



**Management plan**

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**Rjukan – Notodden  
Industrial Heritage Site**

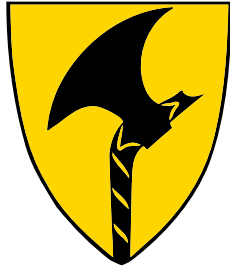
**Nomination to the UNESCO World Heritage List  
Norway**

**Nomination Dossier**

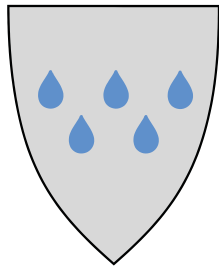
**Annex 1**

**Annex 2**

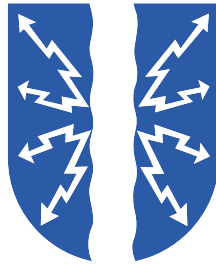
**Annex 3**



Telemark County Authority



Tinn Municipality



Notodden Municipality



Vinje Municipality



Directorate for Cultural Heritage

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## **Preface**

The purpose of a management plan is to protect the outstanding universal value (OUV) that form the basis for the World Heritage nomination. The area must be protected for the future, while still facilitating sustainable development. The management plan is intended as a tool to strike a balance between the need for protection and accessibility and development in the local community.

The management plan is an appendix to the application and will only be implemented if the area is granted World Heritage status. This is a first-generation plan and it has not yet been finalised. The management plan will serve as a guide until the results of the periodic reporting are ready in 2019. The plan will be revised in 2020.

## **1. World Heritage policy**

Report to the Storting No 16 (2004–2005) 'Living with our Cultural Heritage' emphasise that the Norwegian World Heritage sites shall represent examples of how to preserve cultural heritage in the best possible way. Report to the Storting No 35 (2012–1013) 'Framtid med fotfeste' ('Future with a foothold' – in Norwegian only) clarifies and develops Norway's World Heritage policy.

### **Organisation, parties involved and cooperation**

The Ministry of Climate and Environment will organise the World Heritage work so as to ensure optimum coordination between the various authorities and to secure expertise, resources and quality. A ministerial World Heritage Council will be set up. Fixed meeting arenas will be established for government authorities and representatives of the World Heritage sites. Emphasis will also be placed on a broad local basis, and all World Heritage sites shall have a World Heritage Coordinator.

### **Legislation and management plan**

World Heritage in Norway is protected through the Cultural Heritage Act, the Natural Diversity Act and the Planning and Building Act.

All World Heritage sites shall have separate management plans. The plans shall describe the parties involved, the roles and responsibilities of each party and the tasks to be performed.

### **Monitoring**

The Ministry of Climate and Environment will ensure regular reporting on condition and developments in accordance with the precautionary principle in the management of the sites. Measurable indicators shall be prepared for all the values.

### **Education, dissemination and expertise**

The Ministry of Climate and Environment will create a joint website where all relevant information is made available. The World Heritage centres, museums and the National Park Information Centres will all play an active role in the work on disseminating the values and tolerance limits of the World Heritage sites. Knowledge-building shall take place to ensure that local, public and private parties have the relevant expertise. Competence-raising among skilled craftsmen shall be prioritised.

### **World Heritage centres**

All World Heritage sites shall have a World Heritage Centre. The distinct features of the area, the need for information and activities and existing infrastructure must be taken into account when establishing such centres.

## 2. Introduction

The World Heritage Site represents the most important industrial history in Norway. It shows a history that is important to Norway as well as to mankind. Managing the area's values is therefore important for everyone. It is our responsibility to protect these values for present and future generations. The Norwegian Government wants the management of Norwegian World Heritage sites to serve as examples of how to preserve cultural heritage in the best possible way. The World Heritage sites shall be assured the best possible condition, management and formal protection.

An interim World Heritage Council has been established that shall serve until World Heritage status has been granted in 2015. The council will be given the task of deciding the framework for a permanent World Heritage Council. The World Heritage Council shall be a collaborative body and a meeting place for management bodies involved in the World Heritage Site. Among other things, the Council shall be responsible for following up the management plan. The interim council consists of political and administrative participants from the county authority, Notodden, Tinn and Vinje municipalities, a representative of the Directorate for Cultural Heritage, and a representative of the Norwegian Industrial Workers Museum. The representatives include politicians from both the ruling parties and from the opposition.

To ensure the broadest possible involvement and support in the local community, the World Heritage Council will hold meetings with stakeholders, representatives of business and industry and voluntary organisations at least once a year and otherwise as required.

Tinn and Notodden municipalities currently have one World Heritage coordinator each. Once World Heritage status has been achieved, a World Heritage Coordinator will be appointed who will have responsibility for the whole area.

### 3. Declaration of intent

As part of the work of preparing the nomination document for inscription on the World Heritage List, the municipalities of Notodden, Tinn and Vinje, Telemark County Authority's administrative and political management, and the Directorate for Cultural Heritage and the Ministry of Climate and Environment have jointly agreed on the following declaration of intent:

The Rjukan and Notodden area is an example of the ground-breaking industrial development that took place at the beginning of the 20th century during what is known as 'the second industrial revolution'. At a time when ways of transmitting electric power over great distances were limited, manufacturing facilities and local communities were set up near the waterfalls and thereby the source of electricity. Building what was then one of the world's largest power stations in a remote valley under Europe's biggest mountain plateau was an achievement in itself. Artificial fertilizer was in demand worldwide. Kristian Birkeland's invention of the electric arc method for producing artificial fertilizer, combined with Sam Eyde's entrepreneurial skills and foreign capital, formed the basis for the company Norsk Hydro and the two industrial towns Notodden and Rjukan. The whole ensemble of power stations, factories, transport systems and a complete company town was created under the organisational framework of a single company. Rjukan – Notodden is a prominent manifestation of how innovation, capital and creative power shaped a fundamental new reality in the early 20th century.

**Should the industrial communities of Rjukan and Notodden be inscribed on the World Heritage List, Norway guarantees that the future management of the sites will preserve the cultural heritage values.**

Notodden Municipality, Tinn Municipality, Vinje Municipality, Telemark County Authority, the Directorate for Cultural Heritage and the Ministry of Climate and Environment have agreed on the points listed below:

The aim of nominating the industrial towns of Rjukan and Notodden for World Heritage status is to preserve cultural heritage and landscapes that show why the industrial towns were established here and how the area functioned and continued to develop.

- **The historical character and quality shall be a resource and form part of the basis and driving force for developing both business and industry and society as well as cultural life and good living conditions**
- **The industrial town shall be preserved as a living community without diminishing the values of its cultural history.**
- **The cultural environments shall be protected to ensure that the World Heritage values are not negatively affected by change.**
- **The industrial heritage shall be managed in accordance with national legislation. Norway's aim is for the World Heritage sites to be perceived as examples of best practice for the protection of cultural heritage and cultural environments, and contribute to promoting the World Heritage Convention.**



## Working together

We all have a responsibility for ensuring that the World Heritage sites are preserved and protected. We are also responsible for facilitating the development of business and industry without reducing the overriding cultural heritage values.

In order to be able to work together, it is essential for all those with interests in the area to share this understanding.

A World Heritage Council shall be established that comprises all areas of the administration. The collaborative council shall promote quality in all stages of administrative processing concerning the World Heritage Site and its outstanding universal values, and ensure that all cases are processed in a standardised, predictable and transparent manner. The collaborative council shall take the initiative to develop and highlight the World Heritage status to the benefit of the entire area and buffer zone.

This declaration has been accepted at all political levels and incorporated by the relevant parties. It will form the basis for all further management of the important cultural heritage values in the area.



*The mayors of Vinje, Tinn and Notodden municipalities signed the Declaration of intent in 2013. Sam Eyde on the portrait behind them. Photo: Eystein M. Andersen.*

## 4. Description of values



*Hydro Industrial Park in Notodden facing north east. Photo: Per Berntsen.*

### a) Brief Synthesis

The industrial towns of Rjukan and Notodden in Telemark county in Norway are outstanding examples of ground-breaking industrial development and a testament to the social transformation that took place in the Western World at the beginning of the 20th century. This was a time when scientific and technological progress interlocked with economic and political factors and created what is known as ‘the second industrial revolution’.

With its dramatic scenery and numerous waterfalls, Norway was an ideal location in which to establish the new type of energy-intensive industry. The industry project represents the transition from coal to hydroelectric power for industrial use, and thereby a gateway to the second industrial revolution in Northern Europe. At a time when the ways of transmitting power over great distances were limited, manufacturing facilities and local communities were set up where the power was. Building what was then one of the world’s largest power stations in a remote valley under Northern Europe’s biggest mountain plateau was an achievement in itself. The new industrial towns were built for the production of previously unknown products using newly developed methods, targeting an international market. That this development was achieved is due to domestic scientific achievements and an active entrepreneurship in close cooperation with foreign financial investors. Technologically and organisationally, the Rjukan and Notodden area is seen as a hub for a development that took place simultaneously and in interaction with several countries.

The two industrial towns were created as a direct response to the Western World's great demand for artificial fertilizer for agriculture. The aim was to supply the international community with a product that at the time was considered a necessity for the future of civilisation.

The transport system that had to be built to connect the factories and industrial town to the outside world and the global market is a further expression of the pioneering aspect of the industrial project in inland Norway. The system of two railway sections connected by train ferries across a lake is in itself unique. The electrified railway contributed to the breakthrough of an international standard for electric rail operations.

The whole ensemble of power stations, factories, transport systems and company towns was created by visionary, ambitious people, whose plans were achieved through hard work and the efforts of an extensive labour force under the organisational framework of a single company: *Norsk Hydro-Elektrisk Kvælstofaktieselskab (Norsk Hydro)*. Rjukan – Notodden is thereby an outstanding manifestation of how innovation, capital and man's creative power shaped a fundamental new reality in the early 20th century.

## **b) Justification for Criteria**

### ***Criterion (ii)***

The industrial towns of Rjukan and Notodden were established as the result of an international industrialisation process in which the use of hydroelectric power for energy production had been sufficiently developed. Internationally, the growth of new industrial products and the range of technological inventions that were created within a limited period of time led to sweeping social changes. What made these events possible was the exchange of results from science and research across national borders, of capital in an international arena for investments, and the sale of goods in a global market.

Rjukan – Notodden is the result of the changes that took place, but the towns themselves have also contributed to these changes. The production of artificial fertilizer using the electric arc method was the invention of the Norwegian physicist Kristian Birkeland. Later, the Haber-Bosch method was used and further developed in Rjukan. Rjukan – Notodden was the scene of outstanding achievements that represent an important step forward for mankind in the areas of science and engineering.

