

**Component Part No. 2-1 of the “Sites of Japan’s Meiji Industrial Revolution”
Conservation, Restoration, Presentation and Utilization Plan
for the Shuseikan (Area 2 Kagoshima) (Abstract)**

Kagoshima City drew up a Conservation, Restoration, Presentation and Utilization Plan for the Shuseikan (hereinafter referred to as “Plan”) in FY 2016 and 2017, which became a source of “Conservation Work Programme” pursuant to Recommendation b) in Decision: 39 COM 8B. 14 as adopted by the World Heritage Committee at its 39th session in 2015. The Plan comprises detailed measures for the conservation, restoration 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”). This document provides an abstract of the Plan.

1. Vision

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.

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.

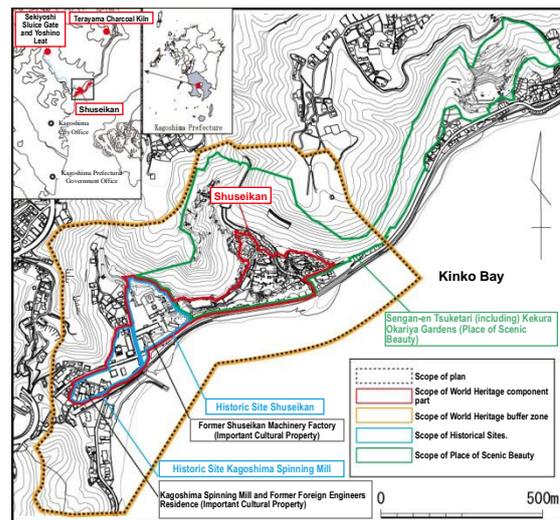


Figure 1: Scope of Plan

(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 owner¹ 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

¹ In this Abstract, the owner of the component part refers to Kagoshima City and SHIMADZU LIMITED.

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 via guidance facilities, etc., 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, focusing on the period from the late Edo period to early Meiji Era when the Shuseikan Project was underway, but also including the prior period when Sengan-en was built as a garden attached to the residence of Satsuma Clan feudal lord Shimadzu, as well as from the end of the Meiji Era onward when the Shuseikan Project was over.

(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 locations and scales 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.

(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 actualize the Vision:

(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 and explaining industrial systems at the component part

The owner will install exhibits at the new guidance facility scheduled to be opened at Shuseikan, deploy guides to the site, and 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 division of roles between the new guidance facility and existing facilities for providing information and explanations will be clarified, with the new facility to present an overview of the Sites of Japan's Meiji Industrial Revolution and the Shuseikan Project as a whole. 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 Plan.

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 Plan. 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, restoration, presentation and public utilization projects.

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 state 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.

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.

