iron-making and shipbuilding - the challenges to modernization Explaining the Hagi Reverberatory Furnaces, Ebisugahana Shipyard, and Ohitayama Tatara Iron Works as symbolizing the independent modernization experiments of the Hagi (Choshu) Domain at the end of the Edo period.	
⑤ Shoin Yoshida, a pioneer in engineering education Presenting Shoin Yoshida as a pioneering advocate of the importance of educating about engineering and head of the Shokasonjuku Academy in Hagi.	
⑥ Meiji Industrialization and the Choshu Five Introducing the Choshu Five who contributed significantly to the industrialization of Japan.	

- **Visitor route**

  1st floor ⇨ 2nd floor ①⇨②⇨③⇨④ ⇨ 1st floor ⑤⇨⑥

- **Guides**

  Locating several guides on each floor to explain exhibits to visitors.

3. The Outstanding Universal Value of the World Heritage property and positioning of Area 1 Hagi and Hagi Castle Town in that

The Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining" is stated as follows: (Excerpts from the Statement of Outstanding Universal Value in the Decision: 39COM 8B.14 adopted by the World Heritage Committee at its 39th session in 2015):

> "A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of south-west of Japan, represent the first successful transfer of industrialization from the West to a non-Western nation. The rapid industrialization that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialisation achieved over a short space of just over fifty years between 1850s and 1910.
>
> The first phase in the pre-Meiji Bakumatsu period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialisation was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.
>
> The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialisation achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors."

Of the three phases reflecting the Outstanding Universal Value of the "Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining, Area 1 Hagi has five component parts belonging to the first phase (experimentation in steel making and shipbuilding in the pre-Meiji Bakumatsu period from the 1850s to early 1860s). The World Heritage Visitor Center opened in the buffer zone of Hagi Castle Town as one of the component parts of the Area.

4. Impact of opening of World Heritage Visitor Center on Hagi Castle Town

- Opening the World Heritage Visitor Center made it possible to maintain two wooden school buildings built in 1935 as their exteriors were, at the center of the buffer zone of Hagi Castle Town. This enabled conservation of the historical landscape and the control of local development over the long term.

- The exterior of World Heritage Visitor Center is in keeping with that of the Meirin Elementary School wooden building. Restoration reversed much of the exterior dilapidation of the buildings with age.
- The location of World Heritage Visitor Center is on the National Historic Site of Hagi Meirinkan, a school of the Hagi Domain (**Figure 5**). The wooden school building was restored for the center, eliminating the need to construct a concrete structure, so underground archaeological remains can be preserved.
- For World Heritage Visitor Center exhibits, expert supervision by historical curators of the Hagi Museum (**Figure 3**) under the jurisdiction of Hagi City was augmented with instructions and guidance from the Cabinet Secretariat of the Government of Japan as needed.
- Hagi City set up an exploratory committee of 15 citizens to formulate a policy on using the old wooden school buildings as a tourist site and providing exhibition areas for historical and cultural artifacts. Restoration and refurbishment to open the World Heritage Visitor Center was in keeping with a policy determined through such a civic consensus.

5. Process for building a prior consensus relating to this project

- As mentioned in the above, the opening of World Heritage Visitor Center was in keeping with a civic policy decision, and specific exhibits were based on instructions and guidance from the Cabinet Secretariat and expert supervision.
- At the same time, installation was approved by the Hagi Conservation Council in line with the General Principles and Strategic Framework for the Conservation and Management of Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining. The Hagi Conservation Council is a decision-making institution that exchanges information and views with relevant stakeholders on such matters as the Hagi Area Conservation Management Plan for five component parts, formulating implementation methods and solutions if there are any issues, and monitoring the state of conservation of each component part.
- The opening of World Heritage Visitor Center in Hagi City was thus based on appropriate consensus building from the initial stage in determining policy through implementation of the project.

6. Conclusion

- As explained, the World Heritage Visitor Center opening project contributes significantly to understanding the Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining as a whole, as well as Area 1 Hagi and the five component parts included. The Center has presented no issues in terms of any adverse impact on cultural properties or the consensus building process.
- The World Heritage Visitor Center opening project thus poses no threat to the Outstanding Universal Value of the World Heritage Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.
- Further, the project has contributed greatly to controlling development in the buffer zone and to conserving and improving the landscape.

STATE OF CONSERVATION REPORT

PROPOSED WORKS AT THE IMPERIAL STEEL WORKS, JAPAN, AND ONGA RIVER PUMPING STATION— COMPONENT PARTS OF THE *SITES OF JAPAN'S MEIJI INDUSTRIAL REVOLUTION—IRON AND STEEL, SHIPBUILDING AND COAL MINING.*

INTRODUCTION

This State of Conservation report is to inform the World Heritage Committee of conservation works proposed for the Imperial Steel Works and the Onga River Pumping Station, component parts of the *Sites of Japan's Meiji Industrial Revolution.* These works are not considered to have an adverse effect on the Outstanding Universal Value of the Property, but are forwarded to the Committee in compliance with Paragraph 172 of the *Operational Guidelines*, as notification of works that may affect the conservation of OUV, albeit positively.

1. SUMMARY OF PROPOSALS

The proposals affect four buildings in two component parts of the World Heritage Property *Sites of Japan's Meiji Industrial Revolution: Coal Mining, Iron and Steel and Shipbuilding*. All works are related to the conservation and presentation of the properties, which are not currently accessible to regular public visitation.

The two component parts are the Imperial Steel Works and the Onga River Pumping Station. The four buildings are the First Head Office Building, the Former Forge Shop, and the Repair Workshop (all within the Imperial Steel Works), and the Onga River Pumping Station.

The proposed works involve, in summary:

First Head Office Building: Completion of interior restoration following extensive earthquake stabilisation completed in 2014, for the purpose of opening the building as an historic building and visitor interpretation facility;

Former Forge Shop: External building conservation, and commencement of earthquake stabilisation work;

Repair Workshop: External building conservation, and commencement of earthquake stabilisation work;

Onga River Pumping Station: External building conservation and commencement of earthquake stabilisation work.

2. ADMINISTRATIVE STATUS OF THE PROJECT

The proposals are in the process of being developed, with full documentation to be completed by the third quarter of 2017. Some documentation, such as that for seismic reinforcement works for some buildings, will extend into 2018.

It is anticipated that planning and works approval will be sought in September 2017.

The projected start date for the first stage of works is December 2017, with staged works extending into 2020.

Overall management and conservation of the buildings at the Imperial Steel Works are conducted based on the "Strategic Framework" established by the Cabinet Secretariat through collaboration with interested parties. The owner, Nippon Steel and Sumitomo Metals Corporation, is responsible for the proposals, developed in conjunction with Kitakyushu City and Nakama City.

Approvals will be required from the Yawata District Management and Conservation Council, the city administrations of Kitakyushu and Nakama Cities, and the Cabinet Secretariat of Japan.

All of these bodies have been, and will continue to be, fully informed of the development of the proposals, and their representatives, together with the representatives of the Nippon Steel and Sumitomo Metals Corporation (the Owners) are members of the planning group developing the proposals.

An outline of the proposed schedule is at Table 1.

Table 1

Agenda for World Heritage Related Affairs

1．Basic Policy

-Obtain approval for each course of action at the Yawata Conservation Council scheduled to be held in April, 2017

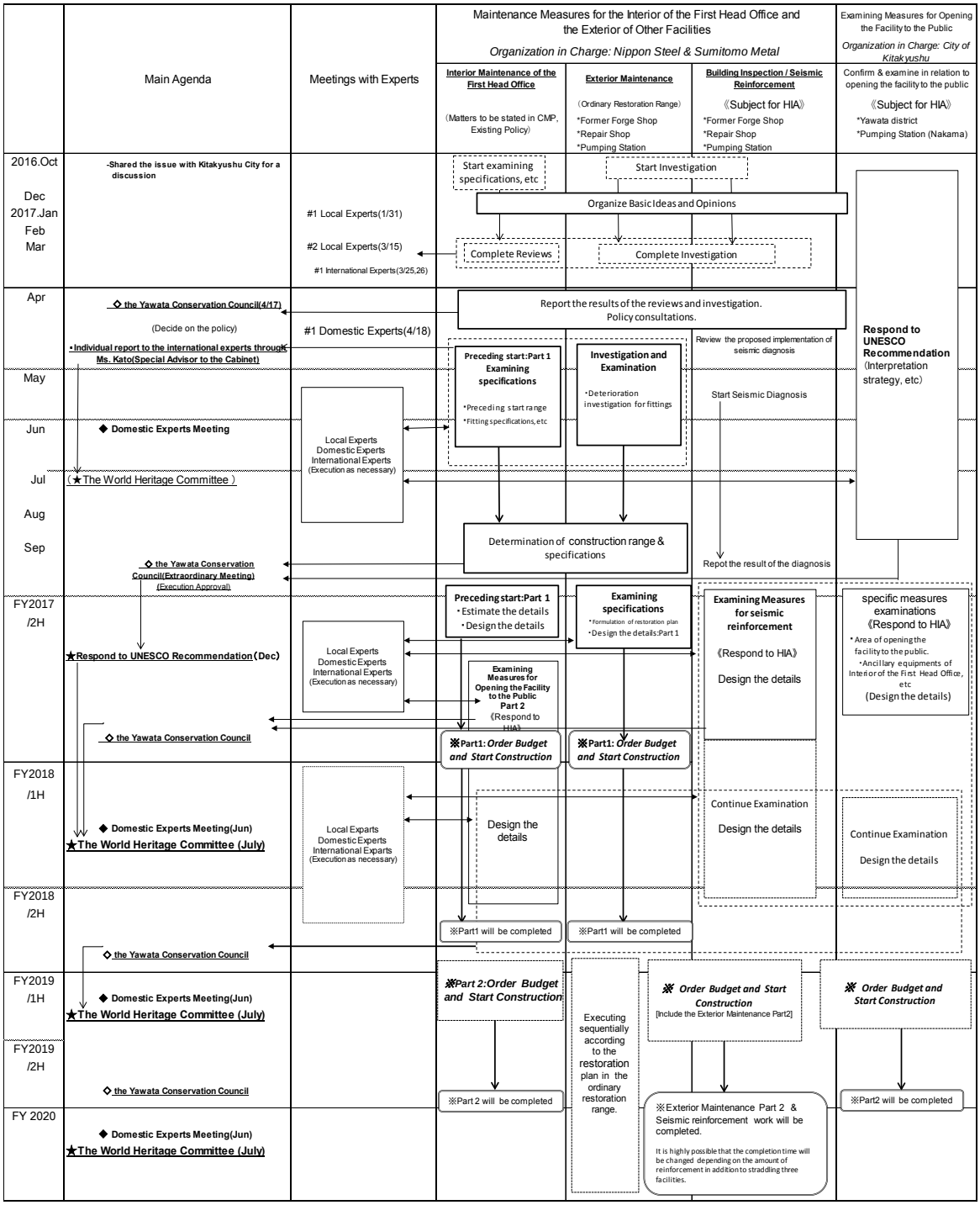
-Obtain execution approval for each measure at the Yawata Conservation Council, provisionally scheduled to be held in September, 2017

※Propose and obtain approval for executing the seismic reinforcement at the Yawata Conservation Council in February, 2018

-Decide on a plan after consulting domestic and international experts through Special Advisor to the Cabinet.

-Regarding the "Measures for Opening to the Public", City of Kitakyushu will be in charge of examining and executing them

2．Proposed Schedule



Enlarged version of Table 1 is shown in the next page below:

Agenda for World Heritage Related Affairs

Table 1

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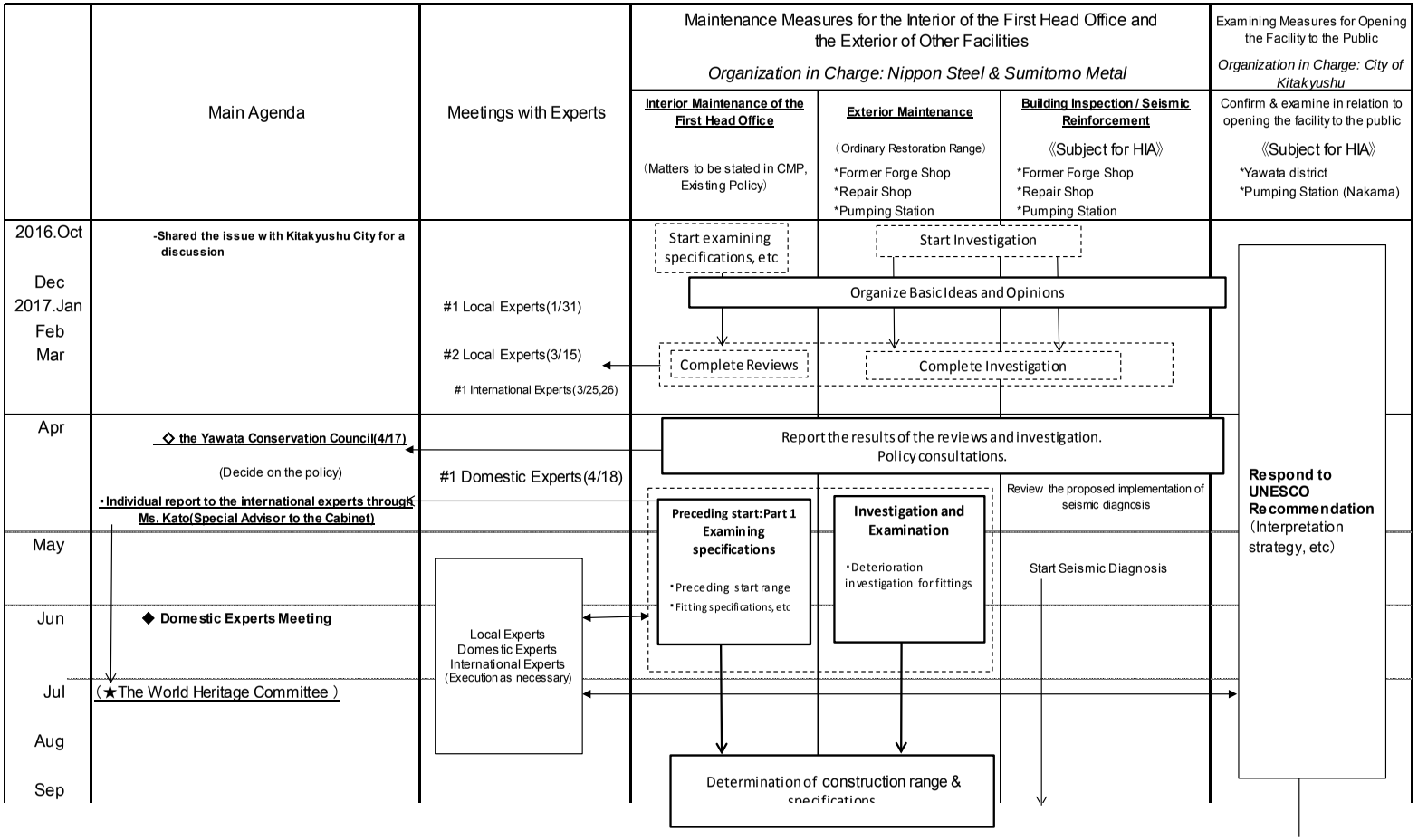
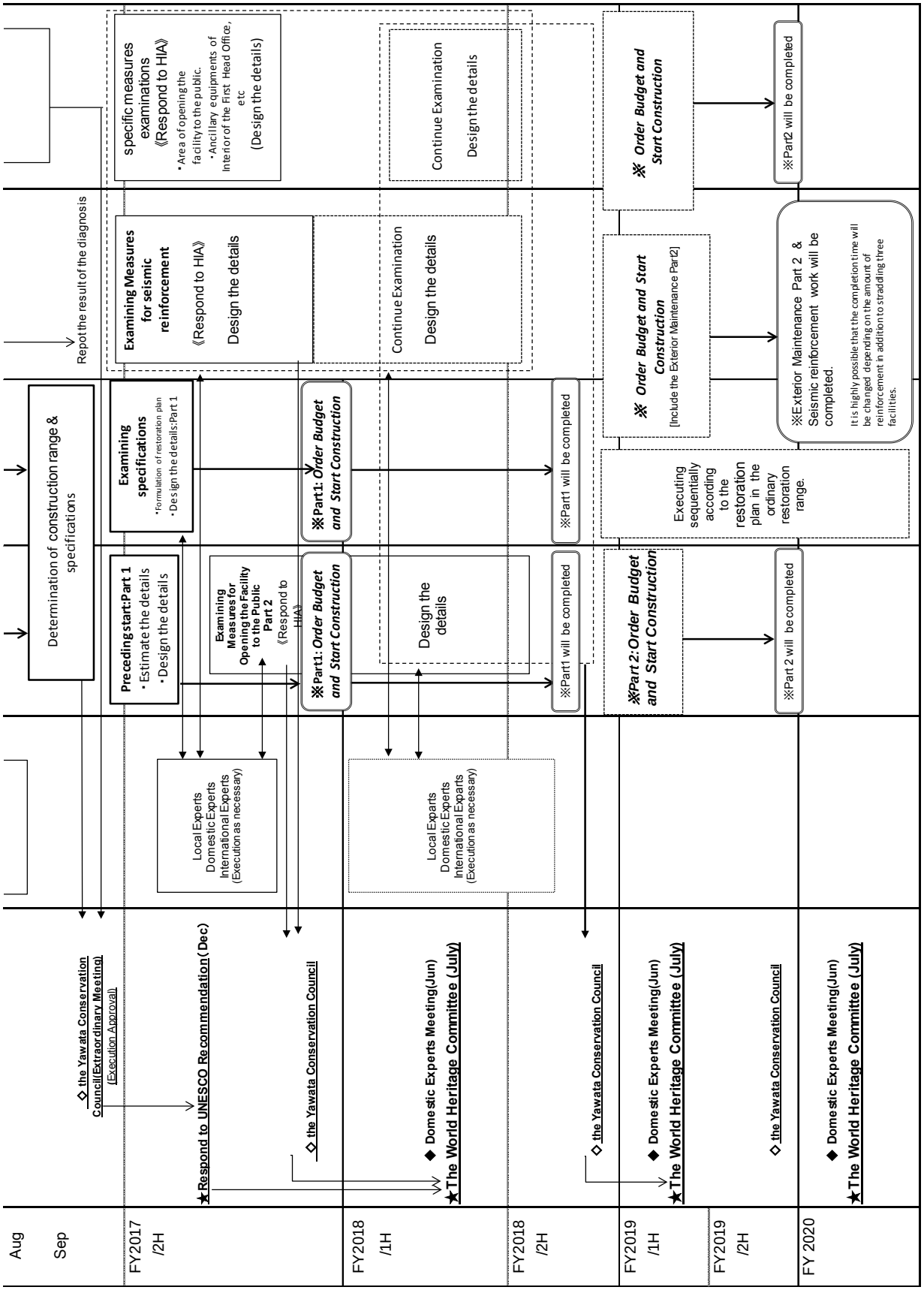



