Liikennevirasto

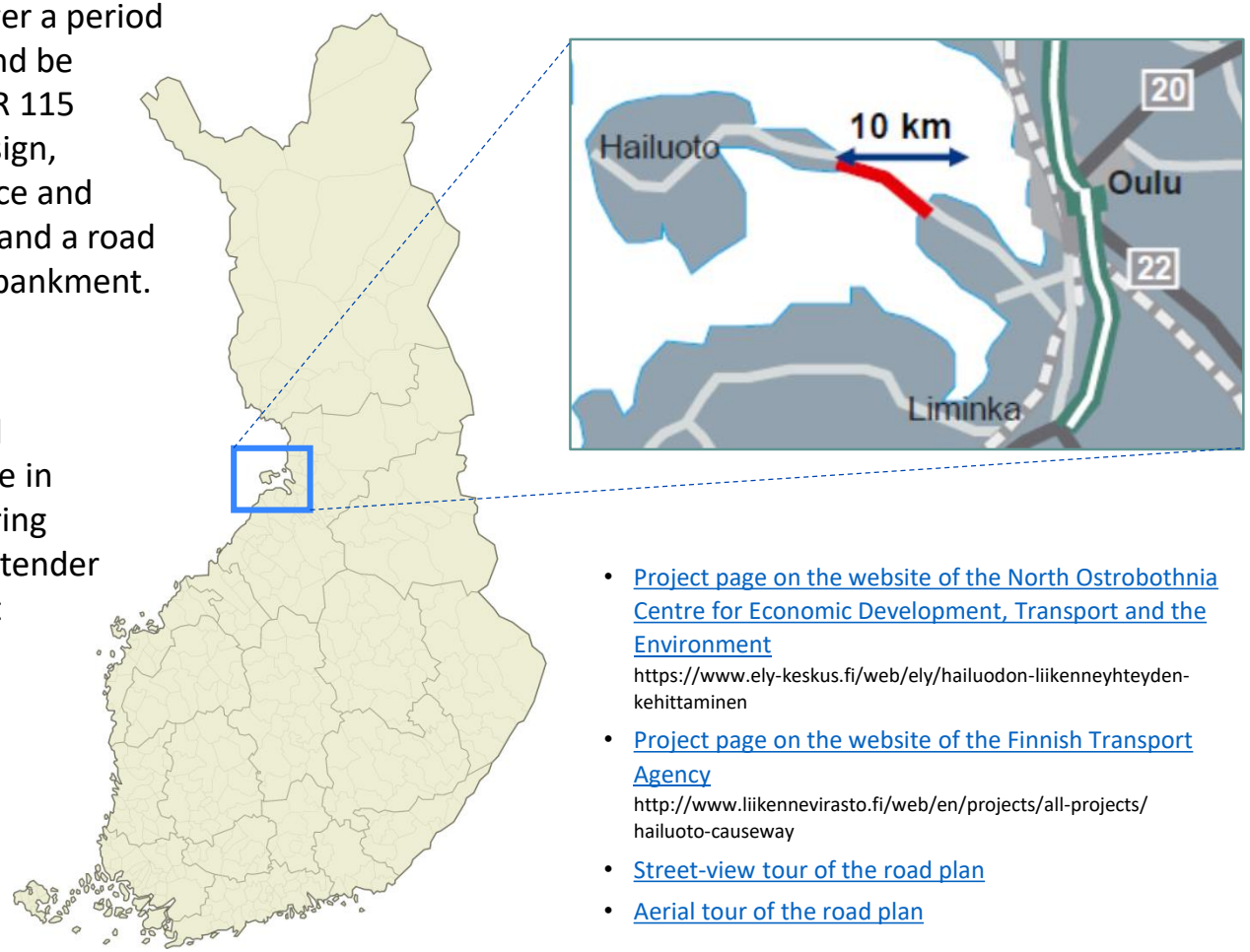
Hailuoto Causeway

Market information concerning
an upcoming PPP project

Summary

Thanks to Finland's good credit rating and previous PPP successes, the Finnish Transport Agency has been authorised to build a causeway between Hailuoto Island and the mainland using the PPP model.

