

# Proposal on the Properties Nominated for the World Heritage Tentative List

Name of the Properties

The Tomioka Silk Mill and Silk Industrial Heritage

--- The Starting Point of the Japanese Industrial Revolution ---

November 29, 2006

Gunma Prefecture

Numata City

Fujioka City

Tomioka City

Annaka City

Shimonita Town

Kanra Town

Nakanojo Town

Kuni Village

## (1) Proposal Concept

### Name and Outline of the Property

“The Tomioka Silk Mill and Silk Industrial Heritage Sites --- The Starting Point of the Japanese Industrial Revolution ---”

The concept of the World Heritage is the protection and preservation of the irreplaceable cultural and natural heritage of humanity for all the people of the world. From this perspective, the most remarkable event achieved by Japan on world history should be its success on the Industrial Revolution, for the first in the Non-Western World. The Japanese Industrial Revolution was unique in that it experienced more rapid modernization than the Western Countries did. The Japanese Industrial Revolution, which came to be known as “Japan’s Miracle,” drew the attention of the world and its historic value has been studied for a long time. The research on the industrial heritage that grew out of the Japanese Industrial Revolution, such as factories, railways, harbors, and mines, began from around 1990. These researches are achieving to clarify the historical importance of these properties, and prompt conservation efforts for them.











The cultural significance of our industrial heritage properties has been re-evaluated. One of the criteria used for determining the importance of a site is whether the property embodies the characteristics of a significant historical event, in this case, the Japanese Industrial Revolution. Such characteristics include the firm guidance of a centralized, unified government, the introduction of state of the art technology from the West, the transition from light industry to heavy industry, fund-raising through exports, and significant growth during a relatively short period. An industrial heritage site should not merely include a factory or a railroad, but should incorporate an entire system related to an industry, or a whole combination of the properties which embody the connection between life and industry in a region.

If one were to look at Japan’s industrial heritage sites from this point of view, the Tomioka Silk Mill fulfills all of the criteria described above and furthermore, is nearly perfectly preserved. Founded in 1872, the Tomioka Silk Mill was the first full-fledged large-scale factory which used modern technology imported from France to improve the quality of its raw silk, the main export of Japan. The Silk Mill was a government-run factory. The mill also served as a model factory in that it chose to assimilate French technology such as