Aug
Sep
FY2017 /2H
FY2018 /1H
FY2018 /2H
FY2019 /1H
FY2019 /2H
FY 2020
Repot the result of the diagnosis
Determination of construction range & specifications
Examining specifications
・Formulation of restoration plan
・Design the details:Part 1
Preceding start:Part 1
・Estimate the details
・Design the details
Examining Measures for Opening the Facility to the Public Part 2
《Respond to HIA》
※Part1: Order Budget and Start Construction
※Part1 will be completed
Examining Measures for seismic reinforcement
《Respond to HIA》
Design the details
specific measures examinations
《Respond to HIA》
・Area of opening the facility to the public.
・Ancillary equipments of Interior of the First Head Office, etc
(Design the details)
Continue Examination
Design the details
※Part2: Order Budget and Start Construction
※ Order Budget and Start Construction
[Include the Exterior Maintenance Part2]
※ Order Budget and Start Construction
Executing sequentially according to the restoration plan in the ordinary restoration range.
※Part2 will be completed
※Exterior Maintenance Part 2 & Seismic reinforcement work will be completed.
It is highly possible that the completion time will be changed depending on the amount of reinforcement in addition to straddling three facilities.
※Part2 will be completed
Local Experts
Domestic Experts
International Experts
(Execution as necessary)
◇ the Yawata Conservation Council(Extraordinary Meeting)
(Execution Approval)
★Respond to UNESCO Recommendation (Dec)
◇ the Yawata Conservation Council
◆ Domestic Experts Meeting(Jun)
★The World Heritage Committee (July)
◇ the Yawata Conservation Council
◆ Domestic Experts Meeting(Jun)
★The World Heritage Committee (July)
◇ the Yawata Conservation Council
◆ Domestic Experts Meeting(Jun)
★The World Heritage Committee (July)

3. SUPPORTING MATERIAL

3.1 Description of the project

The proposals affect four buildings in two component parts of the World Heritage Property *Sites of Japan's Meiji Industrial Revolution: Coal Mining, Iron and Steel and Shipbuilding*: the First Head Office Building, the Former Forge Shop, and the Repair Workshop (all within the Imperial Steel Works), and the Onga River Pumping Station.

The proposed works are as follows:

First Head Office Building: Completion of interior restoration following extensive earthquake stabilisation completed in 2014, for the purpose of opening the building as a historic building and visitor interpretation facility. The details regarding the way in which the building would be opened to the public, and the design of associated roads and land around the site, are under consideration.

Former Forge Shop: External building conservation and commencement of earthquake stabilisation work, to stabilise and repair building fabric in poor condition, and allow for ongoing operational use. The improvement of the presentation of the building to the public (as seen from the First Head Office Building) is also being considered.

Repair Workshop: External building conservation, and commencement of earthquake stabilisation work, to stabilise and repair building fabric in poor condition, and allow for ongoing operational use. The improvement of the presentation of the building to the public (as seen from the First Head Office Building) is also being considered

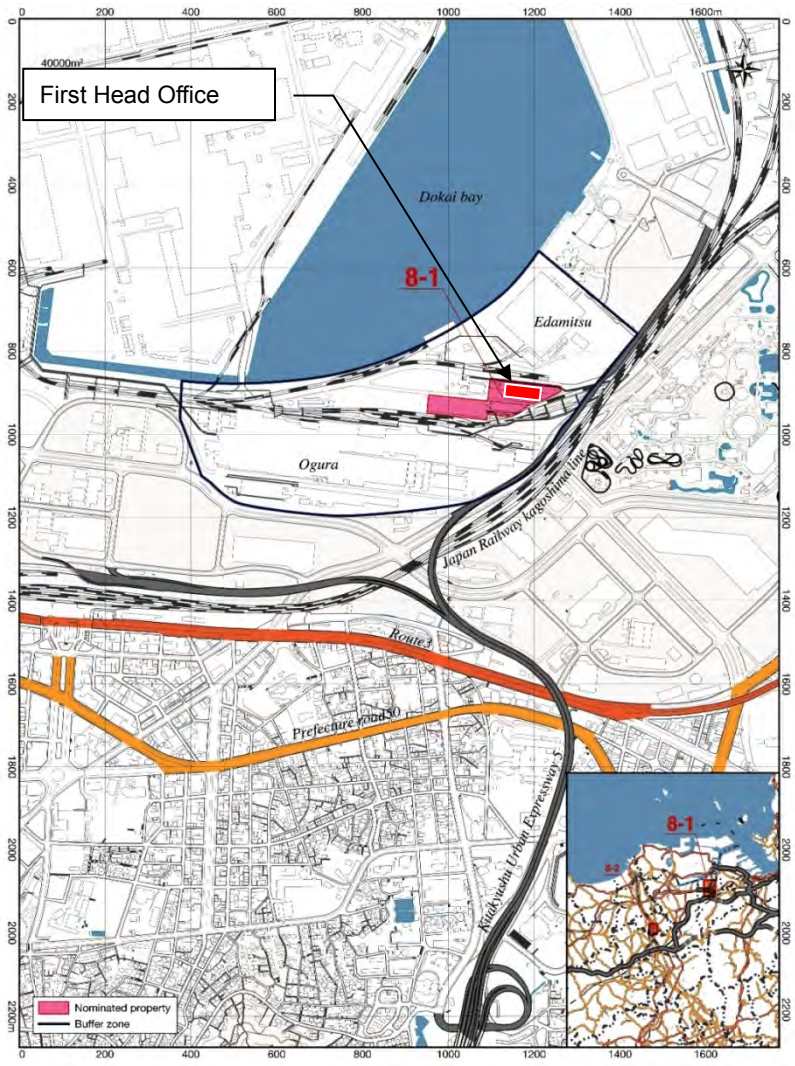
Onga River Pumping Station: external building conservation, and commencement of earthquake stabilisation work, to stabilise and repair building fabric in poor condition and allow for ongoing operational use, and improve the presentation of the building to the public (as seen from the existing viewing platform on the perimeter of the site).


MAP of A8 Yawata
8-1
The Imperial Steel Works, Japan
8-2
Onga River Pumping Station
First Head Office
Former Forge Shop
Repair Workshop
Onga River Pumping Station

3.1.1. First Head Office Building

The First Head Office Building underwent extensive seismic strengthening works in 2014, to stabilise and strengthen the brick masonry walls so as to be able to withstand earthquake movement. This work is a national building code requirement.
Seismic strengthening required the addition of steel plates bolted to the internal masonry walls. This required the removal of internal finishes that symbolized the integration of western and Japanese building technologies and reflected the craftsmanship that was involved. This evidence was carefully recorded before the reinforcement work, and samples retained for future reference. The restoration of these interiors is being considered with input from the relevant experts and organisations, to restore the building back to its traditional finishes, and to be able to use as an historic property and visitor facility for the component. There is as yet no formal proposal for these works, which are foreshadowed in the Conservation Management Plan. The local government and the owner are negotiating the nature of future uses and the extent of visitor access, while maintaining ongoing operation.

The proposed works will include the conservation and adaptation of window frames to improve weather sealing and allow for stronger glass to withstand typhoon winds.

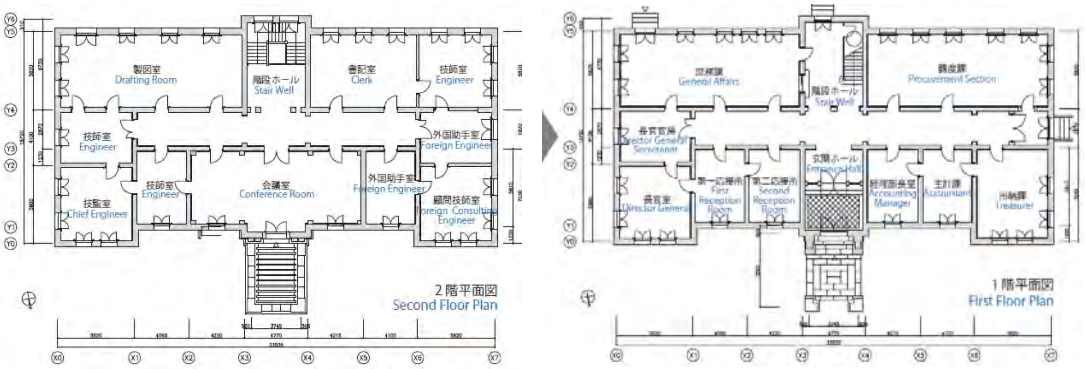


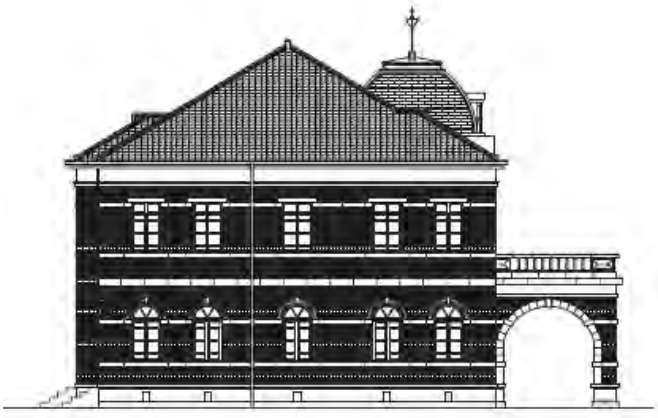
First Head Office Building

(East side Exterior, Plan and East Elevation)



Camera Position



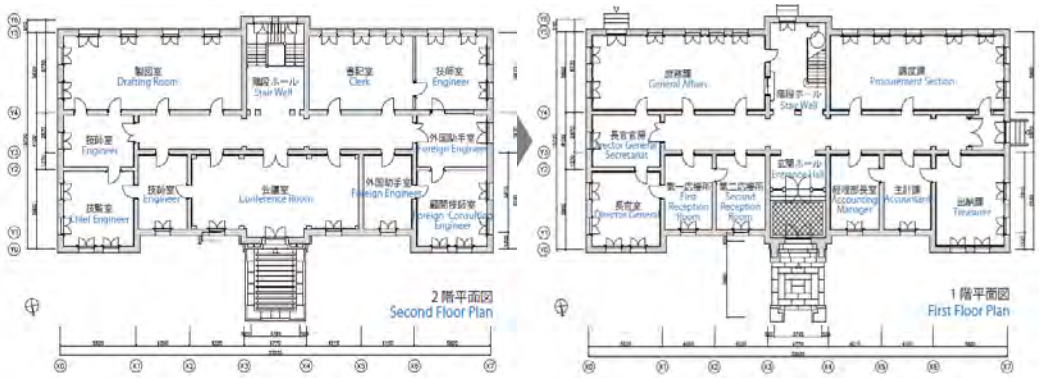


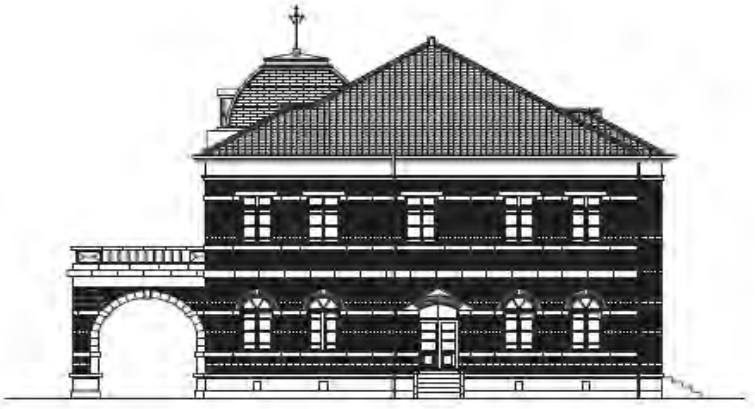
東側立面図
East Elevation

First Head Office Building

(West side Exterior, Plan and West Elevation)





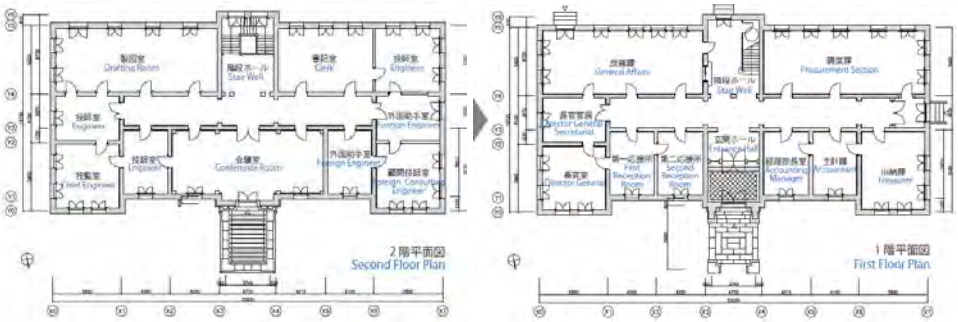


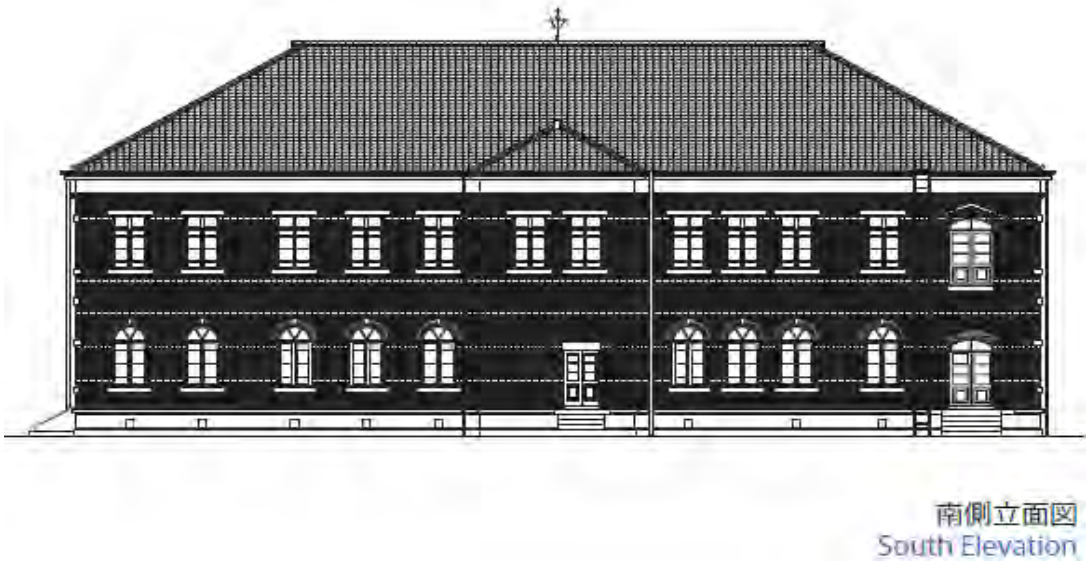
First Head Office Building

（South side Exterior, Plan and South Elevation）



Camera Position

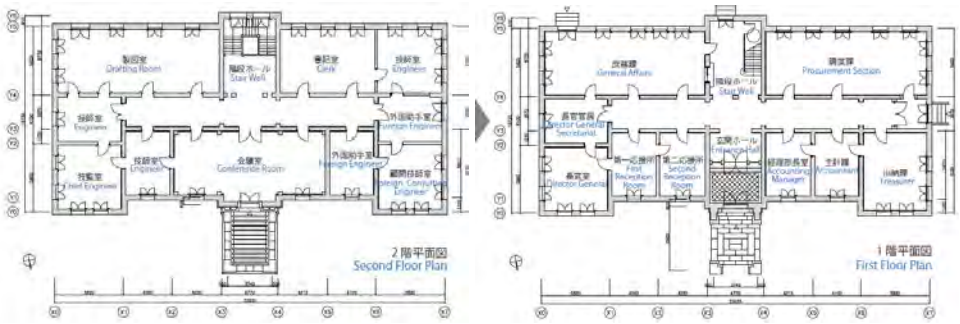




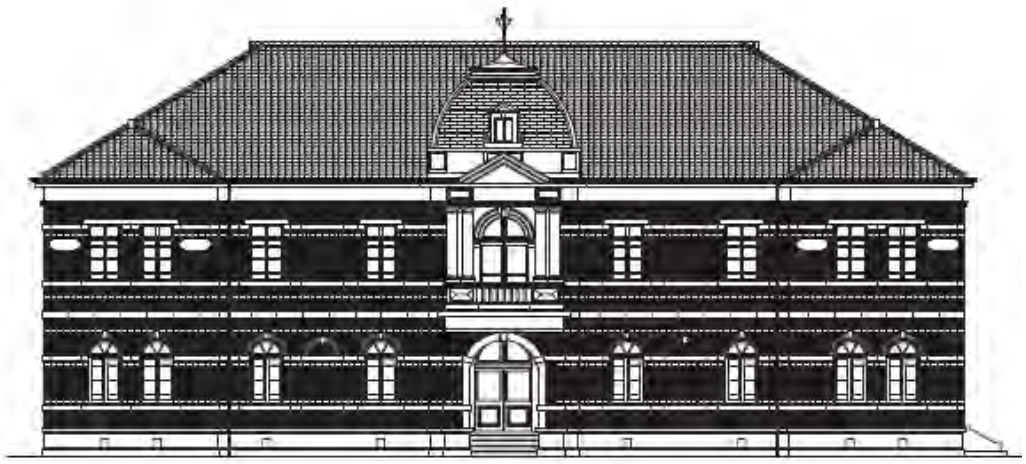
First Head Office Building

(North side Exterior, Plan and North Elevation)