### ***Criterion (iv)***

The era of the second industrial revolution started first in the Western world, where electric energy replaced coal as a source of energy in industry, creating new types of industries, products and places. Rjukan – Notodden is one physical result and expression of this development. The World Heritage includes four thematic components with associated World Heritage attributes for hydroelectric power, industry, transport and company towns. The whole ensemble of dams, tunnels and pipes to take water to the power stations, routes for power lines to the factories, the industrial areas, the factory towns with houses and social institutions, railway lines and ferry service with navigational devices, was created against the background of a powerful natural environment. Together, they form an outstanding example of technological innovations and industrial landscapes created under historical conditions that were present for only a limited period of time.



*Electric Arc Furnace, Notodden. Photo: Dag Jensen.*

### **c) Statement of Integrity**

Within the proposed limitation of the World Heritage Site, all important parts of the complex industry project is preserved. As a whole, they document the story of Rjukan and Notodden as outstanding representatives of the second industrial revolution. The nomination area will be framed by a proposed buffer zone that ensures that the whole landscape around the nominated power stations, production plants, urban communities and transport facilities is protected. There are no factors that can pose a material threat to the World Heritage values in Rjukan and Notodden.

### **d) Statement of Authenticity**

The World Heritage Site comprises environments and individual objects with a varying degree of authenticity. All the thematic components comprise a sufficient number of environments/objects with a high degree of authenticity, so that the area as a whole contains outstanding examples in the fields of technology, urban planning and architecture.

### **e) Requirements for protection and management**

The World Heritage Site is sufficiently protected under the Norwegian Cultural Heritage Act for the most important individual objects, and the Norwegian Planning and Building Act for bigger, more complex areas. A management plan has been prepared for the World Heritage Site. All management levels have signed a declaration of intent for protection of the World Heritage values. A World Heritage Council with representatives of all management levels will coordinate the management and contribute to positive development and sustainable use of the World Heritage status.





*Rjukan Hydro Town with the industrial area, Vemork railway track and Villaveien-Flekkebyen housing area seen from Krosso Aerial Cableway in 1929 and today.  
Photo above: Norwegian Industrial Workers Museum. Photo below: Anders Haslestad.*



## 5. Status of conservation

The outstanding universal value of the World Heritage Site can be illustrated by the four main components: hydroelectric power, industry, transport systems and company town. Each main component is divided into areas that are called attributes. Significant objects have been selected in each of these areas. These are the cultural heritage objects in the World Heritage Site that best serve to highlight the essential national and international values of cultural history.

The current condition of the attributes is deemed to be good overall. Ten attributes are considered to have a normal level of maintenance, while three are in need of moderate or extensive improvements. Seventy-three significant objects have a normal level of maintenance. Seventeen need moderate improvements and seven need extensive improvements.

The assessment is based on Norwegian Standard (NS) 3423 'Condition survey of protected buildings and buildings with historical value'. The aim of the survey is to identify the condition of the objects and to specify the need for necessary measures, which will form the basis for more detailed planning, further investigations and implementation. The three following condition classes (CCs) are used:

- **CC 1: In good condition, ordinary level of maintenance, i.e. only planned maintenance is necessary**
- **CC 2: Moderate improvements needed.**
- **CC 3: Extensive improvements needed. Encompasses breakdowns and complete functional failures.**

ID/component	Attribute	Condition
<b>Hydroelectric power</b>		
1	Tinfos power plants	CC 1
2	Hydro's power plants in the Tinnelva river	CC 1
3	Vemork Power Plant	CC 1
4	Såheim Power Plant	CC 1
5	Regulating dams	CC 1
6	Power transmission	CC 1
<b>Industry</b>		
7	Hydro Industrial Park in Notodden	CC 1
8	Hydro Industrial Park in Rjukan	CC 1
9	Production equipment	CC 3
<b>Transport systems</b>		
10	The Tinnoset Line	CC 3
11	The Rjukan Line	CC 2
<b>Company town</b>		
12	Notodden Hydro Town	CC 1
13	Rjukan Hydro Town	CC 1

*A complete table of all significant objects is included as an appendix to be used as underlying documentation for further work schedules*

## **6. Factors affecting the area**

The nominated area is considerable in size and diverse in content. Different impact factors will therefore apply. They mainly fall into two main categories; forces of nature and social structural changes. In addition, individual owners' wishes to upgrade and modify their buildings may have an impact on the conservation of the OUV.

### **Development pressures**

#### ***Power production***

The facilities are mainly located in areas where the development pressure is low. The area by Møsvatn lake may be used for new holiday homes. The Planning and Building Act will regulate this so that it will not threaten the OUV. New technical and safety-related requirements for installations and dams, and upgrades for the purpose of increased production, necessitate changes that may affect the OUV. Close cooperation with the power producers may help to reduce this risk. A licence application will be submitted for several small-scale power plants, primarily in the buffer zone. The county authority will follow up the case to ensure that the power plants do not affect the water level in Tinnsjøen lake or disfigure the World Heritage Site.

#### ***Industrial areas***

Hydro's former industrial site in Notodden is an area used for active industry, office and service activities. Industry is subject to continuous requirements for reorganisation, and thereby modifications and new buildings. Other activities will also require modernisation in line with requirements for modern workplaces.

Hydro's former industrial site in Rjukan is an area used by industry, office and service enterprises. Manufacturing in the area leads to requirements for reorganisation and thereby also a need for modifications to the buildings. Closing of businesses that are not replaced by new ones results in unused buildings, which may also constitute a threat. Whether to build new commercial premises suitable for new businesses is currently being discussed. An analysis of the area has shown that new buildings can be accommodated without affecting the OUV. For both areas, plans are in place and planning capacity in relation to major projects is good. Obtaining protected status for important parts of the plants will strengthen a well-managed development.

#### ***Transport systems***

The railway areas in Notodden are owned by the State. The actual railway track and technical facilities are in an area with low development pressure. The Rjukan Line is owned by the Norwegian Industrial Workers Museum (NIA) and is managed as a heritage railway. The track goes through an area with low development pressure. The planning tool works well in the areas. Both railway facilities are protected, and this will lead to a controlled development that safeguards the OUV.

#### ***Urban communities***

Notodden is experiencing some population growth, and a certain development pressure is expected. Rjukan has seen a reduction in population figures, and the development pressure is currently low. For both towns, the biggest threat in terms of housing development is the owners' need to upgrade and maintain their buildings. Many residents express a wish to

replace elements like windows, panelling and roofing. The current regulation can control this to a certain extent. Good information, guidance and the possibility of grants will also be important in order to manage maintenance and repairs/restoration in a positive way.

### ***The buffer zone***

Large parts of Notodden town, including housing areas, lie in the southern part of the buffer zone. A certain amount of development pressure must be expected in the central area. Several buildings and some areas in the central area have already been zoned for protection.

A report has been prepared on the choice of concept for the future E 134 road. It was adopted by the Government in 2011. The report identifies four alternatives. One alternative proposes that the road be laid north of Notodden, crossing the World Heritage Site and the buffer zone in the area between Kloumannsjøen lake and the northernmost buildings at Skogen in Notodden. The report makes reference to protection of the cultural environment at Tinfos and the application for World Heritage status.

The mountainsides along the watercourse between Møsvatn and Heddalsvannet lakes are in the buffer zone. The terrain is steep and mostly consists of undeveloped areas with no development pressure. Newer parts of Rjukan and the cultural landscape between Rjukan and Tinnsjøen lake are in the buffer zone. A certain development pressure applies in this area. It is an area that can withstand some changes without affecting the OUV. The municipality will manage this area through planning.

## **Environmental pressures**

Models used to calculate the effects of climate change as the result of increased carbon emissions predict a wetter climate in Norway. More frequent records of extreme values can be expected for both precipitation and temperature. There is little air and water pollution in the area. Natural disasters of relevance are floods, landslides and avalanches, gusty winds, and fire.

### ***Power production***

The Tinnfoss area may suffer some damage in the event of flooding. The power plants are considered to be safe. The enterprises' level of fire preparedness is normal.

In Rjukan, some of the production plants are in an area potentially at risk of landslides and avalanches. The energy company has emergency response plans and procedures in place.

### ***Industrial areas***

The buildings in Hydro Industrial Park in Notodden may be at risk in the event of a large flood. The flood warning system has been improved. The enterprises have been ordered to implement special fire-technical measures, including requirements for training and drills.

Parts of Hydro Industrial Park in Rjukan are located in areas at risk of landslides and avalanches. The risk zone maps that have been prepared are a good tool for assessing the risk. Parts of the industry that produces gas and hydrogen peroxide are subject to extensive regulations for safety procedures in relation to both production and transport.

The Directorate for Civil Protection and Emergency Planning is the supervisory authority.



### ***Transport systems***

The railway facility in Notodden may be at risk of flooding and damage in the event of heavy precipitation. The municipality is working on security measures to reduce any damage caused by heavy precipitation. Part of the Rjukan Line goes through an area at risk of landslides and avalanches. Procedures are in place for monitoring and clearing in the event of heavy precipitation.



*In summer 2011, large parts of Notodden railway station was washed away, when the stream found a new course during a flood after prolonged period of rain. The area was rebuild and flood protection improved.  
Left photo: Unn Yilmaz. Right photo: Eystein M. Andersen.*

### ***Urban communities***

The nominated area in Notodden is not exposed to any particular natural threats. The buildings, which are mainly wooden, are particularly at risk in the event of fire. The fire and rescue services are organised in accordance with norms for towns of this size.

Parts of Rjukan are situated in areas potentially at risk of landslides and avalanches. The emergency response level and monitoring are generally good in relation to precipitation and the risk of landslides and avalanches. A large proportion of the wooden houses are vulnerable in relation to fire. Some of the protected and historic buildings have sprinkler systems. The fire preparedness is generally good.

## **7. Vision and goals**

### **1. Vision for the area (20–30 year-perspective)**

- 1.1 The distinctiveness, cultural heritage values and traditions characterising the Rjukan and Notodden World Heritage Site shall form the basis for business development, social development, identity-building and good living conditions. The World Heritage Site has preserved cultural heritage and cultural landscapes to show why the industrial community was founded and how it developed and functioned.

### **2. Goal for conservation and strengthening of OUV**

- 2.1 The authenticity and integrity of the World Heritage Site shall be safeguarded and improved, and significant objects shall be in use.
- 2.2 The administrative bodies shall have sufficient expertise and capacity.
- 2.3 Local craftsmen shall have expertise in restoration/repair work on cultural heritage sites and monuments.

### **3. Goal for conservation and legal protection of the OUV**

- 3.1 Attributes and significant objects shall have adequate legal protection.
- 3.2 Sightlines defined as important shall be kept open.

### **4. Goal for conservation and strengthening of relevant supporting values**

- 4.1 The supporting values shall be protected, legally if necessary, so that the original characteristics and main structure are preserved. Restoration/repairs and future development shall safeguard the historical values.

### **5. Goal for competence-building and research:**

- 5.1 The administrative bodies shall collaborate with primary schools, lower and upper secondary schools, university colleges, universities and research institutes.
- 5.2 Knowledge bases shall be developed.
- 5.3 The administrative bodies shall collaborate with international parties.