The PPP contract will cover a period of a couple of decades and be worth approximately EUR 115 million, including the design, construction, maintenance and financing of two bridges and a road running on top of an embankment.



The Finnish Transport Agency is seeking to engage Finnish and international contractors, investors and financiers in a dialogue in preparation of the PPP project. Invitations will be sent out during the autumn of 2018. The PPP contract itself will be put out to tender once all the necessary permits have been obtained, in 2019 at the earliest.

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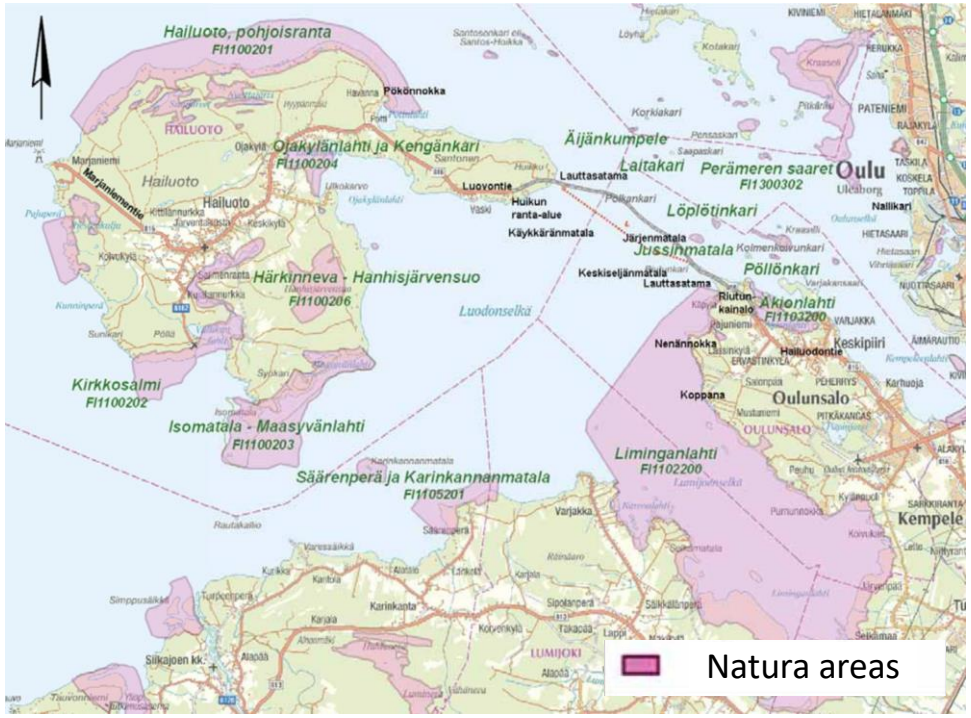
- Project page on the website of the North Ostrobothnia Centre for Economic Development, Transport and the Environment
  https://www.ely-keskus.fi/web/ely/hailuodon-liikenneyhteyden-kehittaminen
- Project page on the website of the Finnish Transport Agency
  http://www.liikennevirasto.fi/web/en/projects/all-projects/hailuoto-causeway
- Street-view tour of the road plan
- Aerial tour of the road plan