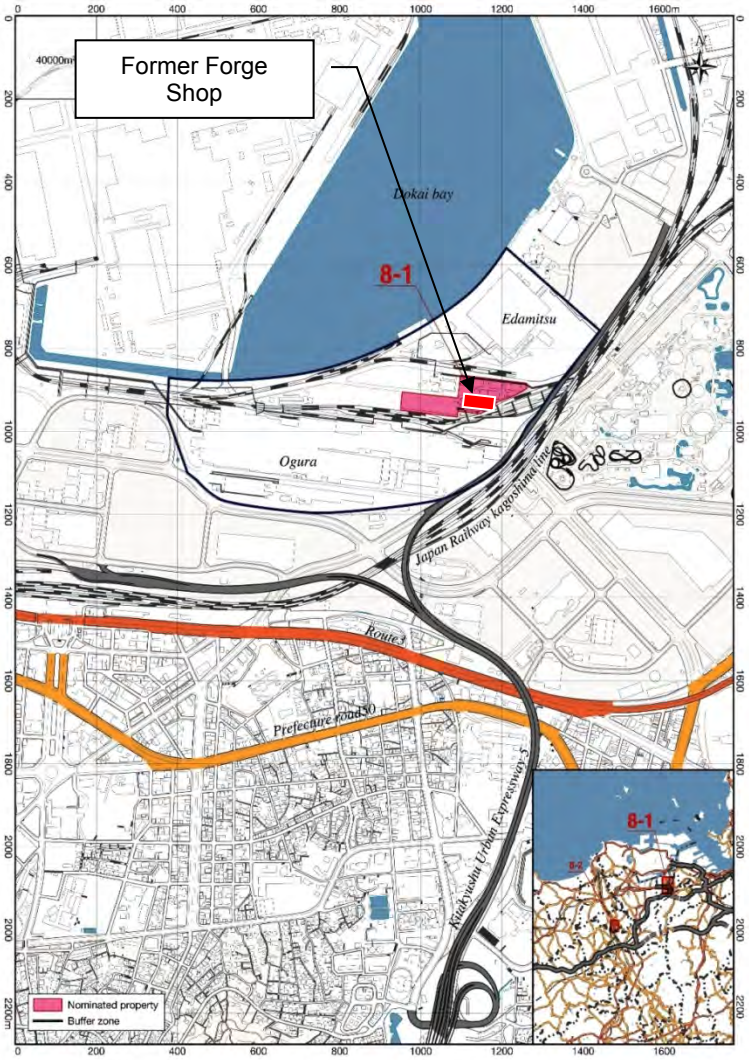
Camera Position



北側立面図
North Elevation

3.1.2. Former Forge Shop

The Former Forge Shop building houses the Yawata steelworks archives and a storage facility for materials originating in the ensemble of buildings that make up the property. Parts of the building are in need of stabilisation and restoration of the materials to maintain the original design and appearance. The building, being steel-framed with masonry infill, also needs to be assessed for its seismic performance, and upgraded if found to be under standard (which appears to be likely).



The building, clad with slag-bricks made in the steelworks, has been used for a variety of functions, and maintained in a 'robust' way. This included cement rendering the walls on one side to counter water penetration problems (caused largely by faulty rainwater furniture), and the cladding of one end in metal sheets. The slag brick wall that formed the eastern wall collapsed in an earthquake in 2005, and was temporarily replaced with metal-clad wall. The

potential for reinstating the wall as slag bricks will be part of the seismic strengthening discussions.

Investigations on seismic reinforcement are under way, and we plan to separately report on the plan of countermeasure construction in 2018. Although it is preferable to construct most of external appearance concurrently with seismic reinforcement work, there is a possibility that some windows and gutters may require emergency action to remediate major condition problems. As a result of the current survey, we are planning to carry out selected conservation work prior to seismic reinforcement work where such work is separated from projected seismic reinforcement work and does not require integration with it. The restoration work will be carried out in accordance with the "General Principles for Maintenance (CMP Table 5-2) (Guidelines)".

Gutters and downpipes will be restored based on existing designs. Conservation works to walls will be based on respect for the original design, and to solve historic problems of steel frame decay and water penetration.

The large windows, the wooden frames of which have also deteriorated, will be restored, with the replacement where necessary of frames with matching detail. Stronger glass will be fitted to withstand typhoon winds, in frames restored and adapted to integrate with any seismic reinforcement requirements. The scope of this work will be determined in September 2017.

The steel frame will have rust removed and then be treated with a rust inhibitor.
Any steel frame elements found to be structurally unsound will be reinforced or replaced in a manner sensitive to their heritage significance, and any additional seismic retrofitting will be designed to maximise the conservation and understanding of original fabric.

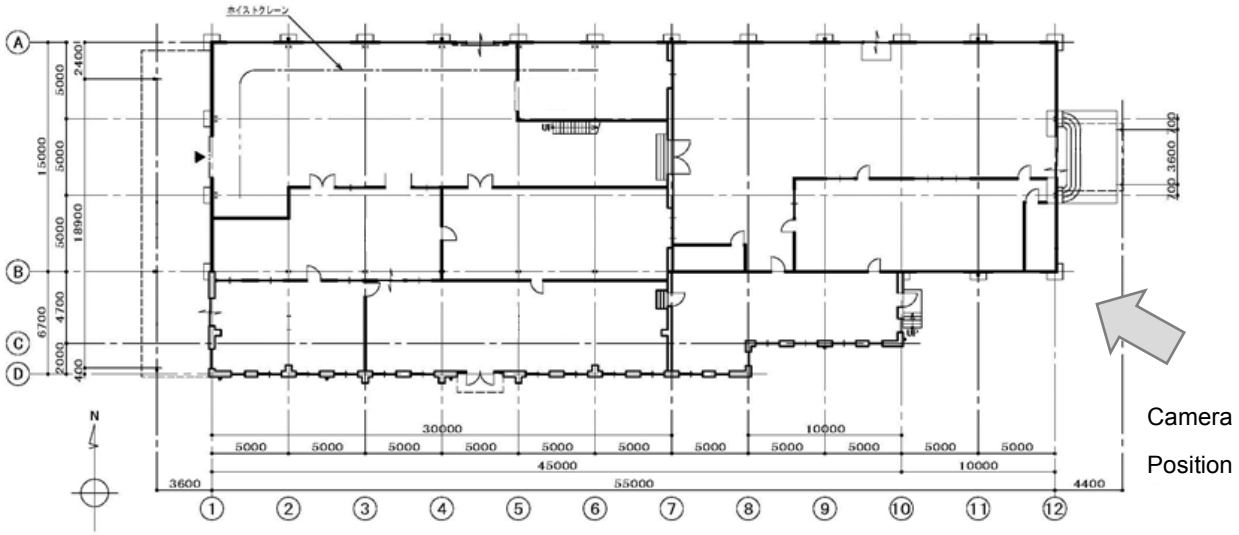
Redundant external steam piping and service shelving will be retained if it has been associated with major stages in the building's operations. Minor and recent redundant external services will be removed. Poles and aerial trays in the road spaces outside both the Former Forge Shop and the Repair Workshop will be retained to maintain the industrial landscape associated with the operations of these elements of the steelworks.
The metal sheet roof has a life expectancy of 20-30 years and will be maintained as it is.

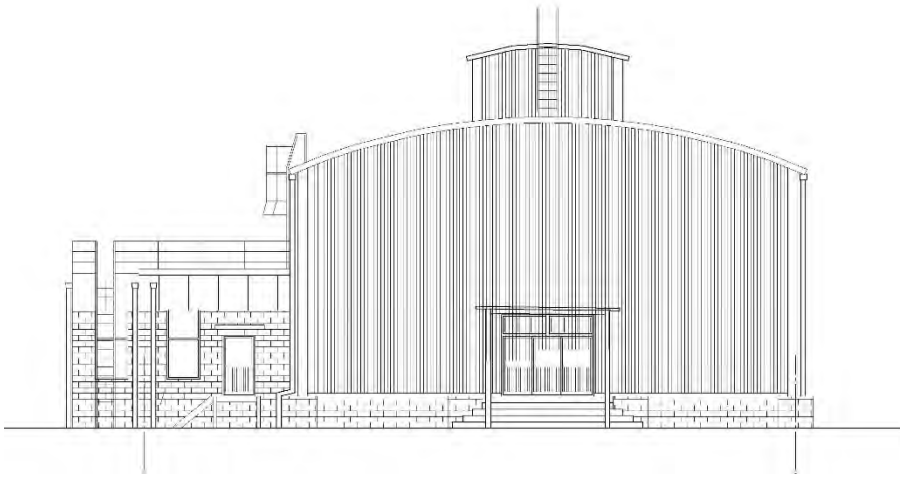
The details of the proposed works are provided at Appendix 002.

Former Forge Shop

(East side Exterior, Plan and East Elevation)



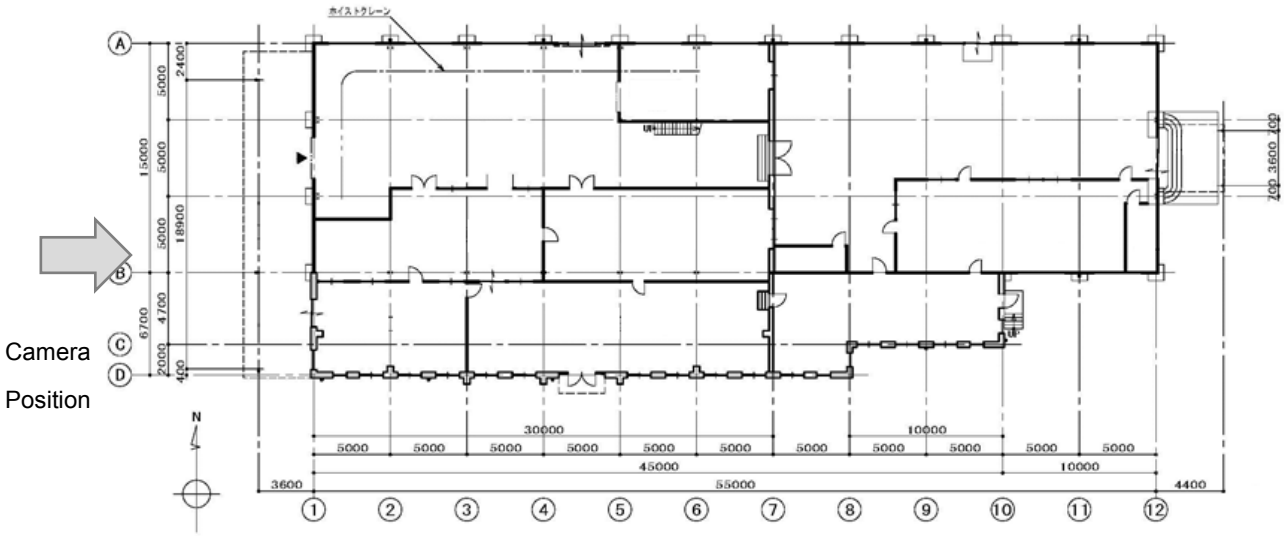


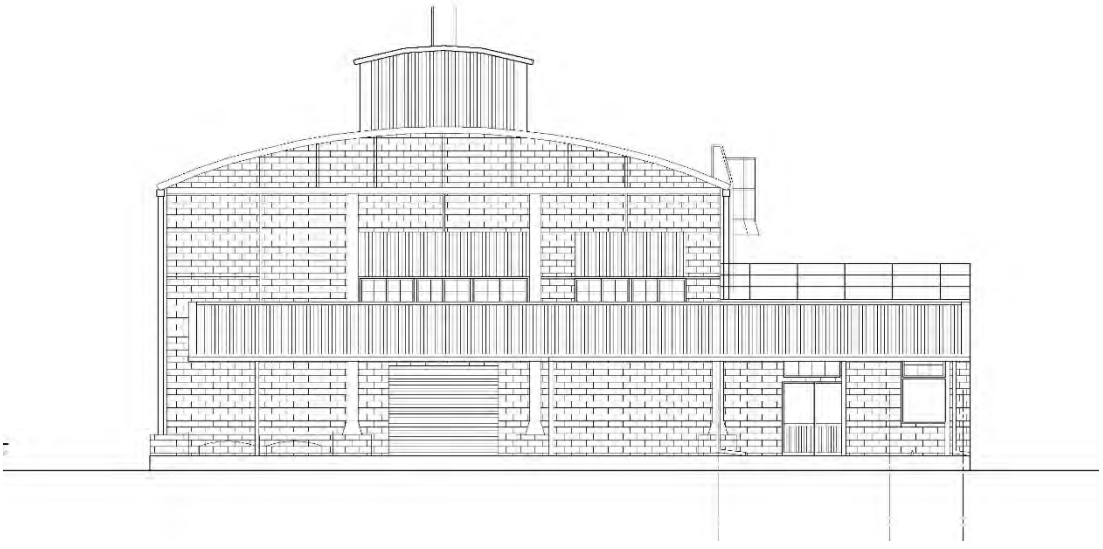


Former Forge Shop

（West side Exterior, Plan and West Elevation）



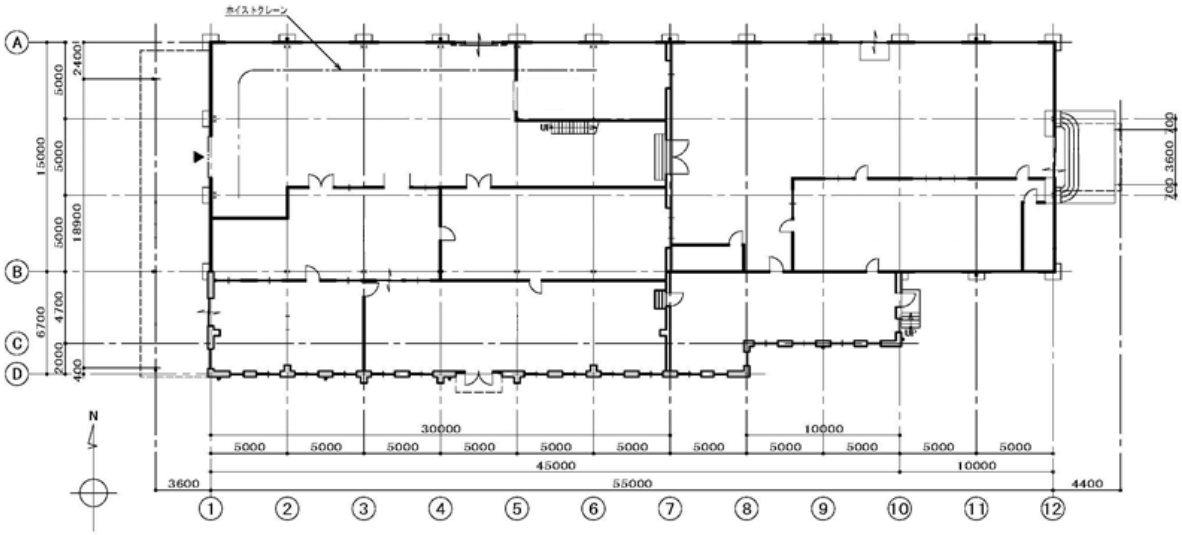




Former Forge Shop

(South side Exterior, Plan and South Elevation)