### **6. Goal for information and presentation**

- 6.1 All World Heritage attributes shall be presentation arenas.
- 6.2 The World Heritage Site shall be marketed in Norway and abroad.
- 6.3 The local population shall be knowledgeable about the World Heritage and the history, and be good hosts.
- 6.4 A World Heritage Centre shall be established with active visitor and presentation arenas in both Notodden and Rjukan.

### **7. Goal for visitor management**

- 7.1 Accommodation and catering facilities shall be augmented.
- 7.2 The attributes shall be universally accessible as far as possible.
- 7.3 Easily accessible and clear, joint information shall be prepared.

## 8. Goal for the OUV

### Goal for conservation and strengthening of OUV (the core values)

Goal	Indicator
2.1 The authenticity and integrity of the World Heritage Site shall be safeguarded and improved, and significant objects shall be in use	A specific plan has been developed with funding options and deadlines for all objects classified as CC 3
	Number of significant objects classified as CC 1
	The transport service from Notodden to Rjukan shall be used in a tourism context by 2015
2.2 The administrative bodies shall have sufficient expertise and capacity	Case processing time in relevant fields
	Suitable information is available about restoring/repairing and using materials correctly, etc. and general guidelines for change
2.3 Local craftsmen shall have expertise in restoration/repair work on cultural heritage sites and monuments	Number of craftsmen in Notodden and Tinn with specialist expertise, documented supplementary training



*Birkeland Bridge was in 2011 reopened with its original light arrangement after years without lights. The lights were made new with the original design on pillars as seen on the old photo. (old postcard)  
Photo to the left: Norwegian Industrial Workers Museum. Photo to the right: Bjørn Iversen.*

### ***Goal for maintaining and strengthening preservation objectives***

<b>Goal</b>	<b>Indicator</b>
3.1 Attributes and significant objects shall have adequate legal protection	An overview is available that shows the need for legal protection under the Planning and Building Act or the Cultural Heritage Act
	Number of attributes and significant objects that are legally protected
3.2 Sightlines defined as important shall be kept open	A maintenance plan has been prepared for the sightlines
	Maintenance measures are carried out in accordance with the plan



*Sightline towards Rjukan from the road 651 to Tuddal. Photo: Trond Taugbøl.*

### ***Goal for conservation and strengthening of relevant supporting values***

<b>Goal</b>	<b>Indicator</b>
4.1 The supporting values shall be protected, legally if necessary, so that the original characteristics and main structure are preserved. Restoration/repairs and future development shall safeguard the historical values.	A status report has been prepared for objects with supporting value
	Number of objects protected by law
	Number of objects restored/repared so that history is decipherable

### ***Goal for competence-building and research***

<b>Goal</b>	<b>Indicator</b>
5.1 The administrative bodies shall collaborate with primary schools, lower and upper secondary schools, university colleges, universities and research institutes	A knowledge-building programme has been developed for use by kindergartens and primary and lower secondary schools
	A local curriculum has been developed for primary and lower and upper secondary schools
	Local craftsmen have undergone supplementary training in disciplines relevant to the protection of World Heritage
	A building preservation centre has been established in Telemark
5.2 Knowledge bases shall be developed	Information, such as drawings and photos, have been digitised and made available according to a plan
5.3 The administration shall collaborate with international parties	Number of international, relevant projects
	Number of international networks in which the World Heritage Site participates



## Goal relating to information and presentation

Goal	Indicator
6.1 All World Heritage attributes shall be presentation arenas	A sign plan has been prepared, and signs have been posted Big events are used as presentation arenas
6.2 The World Heritage Site shall be marketed in Norway and abroad	A presentation strategy has been prepared
6.3 The local population shall be knowledgeable about the World Heritage and the history, and be good hosts	Courses will be held to raise knowledge about the area and highlight its identity One hosting course held each year
6.4 A World Heritage Centre shall be established with active visitor and presentation arenas in both Notodden and Rjukan	Number of visitors to the presentation arenas



*It's a goal that the transport system can be an attraction and serve the public. Photo: Trine Wahl.*

## Goal for visitor management

Goal	Indicator
7.1 Accommodation and catering facilities shall be augmented	Number of accommodation enterprises in or near the World Heritage Site
	Number of catering enterprises in or near the World Heritage Site
7.2 The attributes shall be universally accessible as far as possible	Number of publicly available attributes with universal accessibility
7.3 Easily accessible and clear, joint information shall be prepared	Number of information platforms



*The new café at Gvepseborg next to the top station of Krosso Aerial Cableway. Photo: Per Berntsen.*

## 9. Means of implementing protective measures

### Legislation

The most important law relating to the protection of the World Heritage Site and the buffer zone is the Planning and Building Act. The Act was recently revised, and the new Act entered into force on 1 July 2009. In addition, special acts are relevant for the protection of the World Heritage Site and the buffer zone. This applies in particular to the Cultural Heritage Act. The Nature Diversity Act also contains provisions that may be of relevance for the protection of natural areas, especially the buffer zone. The Energy Act and other acts relating to watercourse regulation and power transmission are relevant for the power production plants.

### The Planning and Building Act

Planning pursuant to the Act shall help to coordinate government, regional and municipal tasks and form the basis for decisions relating to the use and protection of resources. Processing of building applications pursuant to the Act shall ensure that measures are in compliance with laws, regulations and planning decisions. Planning and decisions shall ensure transparency, predictability and participation for all affected parties and authorities. Emphasis shall be placed on long-term solutions, and consequences for the environment and society shall be assessed.

The aesthetic design of the surroundings shall be taken into account in planning and in individual building projects. The same applies to the principle of universal design.

The Act emphasises early involvement to ensure that cultural and natural values are protected. If a higher administrative level learns that a municipality has failed to attend to this responsibility as provided for by law, it may raise objections to the plan. In the event of disagreement, the final decision will be made by the Ministry of Local Government and Modernisation. Municipal sub-plans and zoning plans with provisions that aim to protect the cultural history values in an area provide good protection of cultural heritage and cultural environments.

Under the Planning and Building Act, the municipalities are given tools to protect cultural heritage in the form of zoning plans and municipal master or sub-plans. Through the regulation of zones requiring special consideration and protection, provisions and guidelines are issued that protect cultural heritage against detrimental changes. General provisions in the Act can also be used to avoid detrimental changes or to ensure positive development.

There are three ways of protecting cultural heritage, cultural environments and landscapes through municipal master plans:

- **Zones requiring special consideration, with provisions or guidelines, Section 11-8**
- **Provisions relating to land-use objectives, Sections 11-10 and 11-11**
- **General provisions, Section 11-9**

There are three ways of protecting cultural heritage, cultural environments and landscapes through zoning plans:



- Land-use objectives (farming, nature and recreational objectives) with the sub-objective for the protection of cultural heritage and cultural environments, Section 12-5 (5)
- Zones requiring special consideration with provisions, Section 12-6
- Provisions relating to land-use objectives, Section 12-7

## **Act of 9 June 1978 No 50 concerning cultural heritage**

The purpose of the Act is to protect cultural heritage and cultural environments in all their variety and detail, both as part of our cultural heritage and identity and as an element in the overall environment and resource management. It is a national responsibility to safeguard these resources as scientific source material and as an enduring basis for the experience of present and future generations and for their self-awareness, enjoyment and activities.

The purpose of the Act must also be taken into account in any decision taken pursuant to another act that may affect the cultural heritage resources.

According to Section 14 of the Cultural Heritage Act, the State shall have right of ownership of boats that are more than 100 years old, ships' hulls, gear, cargo and anything else that has been on board. Section 14 provides for the protection of boats that are valuable from a cultural history perspective, regardless of age.

Section 15 of the Cultural Heritage Act provides for the protection of structures and sites or parts of these that are valuable from an architectural or cultural history perspective. The protection order includes fixed inventory. The Act also provides for the protection of large pieces of movable furniture. The protection order may prohibit or otherwise regulate all measures that may counteract the purpose of the protection.

Section 19 provides for the protection of an area around a protected monument or site if this is necessary to preserve the effect of the monument in the environment or to safeguard scientific interests associated with it.

The Directorate for Cultural Heritage makes decisions pursuant to Sections 15 and 19. Before a decision is made, the owner, municipality and county authority shall give their comment on the case. The decision can be appealed to the Ministry of Climate and Environment.

Section 20 provides for the protection of a cultural environment. Following extensive consultation with owners, the municipality, the county authority and government agencies with an interest in the area, the final decision shall be made by the King in Council. Such decisions cannot be appealed.

Section 22a provides guidelines on the protection of state-owned property. It stipulates the use of a simplified procedure and requires agreement between the owner and the Directorate for Cultural Heritage. The decision cannot be appealed.

Pursuant to Section 22.4, the Directorate for Cultural Heritage and the county authority can impose a temporary protection order if a cultural heritage monument or site is threatened by demolition or extensive alteration. A permanent protection process must then be initiated immediately.

All changes of importance to the cultural history values must be considered by the conservation authority. Formal decisions are made pursuant to Section 15a. They can be appealed. The appeal case will be considered at a higher government administrative level. The Act provides long-term protection and safeguards the cultural history values.

## **Royal Decree of 15 August 2006**

The protection of state-owned cultural heritage is the responsibility of the individual state sector. Pursuant to the Royal Decree of 15 August 2006, all state owners are obliged to prepare a protection plan for their properties and to prepare good management plans for the most important of these properties. This provides good administrative protection. The most important properties will be protected pursuant to the Cultural Heritage Act.

## **Regulations relating to protected vessels**

Each state sector is responsible for environmental challenges in its own area of responsibility. In the Norwegian Maritime Authority's area of responsibility, this applies to historic and protected vessels. The main objective of the regulations is to preserve historic vessels with their original layouts and technical arrangements as far as possible. The Directorate for Cultural Heritage and the Norwegian Maritime Authority are working together to find good solutions that preserve the vessels as cultural heritage monuments and promote safety at sea. When adopted, the regulations will affect two of the World Heritage Site's significant objects: 'D/F Ammonia' and 'M/F Storegut'.



