

### Assessment of Impact on World Heritage from Building a Concrete Manufacturing Plant in the Buffer Zone of the Mietsu Naval Dock

#### Summary

This document is a World Heritage Impact Assessment Report created by Saga City, applicable to the building of a new concrete manufacturing plant in the buffer zone of the Mietsu Naval Dock (component part 5-1), a component part of the World Heritage Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.

The elements (attributes) representing the Outstanding Universal Value of the Mietsu Naval Dock are the underground archeological remains and the natural terrain in which they are buried. The construction work outside the scope of the component part has no direct impact, and the impact on the landscape as seen from inside the site is kept to a minimum. Discussions between the private business owner and the component part manager (Saga City) will continue to be carried out.

#### 1. Introduction

- (1) The subject of this heritage impact assessment is the component part Mietsu Naval Dock (5-1) of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining inscribed on the World Heritage List in July 2015 (Figure 1).
- (2) In carrying out the impact assessment, reference was made to the items stipulated in the world heritage conservation and management plan (CMP) and to the views of experts in and outside Japan.
- (3) Preparation of the heritage impact assessment is the responsibility of Saga City.

#### 2. Overview of the Development

- (1) The private business owner decided to move part of the concrete manufacturing plant currently located to the southern part of the buffer zone to another location in the buffer zone (Figure 2). For the site of the new plant, the private business owner is using a plot of land of which it already had ownership. The plot of land, now used as a materials storage yard, is being expanded through the purchase of an adjacent piece of agricultural land so that a new plant of similar scope to the old one can be built.
  - a) Development location: Onoshima, Okawa City, Fukuoka Prefecture
  - b) Site area: Approx. 4,900 square meters  
[Area of materials storage yard already owned by the business owner] Approx. 4,100 sq.m  
[Area of adjacent agricultural land purchased for expanding the site] Approx. 800 sq.m
  - c) Facility scale:
    - [Plant] One plant, 24.25m high, area 5.4m×7.4m
    - [Cement silos] Two silos, 21.57m high, 3.35 m in diameter  
One silo, 12.57m high, 3.35m in diameter

## **Appendix 7**

- d) Process: Work began in late March 2018. The work is to be completed by the end of January 2019 with operation scheduled to start in February 2019.
- (2) The work is being performed outside the scope of the component part. Both the current plant site and new plant site are located in Okawa City in Fukuoka Prefecture.
- (3) As the project involves a change in zoning of agricultural land (approx. 800 sq.m) to a development site, a partial change is made to the protection status as agricultural land in the buffer zone belonging to Okawa City (Figure 3).