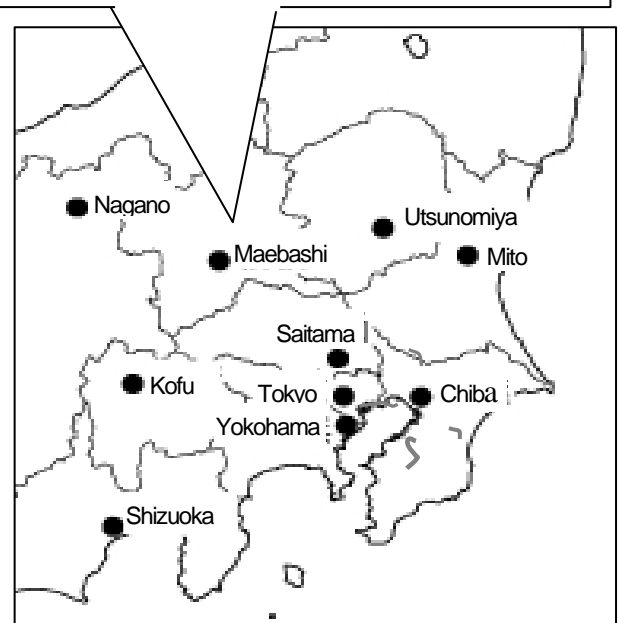
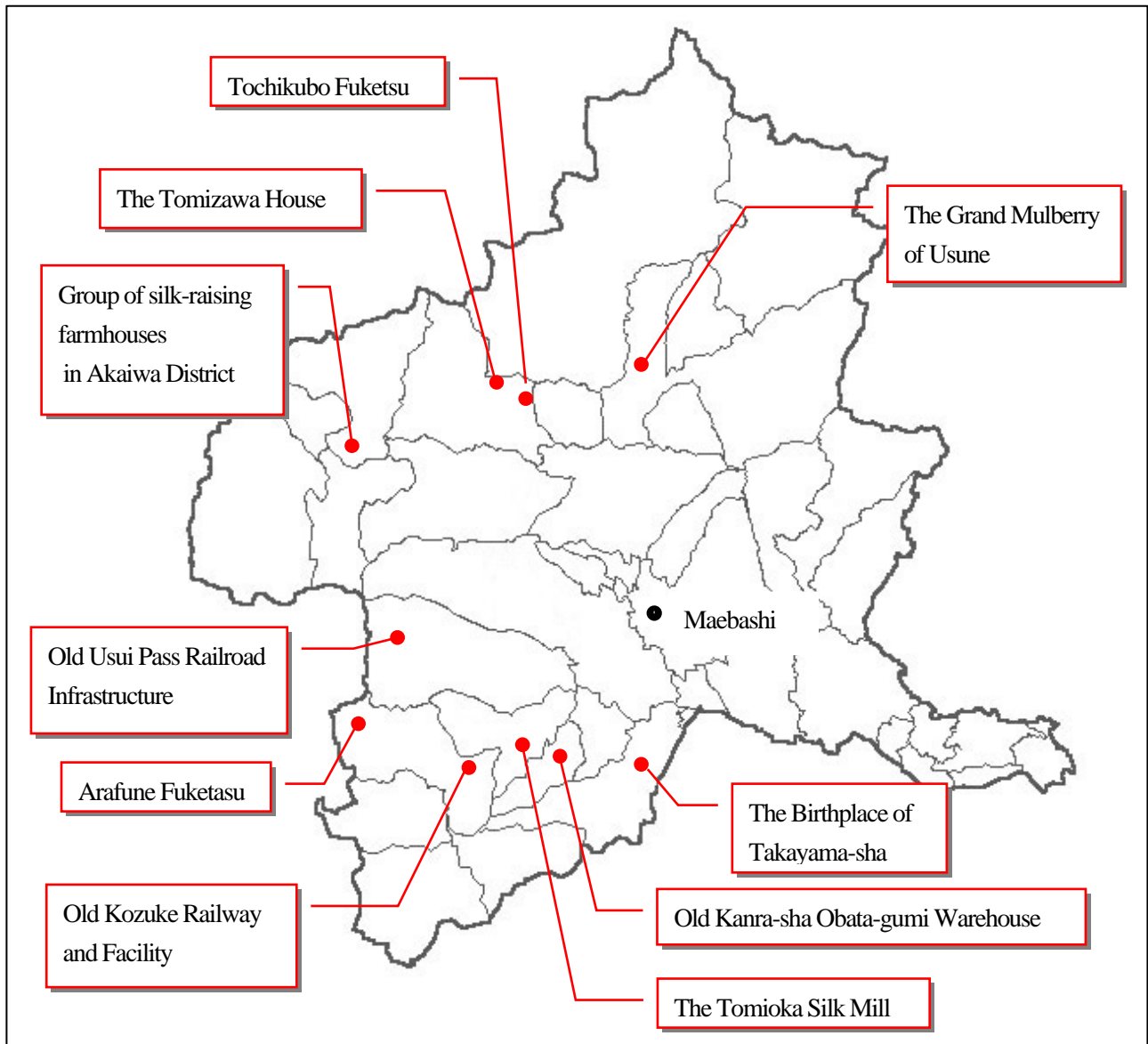
methods of silk reeling. Its mill produced high-quality raw silk for export. For these reasons, the Tomioka Silk Mill should be considered as a symbol of the Japanese Industrial Revolution.