*D/F Ammonia and M/F Storegut. Photo: Alexander Ytteborg.*

## Overview of significant objects and the use of legislation

ID number	World Heritage attribute	Significant objects/parts	Type of protection
<b>Hydroelectric power</b>			
<b>1</b>	<b>Tinfos power plants</b>		
1.1		Tinfos I with Myrens Dam	The Cultural Heritage Act Section 20 (2013)
1.2		Tinfos II and the Holta Canal	The Cultural Heritage Act Section 20 (2013)
<b>2</b>	<b>Hydro's power plants in the Tinnelva river</b>		
2.1		Svælgfos lightning arrester house and workshop	General legislation
<b>3</b>	<b>Vemork Power Plant</b>		
3.1		Power station building	The Planning and Building Act of 1985 Section 20-4
3.2		Penstock	The Planning and Building Act of 1985 Section 20-4
3.3		Penstock valve house	The Planning and Building Act of 1985 Section 20-4
3.4		Skarsfos Dam I with intake gate house	General legislation / the Planning and Building Act of 1985 Section 20-4 (intake gate house)
3.5		Tunnel system with six waste rock dumps	General legislation / the Planning and Building Act of 1985 Section 20-4 (waste rock dumps)
<b>4</b>	<b>Såheim Power Plant</b>		
4.1		Power station building	The Cultural Heritage Act Sections 15 and 19
4.2		Underground turbine generator hall	General legislation
4.3		Underground penstock	General legislation
4.4		Tunnel system with seven waste rock dumps	General legislation
4.5		Workshop building	General legislation
<b>5</b>	<b>Regulating dams</b>		
5.1		Old Møsvatn Dam	General legislation

<b>ID number</b>	<b>World Heritage attribute</b>	<b>Significant objects/parts</b>	<b>Type of protection</b>
<b>6</b>	<b>Power transmission</b>		
6.1		Cable House	The Planning and Building Act of 1985 Section 20-4
6.2		Control room in Furnace House I (building no 242)	The Cultural Heritage Act Section 15 (2013)
6.3		Transformer and distribution station (building no 273)	The Cultural Heritage Act Sections 15 and 19 (2013)
6.4		Power line 16/17	The Cultural Heritage Act Section 15 (2013)
<b>Industry</b>			
<b>7</b>	<b>Hydro Industrial Park in Notodden</b>		
7.1		Furnace House A (building no 60)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.2		Tower House A (building no 70)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.3		Calcium Nitrate Plant (building 105)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.4		Packaging Factory (building no 140)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.5		Warehouse A (building no 95)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.6		Furnace House C (building no 20)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.7		Testing Plant and Electrical Workshop (building no 25)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.8		Testing Plant and Blacksmith (building no 30)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.9		Laboratory and Workshop (building no 80)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.10		Hydrogen Plant (building no 55)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.11		Nitrogen Plant and Gas Cleaning Plant (building no 115)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.12		The Minaret (building no 135)	The Cultural Heritage Act Sections 15 and 19 (2013)

<b>ID number</b>	<b>World Heritage attribute</b>	<b>Significant objects/parts</b>	<b>Type of protection</b>
7.13		Compressor and Synthesis Plant (building no 130)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.14		Nickeling Plant (building no 160)	The Cultural Heritage Act Sections 15 and 19 (2013)
7.15		Ammonia Water (ammonium hydroxide) Plant (building no 90)	The Planning and Building Act of 1985 Section 20-4
<b>8</b>	<b>Hydro Industrial Park in Rjukan</b>		
8.1		Furnace House I (building no 242)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.2		Boiler House (building no 246)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.3		Barrel Factory (building no 282)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.4		Pump House (building no 249)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.5		Laboratory (building no 248)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.6		Såheim II Hydrogen Plant	The Cultural Heritage Act Sections 15 and 19 (2014)
8.7		Nitrogen Plant (building no 226)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.8		Compressor House (building no 228)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.9		Synthesis Plant (building no 229)	The Cultural Heritage Act Sections 15 and 19 (2013)
8.10		Mechanical Workshop (building no 230)	The Cultural Heritage Act Sections 15 and 19 (2013)
<b>9</b>	<b>Production equipment</b>		
9.1		Ceramic pots	The Cultural Heritage Act Sections 15 and 19 (2013)
9.2		Electric Arc Furnace, Notodden	The Cultural Heritage Act Sections 15 and 19 (2013)
9.3		Electric Arc Furnace, Rjukan	General legislation
9.4		Acid Tower	The Cultural Heritage Act Section 15
9.5		AEG pump	The Cultural Heritage Act Section 15 (2013)

<b>ID number</b>	<b>World Heritage attribute</b>	<b>Significant objects/parts</b>	<b>Type of protection</b>
9.6		Tanks in the Hydrogen Plant (building no 55)	The Cultural Heritage Act Section 15 (2013)
9.7		Synthesis Furnace, Rjukan	The Cultural Heritage Act Section 15 (2013)
<b>Transport systems</b>			
<b>10</b>	<b>The Tinnoset Line</b>		
10.1		Railway track with signalling system and overhead line equipment	The Cultural Heritage Act Section 22a
10.2		Notodden old railway station building	The Cultural Heritage Act Sections 15 and 19
10.3		The Railway Quay/ Rjukan Quay	General legislation/ the Cultural Heritage Act Section 22a (railway tracks)
10.4		Notodden Railway Station with eight buildings	The Cultural Heritage Act Section 22a
10.5		Tinnoset Railway Station with three buildings	The Cultural Heritage Act Sections 15 and 19
<b>11</b>	<b>The Rjukan Line</b>		
11.1		Railway track with signalling system and overhead line equipment	The Cultural Heritage Act Sections 15 and 19 (2013)
11.2		Tinnoset Ferry Quay with six buildings	The Cultural Heritage Act Sections 15 and 19 (2013)
11.3		Tinnoset Slipway with winch house	The Cultural Heritage Act Sections 15 and 19 (2013)
11.4		Lighthouses along Tinnsjøen lake	The Cultural Heritage Act Sections 15 and 19 (2013)
11.5		Mæl Ferry Quay	The Cultural Heritage Act Sections 15 and 19 (2013)
11.6		Mæl Railway Station with four buildings	The Cultural Heritage Act Sections 15 and 19 (2013)
11.7		Mælsvingen 10–15 with five houses	The Planning and Building Act of 1985 Section 20-4
11.8		Ingolfsland railway station building	The Cultural Heritage Act Sections 15 and 19 (2013)
11.9		Rjukan railway station building, freight house and engine shed	The Cultural Heritage Act Sections 15 and 19 (2013)

<b>ID number</b>	<b>World Heritage attribute</b>	<b>Significant objects/parts</b>	<b>Type of protection</b>
11.10		Såheim engine shed	The Cultural Heritage Act Sections 15 and 19 (2013)
11.11		Vemork railway track	The Cultural Heritage Act Sections 15 and 19 (2013)
11.12		Rolling stock	The Cultural Heritage Act Section 15 (2013)
11.13		'D/F Ammonia'	The Cultural Heritage Act Section 14a
11.14		'M/F Storegut'	The Cultural Heritage Act Section 14a
11.15		'D/F Hydro' –shipwreck	The Cultural Heritage Act Section 14
<b>Company Town</b>			
<b>12</b>	<b>Notodden Hydro Town</b>		
12.1		Grønnbyen housing area	The Planning and Building Act of 1985 Sections 25-6 and 26
12.2		Villamoen housing area	The Planning and Building Act of 1985 Sections 25-6 and 26
12.3		The Admini (administration) building in Notodden	The Planning and Building Act of 1985 Sections 25-6 and 26
12.4		The Casino with four buildings	The Planning and Building Act of 1985 Sections 25-6 and 26. General legislation
<b>13</b>	<b>Rjukan Hydro Town</b>		
13.1		Krosso housing area	The Planning and Building Act of 1985 Sections 25-6 and 26
13.2		Krosso Aerial Cableway	The Planning and Building Act of 1985 Section 20-4
13.3		Fjøset farm building with housing	The Cultural Heritage Act Sections 15 and 19 (2014)
13.4		Villaveien-Flekkbyen housing area	The Planning and Building Act of 1985 Section 20-4
13.5		The old town centre	The Planning and Building Act of 1985 Section 20-4
13.6		The Admini (administration) building in Rjukan	The Cultural Heritage Act Sections 15 and 19
13.7		Gatehouse and fire station	The Planning and Building Act of 2009 Sections 12-6 and 12-7-6



<b>ID number</b>	<b>World Heritage attribute</b>	<b>Significant objects/parts</b>	<b>Type of protection</b>
13.8		Construction office in Hydro Industrial Park	The Planning and Building Act of 2009 Sections 12-6 and 12-7-6
13.9		Office building in Hydro Industrial Park	The Planning and Building Act of 2009 Sections 12-6 and 12-7-6
13.10		The Rjukan House (the People's House)	The Cultural Heritage Act Sections 15 and 19
13.11		Såheim private school with teacher's residence	The Planning and Building Act of 1985 Section 20-4
13.12		Rødbyen (the 'Red Town') and Tyskebyen (the 'German Town') housing areas	The Planning and Building Act of 1985 Section 20-4
13.13		Market Square	The Planning and Building Act of 1985 Sections 25-6 and 26
13.14		New Town (house type O)	The Planning and Building Act of 1985 Section 20-4
13.15		Baptist Church	The Cultural Heritage Act Section 15
13.16		Rjukan Church	General legislation
13.17		Rjukan Hospital with Chief Physician's residence	General legislation
13.18		Tveito School with five teachers' houses	General legislation / The Planning and Building Act of 1985 Section 20-4 (houses)
13.19		Tveito Park and Tveito Avenue	General legislation
13.20		Mannheimen single men's home and Paradiset housing complex	General legislation / the Planning and Building Act of 1985 Section 20-4 (Paradiset)
13.21		Sing Sing housing quadrant	The Planning and Building Act of 1985 Section 20-4
13.22		Triangelen housing complex in Ligata	The Planning and Building Act of 1985 Section 20-4
13.23		Fabrikkbrua Bridge, Birkeland Bridge and Mæland Bridge	General legislation

During the period 2014–2016, efforts will be made to obtain legal protection pursuant to the Planning and Building Act and the Cultural Heritage Act for objects that lack protection or are not adequately protected.



## Existing plans

### *Government plans*

#### **National Transport Plan**

A report has been prepared on the choice of concept for the future E 134 road. The report identifies four alternatives. One alternative proposes that the road be laid north of Notodden, crossing the World Heritage Site and the buffer zone in the area between Kloumannsjøen lake and the northernmost buildings at Skogen in Notodden. The report draws attention to the cultural environment at Tinnfoss that is to be protected and to the application for World Heritage status.

### *Regional plans*

#### **Regional plan for Hardangervidda National Park confirmed by the Ministry of Climate and Environment 16 July 2012**

The plan is relevant to the Møsvatn area. The purpose is that the area shall be preserved as a relatively unspoilt natural area. For parts of the area near Møsvatn lake, there is a wish to attract more people to the villages. Tourism and green business development are also mentioned.

#### **County road plan, adopted 21 June 2010**

The county road plan clarifies goals and strategies for the management and development of the county road network, and, through the action plan, it forms the basis for annual prioritisations during the period 2011–2014. It is based on the National Transport Plan for the period 2010–2019. The road network is divided into the categories of strategically important county roads, important county roads and other county roads, based on the criteria of connective function for business and industry, tourism and other value creation, the volume of traffic and importance for public transport. These categories form the basis for the prioritisations.

The plan identifies county road 37 to Rjukan and county road 360 to Notodden as strategically important county roads.

#### **County sub-plan for central urban functions adopted by the County Council on 9 December 2004**

The plan coordinates central structures and the location of central urban functions in Telemark. The plan is particularly important in relation to the establishment and development of businesses. The plan forms the basis for commercial development and land use in the municipalities.