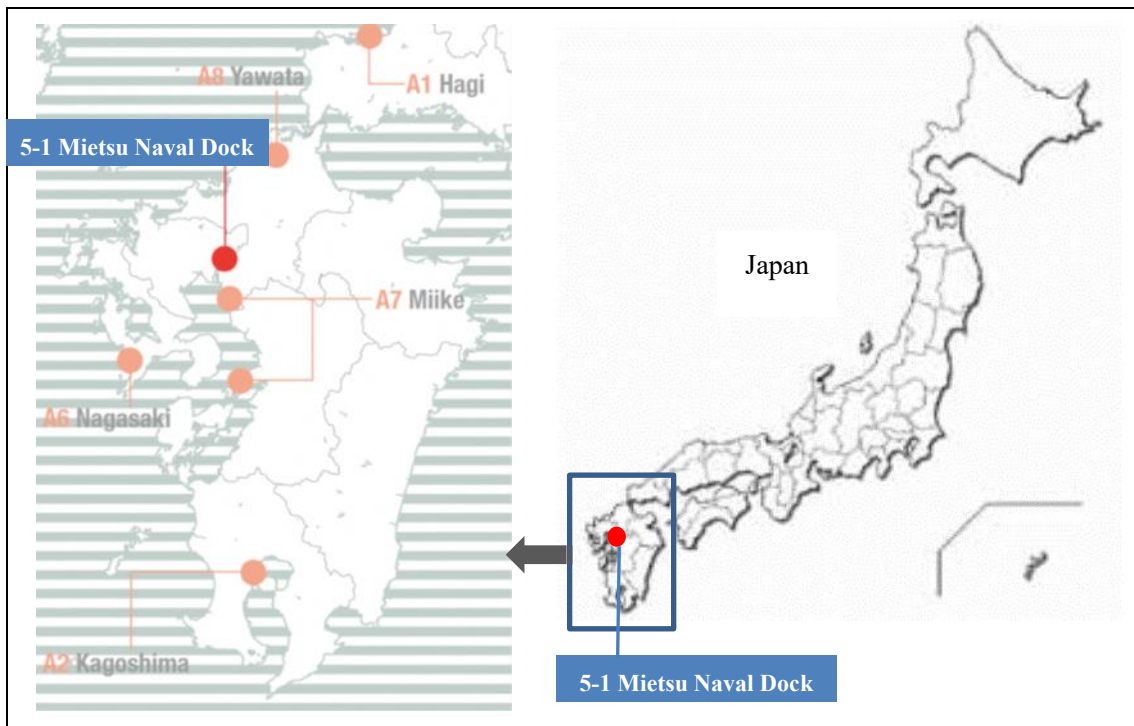


Figure 1. Position of the Saga Area

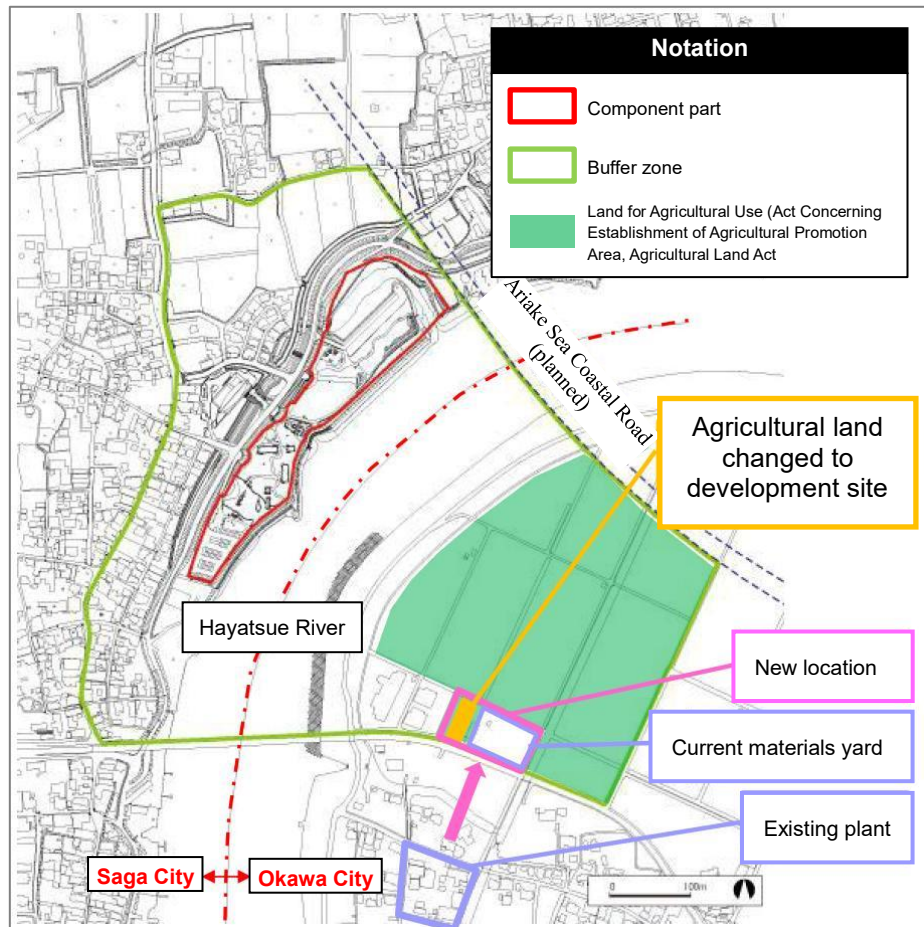


Figure 2. Scope of Component Part, scope of Buffer Zone, and Position of Development Project