Camera Position

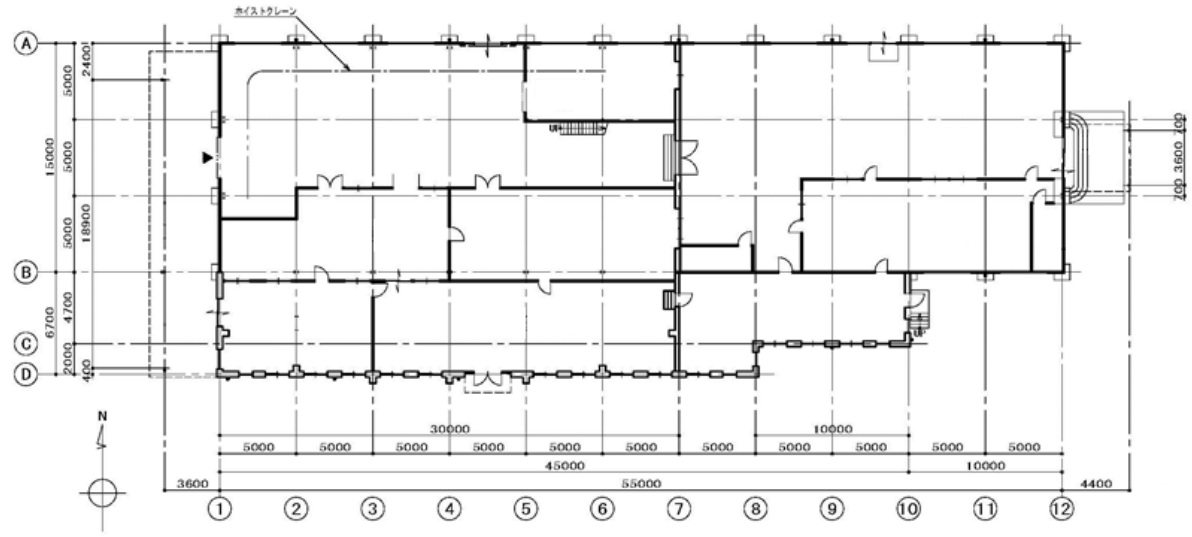


Former Forge Shop

(North side Exterior, Plan and North Elevation)



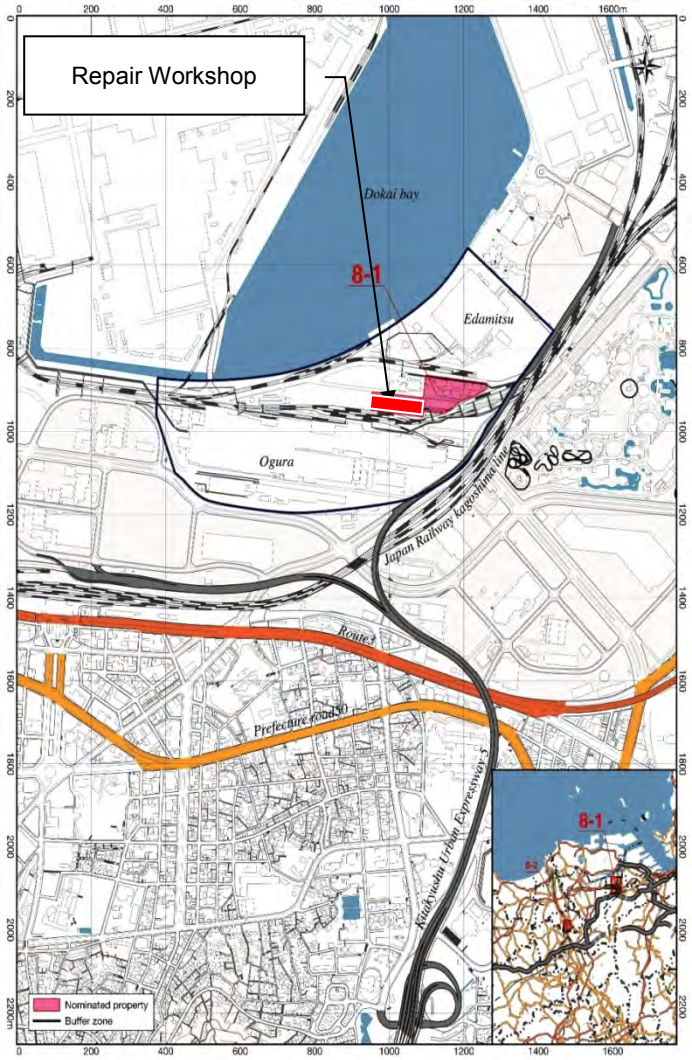
Camera Position





3.1.3. Repair Workshop

The Repair Workshop is a steel-framed structure with extensive glass window walls, and sections of masonry and galvanised iron cladding. The windows are currently protected within temporary acrylic panels attached outside and inside the original window frames, and some have been covered with metal sheeting. Some sections of the building are in need of varying degrees of stabilisation and restoration to maintain original fabric, and restore or replace degraded fabric to maintain the significant form and design of the building. The building is used for a range of light repair and fabrication functions related to the ongoing operations of the steelworks, continuing its traditional use.



As with the former forge shop, we are currently conducting investigations on seismic reinforcement, and we plan to separately report on the plan of countermeasure construction in 2018. Although it is preferable to restore most of external appearance concurrently with

seismic reinforcement work, there is a possibility that some windows and gutters will require immediate conservation work. As a result of the current survey, we are planning to carry out selected conservation work prior to seismic reinforcement work where such work is separated from projected seismic reinforcement work and does not require integration with it. The restoration work will be carried out in accordance with the "General Principles for Maintenance (CMP Table 5-2) (Guidelines)".

As with the Former Forge Shop, sections of the Repair Workshop have infill cladding within the steel frames that include an extensive area of glass windows, iron sheet and slag-brick cladding. As at the Former Forge Shop, the windows frames will be accurately restored or replaced depending on the detailed condition inspection. The scope of the restoration work will be determined after study in September 2017. The use of stronger glass to withstand typhoon damage may require slight modification of frame detailing, as in other buildings. The integration of conservation work with seismic reinforcement will also be determined at this time.

Slag brick sections will be stabilised and repaired, and if necessary treated with the breathable waterproof finish if its reversibility is verified and it has no visual impact.
The steel frame will be subject to the same process of study, rust removal, treatment and reinforcement or replacement as outlined for the Former Forge Shop. All gutters and downpipes will be repaired or replaced to establish a reliable roof-water management system.

Redundant external service piping and trays will be retained where it is related to important phases in the operation of the workshop. Operational services will be maintained and managed to avoid adverse impact on, or confusion or masking of, significant fabric.

Brick cladding encasing structural steel posts at both ends of the building show cracking, and this will be investigated to ensure ongoing stability, and to repair steel and brick elements as necessary.

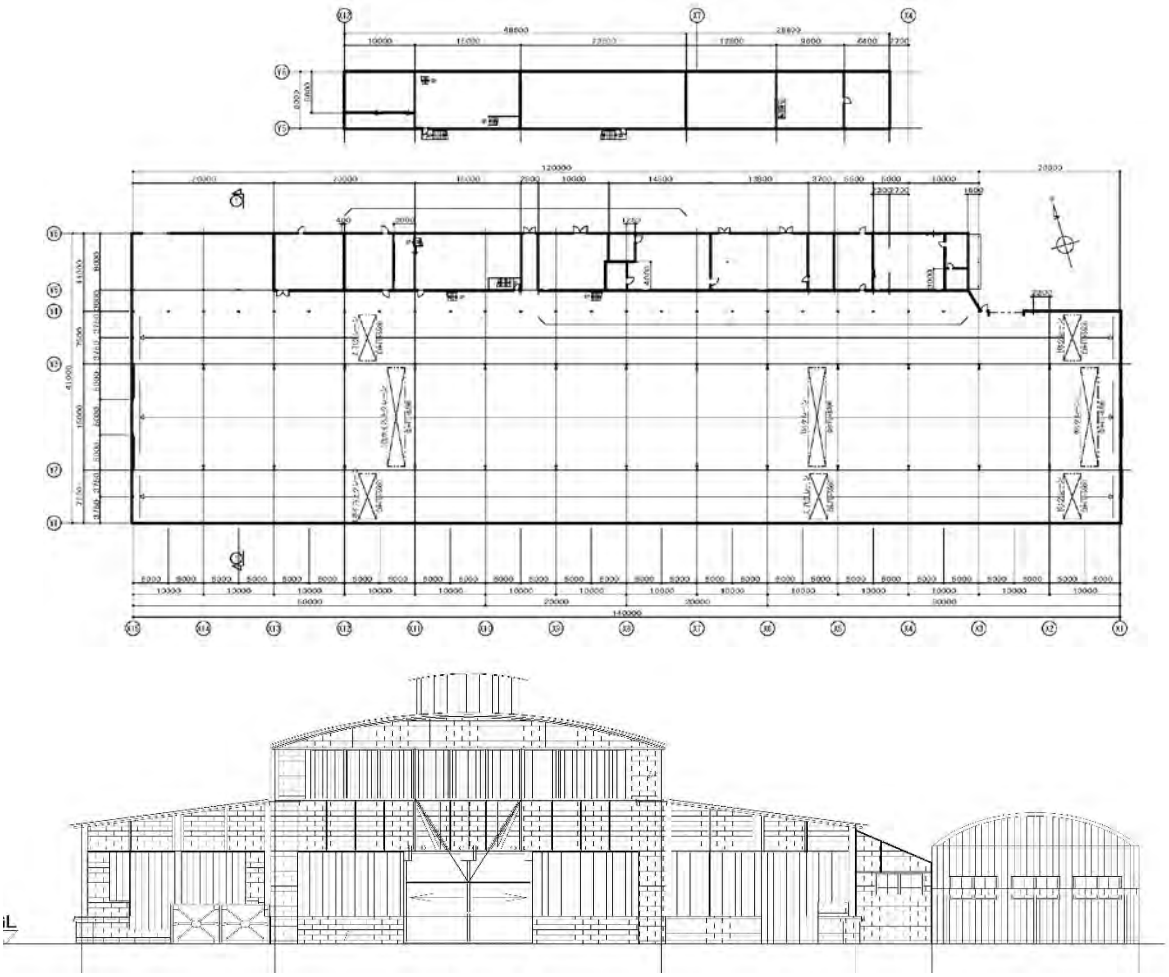
The metal sheet roof was recently replaced and has an expected life of 20-30 years. so will be maintained as it is.

The details of the proposed works are provided at Appendix 003.

Repair Workshop

(East side Exterior, Plan and East Elevation)



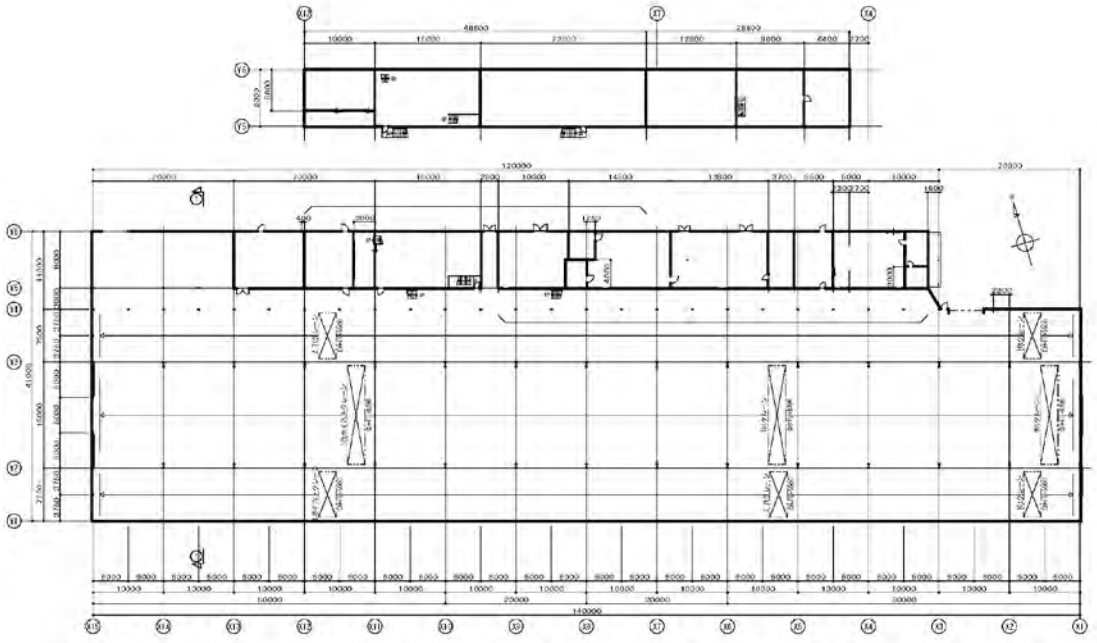


Camera Position

Repair Workshop

（West side Exterior, Plan and West Elevation）





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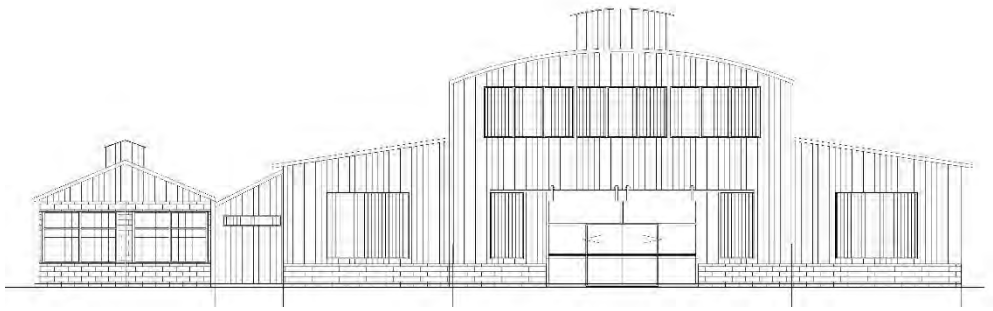
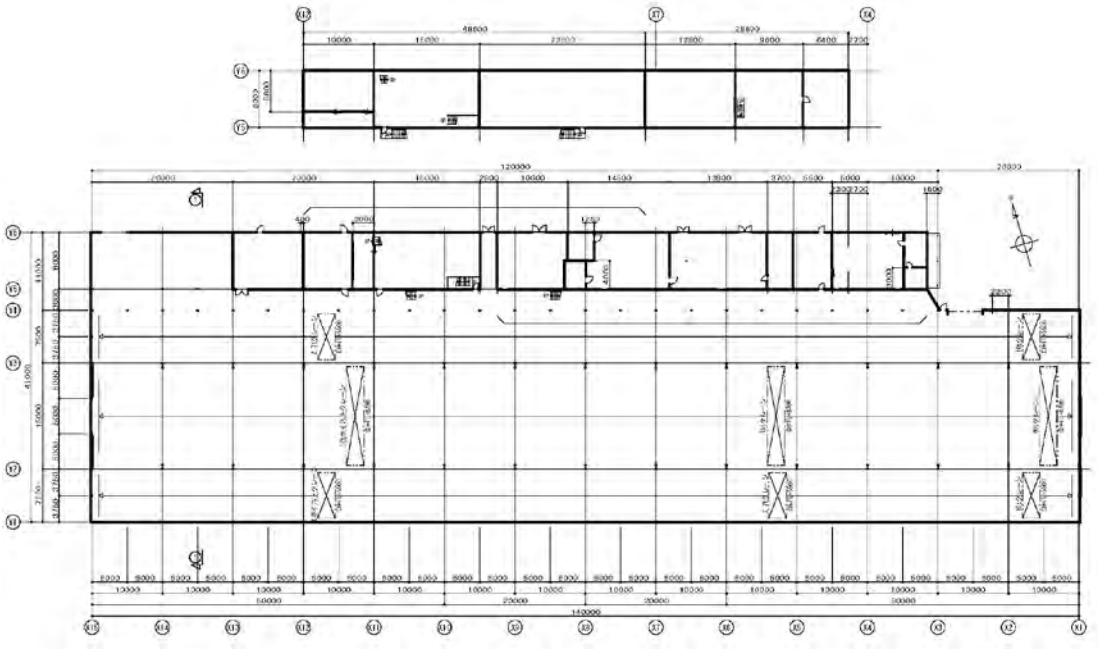