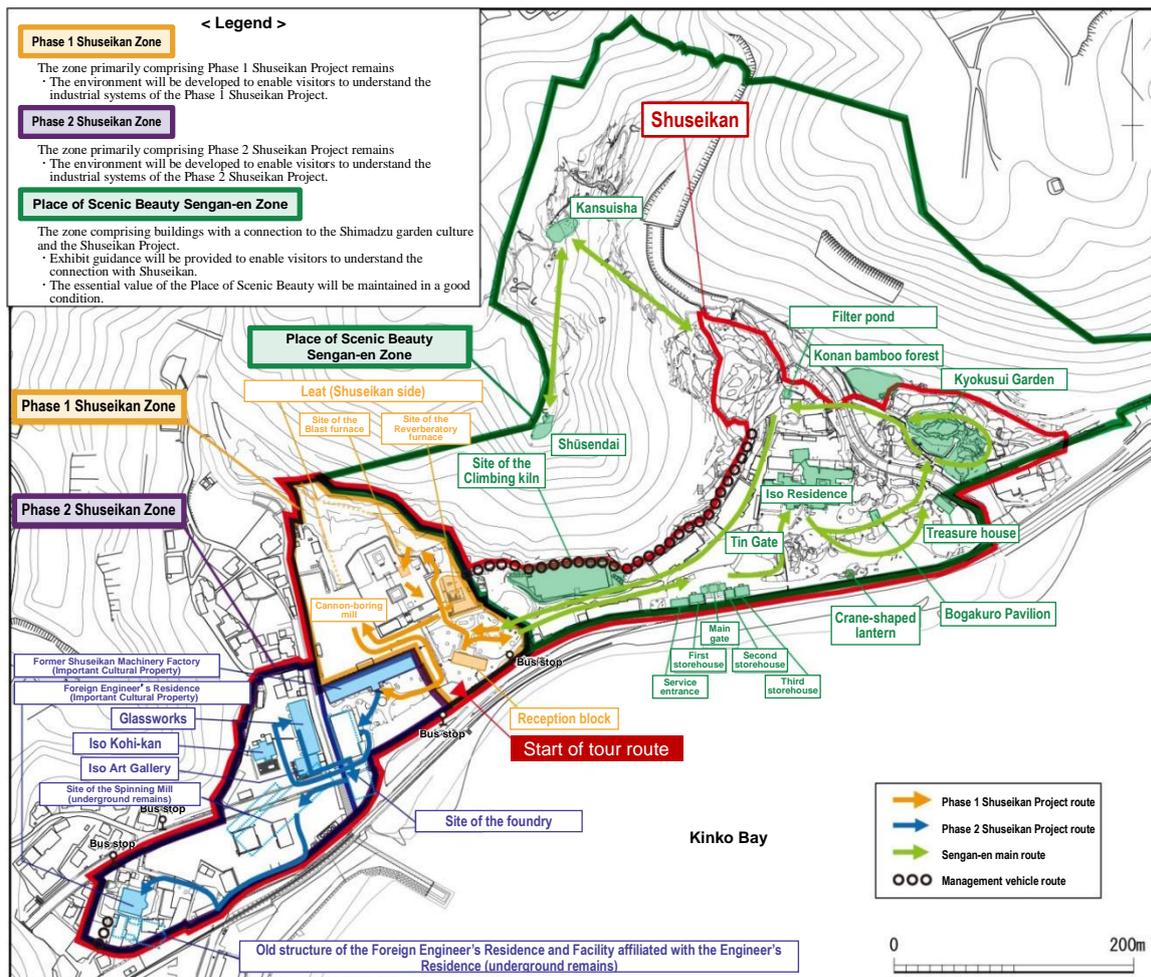


Figure 3: Zoning of constituent elements and surrounding area

(e) Administrative and utility facilities

The owner will arrange panel exhibitions and guides for the Sengan-en reception block so that visitors can gain an immediate overview of the Sites of Japan's Meiji Industrial Revolution and the positioning of Shuseikan Project in that, and also lend visitors tablets, etc., to enrich guidance functions. 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.

(f) Public utilization facilities

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 state 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 Centre 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: Conceptual 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) Enhancement of information functions in Sengan-en reception block							
		(g) Establishment of guidance facility							
		(h) Display information on tour routes							
		(i) Installation of barrier-free toilets in Sengan-en carpark							
		(j) Improve leat (Shuseikan side) and open to public							
		(k) 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) Enhancement of exhibit explanations at Shuseikan Machinery Factory							
		(h) Enhancement of exhibit explanations at Shoko Shuseikan annex							
		(i) Combined public utilization of glassworks and Iso Art Gallery							
		(j) Installation of barrier-free toilets in Iso Art Gallery							
		(k) Updating of guidance boards based on the results of excavation survey							
		(l) Installation of planar markers on site of Spinning Mill							
		(m) Enhancement of exhibit explanations at Foreign Engineer's Residence							
		(n) Improvement of settings of Foreign Engineer's Residence for public utilization with the land owned by city							
		(o) Establishment of management and toilet facilities to merge the administration block and information station, etc., into one place							
(p) Installation of barrier-free toilets in the Foreign Engineer's Residence									
(q) 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) Enhancement of exhibit explanations enabling visitors to understand the connection with the Shuseikan Project							
		(h) Continued use of the Iso Residence							
		(i) Opening of the storehouses to the public							
D. Buffer Zone		(j) Stabilization of slopes							
		(k) Felling of mōsō bamboo							
		(l) Felling of dead trees, planting of replacements							
		(m) Legal protection sensitive to the natural terrain and landscape							

Table 1: Project implementation schedule

5. Basic Plan

The master plan showing those projects to be implemented at Shuseikan is as in Figure 5 below.