The mass production of raw silk from the Tomioka Silk Mill and other facilities, combined with the promotion of raw silk exports, created a demand for large quantities of silk cocoons. In expectation of an increased demand for cocoons in Gunma prefecture, the local sericulturists renovated their houses for silk-raising. Groups of those houses, such as farmhouses of Akaiwa district, formed a unique rural landscape with mulberry fields. Fueled by large quantities of silk cocoons, several other related industries began to develop such as silkworm breeding for supplying silkworm eggs, egg storage facilities such as Arafune-fuketsu and Tochikubo-fuketsu. Also, sericulture training facilities such as the Takayama-Sha, union organizations of local farmers using traditional manual silk-reeling method called “Zaguri,” warehouse facilities and railroads related to the transportation and storage of raw silk and cocoons such as railroads and warehouses Old Kozuke Railway and Usui Line, and silk textile manufacturing were highly developed. Moreover, traditional sericulture and silk industry had been developed during the Edo period and provided the foundation for the Industrial Revolution during the Meiji period. Now we can see the oldest preserved silk-raising farmhouse in Gunma (the Tomizawa House) and a local citizen’s faith in the silk industry (the Great Mulberry of Usune). The Gunma Prefectural Government, which was created after the Meiji Restoration, helped develop the silk industry through its supportive policies leading to Gunma becoming host to one of the largest cocoon and raw silk producers in the nation. This enabled the technological advancements of the silk industry to spread throughout the nation. As a result, Japan became the world’s leading exporter of raw silk in the 1920’s. The foreign currencies acquired from its silk exports supplied the momentum for Japan to make the shift from light industry to heavy industry. Inexpensive and high-quality raw silk from Japan, along with the development of the contemporary silk industry in the United States and other countries, made silk, which was originally only for the privileged classes, popular among commoners and further contributed to a flourishing global fashion culture in the 20th century. The Tomioka Silk Mill and silk industrial heritage provided the impetus that triggered significant change not only in Japanese history but also in world history. For these reasons, the Tomioka Silk Mill and silk industrial heritage sites, as a whole combination of the properties that embody the connection between life and industry, should be inscribed on the World Heritage Site List.

Pictures

Category	Pictures	
Sericulture		
	The Great Mulberry of Usune	Arafune Fuketsu
		
	Tochikubo Fuketsu	The Birthplace of Takayama-sha
		
	The Tomizawa House	Group of silk-raising farmhouses in Akaiwa District
Silk Reeling		
	Old Kanra-Sha Obata-gumi Warehouse	The Tomioka Silk Mill
Transportation		
	Old Usui Pass Railroad Infrastructure	Old Kozuke Railway and Facility

map



(2) Individual Cultural Property included this Proposal

Summary table

Name of component	Responsible Organization	Category of Preservation	Property Area	Description
The Great Mulberry of Usune	National Government	Natural Monument	7.97m Circumference 13.65m Tall	The largest wild mulberry in Japan, this tree is presumed to be 1,500 years old. The tree was recognized from the 17th century. Because of its great size and graceful figure, it is locally worshipped as the "god of sericulture." When the local mulberry fields were struck by frost, its leaves were used to feed silkworms.
Arafune Fuketsu (Cold storage facility)	Unspecified	-	2,500 m <sup>2</sup>	Built in 1907, Arafune Fuketsu is a cold storage facility designed to preserve silkworm-eggs during the summer. Up to 1.1million strips of silkworm egg paper could be stored. It had the largest storage capacity in the nation. Via the Kozuke railway, silkworm eggs were carried into storage from all over Japan. The building was later removed and now only three large stone-lined holes remain.
Tochikubo Fuketsu (Cold storage facility)	Unspecified	-	2,500 m <sup>2</sup>	Similar to the Arafune Fuketsu, this cold storage facility was used from 1910 until after World War II. Tochikubo Fuketsu has the second largest storage capacity of 150,000 papers in Gunma. It once stored all the silkworm eggs from Agatsuma County. Two holes and a stone foundation of the office building remain. Currently, Nakanajo-machi town owns the property.
The Birthplace of Takayama-sha	Unspecified	-	-	This location is where the Takayama-sha company established the "Seion-iku," Japan's standard silkworm-raising method. The silkworm room where Chogoro Takayama invented the method, the main house, the "Nagayamon" gate, and other facilities remain on the stone-lined terrace.
The Tomizawa House	National Government	Important Cultural Property		Oldest preserved silk-raising farmhouse in Gunma, the Tomizawa house was built during the end of the Edo period. The Tomizawa family, former owner of the house, was a village head in the Edo Period. The house is a two-story 23.9m by 12.9m wooden house with a "irimoya" style roof. The front end of the thatched roof is cut off to catch the light. This style is called "Kabuto-zukuri" from its shape like a "kabuto" or battle-helmet. The second floor is the silkworm room, built in the "debari-zukuri" style.