#### **Regional plan for innovation and business development 2011–2024, adopted by the County Council on 15 June 2011.**

The regional plan for innovation and business development was adopted in June 2011. In the development of regional plans that apply to the whole of Telemark county, the county authority shall, as a social entrepreneur, pursue an active, coordinating role and issue guidelines in relation to goals and overall strategies. Partnership is a central aspect, and the plan encourages cooperation in the development of the commercial areas. The plan focuses on the opportunities and potential in Telemark, and how they can best be utilised to form the basis for sustainable business development.

### **Regional plan for tourism and experiences 2011–2014, adopted by the County Council on 15 June 2011**

The plan provides guidelines for the county authority's work and signals to other public and private sector parties. The objective of the plan is to increase activity in the tourism industry and ensure that Telemark gets a bigger share of a growing market. The plan emphasises sustainable development. It draws attention to the potential of Rjukan and Notodden as a World Heritage Site and the development of World Heritage tourism along the industrial axis.

### **Action programme 2013 for the regional plan for tourism and experiences**

One of the focus areas in the action plan is 'attractions in Telemark'. It includes funds for tourism projects that promote the World Heritage application. The measure applies to the period 2013–2016.

### **Strategy for culture and cultural heritage in Telemark**

Telemark County Authority is preparing a strategy that is scheduled to be ready for political consideration by the end of 2013. The plan will contain objectives and measures related to the World Heritage.

### **Long-term priority for the period 2013–2016**

The cultural heritage protection gives priority to the continuation of the UNESCO project and emphasises that the county authority must pursue a long-term strategy in order to satisfy the needs and requirements that a UNESCO status entails. The World Heritage work will be used to increase the level of knowledge and focus relating to cultural heritage in Telemark, and craftsman training will be given priority. Focus will also be given to the World Heritage Site as a tourist destination. The work on facilitating the sustainable use of cultural heritage when creating attractions will be emphasized. The World Heritage will also be used in connection with international work.

### **Long-term priorities for the period 2014–2017**

The document is scheduled for political consideration in the course of 2013. The draft plan gives priority to the continuation of the World Heritage work.

## ***Notodden Municipality***

### **Municipal master plan 'Mål for utviklingen' (Development goals) 2007–2018**

The plan is an overriding, long-term planning document that stipulates goals and guidelines for social development and uses these as a basis to conclude with a municipal strategy that sets out important guidelines for the municipality's long-term work during the period of the plan. The plan shall be revised by the end of 2015.

### **The land-use part of the municipal master plan (the whole municipality) 2004–2015**

A new version of the land-use part of the municipal master plan shall be prepared by 2015.

### **Municipal sub-plan – town centre – Heddal. 2004–2015**

This land-use plan covers the whole built-up area in the town centre up to Kloumannsjøen lake in addition to Heddal up to Nordbygda with the exception of the areas covered by the municipal sub-plans for the town centre and the Tuven area. Conservation guidelines apply to the Tinfos area with Kanalveien and Hyttebyen ('cabin town') plus the Femraden ('row of five') houses and the big Tinneby houses.

### **Municipal sub-plan – Gransherad – Tinnoset. 2004–2015**

This land-use plan covers Gransherad, Tinnoset and the area between these. Conservation guidelines apply to the Tinnoset Line.

### **Municipal sub-plan – town centre 2007–2018**

This land-use plan covers the central area from Tinneberget in the east to Kleivene in the west and north to Ramberghjørnet.

A new version of the municipal sub-plan for the town centre is being prepared. The planning programme has been adopted. A DIVE (Describe, Interpret, Valuate, Enable) analysis has been prepared based on World Heritage as the basis for further planning work.

### **Zoning plans**

Zoning plans have been prepared for several areas for the purpose of conservation. This applies to the Grønnebyen and Villamoen housing areas with the Admini building, the Casino buildings, the Tinnfoss area and the area around Tinnoset Railway Station. In the buffer zone, important Art Nouveau buildings in the town centre have been regulated for conservation.

### **Strategic tourism plan**

The planning work was initiated in cooperation with Notodden Utvikling A/S. The plan is scheduled to be completed by 2015.

### **Cultural plan 2006–2010**

The cultural plan sets out goals and guidelines for work in the cultural field. One of the goals is for the local cultural heritage to be protected and preserved, made available to the public and brought to life for people. In terms of a cultural heritage that can be experienced by people, it is important to note that the Østkanalen canal is part of the Telemark Canal, but that there is currently no boat service to Notodden. During the planning period, an assessment shall be made of whether it is realistically possible to establish a service that makes it possible to travel by boat on the Østkanalen, then onwards by train on the Tinnoset Line, by boat across Tinnsjøen lake and then onwards by train to Rjukan. The plan shall be revised by 2015.

### **Cultural heritage plan**

A decision has been made to start work on a cultural heritage plan by 2015.

### **Municipal emergency response plan**

A systematic review shall be carried out to identify the threats that the municipality may be exposed to and what measures should be implemented to address these. The plan is being prepared and is scheduled for completion by 2015.

## ***Tinn Municipality***

The municipal planning strategy addresses the goal of World Heritage status in a number of disciplines and planning material.



*The Transformation station in Tyskerbyen has been restored back to its original appearance as seen in the top photo. Before and after the restoration below.*

*Photo top: Anders Beer Wilse/  
Norsk Folkemuseum*

*Photo below left: Bjørn Iversen.  
Photo below right: Helge Songe.*

### **Municipal master plan for Tinn 2006–2018**

The plan focuses on Tinn as a centre of tourism. The plan has two strategic areas:

- 1. Business development and expertise.*
- 2. Aesthetics, culture and identity.*

The plan shall be revised in 2014.

### **The land-use part of the municipal master plan 1999, revised in 2007**

The plan covers land use in the whole municipality. The plan shall be revised in 2014/2015

### **Municipal sub-plan for Rjukan**

The existing plan from 1997 is being revised. In 2010, the municipal council adopted a planning programme for work on a new municipal sub-plan. The plan covers parts of the World Heritage Site. It is scheduled to be completed by 2015. A DIVE analysis has been prepared based on the World Heritage values as the basis for further planning work.

**Municipal sub-plan, the Vestfjorddalen valley**

The plan is being prepared. It is intended to secure values relating to the railway corridor and the port area at Mæl. The plan covers parts of the World Heritage Site.

**Municipal sub-plan for the upper part of Månassdraget (watercourse)**

The land-use plan was adopted in 2009. The area has great potential for highlighting the link between nature and culture. Parts of the plan cover the buffer zone.

**Municipal sub-plan Gausta-Rjukan**

The plan regulates the tourist destination beside Mount Gaustatoppen. A small part of the area is in the buffer zone and is visible from Rjukan.

**Zoning plan for Rjukan industrial park 2012**

The goal is for Rjukan industrial park to be a modern, attractive growth area for industry and a place where businesses can establish industry in an area important for cultural heritage.

**In general**

A number of plans regulate smaller areas for conservation pursuant to the 1985 Planning and Building Act Section 25.6.

**Strategic tourism plan**

This plan is an overriding tourism strategy for the municipality. The plan's vision is for Tinn to become Norway's most exciting year-round tourist destination. One of the subordinate goals of the strategy is for Rjukan to be inscribed on UNESCO's World Heritage List.

**Travel and tourism in the cradle of industry**

The Norwegian Hospitality Association, the Federation of Norwegian Industries, the Norwegian Association of Local and Regional Authorities and Color Line have launched a national tourism project: 'Travel and tourism in the cradle of industry' in which Rjukan, Odda, Narvik and Kirkenes have been selected as relevant destinations. The project shall examine the possibility of combining the long and traditional industrial history with tourism, by facilitating experiences in line with the experience economy.

**Cultural plan**

The plan coordinates the municipality's work in the cultural field. The most important priority area is to intensify the work of preserving Rjukan's industrial and cultural history.

**Strategic business plan**

The plan coordinates the municipality's business development work and indicates that a future World Heritage status would be positive for business and tourism development and for developing thriving communities.

**Emergency response plan**

An overriding risk and vulnerability assessment has been carried out.

## ***Vinje municipality***

Agreement between the local power plant and water falls owners' association Øst-Telemarkens Brukseierforening (ØTB) and Vinje Municipality.

The regulator of Møsvatn lake (ØTB) enters into a number of commitments to uphold settlement on the roadless farms along the lake.



*Møsvatn lake with settlement. Photo: Trond Taugbøl.*

## **Sources of finance**

### ***Ministry of Climate and Environment / Directorate for Cultural Heritage***

Every year, the Directorate for Cultural Heritage is allocated a sum for the work on the World Heritage sites. The funds are mainly used for practical restoration/repair work, but they can also be used for other measures that indirectly contribute to safeguarding the World Heritage. There are also grants for technical and industrial heritage and for vessels.

### ***Norwegian Cultural Heritage Fund***

The fund shall contribute towards the work of preserving historic and protected cultural heritage and help to ensure that a variety of cultural heritage and cultural environments can be used as the basis for future experiences, knowledge, development and value creation. The Cultural Heritage Fund's grants can be used for measures right across the cul-

tural heritage field. Private owners and voluntary organisations may apply for funds. In special cases, municipalities may apply for funds for cultural heritage that they own.

### ***Telemark County Authority***

The county authority manages regional development funds. Grants may be allocated on application to tourism enterprises businesses, restoration crafts courses, for the upkeep, adaptation and presentation of cultural heritage, and for culture-based business development. A decision has now been made to allocate funds for tourism projects that support the World Heritage application and the Telemark Canal Regional Park. Telemark County Authority also manages regional development funds for community development, business, culture and travel and tourism. It also manages various grant funds for cultural initiatives and running funds for museums.

### ***Telemark development fund***

The fund shall be an instrument for creating and supporting positive population growth and business development in all parts of Telemark county. The fund shall contribute towards ensuring that Telemark has and maintains systems and organisations that contribute to high-quality community development, culture, public health, sports, outdoor pursuits, museums, libraries, voluntary work and integration across the county.

### ***The municipalities***

In terms of the municipalities' management of their own properties, the annual operating budgets for the departments concerned are essential in determining the level of maintenance.

For private owners, Notodden Municipal Council has decided to establish a fund with pertaining guidelines from which grants can be allocated for the refurbishment and restoration of buildings worthy of conservation.

Tinn Municipality manages a grant scheme for private owners with pertaining guidelines from which grants can be allocated for the refurbishment and restoration of buildings worthy of conservation.

### ***Ministry of Culture***

Cultural policy shall, among other things, promote the conservation and presentation of cultural heritage. The Ministry of Culture manages grant funds for museums and other cultural conservation initiatives. Funds are allocated for NIA Vemork in addition to the Ministry's budget.

### ***Arts Council Norway***

The Arts Council Norway manages the Norwegian Cultural Fund. A small part of the fund's return is spent on cultural heritage conservation, documentation and presentation.

### ***Innovation Norway***

Innovation Norway contributes to innovation in business and industry, regional development and developing competitive Norwegian businesses. Innovation Norway markets Norwegian business and industry and Norway as a tourist destination. It has regional offices, and Innovation Norway in Telemark provides assistance for establishing new and developing existing businesses.

