



Management of historic bridges in Finland

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Background of the collection

Finnish Road Administration's heritage activities date back to the 1930's

- The early phases of museum roads and bridges and the Roads Museum are interconnected
- The agenda for the Roads Museum was approved in 1979; at the same time began also the mapping of potential museum road and bridge sites

The majority of the museum site collection was formed in 1982

The collection was increased by individual roads and bridges during 1983-98

This work was directed by the Museum Committee

- Road districts were provided with integrated instructions for the signs and maintenance of the sites
- Historic data of the sites were collected and the sites were photographed

Museum bridges

| Name | Bridge type | Number of spans | Main span [m] | Total length | Year of completion |
|--------------------|----------------------------|-----------------|---------------|--------------|--------------------|
| Espoo Manor Bridge | Stone arch | 1 | 2,7 | 17,2 | 1777 |
| Toby Bridge | Stone arch | 3 | 8,0 | 93,0 | 1781 |
| Etelankyla Bridge | Timber strut frame | 4 | 19,9 | 77,5 | 1837 |
| Narpes Bridge | Stone arch | 3 | 9,5 | 68,2 | 1842 |
| Muntti Bridge | Stone arch | 1 | 2,0 | 23,6 | 1850 |
| Leineberg Bridge | Stone arch | 3 | 3,9 | 32,5 | 1860 |
| Halikko Bridge | Timber strut frame | 1 | 27,8 | 75,0 | 1864 |
| Koria Bridge | Steel truss | 3 | 63,8 | 118,7 | 1870 |
| Lapijoki Bridge | Stone arch | 3 | 5,2 | 47,0 | 1883 |
| Lankoski Bridge | Stone arch | 3 | 8,3 | 28,3 | 1892 |
| Stromma Bridge | Steel swing Bridge | 1 | 20,0 | 51,5 | 1897 |
| Pattijoki Bridge | Stone arch | 1 | 6,0 | 10,5 | 1897 |
| Harrstrom Bridge | Stone arch | 3 | 4,0 | 26,4 | 1898 |
| Aunessilta Bridge | Stone arch | 1 | 19,0 | 46,7 | 1899 |
| Viheri Bridge | Timber strut frame | 2 | 8,8 | 29,5 | 1900 |
| Salmi Bridge | Stone arch | 2 | 8,4 | 57,6 | 1904 |
| Enonkoski Bridge | Stone arch | 1 | 3,2 | 21,0 | 1904 |
| Perttila Bridge | Suspension bridge | 1 | 81,5 | 108,5 | 1909 |
| Tonno Bridge | Concrete arch | 5 | 23,5 | 37,1 | 1911 |
| Savisilta Bridge | Concrete cantilever girder | 5 | 19,8 | 96,2 | 1912 |
| Alvettula Bridge | Concrete arch | 2 | 29,7 | 71,5 | 1916 |

Museum bridges

| Name | Bridge type | Number of spans | Main span [m] | Total length [m] | Year of completion |
|----------------------|-----------------------------|-----------------|---------------|------------------|--------------------|
| Tulkkila Bridge | Concrete arch | 3 | 25,9 | 90,6 | 1918 |
| Mierola Bridge | Concrete arch | 3 | 30,6 | 88,6 | 1920 |
| Mattila Bridge | Concrete girder | 3 | 22,5 | 72,3 | 1921 |
| Heinajoki Bridge | Stone arch | 2 | 13,0 | 41,3 | 1924 |
| Moykkysenjoki Bridge | Stone arch | 1 | 6,0 | 13,9 | 1925 |
| Matarapuro Bridge | Stone arch | 1 | 6,0 | 13,8 | 1925 |
| Saarenputaa Bridge | Concrete arch | 1 | 10,5 | 16,0 | 1925 |
| Mannikko Bridge | Concrete cantilever girder | 3 | 16,0 | 27,9 | 1926 |
| Savukoski Bridge | Concrete arch | 1 | 50,0 | 60,0 | 1927 |
| Haarajoki Bridge | Concrete cantilever girder | 3 | 18,0 | 31,0 | 1927 |
| Sulasalmi Bridge | Steel girder | 1 | 9,0 | 17,6 | 1931 |
| Ponkila Bridge | Suspension steel bridge | 1 | 60,0 | 71,0 | 1931 |
| Tonkopuro Bridge | Stone arch | 1 | 4,0 | 10,2 | 1935 |
| Tervasalmi Bridge | Concrete arch | 1 | 20,3 | 33,0 | 1935 |
| Virransalmi Bridge | Steel truss | 1 | 35,0 | 44,1 | 1937 |
| Kaivosoja Bridge | Stone arch | 1 | 3,5 | 11,0 | 1937 |
| Ahdaskuru Bridge | Stone arch | 1 | 2,5 | 7,5 | 1943 |
| Varnes Bridge | Timber girder | 82 | 2,6 | 139,2 | 1948 |
| Mullinkoski Bridge | Prestressed concrete girder | 1 | 19,0 | 26,4 | 1950 |
| Keskikoski Bridge | Steel arch | 3 | 51,0 | 78,5 | 1954 |
| Markkula Bridge | Timber king-post truss | 1 | 8,0 | 16,2 | 1959 |
| Myllysilta Bridge | Timber strut frame | 4 | 15,9 | 50,8 | 1966 |