# Appendix 7

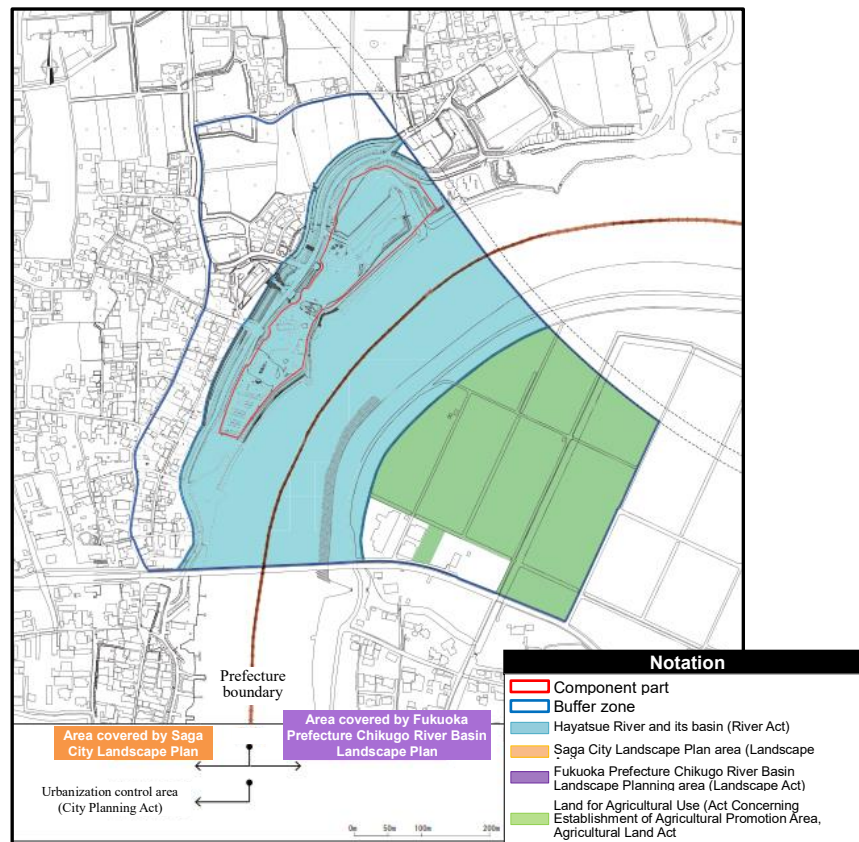
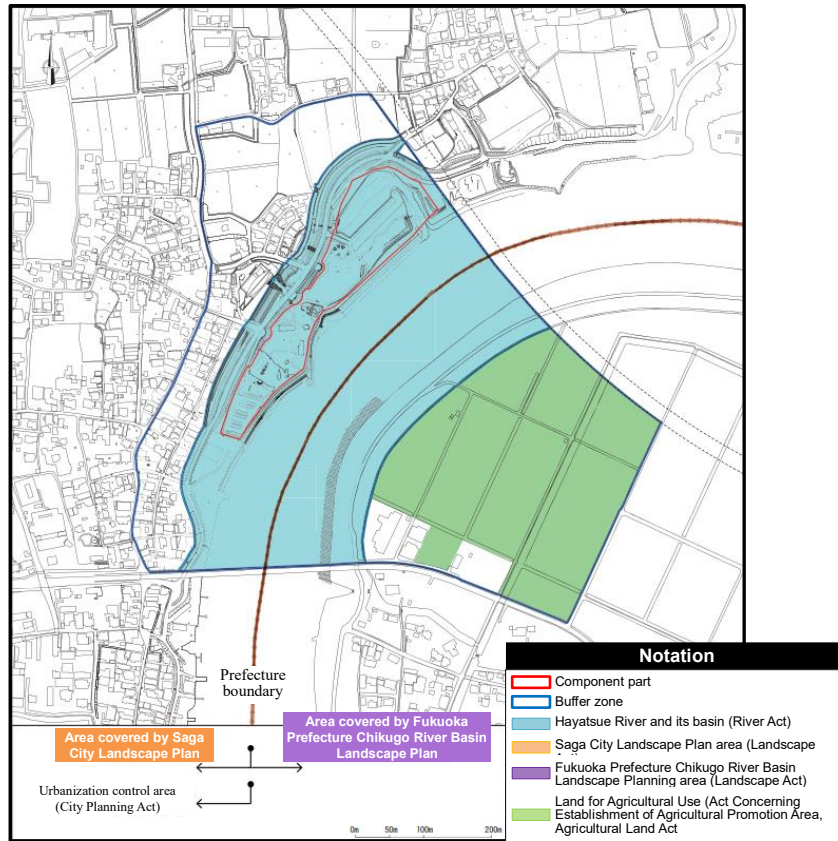


Figure 3. Change in Protection Status of Buffer Zone (upper: before change, lower: after change)

### 3. Heritage Value

The Outstanding Universal Value of the Sites of Japan's Meiji Industrial Revolution: Iron and Steel Shipbuilding and Coal Mining is as follows. (excerpted from the Statement of Outstanding Universal Value in the World Heritage Committee Decision)

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.