Name of component	Responsible Organization	Category of Preservation	Property Area	Description
Group of silk-raising farmhouses in Akaiwa District	National Government	Important Preservation District for Groups of Historic Buildings	about 63ha	This group of silk-raising farmhouses was built mainly in the middle of the Meiji Era. The houses, built in the "Debari-zukuri" and/or "Degeta-zukuri" style with overhanging-beams remain in good condition. The houses with warehouses and stonewalls, religious facilities, farmlands and mountain forest show how the sericulture has been implemented there from the Edo period to present day.
Old Kanra-Sha Obata-gumi Warehouse	Unspecified	-		A two-story brick warehouse used to store raw silk was built in 1926 by the Kanra-sha Obata-gumi, which was formed by local silk-raising farmers in Obata and Ueno district. The Kanra-sha Obata-gumi was one of the organizations that created an innovative style of silk reeling derived from the traditional reeling method called "Zaguri." Located at the end of the row of farmers' houses, it is now used as a museum of folk history.
The Tomioka Silk Mill	National Government	Historic Site / Important Cultural Property	55,391.42 m <sup>2</sup> (historic site)	The Tomioka Silk Mill was established by the Meiji Government in 1872. After its privatization in 1893, it had been used as a silk reeling mill until the mill was shut down in 1987. Most of the buildings retain their original structural integrity. The machinery, offices, female dormitory, and houses at the time of the shutdown have also been completely preserved.
Old Usui Pass Railroad Infrastructure	National Government	Important Cultural Property		Built in 1893, the old Usui Line which ran between Yokokawa and Karuizawa adopted the Swiss Abt Rack Rail system to overcome the mountain's steep gradient of 66.7 %. Almost all of the bridges, tunnels and other facilities were constructed with bricks under the instruction of British engineers. A substation and old railway tracks remain.
Old Kozuke Railway and Facility	Unspecified	-	brick warehouse 1,374.84 m <sup>2</sup>	The Old Kozuke Railway was established as a light rail railroad between Takasaki and Shimonita in 1897 for the transportation of local cocoons, raw silk, and silkworm eggs. The railway was electrified and upgraded to Japan's standard track width at the end of the Taisho era. However, a bridge for the light rail railroad remains on the old route. Two old brick warehouses for cocoons and raw silk remain next to the Shimonita Station.



## Location and Pictures of Each component

Name: The Great Mulberry of Usune

Location: 2083 Machida -machi, Numata City



Full View



Close View



Name: Arafune Fuketsu (Cold Storage)

Location: 10,690-2 Ko, Minaminomaki, Shimonita Town, Kanra County



Stonewall 1



Stonewall 2



Name: Tochikubo Fuketsu (Cold Storage)