The Hailuoto Causeway Project

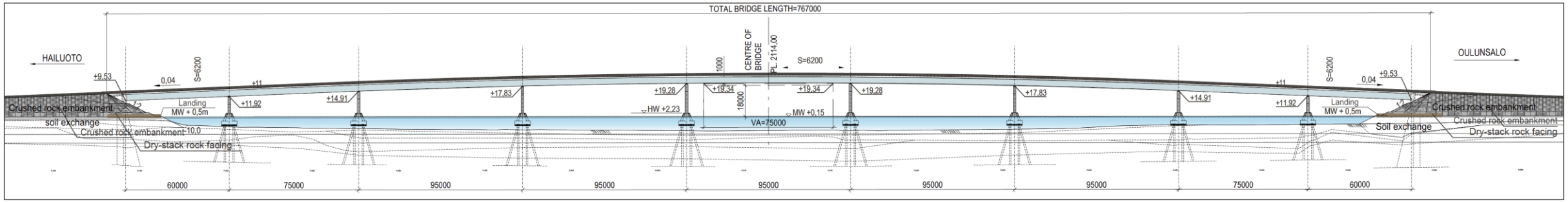
Starting point and end result

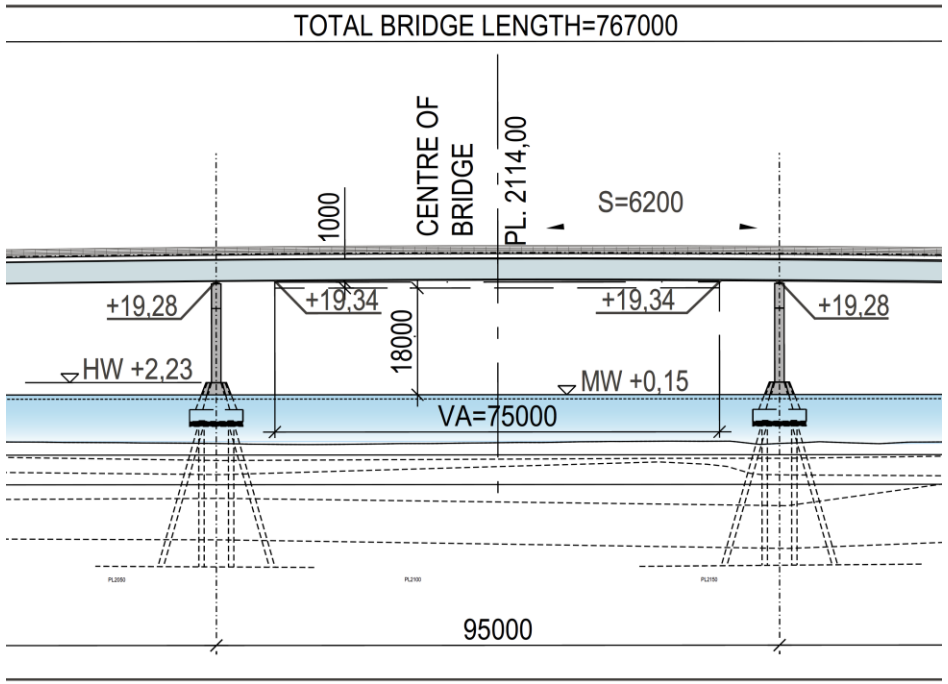


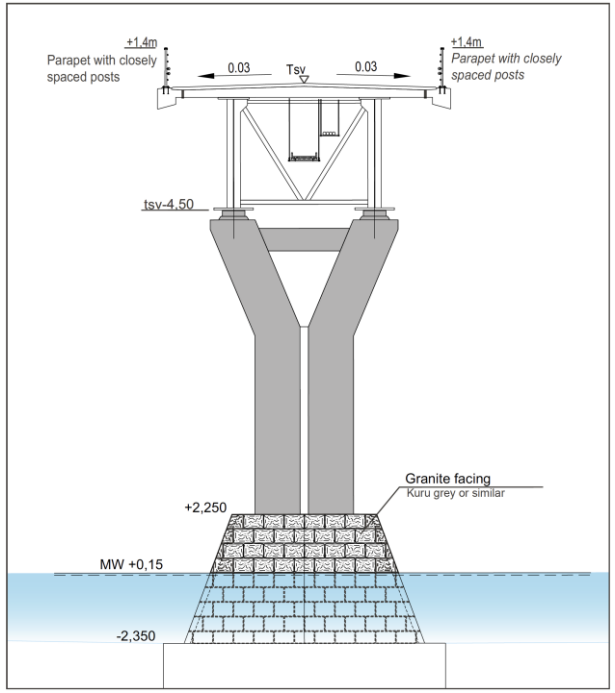
The aim is to provide safe and efficient transport links between Hailuoto Island and the mainland, shorten travel times, improve the operating conditions of local businesses and increase land use on Hailuoto Island.