(2) As a shipbuilding site in the first phase, the Mietsu Naval Dock consists of remains from the initial phase of industrialization, when repair and building of ships were being carried out through trial and error. These remains include Japan's oldest dry dock, in operation from 1858 to 1871, and where used for training and repair of Western-style ships. The Mietsu Naval Dock was operated based on knowledge and technologies obtained by the Nagasaki Naval Training Institute (defunct) established by the Tokugawa shogunate in 1855 in response to the opening up of Japan's ports by the arrival of Commodore Matthew Perry.

(3) The elements (attributes) representing the Outstanding Universal Value of the Mietsu Naval



## Appendix 7

Dock are the underground archeological remains of the dry dock (shipbuilding/repair docks and metal works section), training ground section, and small docks section, along with the natural terrain in which they are buried. The daily maintenance of these is defined as follows in Conservation Management Plan of Mietsu Naval Dock.

[Management by Saga City and Saga City Board of Education]

Elements of the component part that will be conserved and managed date to the period when Mietsu Naval Facility was in operation. These elements 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.

### ●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) Restrictions in the buffer zones are defined as follows. (Conservation and 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 Facility was in operation. In order to protect the surrounding area as the appropriate setting as seen from the component part, restrictions 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. Assessing Overall Impact of the Development**

- (1) The construction work for this development project is taking place outside the scope of the component part and does not have any direct adverse impact on the integrity or authenticity of the elements (attributes) representing the Outstanding Universal Value of the Mietsu Naval Dock, namely, the underground archeological remains and the natural terrain.
- (2) The views from inside the component part are not elements (attributes) representing the Outstanding Universal Value but are subject to the impact assessment. The reason is that preservation of the landscape in the buffer zone is a matter designated for consideration in the Conservation and Management Plan, and this construction work takes place in the buffer zone.
- (3) Saga City received information about this development project from Okawa City in April 2017, and since that time has continued, along with Okawa City, to carry on discussions with the private business owner and related parties. The development project itself is being carried out on a

## Appendix 7

materials storage yard owned by the private business owner since before the component part was inscribed on the World Heritage List and on an adjoining piece of agricultural land (of the minimum necessary area), and is taking place in accordance with the necessary procedures based on relevant laws. Accordingly, while it would have been difficult to stop the project itself, the cooperation of the business owner was obtained in taking measures in execution of the project to minimize to the extent possible any impact on the landscape. These include using beige colors on structures of a certain height to blend in with the surroundings, and limiting sign displays such as the company name on structures to the company logo only and making sure they are as invisible as possible from the Mietsu Naval Dock. Note that these measures were devised in conformity with the landscape formation standards given in the Fukuoka Prefecture Chikugo River Basin Landscape Plan.

- (4) Saga City has continued to carry out monitoring of this development pursuant to the Landscape Act since the business owner began the construction work in late March 2018.
- (5) Through the process described above, any impact of the change on the views from the Saga City side where the site is located toward Okawa City has been kept to a minimum (Figures 4-1 to 4-3).



Figure 4-1. View from Embankment (West Side of Site) (photographed in May 2017)





Figure 4-2. View from Embankment (West Side of Site) (photographed in January 2019)



Figure 4-3. View from Center of Site (Training Ground Section) (photographed in January 2019)

## Appendix 7

### 5. Management Process

- (1) The impact on the component part and on the overall landscape from the concrete manufacturing plant construction, as described above, underwent detailed and careful discussion and study by the private business owner, the component part manager (Saga City), and relevant agencies, etc. The component part manager (Saga City) has also confirmed through discussion with the private business owner that the latter has no plans to expand the plant site.
- (2) Local conservation councils have been established for each area in the management structure of the World Heritage Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining. For this area as well, the Saga Conservation Council has been formed, which exchanges information and views and makes decisions regarding such matters as conservation and management of the component part.
- (3) In the Saga Conservation Council, with the participation also of Okawa City, all due sharing of information and discussions will continue to be carried out with the component part manager regarding preservation of the buffer zone. As necessary, the advice of the national government (Cabinet Secretariat) Industrial Heritage Expert Committee (including Working Properties) will also be sought.
- (4) Assessment of this development in the Saga Conservation Council took place as follows.

In the construction of the concrete manufacturing plant in the buffer zone, measures were taken with the cooperation of the business owner to minimize any adverse impact on the landscape, such as changing the colors of structures of a certain height.