Location: 1474-11 ~ 12, Akasaka, Nakanojo Town, Agatsuma County



Stonewall 1



Stonewall 2

Name: The Birthplace of Takayama-sha

Location: 237 Takayama, Fujioka City



Aerial Photo



Main house



“Nagayamon” gate built in Edo period



Name: The Tomizawa House

Location: 1274 Daido, Nakanojo Town, Agatsuma County



Full View



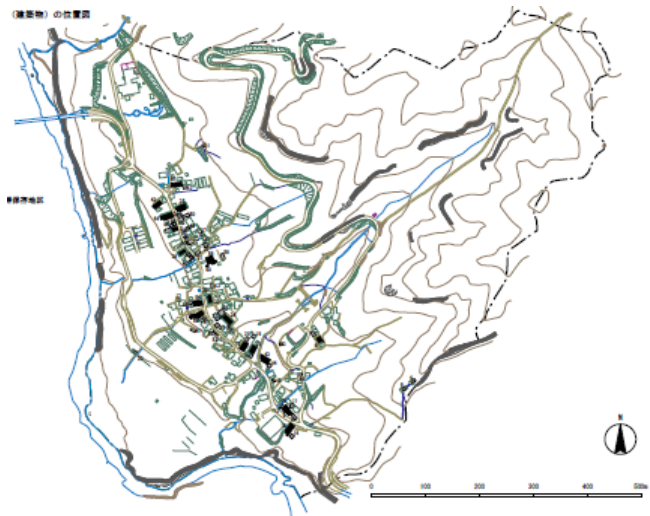
Close View



Back View

Name: Group of silk-raising farmhouses in Akaiwa District

Location: Akaiwa District, Kuni Village, Agatsuma County



Row of Houses along the “Akaiwa-hondo” road



Three-story farmhouse

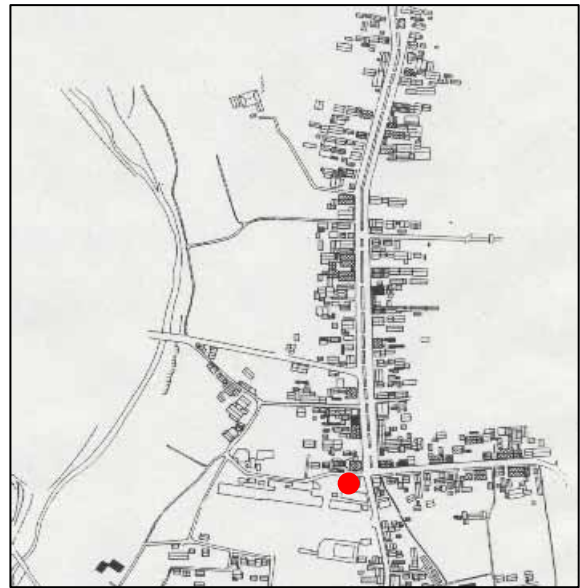


Distant View



Name: Old Kanra-sha Obata-gumi Warehouse

Location: Obata District, Kanra Town, Kanra County



Full View

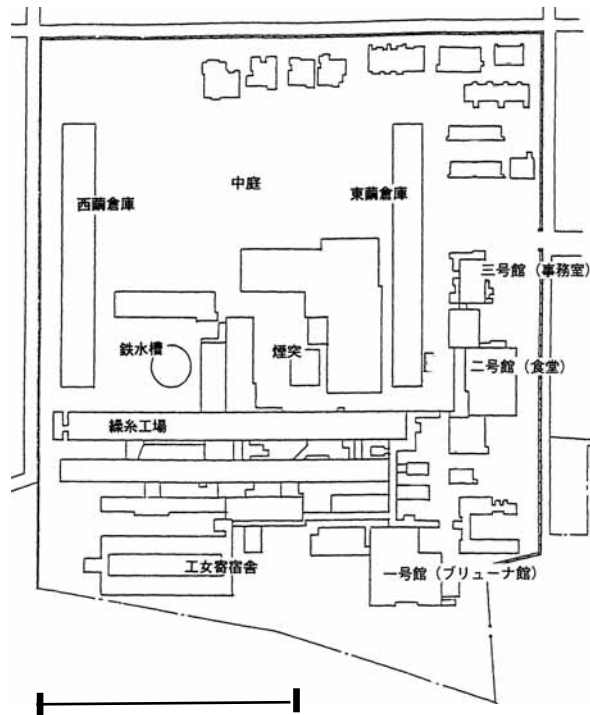


Aerial Photo

Name: The Tomioka Silk Mill

No.1

Location: 1-1 Tomioka, Tomioka City



100m



East Cocoon Warehouse (façade)



East Cocoon Warehouse (inside)



West Cocoon Warehouse

Name: The Tomioka Silk Mill  
Location: 1-1 Tomioka, Tomioka City

No.2



Silk Reeling Plant



Silk Reeling Plant (inside)