Hailuoto Island is currently not accessible by road. The present seven-kilometre ferry service is unable to meet the demand and service level targets.

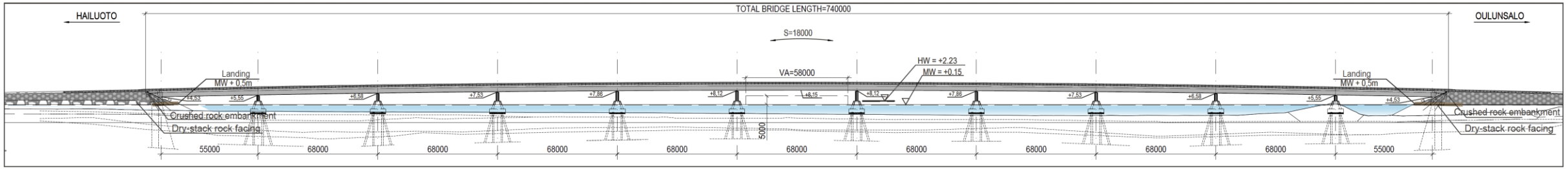
S1 Huikku bridge – road plan design

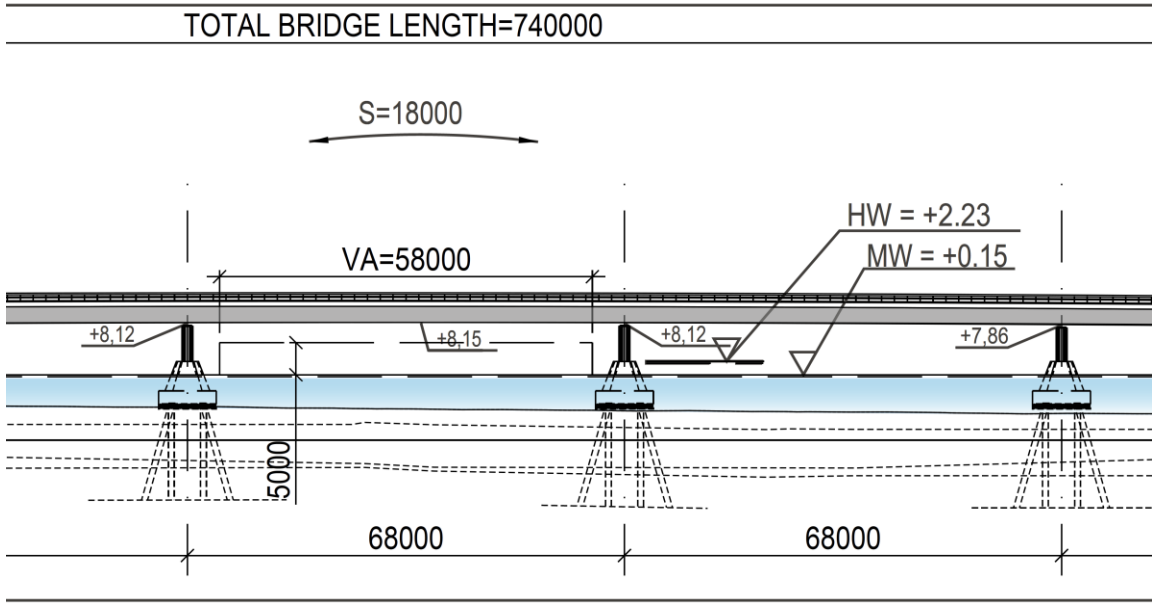


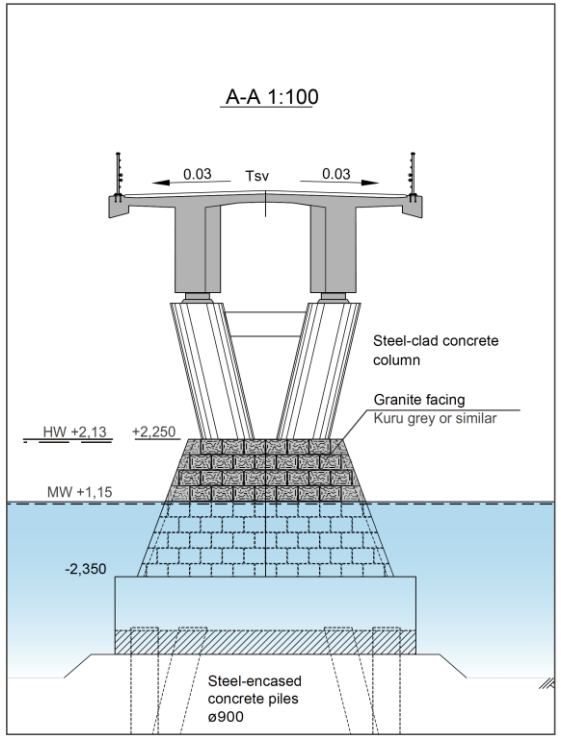




S2 Riutunkari bridge – road plan design







Causeway design

There will be parking and an artificial island along the causeway.

There will be no traditional street lighting, noise barriers or bus stops along the causeway.

The geometric design of the road will enable speeds of up to 80 km/h.

Approximately one million cubic metres of rock will be required.