Repair Workshop

（South side Exterior, Plan and South Elevation）





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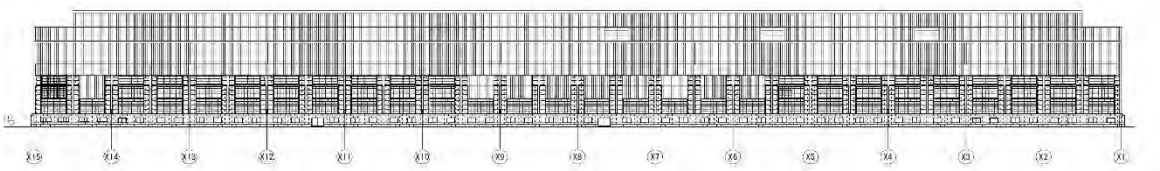
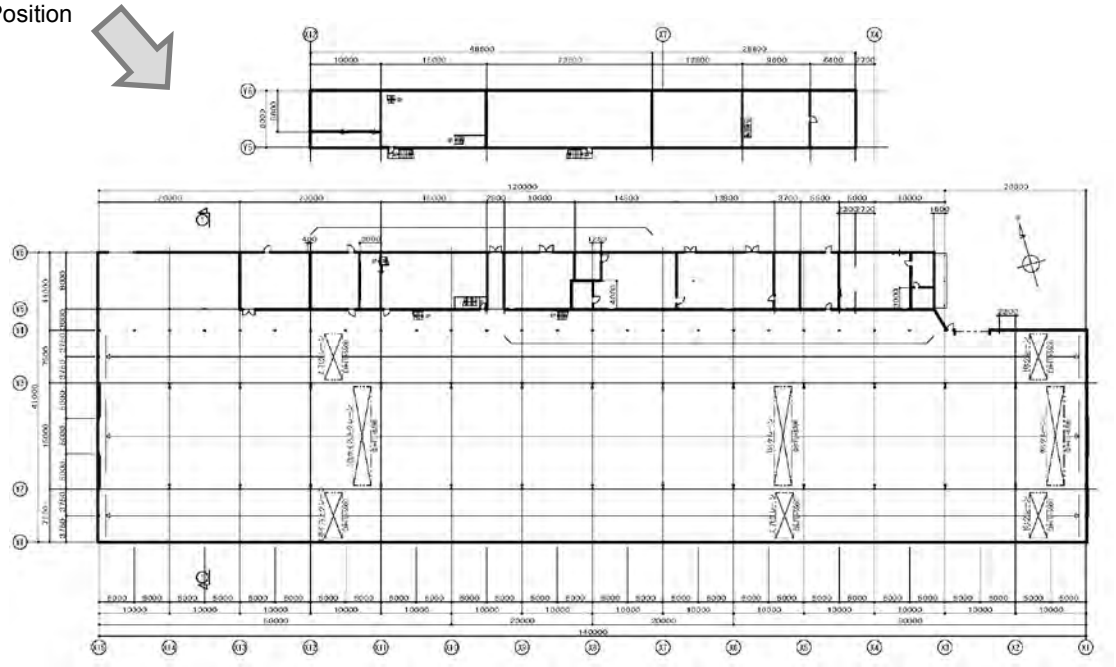


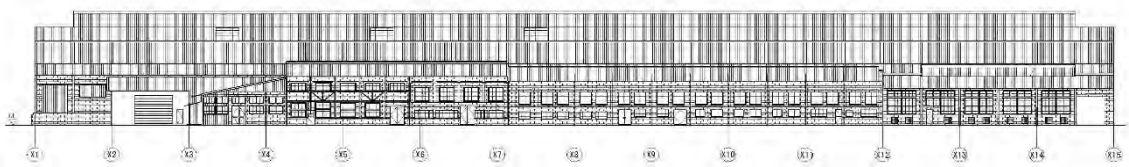
Repair Workshop

(North side Exterior, Plan and North Elevation)



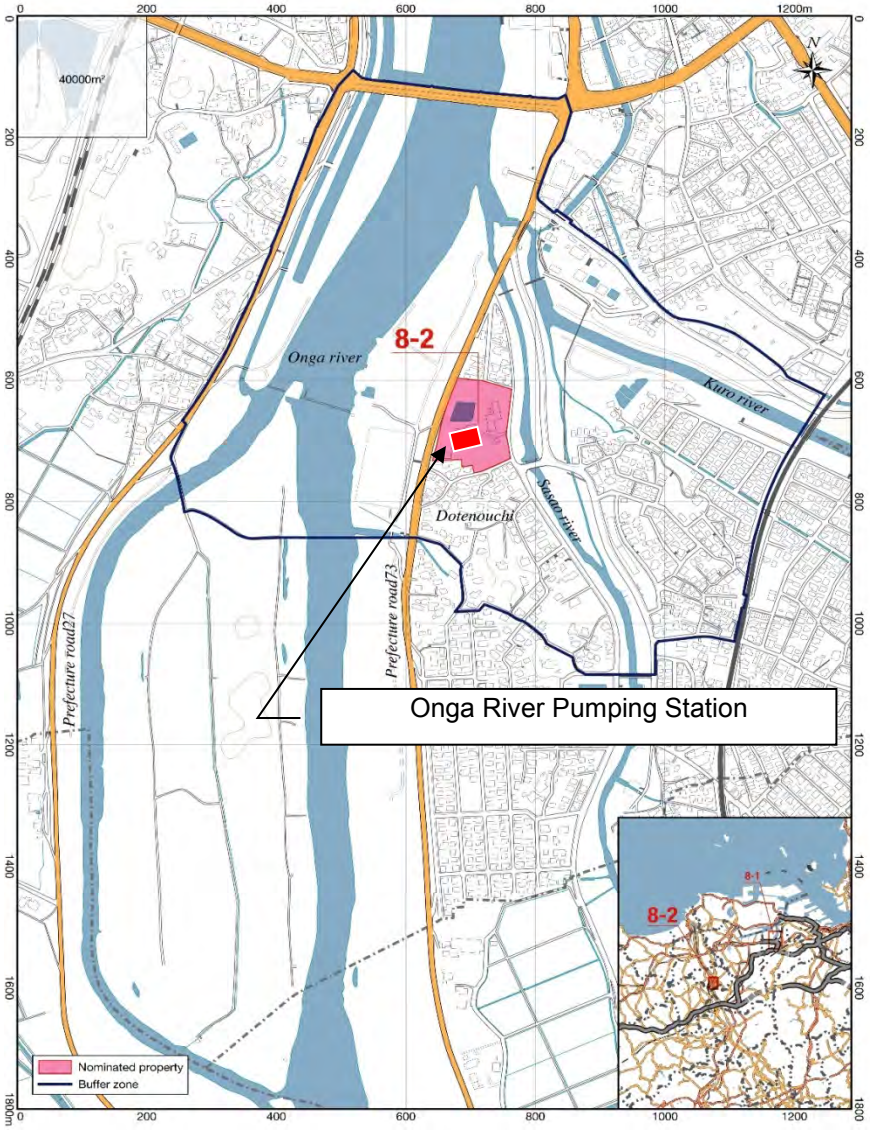
Camera Position





3.1.4. Onga River Pumping Station

The Onga River Pumping Station is a brick masonry building housing operational water pumps built to provide water to the Yawata steelworks, a function that it maintains today. While the building is very largely intact, a number of changes have occurred over time that do not add to the significance of the property, and which call for restoration to enable the significance of the building to be conserved and presented to visitors.



As with the former forge shop and repair workshop, we are currently conducting investigations on seismic reinforcement, and we plan to separately report on the plan of countermeasure construction in 2018. Although it is preferable to restore most of external appearance concurrently with seismic reinforcement work, there is a possibility that some windows and gutters will require immediate conservation work. As a result of the current

survey, we are planning to carry out selected conservation work prior to seismic reinforcement work where such work is separated from projected seismic reinforcement work and does not require integration with it. The restoration work will be carried out in accordance with the "General Principles for Maintenance (CMP Table 5-2) (Guidelines)".

Over recent years a number of window openings have been overclad with metal to prevent collapse of the window frames, and some window frames have been replaced with aluminium frames. The proposal is to remove this overcladding and metal framing, and restore or replace as necessary the timber window frames and glass.

The use of stronger glass to withstand typhoon damage may require slight modification of frame detailing, as in other buildings. The integration of conservation work with seismic reinforcement will also be determined in September 2017. In one area where windows were infilled with masonry walls to protect electrical equipment, the infill will be retained, as it is evidence of a significant change in the technology of the pumping station from steam to electric pumps in the 1950s. The brick masonry walls will be cleaned. Exposed steel frame components will have any rust removed and will then be treated with a rust-preventative coating.

Redundant external service piping and trays will be retained where it is related to important phases in the operation of the pumping station. Operational services will be maintained and managed to avoid adverse impact on, or confusion or masking of, significant fabric.

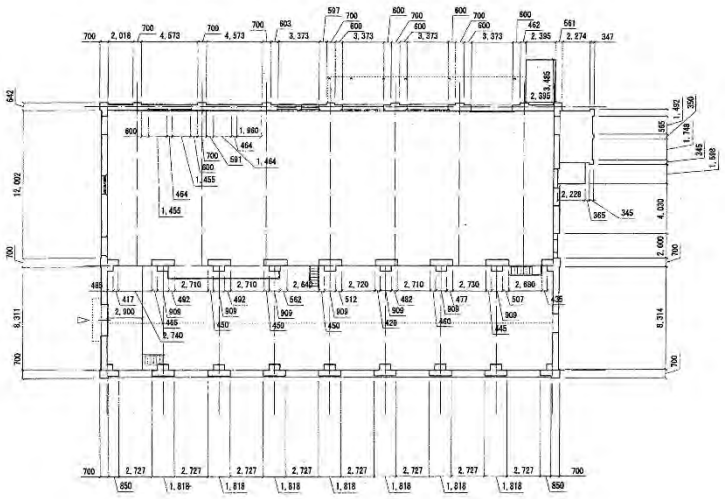
Sympathetic metal sheet roof and roof drainage was recently replaced and has a life expectancy of 20-30 years, so will be maintained as it is.

The details of the proposed works are provided at Appendix 004.

Onga River Pumping Station

(East side Exterior, Plan and East Elevation)





Camera Position

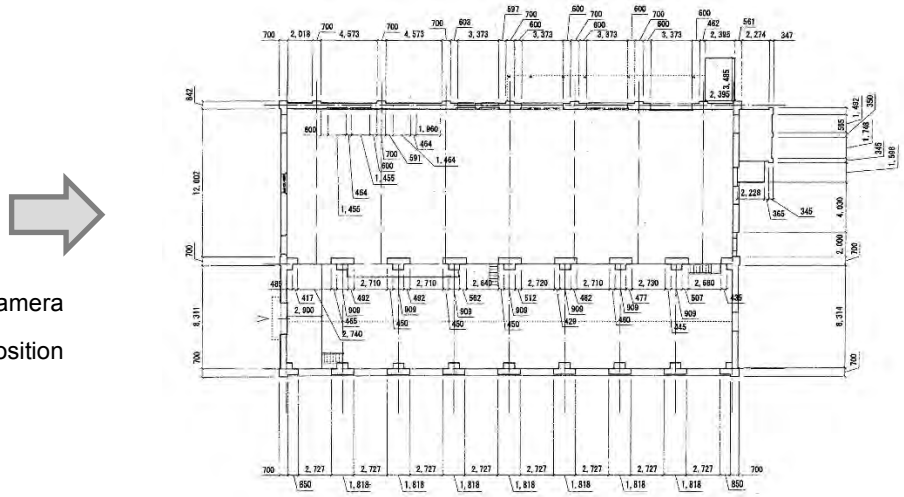


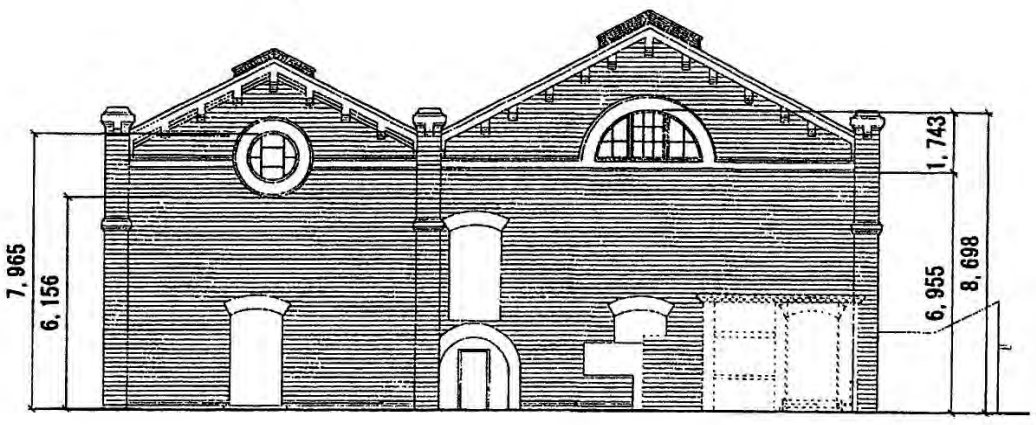
Onga River Pumping Station

（West side Exterior, Plan and West Elevation）



Camera Position

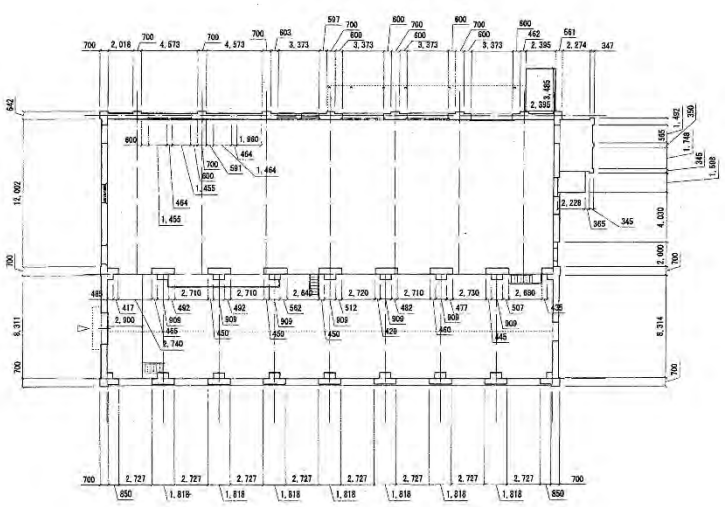




Onga River Pumping Station

（South side Exterior, Plan and South Elevation）





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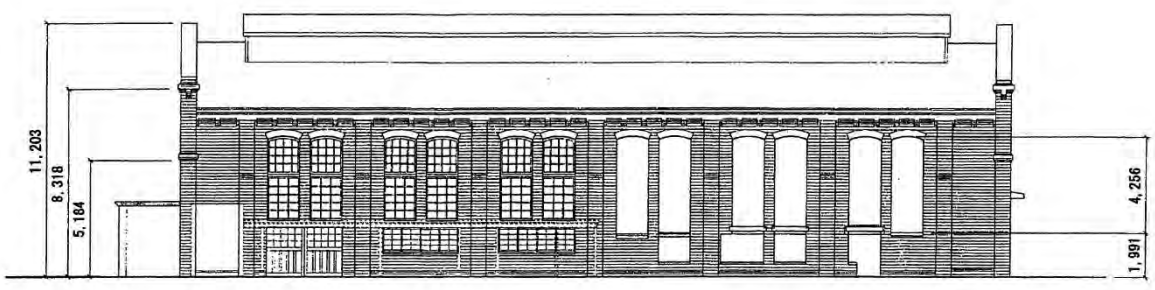
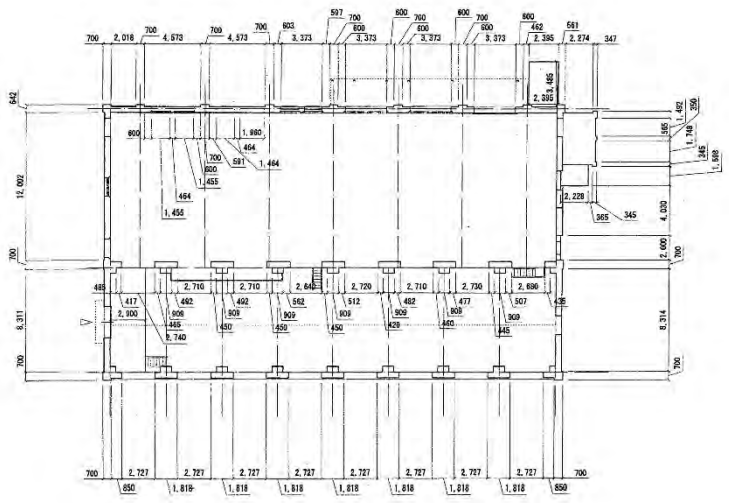


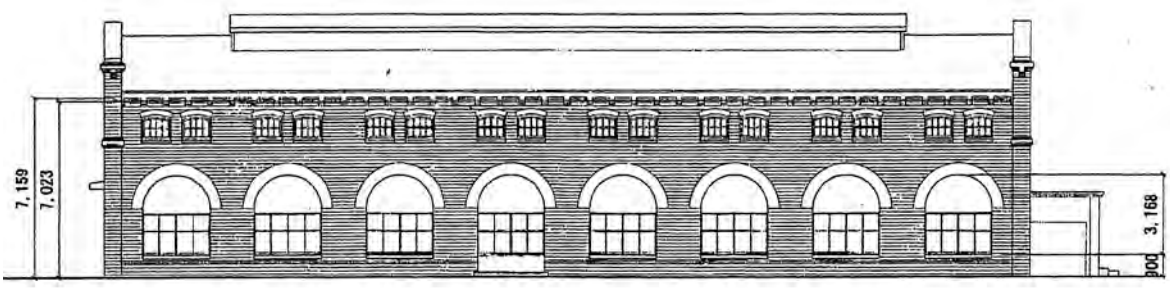
Onga River Pumping Station

(North side Exterior, Plan and North Elevation)



Camera Position





3.1.5. Seismic reinforcement works

Seismic reinforcement of the First Head Office Building was completed in 2014.