Water Tank



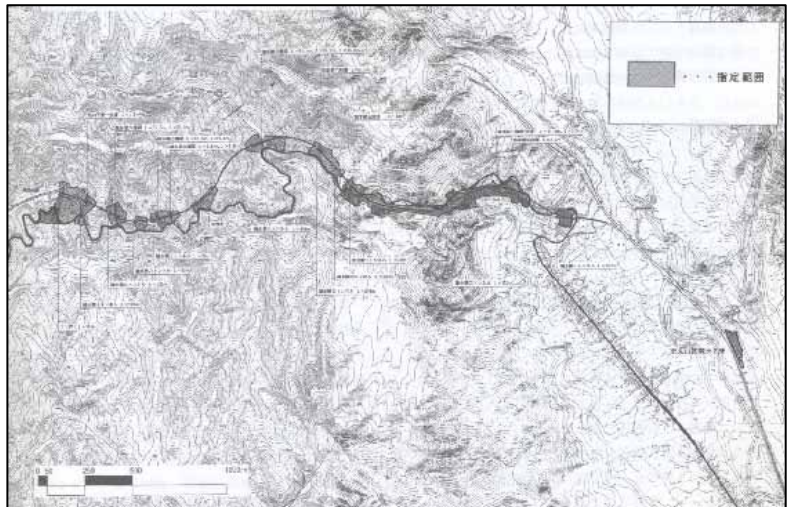
The Brunat House



Name: Old Usui Pass Railroad Infrastructure

No.1

Location: Sakamoto District, Matuida-machi, Annaka City



The Third

Bridge



The Sixth Tunnel



Maruyama Substation (Battery Room)

Name: Old Usui Pass Railroad Infrastructure

No.2

Location: Sakamoto District, Matuida-machi, Annaka City



Looking Over the Third Bridge from the Fifth Tunnel



Aerial Photo



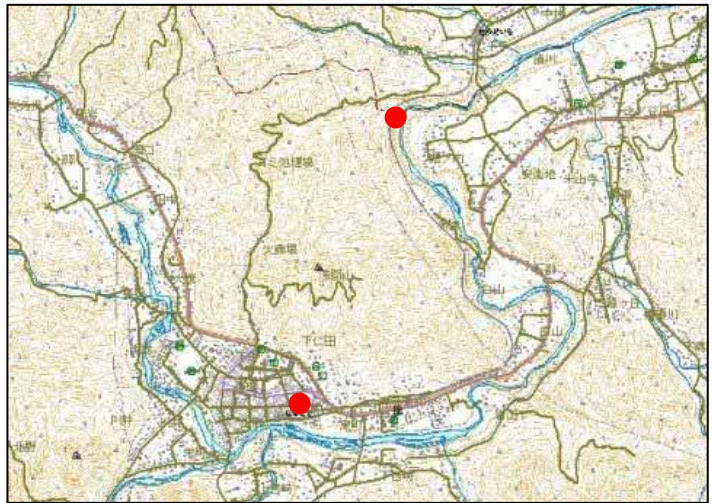
Maruyama Substation (Machine Room)



Maruyama Substation (inside)