Road users will be given warnings of dangerous road conditions by means of telematics.

The total length of the causeway will be 8.4 km.

- 6.9 km of road running on top of an embankment
- Two bridges measuring 1.5 km in total

The road environment will be natural and minimalistic, ecologically sustainable and economical to build and maintain. The road's cross section will include a wide hard shoulder for pedestrians and cyclists.

The cost estimate for the implementation of the road plan is approximately EUR 74 million at 2018 prices.

Cross section

The surface of the road will be approximately 3.5 metres above mean sea level.

Cross section type 9/6.5 m

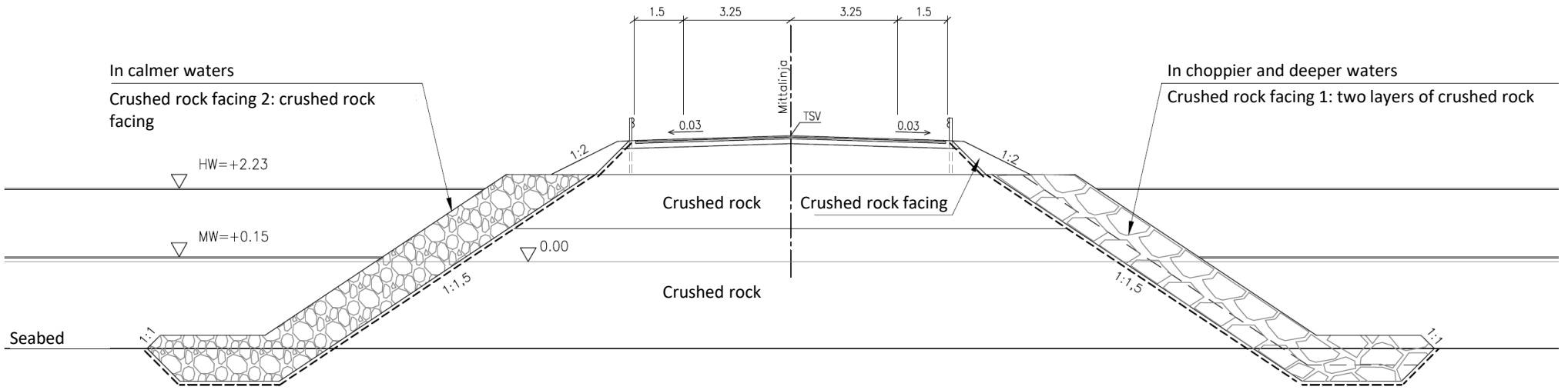
The carriageways will be 3.25 m + 3.25 m wide.