Consideration of the design of necessary seismic reinforcement at the other three buildings will be undertaken in conjunction with the detailed study of the existing structural frames. The aim will be to avoid any unnecessary reinforcement work, and to design new seismic reinforcement elements so as to minimise their visual and physical impact on the significant fabric, its understanding and presentation. The approach taken at the First Head Office Building, where the masonry walls are load-bearing, may inform the reinforcement needed at the Onga River Pumping Station, but are unlikely to be applicable in the Former Forge Shop and Repair Workshop, which are steel-framed buildings with infill panels of various materials.

There will be different timeframes for the primary external conservation works and the seismic reinforcement, due to the standards compliance processes that are associated with the latter. However, the managers are aware of the potential for seismic reinforcement to impact on conservation objectives, and hence the planning of them will be commenced in conjunction with the other conservation works and a compatible seismic approach determined as part of the conservation planning program. We are currently conducting investigations on seismic reinforcement, and we plan to separately report on the plan of countermeasure construction in 2018.

4. HERITAGE IMPACT ASSESSMENT FOR EVALUATING POTENTIAL IMPACT ON OUV

4.1. Contribution to OUV

The four buildings that are the subject of works proposals are all associated with establishment of the Imperial Steel Works, the first successful fully integrated iron and steel mill in Asia. They make up two of the component parts of the 23 component parts in the World Heritage Property *Sites of Japan's Meiji Industrial Revolution: Coal Mining, Iron and Steel and Shipbuilding*, related to the first successful transfer of Western industrialism to a non-Western nation, and characterised as the Meiji Industrial Revolution.

The brief synthesis of OUV states that:

A series of industrial heritage sites, focused mainly on the Kyushu-Yamaguchi region of south-west of Japan, represent the first successful transfer of industrialization from the West to a non-Western nation. The rapid industrialization that Japan achieved from the middle of the 19th century to the early 20th century was founded on iron and steel, shipbuilding and coal mining, particularly to meet defence needs. The sites in the series reflect the three phases of this rapid industrialisation achieved over a short space of just over fifty years between 1850s and 1910.

The first phase in the pre-Meiji Bakumatsu isolation period, at the end of Shogun era in the 1850s and early 1860s, was a period of experimentation in iron making and shipbuilding. Prompted by the need to improve the defences of the nation and particularly its sea-going defences in response to foreign threats, industrialisation was developed by local clans through second hand knowledge, based mostly on Western textbooks, and copying Western examples, combined with traditional craft skills. Ultimately most were unsuccessful. Nevertheless this approach marked a substantial move from the isolationism of the Edo period, and in part prompted the Meiji Restoration.

The second phase from the 1860s accelerated by the new Meiji Era, involved the importation of Western technology and the expertise to operate it; while the third and final phase in the late Meiji period (between 1890 to 1910), was full-blown local industrialization achieved with newly-acquired Japanese expertise and through the active adaptation of Western technology to best suit Japanese needs and social traditions, on Japan's own terms. Western technology was adapted to local needs and local materials and organised by local engineers and supervisors.

The components at Yawata and Onga River relate to the iron and steel making element of this industrial revolution, during the final phase of its development as Japan emerged as an industrial state on the world stage.

The management plan for the components identifies the contribution of each element to the OUV of the Property, as shown in Table 1.

Table 1. Elements of the Imperial Steel Works that reflect OUV

Element	Contribution to OUV
First Head Office	Demonstrates the adoption and adaptation of Western architectural design and construction techniques in Japan. Reflects the nature of technological exchanges that underpinned the development of Japan's industrial transformation. It also demonstrates (as the headquarters of the Yawata Steel Works) the organizational style adopted by Japanese steel makers to achieve the local development of an integrated steelworks.
Repair Shop	Demonstrates the transfer of German technology, followed very rapidly by the extension of the building in the same style using Japanese-made steel and design skills. This is reflected particularly in the progression of steel framing, the first section being labeled Gutehoffnungshütte (GHH), and subsequent expanded sections labeled with Yawata nameplate.
Former Forge Shop	Reflects one of the original functions of the steelworks, the original foundry function, necessary to the autonomous development of the steelworks, and the subsequent adaptation for materials testing. While its structure has been changed over time, the core building can still be recognized, and the changes it demonstrates echo the continuing expansion and refinement of the steelworks, and the adaptation of transferred technology to meet evolving local needs.
Onga River Pumping Station	Demonstrates the rapid growth of the steelworks and the increasing demand for water for steelmaking purposes. The pumping station is an accomplished "modern" industrial design reflecting the rapid development of design skills within the steelworks based on Western precedents but modified to meet Japanese conditions.

4.2. Potential impact of proposals on OUV

The proposed works at the **First Head Office building** are primarily internal, to complete the restoration of the building following seismic reinforcement work in 2014. The seismic work had an unavoidable impact on the original interior fabric of the building because of the necessity to add steel plates to wall elements to provide structural integrity that would

withstand earthquake movement, as well as reinforcing frames in the ceilings. The proposed works, which applies render and associated internal decoration to ceilings and walls, remediates that impact by returning the internal spaces to a condition that returns the finishes that existed prior to the seismic work, then decorates them as they were in the Meiji and subsequent significant periods. This work will restore the and make accessible the evidence of the integration of western and Japanese building technologies and craftsmanship that underpin the contribution of the building to OUV

The evidence on which this work is based is on extensive recording of existing and earlier physical condition prior to the works, and the study of historic photographs of the spaces. The provision of minimum necessary concealed services stipulated by domestic laws such as fire fighting equipment will be included in the restoration works.

The local government and the owner are in negotiation regarding the nature of future uses and the extent of visitor access that may be appropriate.

There will be no adverse impacts on the OUV of the Property, the impacts being positive in the form of physical conservation actions and enhanced presentation of the contribution of the First Head Office building to OUV.

The proposed works on the **Former Forge Shop and the Repair Workshop** are external, though elements such as the restoration of windows will also relate to internal conservation. Over one hundred years of changing operational use and selective maintenance has resulted in some neglected elements that have deteriorated. The works are to provide stabilisation and restoration for these building elements, and to bring the condition of the buildings to the point where ongoing maintenance is achievable.

There may be some loss (and like-for-like replacement) of deteriorated original fabric, but the overwhelming outcome will be the active conservation of the buildings and their long-term preservation as elements contributing to OUV. This work will improve the condition and appearance of the buildings, make their built form and history more understandable and enhance their presentation to visitors, who will view the buildings from the First Head Office precinct.

The proposed works at the **Onga River Pumping Station** are external, though elements such as the restoration of windows will also relate to internal conservation. The main works relate to the conservation/replacement of windows that have deteriorated over the years and been over-clad with other materials to prevent collapse. Window frames will be restored or replaced if they cannot be conserved, in a way that replicates the original window detailing.

Other works will clean and stabilise the external walls, and the ivy that has grown on the building in recent years has be removed.

There may be some loss (and like-for-like replacement) of deteriorated original fabric, but the overwhelming outcome will be the active conservation of the building and its long-term preservation as a component contributing to OUV. While public access into the building is not permitted due to its industrial operation, a visitor viewing area with interpretative panels has been developed at a view point on the boundary, and the proposed conservation works will enhance the visitor understanding and appreciation of the building.

4.3. Assessed heritage impact

In the case of the First Head Office Building, the works have two purposes: to restore the interior following already completed seismic reinforcement works; and to conserve the interior in form and finishes that replicate original or significant later uses of the building, while considering the future adaptive re-use as an interpretation facility for visitors.

In both cases the works will conserve OUV and enhance its understanding.

In the case of the Former Forge Shop, Repair Workshop and the Onga River Pumping Station, the works are to conserve the heritage values of the buildings. While the conservation actions needed to remediate deferred maintenance on elements of the buildings will result in some loss of original fabric, this will be largely limited to window frames, which, where they cannot be conserved, will be replaced with timber frames based on the original designs. All works are necessary to bring the buildings to a condition where their ongoing conservation can be guaranteed, and their contribution to OUV can be presented and appreciated.

The proposed works will not have an adverse impact on the range of heritage values of the buildings, and will not diminish the contribution of the elements to the OUV of the Property. They will ensure the conservation of the buildings, establish a sound basis for appropriate future uses, and the extent of visitor access which is currently being negotiated between the local government and the owner.

5. Relevant policies in the property Management Plan or Management System

The following are policies and strategies that are particularly relevant to the current works proposals. They are drawn from the *Conservation Management Plan: The Imperial Steel Works, Japan* (Nippon Steel and Sumitomo Metals, Kitakyushu City and Nakama City. 2014). These policies have been complied with in developing the current works program.

	Policies	**Strategies**
1	**Significance will form the basis of conservation management and improvement plans.** The statements of the significance of the property set out in Chapter 3 shall be a basic principle for the future conservation management and improvement plans. In order to conserve the heritage values of the Property while continuing production at the working steelworks, every change or improvement work in Component parts shall be examined in terms of its potential impact on significance.	Any proposed changes or works at the component parts shall be considered in relation to its potential impacts on significance. Proper management will be conducted according to the Landscape Act for the protection of the component elements of the First Head Office, the Repair Shop, the Former Forge Shop, and the Onga River Pumping Station. In addition to this, the Port and Harbor Act protects the component part to preserve the setting of three facilities in the Yawata Steel Works compound. Overall management and conservation of the component parts of the Yawata Steel Works are conducted based on "Strategic Framework" established by the Cabinet Secretariat through collaboration with interested parties. The Local Conservation Council established under the 'Strategic Framework' will ensure that this policy is a principle driver in its decisions on site management.
5	**Utilization of expert advice and technical supports.** In the complex issues of conservation affecting the component parts, advice shall be sought from specialists having adequate experience in the conservation management of industrial heritage. Appropriately skilled personnel shall undertake the works which may affect elements of the component parts having heritage value.	5.1 Involvement of appropriate heritage expertise Involvement of the personnel having necessary heritage skills is critical for decisions potentially impacting on heritage values. Accordingly, advice shall be sought from specialists, such as architects, historians, civil engineers or archaeologists, depending on the issue involved.
10	**Conservation of the property and its significant elements.** The Property and four elements (the First Head Office, the Repair Shop, the Former Forge Shop, and the Onga	10.1 On planning future changes to the component parts, the heritage values of the elements or spaces involved shall be recognized and protected. In addition, when drafting the plan, appropriate and professional heritage advice shall be sought as outlined in Policy 5, to identify actions that will achieve the

	River Pumping Station) shall be conserved since they are determined to have high values in the Valuation in Chapter 3.	conservation of the heritage values. Appropriate conservation processes might include preservation, resto- ration, reconstruction, adaptation, and maintenance depending on the nature of heritage values and management issues involved. Significant interior spaces include: • the rooms and corridors of the First Head Office; • the main large space in the Former Forge Shop; • the interior space of the Repair Shop; • The pump room of the Onga River Pumping Station. An additional significant space is the view corridor linking the First Head Office and the waterfront. 10.2 The owner responsible for on-site management decisions and local governments having jurisdictions over the Landscape Act and the Port and Harbor Act shall recognize their respective management responsibility. 10.3 Continuous maintenance of the four buildings is a top priority, and the highest priority for conservation measures will be given to components at greatest risk from decay of structural instability. 10.4 The plan of earthquake strengthening works for the First Head Office, being implemented in 2013-14, is attached as an appendix (Chapter 8) to supplement the CMP. As described in Policy 5, the plan is drafted with consultation with specialists, and will be revised regularly based on professional advice provided. The earthquake strengthening works for the main building will finish by FY 2013 and then the details of interior works will be examined. At this moment, the plans of the interior works are not clarified, but will be guided by the principle of minimizing impact on remaining heritage fabric, and planning new work to be compatible with conserving and presenting heritage values of the building. Records (CADs) of the decorations such as plaster and wooden

		frames, etc., inside the building are collected before undertaking the earthquake strengthening works to provide a basis for subsequent restoration. 10.5 "Removal" of any significant structure in the component parts is prohibited. In addition, "major reconstruction, partial removal, etc." including the following actions are limited and require mayor-level permission (following consideration by the Local Conservation Council): • Major reconstruction, remodeling, or change of color shades causing substantial changes in external appearance; • Partial removal of a facility causing substantial changes in external appearance; • Disposal of the central and aisle overhead cranes in the Repair Shop. Details are described in Table 5-3 "Restrictions and criteria for changing existing conditions."
11	**Maintenance planning and improvement works .** The component parts shall be well maintained and all maintenance and repair planning shall respect the heritage significance of the component parts. Maintenance and repair works will be conducted based on maintenance plans that are informed by: • Accurate knowledge of each part of the building or site, its materials, literature and services and their heritage significance; • A careful analysis of actions needed to maintain working activities, and their potential impact on heritage values; • regular inspection/monitoring (see	11.1 Draft and implement a basic maintenance plan based on the information from an ongoing monitoring program. 11.2 Draft and establish an overall life-cycle management plan for the component parts in active working use. Maintenance management plan for the prioritized reforms will be carried out according to Chapter 4.4 For long-term maintenance, follow the results of consultation held every fiscal year. 11.3 When "repairing," "replacing," or "introducing new materials" for the roofs, windows, doors, floors, or external wall bricks, etc., in each element, use design, style, materials and colors similar to the existing element, and if it is difficult to do so, refer to the original specifications or use materials or colors that are compatible with the heritage values of the building (and hence also meet the requirements of the Landscape Act.) Details of the maintenance management for the facilities are

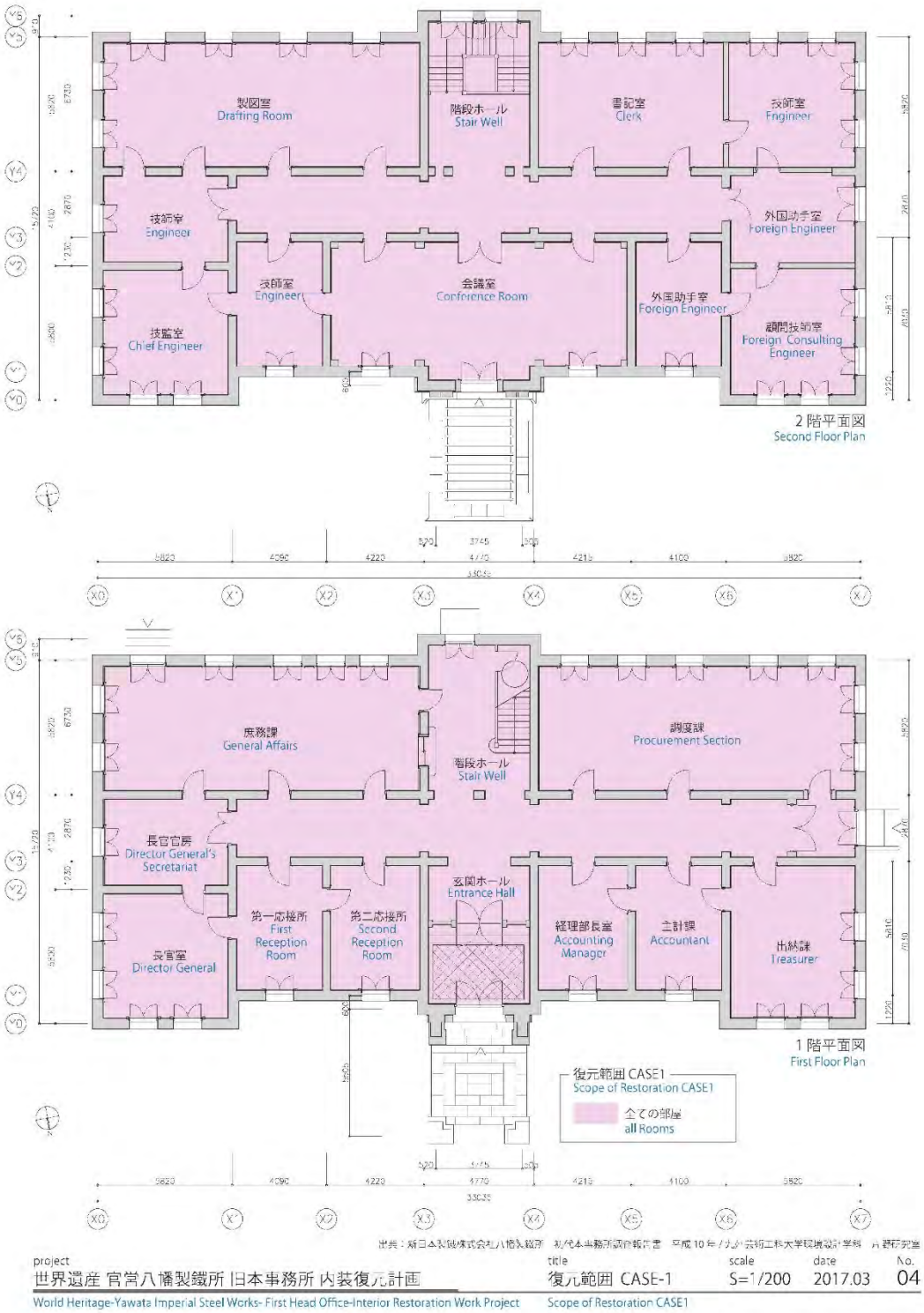
	also Policy 14); and • Timely preventive conservation management and prompt response for repairs when damage occurs.	described in Table 5-2 "General Principles (Guidelines) for Maintenance
12	**Changes to interior spaces of cultural significance** Changes to significant spaces listed in Strategy 10.1 shall conform to the policies described in the conservation management plan and shall not diminish the values of the spaces. The values of these spaces generally rely on elements such as remaining partition and external walls, floors, or ceiling decorations, original room sizes, surviving original use or later uses consistent with the original, and original decorations, fittings and furniture. Where important earlier built elements have been hidden or partially removed, actions to make the elements visible or to partially reconstruct them for interpretation to visitors, should be encouraged.	The changes to the interior in the First Head Office caused by currently conducted earthquake strengthening works may be unavoidable. At the time of writing (2013), the plans for the interior works are being examined to minimize its impact on significant elements of the First Head Office. Where necessary, the design, style, materials and colors consistent with the documented construction and details will be used taking care to make the old and new fabric similar enough not to be distracting, but making sure good records are kept of what is original and what is new. If original elements have been removed (such as the stairway) refer to the original specifications and use design, materials or colors that replicate the original or are compatible with the significance of the building. The Repair Shop and the Onga River Pumping Station are currently in operation, and no changes to the interior are planned except for the purpose of operation. The changes of working purpose are, if any, conducted with consideration to the conservation of heritage value. Maintenance of the existing significant internal details will be the main objective. The Former Forge Shop is currently used for historical material storage, and no major changes to the interior are planned at the moment. In the case of the Repair Shop, Former Forge Shop and the Onga River Pumping Station, the window frame systems have deteriorated and require replacement or stabilization in the near future. It is necessary to consider the options of reconstruction of the original window design and materials, or the adoption of a visually similar design in new materials. The changes to the interior of each element shall be conducted