Name: Old Kozuke Railway and Facility  
Location: Shimonita Town, Kanra County



Brick Warehouses near the Shimonita Station



Old Kozuke Railway Onigasawa Bridge 1



Old Kozuke Railway Onigasawa Bridge 2

### (3) Preservation and Management Plan

#### ① Current Status and Future Considerations for Preservation and Management Plan of each Component.

Property	Current Status and Future Consideration
The Great Mulberry of Usune	Designated as a Natural Monument on 15 May 1956. A preservation and management plan will be drawn up.
Arafune Fuketasu (Cold storage facility)	To be designated as a Historic Site. A preservation and management plan will be drawn up.
Tochikubo Fuketasu (Cold storage facility)	To be designated as a Historic Site. A preservation and management plan will be drawn up.
The Birthplace of Takayama-sha	To be designated as a Historic Site or an Important Cultural Property. A preservation and management plan will be drawn up.
The Tomizawa House	Designated as an Important Cultural Property on 17 June 1970. A preservation and management plan will be drawn up.
Group of silk-raising farmhouses in Akaiwa District	The Kuni Village Board of Education set up a “Kuni Village Preservation plan for the Akaiwa Preservation District for Groups of Historic Buildings” in February of 2006. Selected as an Important Preservation District for Group of Historic Buildings on 5 July 2006.
Old Kanra-sha Obata-gumi Warehouse	To be designated as a Historic Site or selected as a component for an Important Preservation District for Groups of Historic Buildings. A preservation and management plan will be drawn up.
The Tomioka Silk Mill	Designated as a Historic Site on 14 July 2005 and an Important Cultural Property on 5 July 2006. The Tomioka Board of Education has set up a committee to draw up the “Preservation and Management Plan for the old Tomioka Silk Mill.”
Old Usui Pass Railroad Infrastructure	Designated as an Important Cultural Property on 17 Aug. 1993 and 27 Dec. 1994. The Matsuida Board of Education (now Annaka Board of Education) drew up the “Preservation and Management Plan for the Important Cultural Property of Usui Pass Railroad Infrastructure.”
Old Kozuke Railway and Facility	To be designated as an Important Cultural Property. A preservation and management plan will be drawn up.

② Current Status and Future Considerations for Comprehensive Preservation and Management Plan of the Whole Properties

Name of Property	The Tomioka Silk Mill and Related Silk-Industrial Heritage --- the Starting Point of the Japanese Industrial Revolution ---
Implementing Agency	Gunma Prefectural Government
Contents	<p>As a first step to draw up a comprehensive preservation and management plan for properties that are considered to be suitable for inscription on the World Heritage Site List, the Gunma Prefectural government implemented a project from December 2004 to March 2005. The purpose of the project was to clarify the current state of the modern industrial heritage related to sericulture, raw silk production, and textile production in Gunma, and to list up predicting problems from the point of view of tourism.</p> <p>To drive this project named “World Heritage HIKARI project,” a committee composed of 17 members, that included some persons who were selected from general applicants, representatives of administrative bodies and representatives of relevant organizations, was created. After conducting multiple field surveys, and holding several meetings, the committee submitted the “Proposal from World Heritage HIKARI Project” whose volume was over 50 pages to the prefectural government in March 2005. Then, the documents were released to the general public.</p> <p>Furthermore, after being inducted into the Tentative List for the World Heritage Site, we will draw up comprehensive preservation and management plan of the whole properties.</p>

③ Description of the Property's Surroundings, Current State and Future Considerations for Conservation of the Surroundings.

Property	Description of the Property's Surroundings / Current State and Future Considerations for Conservation
The Great Mulberry of Usune	The surroundings of the tree are fields and a few houses. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Arafune Fuketsu (Cold Storage Facility)	The surroundings of the property are private forests composed of mostly cedar trees. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Tochikubo Fuketsu (Cold Storage Facility)	The surroundings of the property are state forests composed of mostly cedar trees. The core area of 2,500m <sup>2</sup> of the property has made to be owned by Nakanojo Town. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
The Birthplace of Takayama-sha	The surroundings of the property are mountain forests and fields. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
The Tomizawa House	The surroundings of the property are mountain forests. An old road runs right through the front of the garden. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Group of silk-raising farmhouses in Akaiwa District	The surroundings of the property are mountain forests. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Old Kanra-Sha Obatagumi Warehouses	The area around the property is a residential area. The houses of silk-raising farmers in Obata form lines alongside of the road to the north from this warehouse. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
The Tomioka Silk Mill	The area around the property is a shopping district with buildings mainly from the early Showa period. In 1997, the area was designated part of the Rezoning Project. However, in 2005, the designation of the Tomioka Silk Mill as a Cultural Property prompted the municipal government to change its policy, and to begin to draw up a new plan focusing the conservation of its historic landscape. In the same year, the municipal government became a "landscape administrative organization." We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Old Usui Pass Railroad Infrastructure	The surroundings of the property are state forests composed of mostly cedar trees. We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.
Old Kozuke Railway and Facility	The surroundings of the Onigasawa Bridge are mountain forests. The warehouses are located next to the Shimonita Station of the Joshin Dentetsu (present name of the Kozuke Railway). We are keen to draw up a scheme for conservation of the surroundings that were integrated with the property.