Museum bridges



**Tuovila (Toby) stone arch
bridge (1781)**



**Etelänkylä wooden bridge
(A-frame supporting
horizontal beam, 1837)**

Museum bridges



Koria steel truss bridge (1870), originally railway bridge



Tönnö concrete arch bridge (1911), oldest concrete bridge

Museum bridges



**Virransalmi truss bridge
(1937), use of type
drawings**



**Savukoski bridge, single
span concrete arch bridge
(1927)**



Background for the clarification report

Situation of the collection and the related material prior to the report

- An overall image of the extent of the collection was missing
- An overall image of the current status of the sites and threats of alterations was missing
- Dispersion of material and data
- Inconsistence and defects of historic information and documentation

Need for clarification

- The collection and the related material must be coherently managed and long-term development of the collection initiated

Objectives and tasks of the project

Objectives

- To draft a basic report of the current status, history, significance, level of originality and prerequisites for long-term preservation of the Finnish Road Administration's 59 museum sites
- To ensure that the documentation related to the sites is saved

Tasks

- Collecting initial information
- Collecting additional information from the municipalities and the heritage contact persons of the road districts
- Performing field work
- Drafting a policy for the collection
- Analysis of the material, value classification of the sites, definition of the categories for saving, design of site cards, and reporting



Information level of the collection

The information values of the museum sites indicate clear defects.

- Only a little information is available of seven sites.
- Sufficient, scientific research has been performed on 14 sites

Only a few saved historic documents

- Documents, drawings, photographs etc. only exist for 29 sites

Saving of documents related to establishing museum sites has been inconsistent, e.g. documentation related to decision-making processes is missing

Extent of the collection

Roads

- The early phases of almost all saved roads date back to the Middle Ages or the period from the 16th to the 19th century; the newest one was completed in the 1910

Bridges

- The collection consists of stone, wooden, steel and concrete bridges (1780-1966)
- Half of the museum bridges were completed during the first three decades of the 20th century
- All bridges are waterway bridges

Missing from the collection

- Later roads and bridges from the periods of the war and the reconstruction period
- Roads constructed as projects supporting employment
- The construction of the modern road network



Prerequisites for preserving the collection

The majority of the sites has good prerequisites for being preserved

Visible threats are only present in a few sites

These threats are mainly related to expanding habitation, increasing traffic and the condition of the site



The condition level of the collection

Almost all sites are well preserved.

Some museum roads have been paved partially or completely; the same applies for bridges.

Some sites have lighting.

→ As a rule, the museum sites and their environment have been well taken care of.



The evaluation tool used was the collection policy for museum roads and bridges

The sites were classified by value

- Data value
- Value in terms of road traffic history
- Preservation value

After classification, the saving categories for the sites were defined

- Museum sites to be preserved permanently
- Sites to be preserved for a fixed term
- Sites to undergo selection procedure

Proposals for action were determined on the basis of the saving categories

Problems and areas for development detected in the course of the clarification

Increasing the data value of the sites

- There is not sufficiently data of all sites. By means of historic and additional clarifications, the evaluation of the sites can be completed and the decision on the final collection to be preserved can be made

Promoting the availability and updating of data

- Transfer of the data to an Internet browser-based collection management system

Improving the extent of the collection

- The focus in preservation has been from the Middle Ages to the early decades of the 20th century. The collection lacks examples from WWII to present day

Problems and areas for development detected in the course of the clarification

Improving the accessibility of the sites

- The collection is a decentralized outdoor exhibition, and its should be easily accessible to the visitors
- There is only a little information on the sites directed to tourists
- In the future, dissemination of information should be developed and promoted, and road signs and guidance should be modernised

Planning and implementing a long-term development programme

- Long-term development, expansion and preservation the collection
- Other related tasks and co-operation

Objective: a well administered collection of historic bridges

2007

- Historic and additional clarifications for sites to be preserved for a fixed term
- Strengthening the policy for the collection

2008

- Historic and additional clarifications for sites to be preserved for a fixed term and the final definition of the collection to be preserved
- Planning of the development programme
- Transferring the collection data of the museum sites to an Internet browser-based collection management system (currently site cards)

2009

- Start-up of the implementation of the development programme

2010

- Implementation of the Internet exhibition of museum roads and bridges and other measures for improving the accessibility of the sites