## ***Research Council of Norway***

The Research Council of Norway is a national strategic and funding agency for research activities. It is the most important research policy adviser to the Government, the ministries and other important institutions and environments associated with research and development. Funds may be granted on application for projects of importance to cultural heritage.

## ***Private foundations***

There are several not-for-profit private foundations that may allocate grants on application for cultural heritage initiatives for private institutions and individuals.

## ***International cooperation***

Through the EEA Agreement, Norway is entitled to participate in most programme areas for regional development (INTERREG) established in the EU. The Ministry of Local Government and Regional Development funds Norwegian participation through allocations for the various programme areas with 50% co-funding. Rjukan and Notodden will have the opportunity to enter into partnerships with other European World Heritage sites to exchange experiences and learn from each other. The INTERREG portfolio includes the URBACT programme, which is aimed at which targets collaborations between cities/towns and experience sharing, and the ESPON research programme. Such projects are fully financed by the EU. All these programmes will be activated and be relevant for Rjukan and Notodden. The EU's cultural programme, the education programmes and the youth programmes for informal learning will be of interest to Rjukan and Notodden. The programmes will be able to ensure that the World Heritage Site is marketed and contribute to the continuous development of the area.

## **Information and presentation**

### ***Tourism plans***

In the tourism/experience industry project in Notodden, it is important to note that Notodden should focus its efforts on three main experiences: Notodden as a Blues Town, opportunities related to UNESCO's World Heritage List and Heddal stave church. Tinn Municipality highlights the work on the World Heritage and how it is communicated.

### ***Museum exhibitions***

Notodden municipality's tourist information office is planned to be moved from the service building to the Book and Blues House that is scheduled to be completed before Christmas 2013. The World Heritage would naturally form a central part of the information provided here.

The Norwegian Industrial Workers Museum provides excellent information about the industry in Rjukan and about working culture in general. Hydro's Industrial Museum is in the Tinfos area and has been given the name Lysbuen ('the electric arc'). Emphasis will be given to the history of the technical innovations and the entrepreneurs, while labour history will be emphasised at Vemork. Parts of the museum storage will also be open to the public.

The focus for this area will be on the history of the technical innovations and the entrepreneurs, while the focus for Vemork will be on the workers' history. The museum will provide facilities enabling visitors to see parts of the archives.





*Lysbuen museum and art gallery has among other things paintings made for Hydro on display. Photo: Ingrid Lie.*

A visitor centre will be developed at Rjukan Railway Station, the aim of which will be to provide information about the World Heritage. The station is close to both the industrial area and the company town. Two nearby houses owned by the museum will be restored to represent homes from 1920 and 1960.

A conservation depot for railway stock is also planned in this area. There are plans to use the old engine shed as a building preservation centre.

The *D/F Ammonia*, which is berthed at Mæl Station, will be open to visitors. A visitor centre is planned at Mæl.

The plan is to offer trips on the Rjukan Line from Rjukan Station to Mæl and then onwards by the *M/F Storegut* to Tinnoset. Basic information will be provided at Tinnoset emphasising the history of the slip and the shipbuilding industry.

NIA Vemork is one of the plants that have been approved by the European travel and tourism network European Routes of Industrial Heritage. Five of the 90 places selected are in Norway. The museum is working on a project, the goal of which is to establish a touring route starting at NIA Vemork and extending down through Telemark, linking together industrial history attractions.

### **Information**

Information about the World Heritage application and the World Heritage Site has been posted on the websites of the Directorate for Cultural Heritage, the county authority and the municipalities. If and when World Heritage status is granted, the information will be further developed. Good brochures will be available to tourists through the tourist information offices, at the World Heritage Centre and in accommodation enterprises and cafes in the area.

### ***Signposting***

If and when World Heritage status is granted, a sign plan will be prepared and signs will be posted in the areas that will be visited by the public.

### ***Information to children and young people***

Work is under way on developing a local curriculum for Rjukan and Notodden that will cover the whole course of education from kindergarten to upper secondary education. The two upper secondary schools have together signed a declaration, which commits the schools to make use of a World Heritage status in their work. Telemark University College is involved as a partner in this work. Telemark University College is also working on putting in place doctoral degrees of relevance to the World Heritage Site, and for Rjukan and Notodden to be able to order master's theses of relevance to cultural dissemination and travel and tourism. Telemark County Authority is working on establishing guidelines for expertise in restoration.

Notodden and Rjukan are working together to develop a joint teaching programme for the Cultural Rucksack. The Cultural Rucksack is a national programme that is intended to give all school pupils in Norway the opportunity to experience, become familiar with and appreciate different forms of professional artistic and cultural expression.

### ***Local newspapers***

The local newspapers *Telen* and *Rjukan Arbeiderblad* are deeply involved in the World Heritage project and disseminate a lot of historical material. The regional newspapers *Varden* and *Telemarksavisa* are important presentation arenas. They are read throughout Telemark county.

### ***Voluntary organisations***

The Telemark branch of the Society for the Preservation of Norwegian Ancient Monuments has several members in Notodden who are actively involved in conservation work. The history group in Notodden is active. It is working to increase the involvement of volunteers by setting up a history group in Rjukan as well. Friends of the Rjukan Line are important supporters of the protection and operation of the line. Work is under way on establishing a group associated with the two ferries.

## 10. Monitoring

Knowledge about the condition of the cultural heritage and cultural environments, how they develop and causes of change are basic requirements needed for facts-based policy-making and management. Environmental monitoring produces results through the systematic, long-term collection of data and thereby helps to develop this knowledge. The Directorate for Cultural Heritage established environmental monitoring as a permanent field in 2001. Through environmental monitoring, the Directorate monitors quantitative and qualitative changes to cultural heritage and cultural environments.

### *World Heritage attributes*

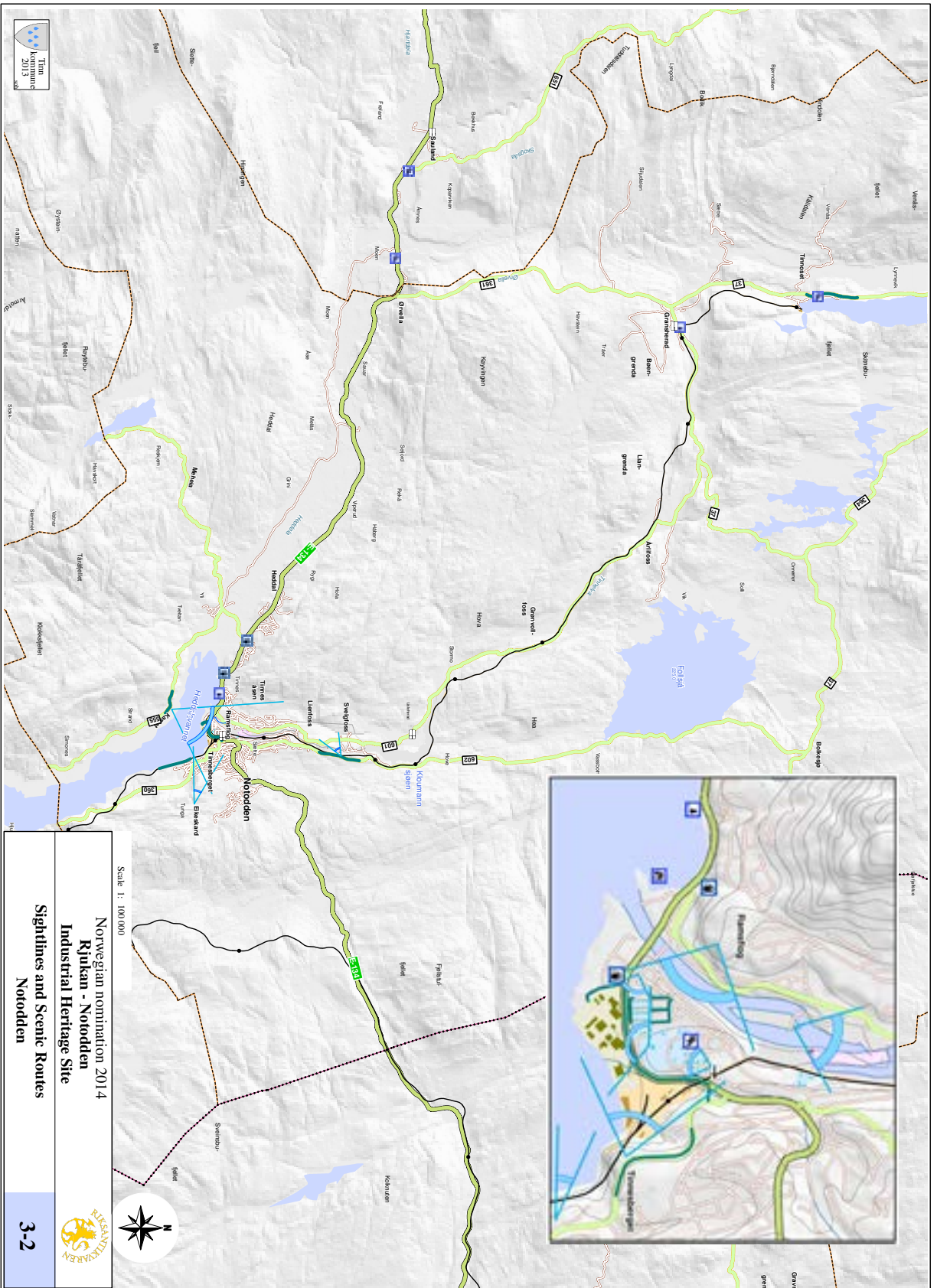
<b>Indicator</b>	<b>Period</b>	<b>Tentative method</b>
Number of significant objects with acceptable level of authenticity and integrity	Every three years + reporting Every six years	Photo documentation and professional assessment of change over time
Number of significant objects in an acceptable state of conservation	Every three years + reporting Every six years	Photo documentation and professional assessment of change over time
Number of significant objects in use	Every three years + reporting Every six years	Quantification of change over time

### *Buffer zone*

<b>Indicator</b>	<b>Period</b>	<b>Tentative method</b>
Number of key sight areas with visibility of the World Heritage Site	Reporting every six years	Assessment photos with GPS coordinates

The Directorate for Cultural Heritage, Telemark County Authority, Tinn Municipality and Notodden Municipality will decide on the division of responsibilities and where the documentation is to be stored.







## **11. Rolling revision of plan**

The management plan will serve as a guide for the World Heritage Site. Following periodic reporting to UNESCO in 2019, the World Heritage Council will review the plan in 2020.

## **12. The administrative system**

### ***Ministry of Climate and Environment***

The Ministry is the secretariat for the Minister of Climate and the Environment, and it is the most senior authority on issues concerning cultural heritage protection. The Ministry also submits proposals to the King in Council regarding the protection of areas that are important from a cultural history perspective. It is also the appeals body for resolutions adopted by the Directorate for Cultural Heritage.