		based on Table 5-2 "General Principles (Guidelines) for Maintenance Management."
14	**Monitoring of the condition of the property** The management body shall establish and implement a program to periodically monitor (follow-up) the condition of the buildings, elements, facilities, and equipment of heritage value. In addition, the management body determines the priority of remedial actions in response to the nature and consequences of the problem revealed.	14.1 Responsible party of monitoring Since multiple agencies relating to the management of the component parts monitor the component parts, Kitakyushu City and Nakama City, under the coordination by the Counsellor at the Regional Development Agency, Cabinet Secretariat, implement monitoring of the three elements in Yawata Steel Works compound and the Onga River Pumping Station and take records, respectively, to collect information and implement appropriate conservation. 14.2 Monitoring program As described in: Table 6-1: "Elements that might negatively impact on the OUV & Monitoring Indicators" and Table 6-2: "Monitoring Indicators and Observation Methods." 14.3 Monitoring program shall be coordinated with daily maintenance of the component parts.
15	**Public access** The allowable extent of visitors' access to the property shall be determined.	15.1 The component parts are, in part, a working industrial site, and therefore public access has to be controlled or limited accordingly. Public access to the currently operating Repair Shop and Onga River Pumping Station are to be restricted. Public access to the First Head Office will be examined deliberately. As for Former Forge Shop, there is no plan to open its interior to the public. In each case, the effect of public access shall be monitored with a view to limiting it should the conservation of the buildings' heritage value be placed at risk by visitor impact. Restrictions on access might change over time, so the access provisions should be revised at least every 6 years.
17	**Records of change and maintenance** The management body shall keep records of any substantial intervention or change to the	17.1 Records of actions taken to conserve or manage the component parts (including those to implement these policies) and maintenance plans shall be continuously maintained by the entity undertaking the work. These records should be organized and indexed so that they can be readily accessed by the

	component parts, including records about maintenance.	manager at any time. Items to be recorded include maintenance programs, refurbishment projects, conservation actions (preservation, restoration, reconstruction, and adaptation), changes of use, interpretation/introduction works such as exhibition, etc., and any other actions that might affect the heritage element of the component parts. Record the plaster walls and decorations removed by the earthquake strengthening work for the First Head Office, substantial changes and intervention to the component parts and other actions relating to maintenance management.

Appendix 001

Interior Restoration Plan for First Head Office Building.



Appendix 001



現状
Existing condition



2階会議室復元イメージ
Restoration Image of the Meeting Room on the 2nd floor

project	title	scale	date	No.
世界遺産 官営八幡製鐵所 旧本事務所 内装復元計画 World Heritage-Yawata Imperial Steel Works- First Head Office-Interior Restoration Work Project	復元イメージ1 Restoration Image1	-	2017.03	01

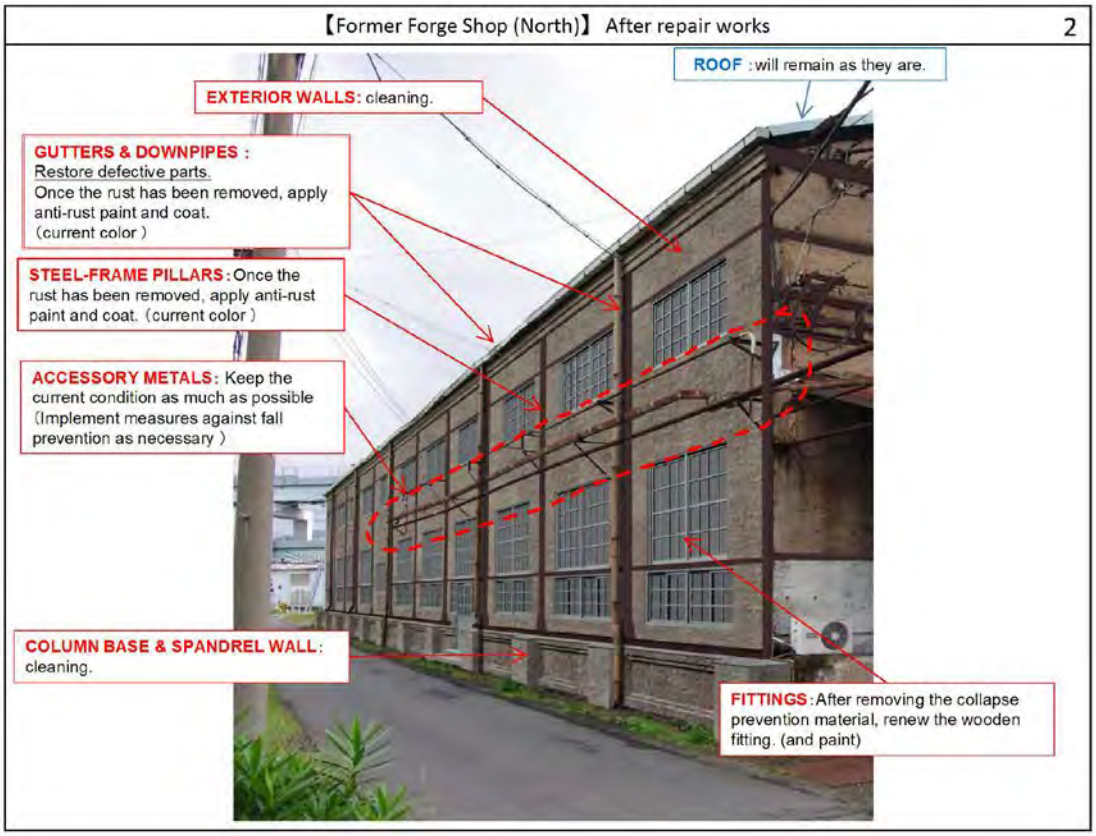
Appendix 002

Exterior Restoration Plan for Former Forge Shop.

【Former Forge Shop (North)】Before repair works 1



【Former Forge Shop (North)】 After repair works 2

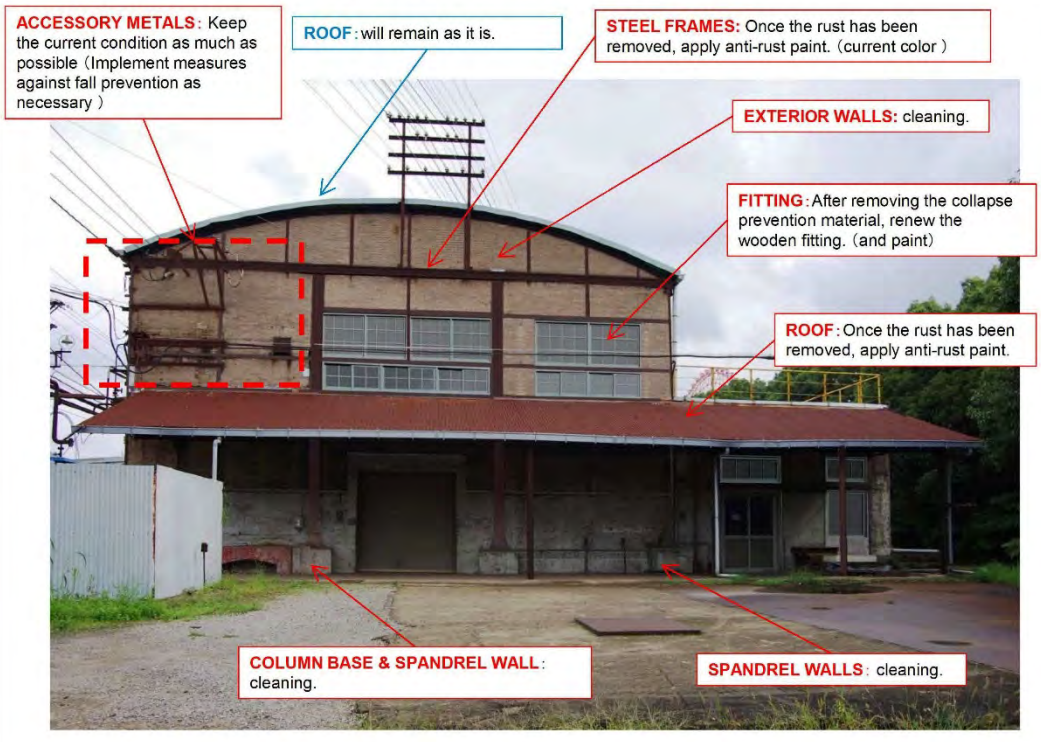


Appendix 002

【Former Forge Shop (West)】Before repair works 3



【Former Forge Shop (West)】 After repair works 4

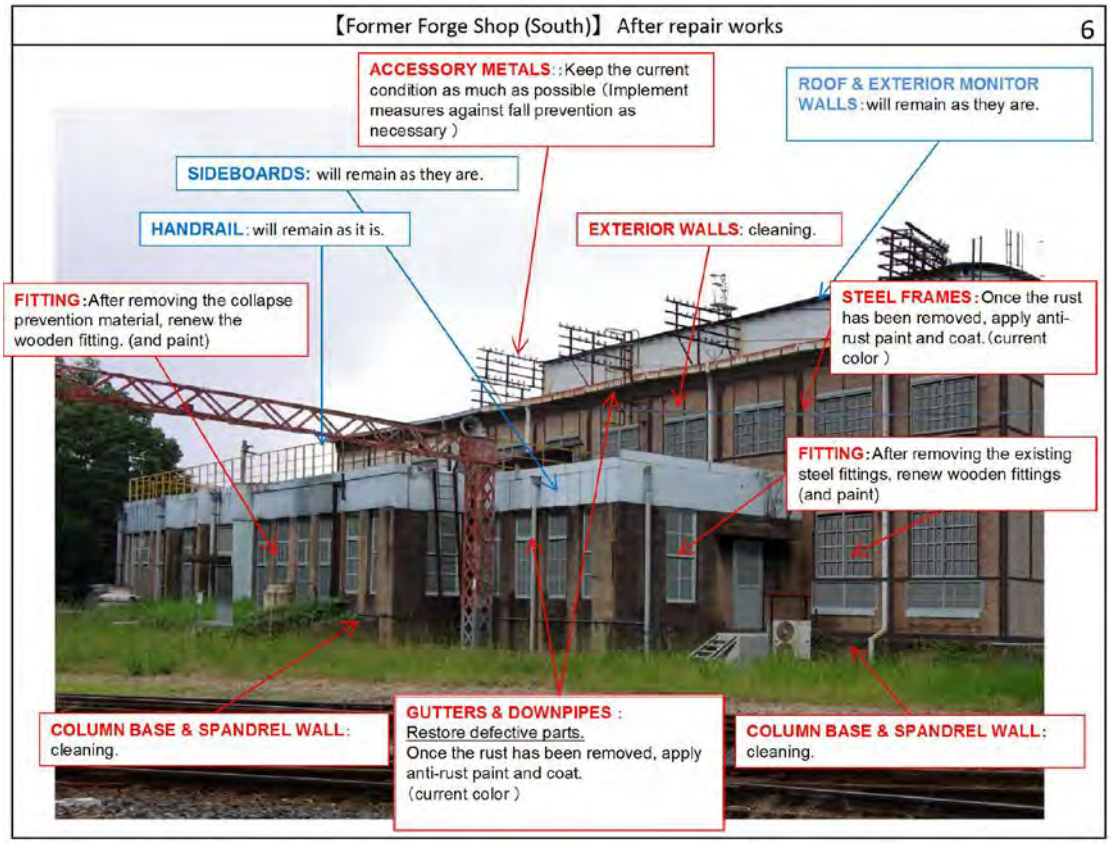


Appendix 002

【Former Forge Shop (South)】Before repair works 5



【Former Forge Shop (South)】 After repair works 6



Appendix 002

【Former Forge Shop (East)】 Before repair works 7



【Former Forge Shop (East)】 *will remain as it is. 8



* East side exterior will remain as it is until restoration in conjunction with seismic reinforcement.