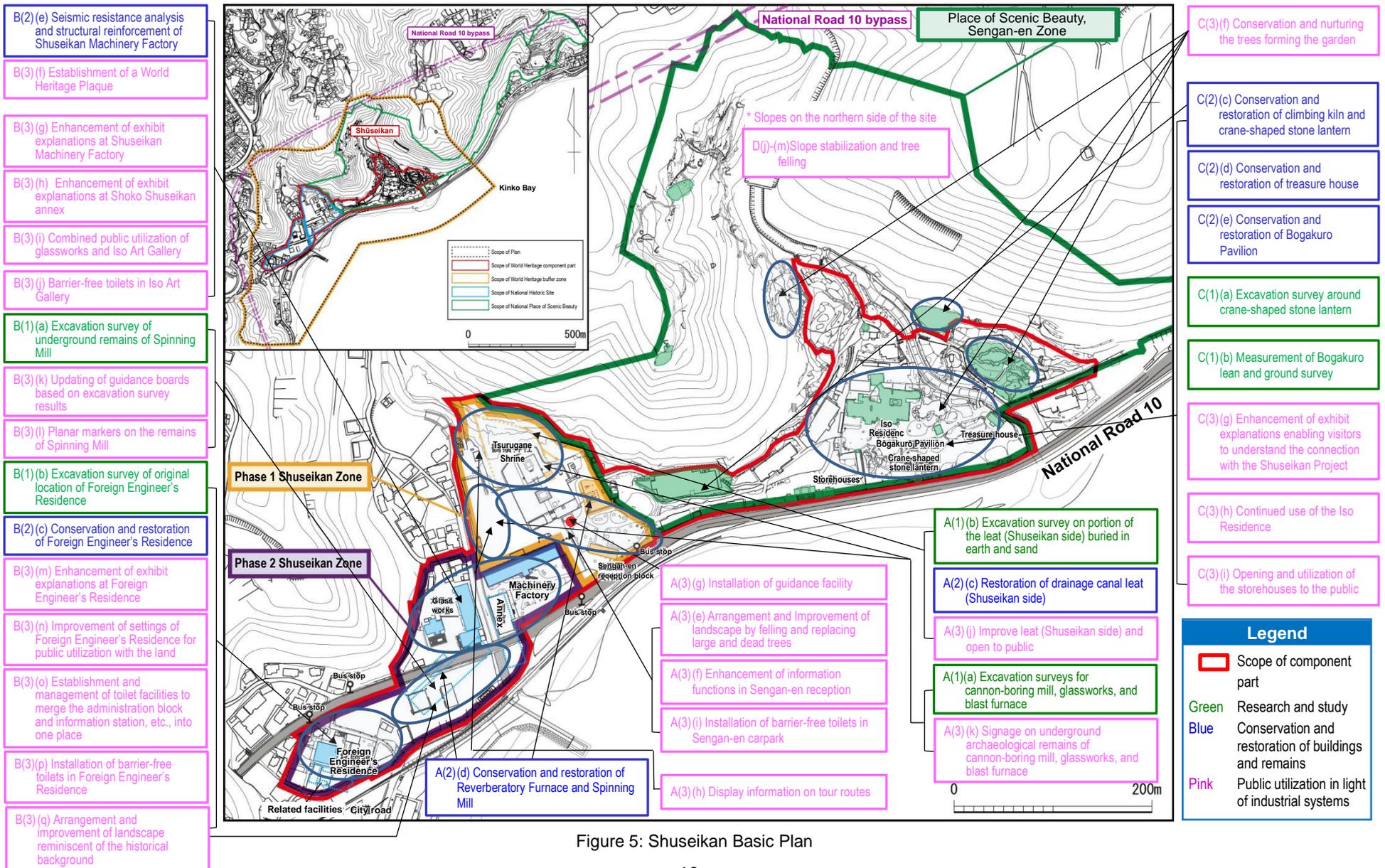


Figure 5: Shuseikan Basic Plan