### ***Ministry of Petroleum and Energy***

The Ministry's main task is to facilitate a coordinated, coherent energy policy. The Ministry is also responsible for managing Norway's water resources and has overall responsibility for preventing all types of floods and landslides/avalanches.

It also has overall responsibility for Norway's power supply. Operational responsibility has been delegated to the Norwegian Water Resources and Energy Directorate, which is the emergency preparedness authority.

### ***Ministry of Transport and Communications***

The Ministry of Transport and Communications has overall responsibility for the framework conditions for the railway sector in addition to, among other things, roads and air traffic.

The Ministry manages the following subordinate agencies: the Norwegian Public Roads Administration, the Norwegian National Rail Administration, the Civil Aviation Authority Norway, the Norwegian Railway Authority, the Norwegian Post and Telecommunications Authority, the Technical Supervisory Authority for Cableways, the Road Supervisory Authority and the Accident Investigation Board Norway. The Ministry also manages the state's ownership interests in the state-owned railway company NSB AS and Baneservice AS, among others.

### ***Ministry of Culture***

One of the main goals of the government's cultural policy is to facilitate cultural diversity. Cultural policy shall promote the protection and presentation of cultural heritage, artistic renewal, and quality and cultural diversity, nationally and internationally. The Ministry is the authority to which most museums in Norway report.

### ***Ministry of Trade and Industry***

Among other things, the Ministry has overall responsibility for the travel and tourism industry. A strategy for the travel and tourism industry was prepared in 2012. Among other things, it emphasises the Ministry's work on coordinating travel and tourism policies by establishing a coordination forum. This is in line with the work that the Ministry of Climate and Environment will give priority to in its World Heritage initiative.



### ***Ministry of Education and Research***

The Ministry of Education and Research is responsible for kindergartens, primary and lower secondary education, upper secondary education, higher education and research.

### ***Directorate for Cultural Heritage***

The Directorate for Cultural Heritage is the Ministry of Climate and Environment's advisory and executive authority for the management of cultural heritage and cultural environments. The Directorate also has an advisory function in relation to other public administrations, the general public and business and industry. In cases where the Directorate exercises authority pursuant to special legislation, it shall base its decisions on both cultural heritage-related considerations and other social considerations.

### ***Norwegian Maritime Museum***

The Norwegian Maritime Museum (Norsk Sjøfartsmuseum foundation) is a national institution, the goal of which is to increase knowledge about Norwegian shipping and activities relating to the coast, lakes and rivers. The Museum is responsible for the management of archaeological maritime cultural heritage in the ten southernmost counties in Norway. The administrative responsibility covers both the coastline and inland fresh water.

### ***Telemark County Authority***

The county authority is responsible for preserving important cultural heritage in its area. It provides advice and guidance to owners who need help to restore/repair their properties. It is also responsible for following up cultural heritage protected by the Cultural Heritage Act by providing advice, making decisions pursuant to the Act and distributing government grants. The work is carried out by a dedicated department consisting of highly skilled professionals in the area of cultural heritage administration. The county authority distributes grants to the museums. It is also a key adviser to the museums, and works closely with them.

### ***The municipalities***

The municipalities are independent, politically controlled entities at the local level. They have the chief responsibility for planning in their area. Through planning pursuant to the Planning and Building Act, they can safeguard objects requiring protection and provide good guidelines for their further management. The municipalities consider building applications and act as advisers to the owners.

### ***Owners and users***

Owners and users have a very important role in the management of the country's cultural heritage. Their understanding, efforts and initiative are very important if the cultural heritage is to be properly managed. The owners are responsible for maintaining their property pursuant to the Planning and Building Act. Public bodies like the municipalities and the Norwegian National Rail Administration are among the owners.

### ***County Governor of Telemark***

The County Governor reports to the Ministry of Local Government and Modernisation. The County Governor is the state's representative in the county and is responsible for following up decisions, goals and guidelines from the Storting and the Government. The

County Governor carries out administrative tasks and is the appeals body and supervisory authority for several ministries. Each ministry has the power to issue direct instructions to the County Governor in its field. The County Governor's areas of responsibility concerning nature management, rural and land-use planning as well as forestry and agricultural issues are important in relation to the World Heritage Site and the buffer zone.

### ***Norwegian Environment Agency***

The Norwegian Environment Agency is an advisory and executive government agency reporting to the Ministry of Climate and Environment. It will contribute expertise to the Government's national and international environmental work and will be responsible for ensuring that the Government's policy is implemented. The agency's areas of responsibility are the climate, regulation of emissions from industry, environmental toxins and waste. It is also responsible for the natural diversity of plants, animals and landscape. One important task is to combine protection and sustainable use of nature.

### ***Norwegian Railway Authority***

The Norwegian Railway Authority (NRA) was established in 1996 and it is an independent agency reporting to the Ministry of Transport and Communications. It is responsible for supervising the railway and tramway enterprises, whether public or private. Since 2012, the NRA has also been responsible for cable car supervision. The NRA administers laws and regulations for underground railways, tramways, heritage railways and sidings.

### ***Norwegian National Rail Administration***

The Norwegian National Rail Administration (NNRA) is an administrative body reporting to the Ministry of Transport and Communications. On behalf of the government, the NNRA shall operate, maintain and develop the national rail infrastructure with its associated installations and facilities. The NNRA has its own museum/cultural heritage department.

### ***Norwegian Maritime Authority***

The Norwegian Maritime Authority (NMA) is an administrative body reporting to the Ministry of Trade and Industry and the Ministry of Climate and Environment. It is the authority responsible for Norwegian-registered vessels and foreign vessels calling at Norwegian ports. The NMA's overriding goal is to achieve a high level of safety to protect life, health, the environment and material assets. The NMA's responsibility also includes traffic on lakes.

### 13. Action plan for 2014–2019

The action plan of the plan will be reviewed by the permanent World Heritage Council as soon as it has been established. The table includes actions scheduled for completion in 2025. Work on the stipulated actions will start in the period 2014–2019.

#### *Goal for conservation and strengthening of OUV*

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Dead-line</b>	<b>Funding</b>
2.1 The authenticity and integrity of the World Heritage Site shall be safeguarded and improved, and significant objects shall be in use	Prepare a specific action plan for each object in category CC 3	The owners	The World Heritage Council, the municipalities, the county authority, the Directorate for Cultural Heritage	2019	The owners, the municipalities, the county authorities, the government
	Safeguard production equipment	The owners	The World Heritage Council, the municipalities, the county authority	2019	The owners, the municipalities, the county authorities, the government
	Restore the Tinnoset Line so that it can be used in a tourism context	The Norwegian National Rail Administration	The World Heritage Council, the municipalities, the county authority	2025	The government
	Restore significant objects in the Hydro Towns in category CC 3	The owners	The municipalities, the county authority	2025	The owners, the municipalities, the county authorities, the government

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Dead-line</b>	<b>Funding</b>
2.2 The administrative bodies shall have sufficient expertise and capacity	Prepare guides for important town areas	The municipalities, the county authority, the Directorate for Cultural Heritage	The World Heritage Council, the county authority	2019	The municipalities, the county authority
	Prepare good information about proper restoration/repairs	The municipalities	The World Heritage Council, the county authority	2019	The municipalities
	Make efforts to achieve increased resources and qualified personnel required in the municipalities and county authority	The municipalities, the county authorities, the Directorate for Cultural Heritage	The World Heritage Council, the Directorate for Cultural Heritage	2025	The municipalities, the county authorities, the Directorate for Cultural Heritage
2.3 Local craftsmen shall have expertise in restoration/repair work on cultural heritage sites and monuments	Facilitate training through work and further education	The municipalities, the county authority, the Directorate for Cultural Heritage	Educational institutions	2025	The municipalities, the county authority, the Directorate for Cultural Heritage

**Goal for maintaining and strengthening preservation objectives**

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Dead-line</b>	<b>Funding</b>
3.1 Attributes and significant objects shall be adequately legally protected.	Prepare overview of the need for legal protection	The county authority	The World Heritage Council, the municipalities, the Directorate for Cultural Heritage	2019	The county authority
	Implement conservation measures	The county authority, the Directorate for Cultural Heritage	The municipalities, owners	2019	The county authority, the Directorate for Cultural Heritage
	Prepare municipal sub-plan and zoning plan with legal protection	The municipalities	The county authority	2019	The municipalities
3.2 Sightlines defined as important shall be kept open	Prepare maintenance plans for sightlines	The municipalities	The owners	2019	The municipalities
	Perform maintenance	The owners, the municipalities		Annually	Government grants

**Goal for conservation and strengthening of relevant supporting values**

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Deadline</b>	<b>Funding</b>
4.1 The supporting values shall be protected, legally if necessary, so that the original characteristics and main structure are preserved. Restoration/repairs and future development shall safeguard the historical values.	Prepare status report for relevant supporting values	The World Heritage Council	The municipalities, the county authority	2019	
	Protection of the selected cultural heritage through planning	The municipalities	The county authority	2025	
	Restore/repair the selected cultural heritage	The owners	The municipalities, the county authority	2025	The owners, the municipalities, the county authority



**Goal for competence-building and research:**

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Deadline</b>	<b>Funding</b>
5.1 The administrative bodies shall collaborate with primary schools, lower and upper secondary schools, university colleges, universities and research institutes	A knowledge-building programme has been developed for use by kindergartens and primary and lower secondary schools	The municipalities	Telemark University College	2019	
	Joint curriculum being developed for primary and lower and upper secondary schools	The county authority, the municipalities	Telemark University College, universities and research institutes	2025	
	Traditional craftsmanship training is being established in Telemark	The county authority	Telemark Technical College	2019	The county authority, the government
	Possibility of getting a building preservation centre in Telemark is being considered	The municipalities, the county authority	NIA Vemork, museums	2025	
5.2 Knowledge bases shall be developed	Information, such as drawings and photos, shall be digitised and made available to the audience	NIA Vemork	The World Heritage Council	2025	Separate budgets, the government

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Dead-line</b>	<b>Funding</b>
5.3 The administrative bodies shall collaborate with international parties	A plan has been prepared for international projects	The World Heritage Council		2025	
	Participation in international networks	The World Heritage Council	The municipalities, the county authority	2019	

## Goal for information and presentation

Goal	Action	Party responsible	Partner	Deadline	Funding
6.1 All World Heritage attributes shall be presentation arenas	Preparation of sign plan	The World Heritage Council	The Norwegian Public Roads Administration	2019	
	Big events used as presentation arenas	The organisers	The municipalities, the World Heritage Centre	2019	
	Voluntary work encouraged	The World Heritage Centre, the municipalities, the county authority,	Voluntary organisations	2025	
6.2 The World Heritage Site shall be marketed in Norway and abroad	Prepare presentation strategy	The World Heritage Centre	The municipalities	2019	
	Further develop the website for the World Heritage Site	The World Heritage Council	The municipalities, the county authority, the World Heritage Centre	2019	
6.3 The local population shall be knowledgeable about the World Heritage and the history, and be good hosts	Create opportunities for knowledge and identity building	The World Heritage Centre	The county authority, the municipalities	2019	The county authority, the municipality
	Organise hosting courses	The municipalities	The World Heritage Centre	2019	
6.4 A world Heritage Center shall be established eith active visitor and presentation arneas in both Notodden and Rjukan	Follow the presentation strategy	The World Heritage Centre	The municipalities, the county authority, the World Heritage Council	2025	Separate budgets, county authority, the government