## ( 4 ) Justification for Inscription

Category of the Property and Criteria Number for the World Heritage

- Category Industrial Heritage
- Criteria ii, iv, and v.

ii) The Tomioka Silk Mill is the first example to show how the Western cultural values of the Industrial Revolution and Modernization transferred to the Far East in the form of “factories,” and was accepted in a full-fledged manner. Furthermore, the native Eastern and the imported Western technology were integrated, and Western production systems were incorporated in Japanese traditional systems. This form of technological exchanges became a role model for the industrialization and modernization of Asian society. In this respect, the Tomioka Silk Mill was the foundation for the bridge between the East and the West regarding the Industrial Revolution, which was a milestone in world history. On top of that, Japan became the world’s leading producer of raw silk. Japan’s high quality, inexpensive raw silk accelerated the popularization of silk that was originally a rare fiber, and further contributed to flourishing of a global fashion culture in the 20th century.

iv) The Tomioka Silk Mill is a landmark structure as a modern factory, which is symbolic of the Industrial Revolution, built outside the Western world by non-Western people autonomously. Moreover, the local silk-raising farmhouses created in those days have unique characteristics of the incorporation of modern industrial technology and their traditional lifestyle. These groups of farmhouses formed a unique rural landscape that symbolizes the Japanese Sericulture.

v) The farmhouses and mulberry fields that specialized in raising silkworms spread not only to the plains but also to the mountains and riverbanks. In order to adapt to their environment, the structure of the houses and fields show unique landscape in each area. Due to a decline of sericulture across the nation, these landscapes have become vulnerable. So, remaining landscapes such as one in Akaiwa District are culturally quite valuable.

### Proof of Authenticity and Integrity

All of the assets associated with “the Tomioka Silk Mill and Silk Industrial Heritage” were constructed in their original period, using techniques and materials of the days. Although few renovations and/or extensions (caused by change of usage) were done, these works did not compromise the cultural value of the core properties. Both documents and photos of the construction, repair of the buildings, substantiate the authenticity of the site.

The Tomioka Silk Mill’s facilities have been maintained and remodeled since its opening in 1872 and since the shutdown of the mill in 1987, the facilities have remain in perfect condition. The facilities include not only ones related to production but also welfare and managerial affairs, and employees’ lodgings. The documents concerning those facilities also attest to this.

The nominated properties include the full ensemble of silk industrial heritage: houses of silk-raising farmers who provided cocoons to the mills, facilities for silkworm eggs, sericulture education, and railroads for cocoons and raw silk transportation.



### Comparison to Similar Heritage Sites

The Tomioka Silk Mill is the nation's oldest full-fledged factory and was the biggest one among thirty-some factories set up by the national government. It is also the only remaining one with nearly perfectly preserved production equipment among them. The related heritage encompasses the entire silk industry manufacturing process, from the raw materials to the final product, making it a rare ensemble of cultural heritage through which people can understand the connections between regions and throughout the production process.

Worldwide, there are well-known World Heritage Sites related to textile industries, such as the New Lanark, Saltaire, Derwent Valley Mills in the U.K. and Crespi d'Adda in Italy. The Derwent Valley Mills resemble the properties we are applying for, in the respect that they are a group of local factories alongside the Derwent River, a source of water wheel power. On the other hand, the others are single properties that consist of then model factories and employees' communities.

The special features that are unique to the Tomioka Silk Mill and Silk-Industrial Heritage Sites are: 1) it is the first world heritage site which mainly dealt with silk, 2) it is a whole ensemble of manufacturing process, from the production of raw materials to the final production of silk garments, and 3) it is the very first full-fledged modern industrial heritage site in Asia.