The total width of the embankment will be 10.5 m.

There will be a 1.25-metre hard shoulder for pedestrians and cyclists on both sides of the road.

Structure of the causeway according to the road plan

ROAD EMBANKMENT, SCHEMATIC CROSS SECTION



Environmental impacts 1/2

- Direct impacts on the sea and its immediate surroundings will be minor. The project will change the environment locally but will not cause any notable harm to protected species or habitats. Protecting the environment will be one of the most important objectives of risk management during the project.
- The general design of the Hailuoto Causeway and the component master plan for the affected sea area are based on a Natura 2000 assessment. According to the assessment report, the causeway can be built provided that the mitigation measures outlined in the impact assessment report are implemented.
- Measures for mitigating changes in ice erosion rates, such as keeping the channel open as well as mechanical clearing and earthworks, will be discussed and implemented in consultation with the service provider.

Environmental impacts 2/2

- The project will change the appearance of the area both in the immediate vicinity of the causeway and as seen from afar. The current open sea vista and the nature of the area will be permanently altered. An effort will be made to minimise the impacts of the causeway on scenery.
- Any obligations relating to permits will be discussed in the course of the negotiations, and procedures for ensuring compliance with them and the division of responsibilities will be agreed between the parties (contractor and service provider).

Planning process

Decision of the Parliament of Finland of 20 December 2017:

"**The Finnish Transport Agency is hereby authorised to put the construction of a causeway between Hailuoto Island and the mainland out to tender** so that the maximum cost to the State will be EUR 116,900,000.

The aim of the project is to provide safe and efficient transport links between Hailuoto Island and the mainland, shorten travel times, improve the operating conditions of local businesses and increase land use on Hailuoto Island.

The project involves replacing the current ferry service between Hailuoto Island and the mainland with a road running on top of an embankment and two bridges. The project is to be implemented according to the life cycle model and consist of planning, execution and funding as well as maintenance and repairs during the contract period. The total cost of the project must not exceed EUR 116.9 million (cost index of civil engineering works 2010:130). Based on the preliminary engineering plan, the project's benefit-cost ratio will be approximately 1.9. According to the plans, the contract period, including construction and maintenance, will be 20 years in total, and the project is estimated to cost EUR 116.9 million. The project's capital cost will be EUR 76 million (cost index of civil engineering works 2010:130). The project can begin between 2018 and 2020."

Administrative process

- The component master plan for the affected sea area and the preliminary engineering plan are legally enforceable.
- The road plan is being reviewed at the moment, and its adoption is expected in early 2019.
- The water management permit application is being reviewed, and the Regional State Administrative Agency's decision is expected in early 2019.
- The contractor is seeking derogations in respect of species protected under the Habitats Directive and the Birds Directive (Baltic water-plantain and black-headed gulls) pursuant to the Finnish Nature Conservation Act. A decision regarding the Baltic water-plantain has already been made. A decision concerning black-headed gulls is expected towards the end of 2018.

- The permits are expected to be subject to conditions.
- The permits can be appealed against. Objections are likely to take approximately one year per court to process.