### **Goal for visitor management**

<b>Goal</b>	<b>Action</b>	<b>Party responsible</b>	<b>Partner</b>	<b>Dead-line</b>	<b>Funding</b>
7.1 Accommodation and catering facilities shall be augmented	Adaptation of facilities	The municipalities	The business community	2025	
	Influencing commercial enterprises	The municipalities	The business community	2025	
7.2 The attributes shall be universally accessible as far as possible	Prepare universal design plan for publicly accessible attributes	The World Heritage Council	The municipalities	2019	
7.3 Easily accessible and clear, joint information shall be prepared	Prepare information that is easily accessible for visitors	The World Heritage Centre	The travel and tourism organisations, the municipality	2019	



## Annex 1 - present status of conservation

### Hydroelectric power

ID	Object	Condition	Measure
1.1	Tinfos I with Myrens Dam	CC 1	
1.2	Tinfos II and the Holta Canal	CC 1	2010: Work carried out on walls and flashings. The canal has been sealed/lined with stone/concrete and repaired.
3.1	Power station building	CC 1	
3.2	Penstock	CC 1	Vegetation clearance planned in 2013
3.3	Penstock valve house	CC 1	Roof repaired 2012
3.4	Skarsfos Dam I with intake gate house	CC 2	
3.5	Tunnel system with six waste rock dumps	CC 1	
4.1	Power station building	CC 1	Repaired 2011–2012
4.2	Underground turbine generator hall	CC 1	Phased out and closed in 2011 – climate measure
4.3	Penstock	CC 1	Phased out 2011
4.4	Workshop	CC 1	
4.5	Tunnel system with seven waste rock dumps	CC 1	
6.1	Cable House	CC 1	
6.2	Control room in Furnace House I (building no 242)	CC 1	
6.3	Transformer and distribution station (building no 273)	CC 1	
6.4	Power line 16/17	CC 1	Regular clearing of vegetation and inspection every five years.

### Industry

ID	Object	Condition class	Measures
7.1	Furnace House A (building no 60)	CC 2	
7.2	Tower House A (building no 70)	CC 2	Roof repaired 2012
7.3	Calcium Nitrate Plant (building no 105)	CC 1	
7.4	Packaging Factory (building no 140)	CC 1	
7.5	Warehouse A (building no 95)	CC 3	Repairs planned in 2013
7.6	Testing Plant and Furnace House C (building no 20)	CC 1	



ID	Object	Condition class	Measures
7.7	Testing Plant and Electrical Workshop (building no 25)	CC 1	
7.8	Testing Plant and Blacksmith (building no 30)	CC 1	
7.9	Laboratory and Workshop (building no 80)	CC 2	
7.10	Hydrogen Plant (building no 55)	CC 1	
7.11	Nitrogen Plant and Gas Cleaning Plant (building no 115)	CC 1	
7.12	The Minaret (building no 135)	CC 1	
7.13	Compressor and Synthesis Plant (building no 130)	CC 2	
7.14	Nickeling Plant (building no 160)	CC 1	
7.15	Ammonia Water (ammonium hydroxide) Plant (building no 90)	CC 2	
8.1	Furnace House I (building no 242)	CC 1	
8.2	Boiler House (building no 246)	CC 1	
8.3	Barrel Factory (building no 282)	CC 1	
8.4	Pump House (building no 249)	CC 1	
8.5	Laboratory (building no 248)	CC 1	
8.6	Såheim II Hydrogen Plant	CC 2	
8.7	Nitrogen Plant (building no 226)	CC 1	
8.8	Compressor House (building no 228)	CC 1	
8.9	Synthesis Plant (building no 229)	CC 1	
8.10	Mechanical workshop (building no 230)	CC 1	Repairs to exterior walkway planned in 2013
9.1	Ceramic pots	CC 3	Safeguarding planned in 2013
9.2	Electric Arc Furnace, Notodden	CC 3	Safeguarding planned in 2013
9.3	Electric Arc Furnace, Rjukan	CC 3	Safeguarding planned in 2013
9.4	Acid Tower	CC 1	
9.5	AEG pump	CC 1	
9.6	Tanks in the Hydrogen Plant (Building no 55)	CC 1	
9.7	Synthesis Furnace, Rjukan	CC 1	

## Transport system

ID	Object	Condition class	Measures
10.1	Railway track with signalling system and overhead line equipment	CC 3	Prepare management plan
10.2	Notodden old railway station building	CC 1	
10.3	The Railway Quay/Rjukan Quay	CC 1	
10.4	Notodden Railway Station with eight buildings	CC 1	Repairs and reconstruction following floods in 2011–2012
10.5	Tinnoset Railway Station with three buildings	CC 1	Buildings repaired 2012
11.1	Railway track with signalling system and overhead line equipment	CC 1	Separate action and maintenance plan
11.2	Tinnoset Ferry Quay with six buildings	CC 2	Separate action plan for major measures the coming year.
11.3	Slipway with winch house	CC 1	A number of measures to make the slipway ready for operation implemented in 2012.
11.4	Lighthouses	CC 2	
11.5	Mæl Ferry Quay	CC 1	Separate action plan for major measures the coming year.
11.6	Mæl Railway Station with four buildings	CC 1	
11.7	Mælsvingen 10–15	CC 1	
11.8	Ingolfslund railway station building	CC 2	
11.9	Rjukan railway station building, freight house and engine shed	CC 3	
11.10	Såheim engine shed	CC 1	
11.11	Vemork railway track	CC 1	Upgraded 2012
11.12	Rolling stock	CC 2	Maintenance and action plan to be prepared
11.13	'D/F Ammonia'	CC 1	
11.14	'M/F Storegut'	CC 2	Certification measures implemented 2011–2012
11.15	'D/F Hydro' – shipwreck	CC 1	

## Company Town

ID	Object	Condition class	Measures
12.1	Grønnebyen (the 'Green Town') housing area	CC 1	
12.2	Villamoen housing area	CC 1	
12.3	The Admini (administration) building in Notodden	CC 1	Fire-protection installed in 2010
12.4	The Casino with four buildings	CC 2	
13.1	Krosso housing area	CC 1	
13.2	Krosso Aerial Cableway	CC 1	
13.3	Fjøset farm building with housing	CC 3	
13.4	Villaveien-Flekkebyen housing area	CC 1	
13.5	The old town centre	CC 1	
13.6	The Admini (administration) building in Rjukan	CC 1	
13.7	Gatehouse and fire station	CC 1	
13.8	Construction building in Hydro Industrial Park	CC 1	
13.9	Office building in Hydro Industrial Park	CC 1	
13.10	The Rjukan House (the People's House)	CC 1	Repaired and restored 2012
13.11	Såheim private school with teacher's residence	CC 2	Repaired 2012–2013
13.12	Rødebyen (the 'Red Town') and Tyskerbyen (the 'German Town') housing areas	CC 1	
13.13	The Market Square	CC 1	
13.14	New Town (house type O)	CC 1	
13.15	Baptist Church	CC 1	
13.16	Rjukan Church	CC 1	
13.17	Rjukan Hospital with Chief Physician's residence	CC 1	
13.18	Tveito School with five teachers' houses	CC 1	
13.19	Tveito Park and Tveito Avenue	CC 1	
13.20	Mannheimen single men's home and Paradiset housing complex	CC 2	
13.21	Sing Sing housing quadrant	CC 2	Repairs/restoration under planning
13.22	Triangelen housing complex in Ligata	CC 1	
13.23	Fabrikkbrua Bridge, Birkeland Bridge and Mæland Bridge	CC 2	

## Annex 2 - Declaration of intent

### Declaration of intent

The Rjukan and Notodden area is an example of the ground-breaking industrial development that took place at the beginning of the 20th century during what is known as 'the second industrial revolution'. At a time when ways of transmitting electric power over great distances were limited, manufacturing facilities and local communities were set up near the waterfalls and thereby the source of electricity. Building what was then one of the world's largest power stations in a remote valley under Europe's biggest mountain plateau was an achievement in itself. Artificial fertilizer was in demand worldwide. Kristian Birkeland's invention of the electric arc method for producing artificial fertilizer, combined with Sam Eyde's entrepreneurial skills and foreign capital, formed the basis for the company Norsk Hydro and the two industrial towns Notodden and Rjukan. The whole ensemble of power stations, factories, transport systems and a complete company town was created under the organisational framework of a single company. Rjukan – Notodden is a prominent manifestation of how innovation, capital and creative power shaped a fundamental new reality in the early 20th century.

**Should the industrial communities of Rjukan and Notodden be inscribed on the World Heritage List, Norway guarantees that the future management of the sites will preserve the cultural heritage values.**

Notodden Municipality, Tinn Municipality, Vinje Municipality, Telemark County Authority, the Directorate for Cultural Heritage and the Ministry of the Environment have agreed on the points listed below:

The aim of nominating the industrial towns of Rjukan and Notodden for World Heritage status is to preserve cultural heritage and landscapes that show why the industrial towns were established here and how the area functioned and continued to develop.

- The historical character and quality shall be a resource and form part of the basis and driving force for developing both business and industry and society as well as cultural life and good living conditions
- The industrial town shall be preserved as a living community without diminishing the values of its cultural history.
- The cultural environments shall be protected to ensure that the World Heritage values are not negatively affected by change.
- The industrial heritage shall be managed in accordance with national legislation. Norway's aim is for the World Heritage sites to be perceived as examples of best practice for the protection of cultural heritage and cultural environments, and contribute to promoting the World Heritage Convention.

### Working together

We all have a responsibility for ensuring that the World Heritage sites are preserved and protected. We are also responsible for facilitating the development of business and industry without reducing the overriding cultural heritage values.

In order to be able to work together, it is essential for all those with interests in the area to share this understanding.

A World Heritage Council shall be established that comprises all areas of the administration. The collaborative council shall promote quality in all stages of administrative processing concerning the World Heritage Site and its outstanding universal values, and ensure that all cases are processed in a standardised, predictable and transparent manner. The collaborative council shall take the initiative to develop and highlight the World Heritage status to the benefit of the entire area and buffer zone.

This declaration has been accepted at all political levels and incorporated by the relevant parties. It will form the basis for all further management of the important cultural heritage values in the area.



Jon Holme  
Director General  
Directorate for Cultural Heritage



Terje Riis-Johansen  
County Mayor  
Telemark



Steinar Bergslund  
Mayor of Tinn Municipality



Jon Cristensen  
Mayor of Notodden Municipality



Arne Vinje  
Mayor of Vinje Municipality