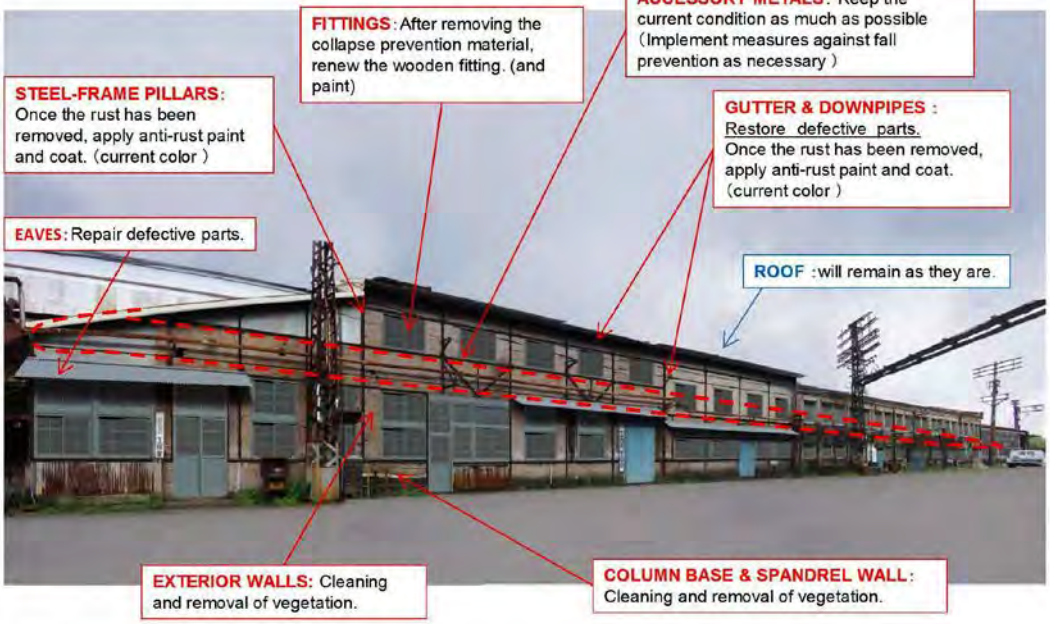
Appendix 003

Exterior Restoration Plan for Repair Shop

【Repair Shop (North)】Before repair works 1



【Repair Shop (North)】 After repair works 2

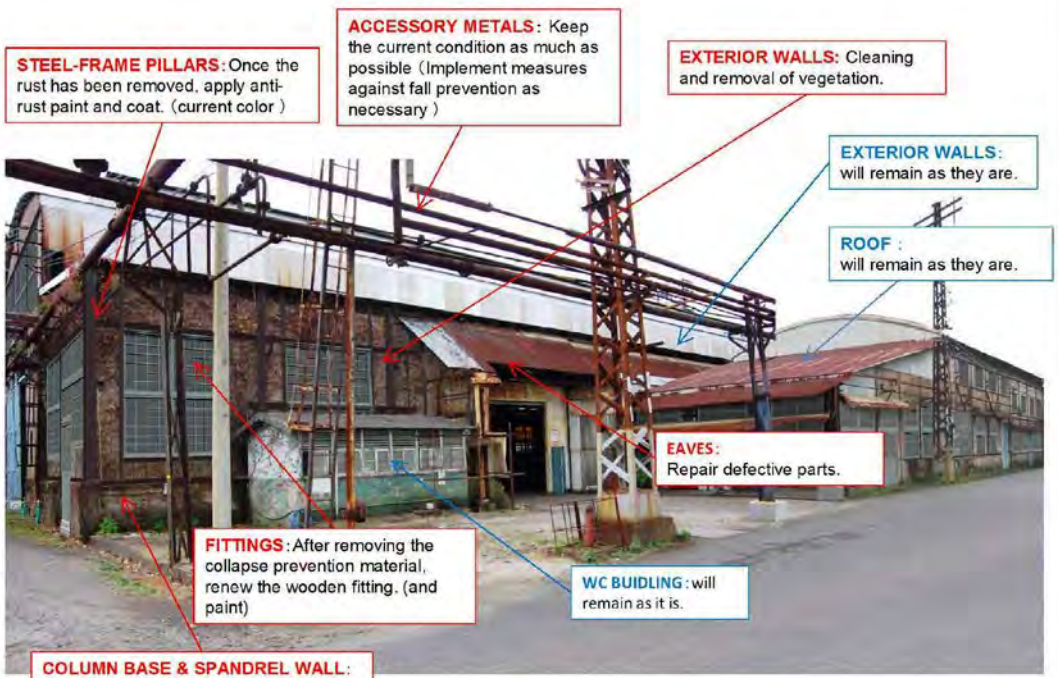


Appendix 003

【Repair Shop (the northeast side corner)】Before repair works 3



【Repair Shop (the northeast side corner)】After repair works 4

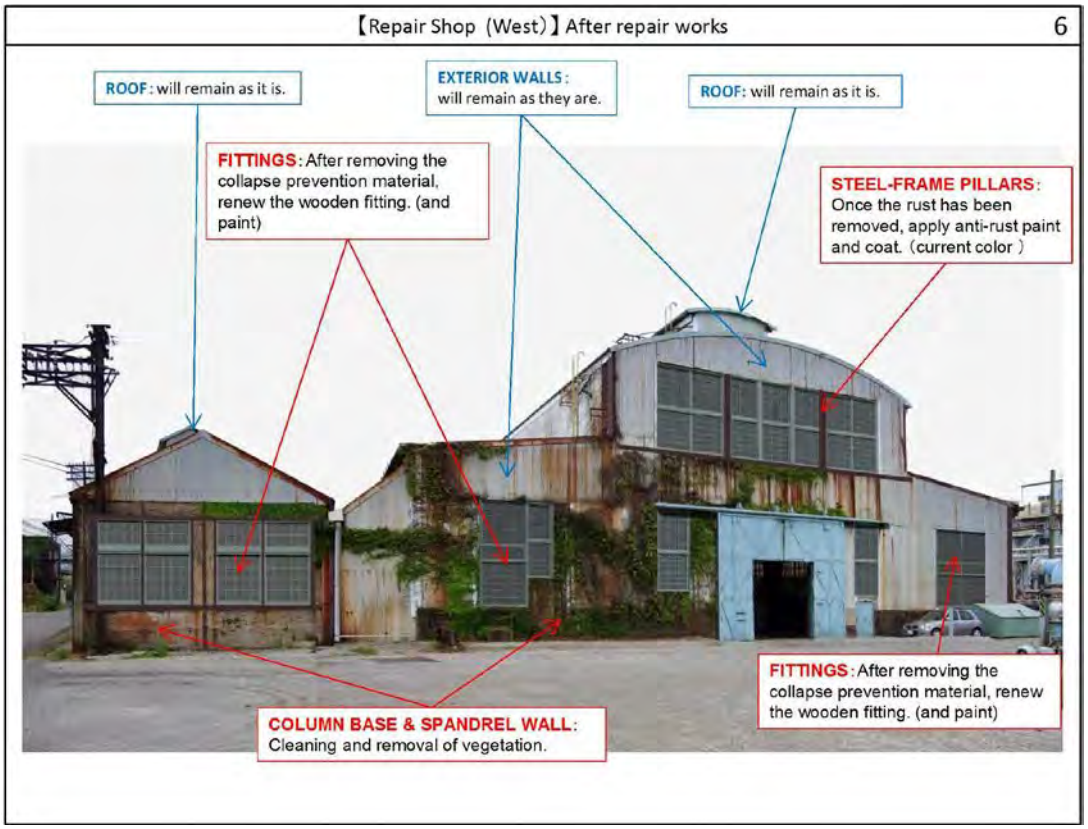


Appendix 003

【Repair Shop (West)】Before repair works 5



【Repair Shop (West)】After repair works 6

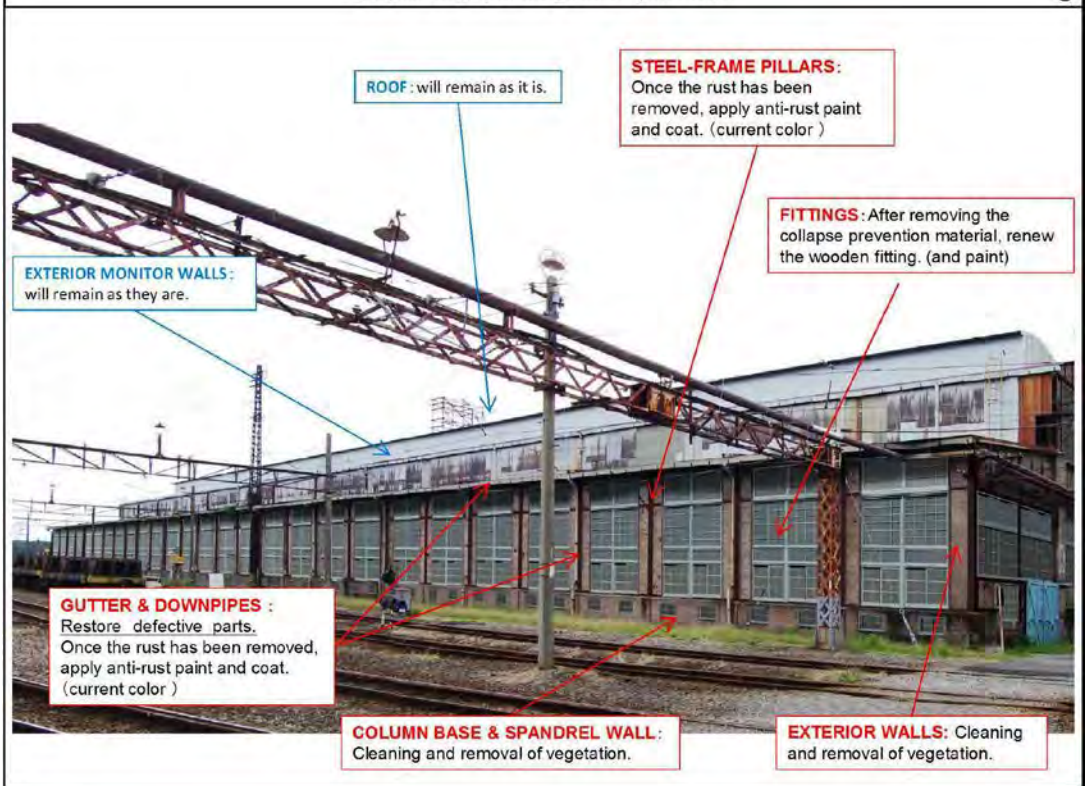


Appendix 003

【Repair Shop (South)】Before repair works 7



【Repair Shop (South)】After repair works 8

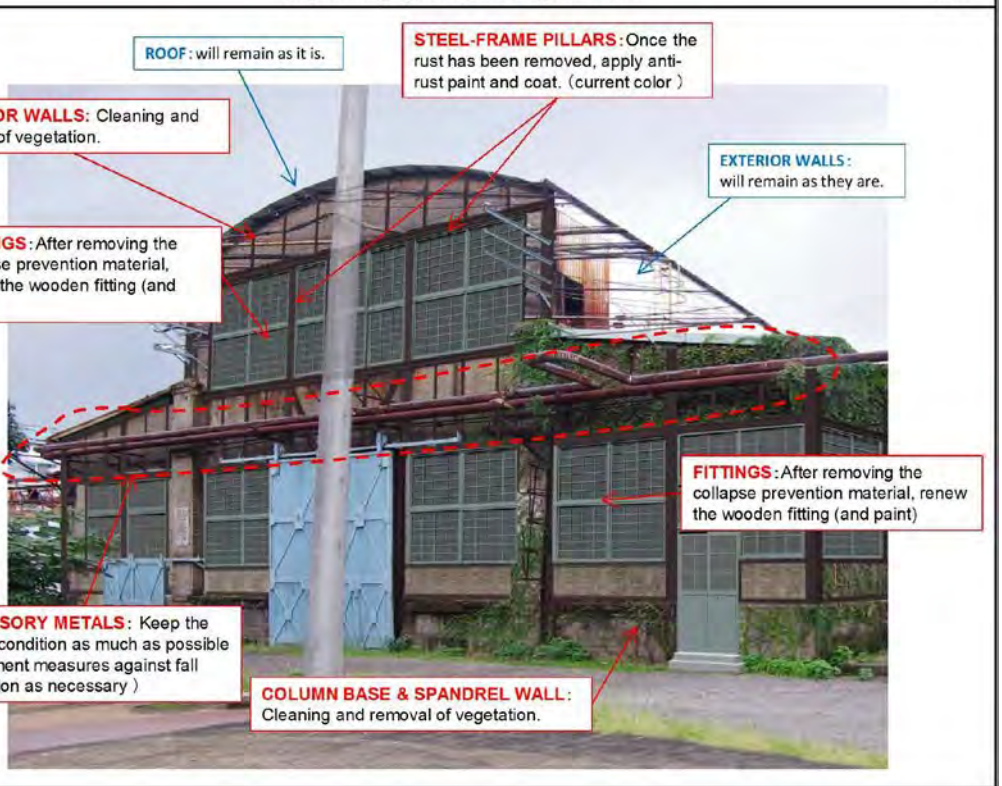


Appendix 003

【Repair Shop (East)】Before repair works 9



【Repair Shop (East)】After repair works 10



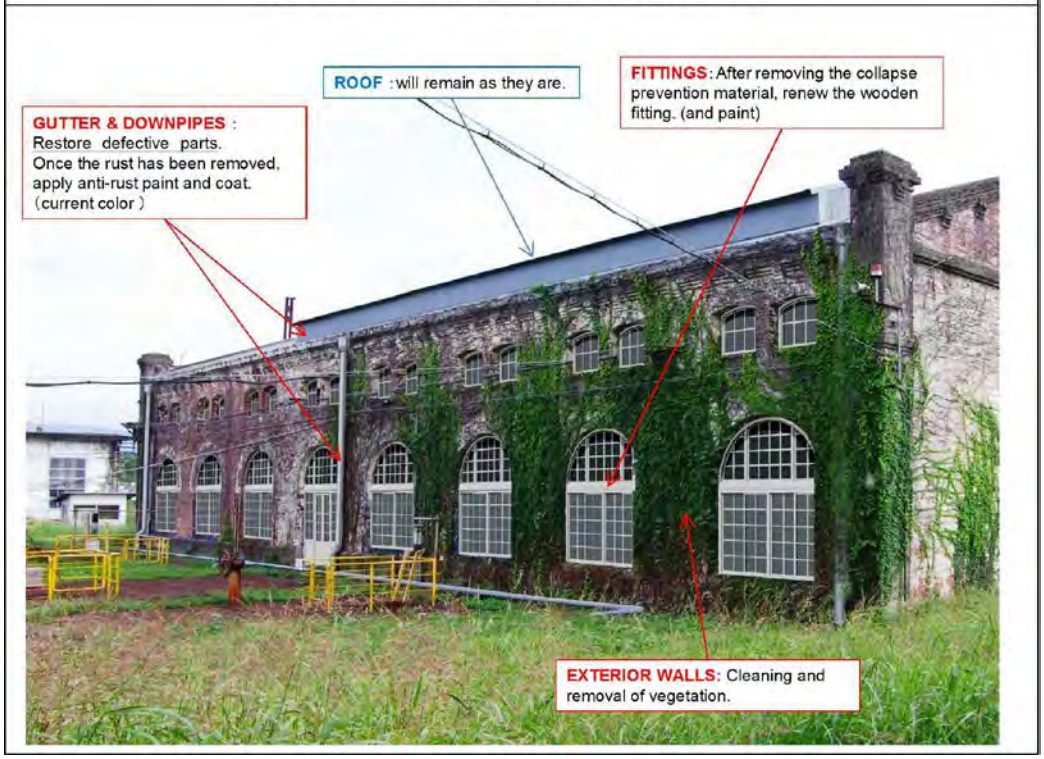
Appendix 004

Exterior Restoration Plan for Onga River Pumping Station.

【Onga River Pumping Station (North)】Before repair works 1



【Onga River Pumping Station (North)】After repair works 2

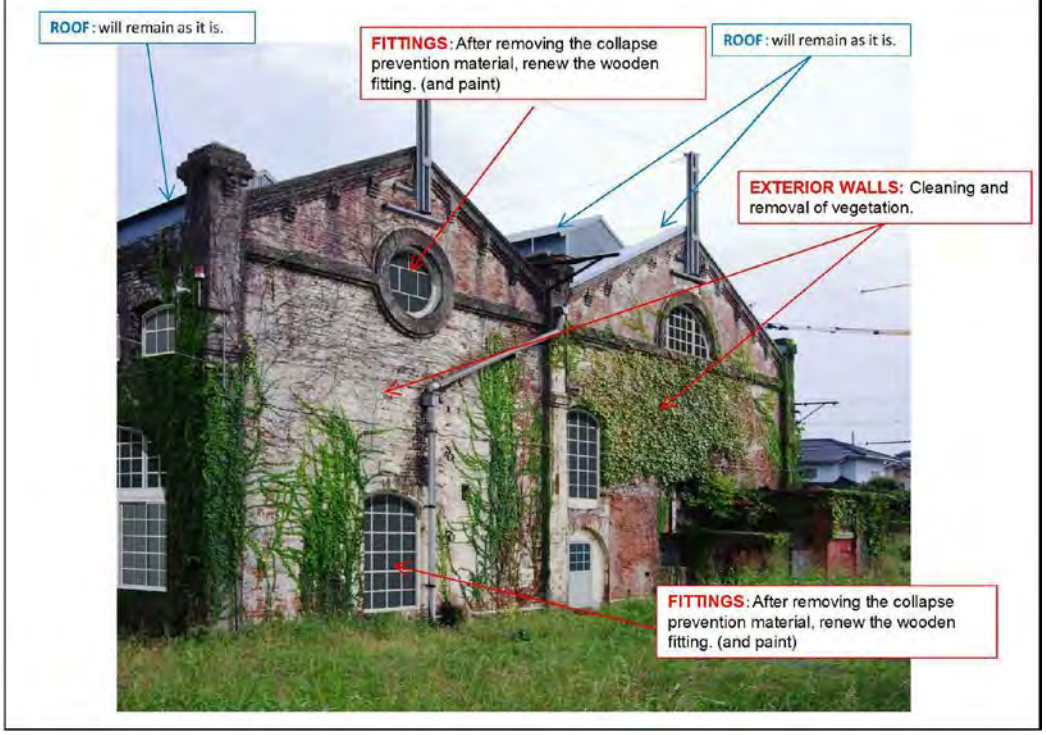


Appendix 004

【Onga River Pumping Station (West)】Before repair works 3



【Onga River Pumping Station (West)】After repair works 4

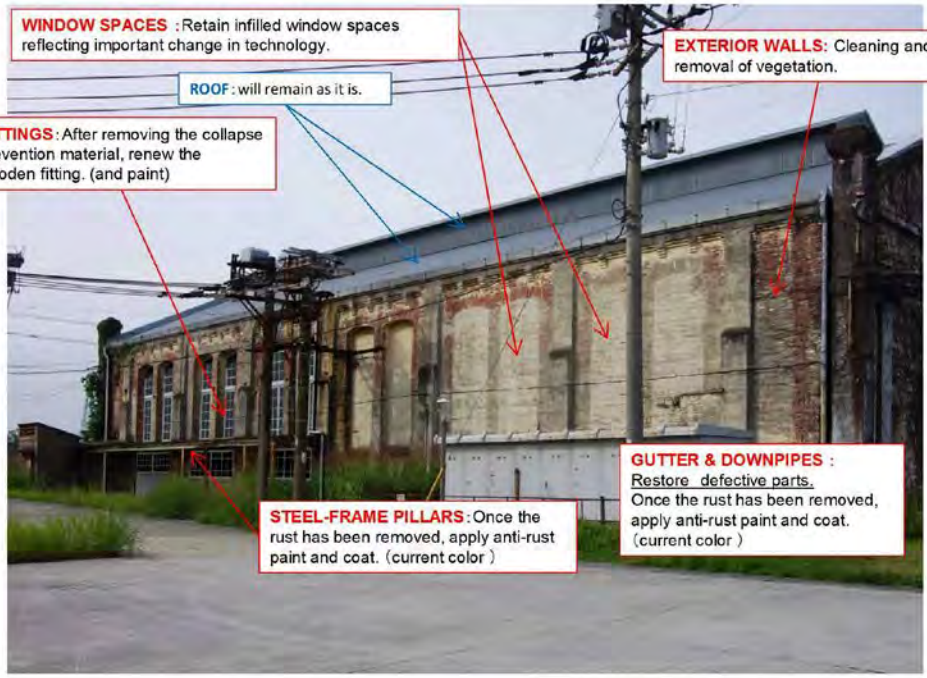


Appendix 004

【Onga River Pumping Station (South)】Before repair works 5



【Onga River Pumping Station (South)】After repair works 6



Appendix 004

【Onga River Pumping Station (East)】Before repair works 7



【Onga River Pumping Station (East)】After repair works 8