- **For risk management reasons, the contract cannot be put out to tender until legally enforceable permits and a road plan are in place.**

Surveys conducted during road planning 1/2

Nature and vegetation surveys concerning the following species, among others:

- Moor frogs
- Beetles
- Macroplea pubipennis
- Vegetation: Siberian primrose, Baltic water-plantain, four-leaf mare's tail
- Birds
- Butterflies and moths
- Benthic communities

Geological surveys and sediment samples

Fish and fishery surveys

Flow and water quality modelling (baseline / final status, scenarios during the project)

Shipwreck surveys

Surveys conducted during road planning 2/2

Previous surveys

- Survey of the Hailuoto Island ferry's noise emissions, 1 July 2009
- Spring migration survey, 2009
- Survey of breeding bird species, 2009
- Autumn migration survey, 2009
- Survey of breeding bird species in Ojakylänlahti, Hailuoto Island's north coast and Akionlahti, 2009
- Survey of whitefish spawning grounds in the area affected by the proposed Oulunsalo–Hailuoto causeway, 2009
- Survey of benthic communities, 2009
- Vegetation survey, 2009
- Seal survey, 2009
- Coastal and islet erosion survey, 2009
- Survey of underwater habitats, 2009
- Social impacts survey based on interviews, 15 September 2009
- Modelling of impacts on water quality and flow (final report), 27 November 2009
- Analysis of PCB, TBT and TPhT levels in seabed sediments and water samples (report), 16 December 2009
- Soil stability survey for the Oulunsalo-Hailuoto offshore wind farm, 29 April 2009
- Assessment of the impact of the component master plan on nature and scenery in the affected sea area, 24 September 2009
- Sediment and water analyses, 17 February 2010
- Assessment of the impact of Hailuoto Island's transport links on Natura 2000 sites, 2010
- Supplementary ice erosion survey, 2011
- Assessment of the impact of the Oulunsalo-Hailuoto offshore wind farm and the causeway on nature, 22 December 2011
- Supplementary Natura 2000 assessment, 20 December 2011
- Follow-up survey of ice erosion around Hailuoto Island, 2013
- Analysis of measures to mitigate the impact of the Hailuoto Causeway project on Natura 2000 sites, October 2013
- Assessment of impacts on species listed in Annexes IV (a) and (b) of the Habitats Directive, 29 October 2014

Https://www.ely-keskus.fi/web/ely/ely-pohjoispohjanmaa-tiehankkeet
http://paikkatieto.airix.fi/tietopankki/hailuoto/

Contractor's current mitigation responsibilities

Mitigation measure	Frequency	Objective and significance
Keeping the ferry channel open in the winter	• Every year after the discontinuation of the ferry service • Freezing will be monitored by means of ice thickness measurements. When ice thickness exceeds 15 cm, a channel approximately 100 m wide will be opened along the route of the current ferry service using a suitable vessel. • Ice thickness will be monitored. Whenever ice thickness increases by another 5 cm, the channel will be reopened. This will be repeated until the ice has reached a thickness of 30 cm, at which point it will have become sufficiently anchored to the shore/seabed to not shift even in gale-force winds.	Keeping the ferry channel open during periods when ice is shifting will prevent changes in the mechanical erosion of the shores compared to the current situation (ferry service).
Mowing and livestock grazing, mechanical destruction of vegetation	At three-to-five-year intervals if surveys show signs of declining ice erosion rates	These measures will compensate for the loss of ice overthrust and help to preserve (and reinvigorate) the area's open coastal meadows and plant colonies as well as prevent overgrowth.
Mechanical soil loosening (creating patches of bare soil, moving rocks)	At five-year intervals if surveys show signs of declining ice erosion rates	These measures will compensate for the loss of ice overthrust by creating the kinds of bare patches suitable for new life that ice overthrust would otherwise produce.

Most notable obligations and limitations

An effort will be made to minimise the impact of the construction works on the black-headed gull colony on the Riutunkari breakwater by timing the dredging of the embankment for the Riutunkari Bridge and the construction of the access embankment so as to not coincide with the nesting season of black-headed gulls (30 April – 30 June). A wall will be built to protect the colony after the construction of the access embankment.