Since the buffer zone overlaps both Saga City (the component part manager) and Okawa City territory, there is all the more need for close information sharing with the concerned parties, including Saga and Fukuoka Prefectures, in endeavoring to conserve the buffer zone.

- (5) The assessment by the World Heritage Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining National Committee of Conservation and Management is similar.
- (6) Note that this heritage impact assessment was drawn up after discussions in the meeting of the Saga Conservation Council held January 21, 2019.

## Governance

### - Governance System and Expertise

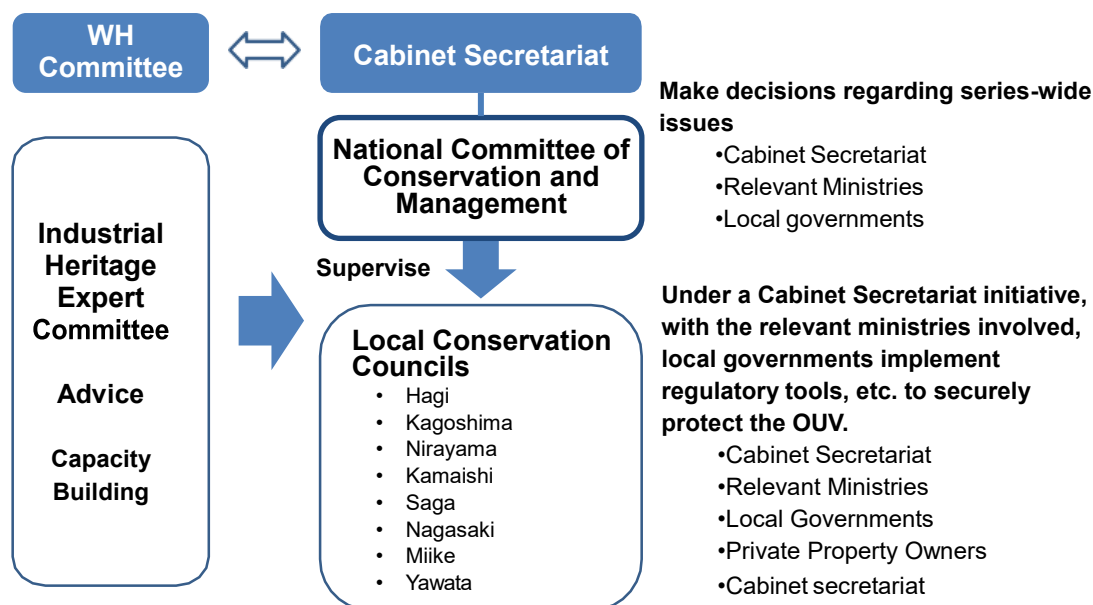


Figure 5: Governance System Defined in the General Principles and Strategic Framework for Conservation and Management

- (7) This development project was an occasion for reconfirming the importance of becoming aware of the development plans at an early date and devoting sufficient time to discussions aimed at minimizing the impact on both the developer and the component part manager. This case involved closely sharing information among the governments where the component part and buffer zone are located, namely, Saga City, Okawa City, Saga Prefecture, and Fukuoka Prefecture. It was therefore decided to set up a new Four-Party Cooperative consisting of Saga City as the component part manager, Okawa City, Saga Prefecture, and Fukuoka Prefecture, to strengthen the organizational structure for ongoing conservation of the buffer zone. The buffer zone overlaps Saga City and Okawa City, which have different laws and ordinances relating to conservation of the buffer zone; moreover, there are multiple departments and organizations in each city. For these and other reasons, the Four-Party Cooperative was established to strengthen cooperation across organizations in each city and enhance information sharing between the cities. These improvements made possible early awareness of the development project and sufficient coordination among the parties concerned.
- (8) Saga City and Okawa City have decided to cooperate in renewing their request to landowners in the buffer zone to work with them toward preservation of the landscape.
- (9) Since the construction work began in late March 2018, Saga City (the site manager) has been monitoring the affected areas as to whether the work has been carried out in line with the matters discussed.

## **Appendix 7**

### **6. Conclusions**

- (1) The construction of a concrete manufacturing plant does not have an adverse impact on the OUV, integrity, or authenticity of the World Heritage Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.
- (2) As for the views from the Mietsu Naval Dock, the construction work is being carried out in a manner that minimizes any impact, based on discussions among the business owner, Okawa City, and the site manager (Saga City); and an organizational structure has been established to continue such consultation and information sharing.
- (3) In such ways, the risk to the world heritage from this development project is being kept to a minimum.