The contractor's obligations will be defined in more detail in the course of the water management permit process. Any obligations and limitations relating to permits will be discussed in the course of the negotiations, and procedures for ensuring compliance with them and the division of responsibilities will be agreed between the parties (contractor and service provider). The monitoring programme outlined in the water management permit application will be discussed on the next page.

Monitoring programme (as outlined in the water management permit application)

Marine environment
- Water quality
- Benthic communities

Fish and fishing
- Juvenile whitefish seining surveys off the coasts of Riutunkari and Huikku
- Juvenile Baltic herring seining surveys by the central embankment and around the shallow rocky areas of Kummitus, Polkankari and Järjenmatala
- Fishing surveys (inconvenience caused by turbidity during the construction works, loss of fishing grounds, lengthening of fishing trips, changes in the distribution of catch species, catch losses, changes in whitefish and salmon migrations, and emergence of new fishing grounds)

Ice erosion monitoring by means of aerial photography and on-the-ground surveys

Coastal plant colonies, reed bed spread, overgrowth and surveys of unvegetated areas, including any parts of the Natura 2000 sites affected by the project

Species-specific surveys (including in any parts of the Natura 2000 sites affected by the project)
- Macroplea pubipennis
- Baltic water-plantain
- Four-leaf mare's tail
- Black-headed gulls
- Elachista vonschantzi
- Breeding birds

Procurement process

– provisional schedule, procedure, contract award and funding

Provisional schedule

The PPP contract itself will be put out to tender once all the necessary permits have been obtained, in 2019 at the earliest.

Schedule option 1 (= assuming that all permits and decisions are legally enforceable by the spring of 2019):

- The contract is put out to tender in the spring of 2019.
- Construction can begin towards the end of 2020.

Schedule option 2 (= assuming that objections take approximately one year per court to process, i.e. approximately two years in total):

- The contract is put out to tender in the spring of 2021.
- Construction can begin towards the end of 2022.

Phases of the PPP procurement process

The procurement process will be preceded by a market dialogue with potential bidders. A separate notice of this will be published at a later date. The contractor's aim is for steps 1–7 of the procurement process to not take longer than 12 months in total.

1. Electronic release of the procurement notice and a provisional invitation to tender
2. Requests to participate and shortlisting of bidders
3. Requests for provisional bids on which negotiations can be based
   - Requests for development ideas / suggestions from bidders to form a basis for the negotiations
4. Rounds of negotiations based on the provisional bids
5. Final invitation to tender
6. Final bids
7. Selection of the preferred bidder
8. Negotiations with the preferred bidder; finalisation of the contract between the parties
9. Financial close and signing of the contract

Differences compared to previous PPP procurement procedures

The contract will be awarded on the basis of a negotiated procedure pursuant to the Finnish Act on Public Procurement and Concession Contracts (1397/2016).

- The procedure is based on Directive 2014/24/EU.

The biggest changes introduced to the statutory negotiated procedure since the previous PPP project (Hamina–Vaalimaa motorway) are as follows:

- All documents associated with the procurement process (invitation to tender, bids and written correspondence) must be in an electronic format. There are tools that will enable this.
- A provisional invitation to tender must be published concurrently with the procurement notice.
- The provisional invitation to tender must set out the contractor's minimum requirements and the criteria on the basis of which bids will be compared against each other. These will be non-negotiable.
- The negotiations must be based on provisional bids. The contents of provisional bids will be discussed with market operators before the launch of the procurement process.

Contracting principles

The contract will be availability-based and comply with common market practices.

- The works to be included in the contract, the road plan and the conditions of any applicable permits will be discussed with market operators before the launch of the procurement process.

The contract and the division of responsibilities will be structured similarly to the Hamina–Vaalimaa service agreement.

- Any possibilities for cutting transaction costs will be discussed with market operators before the launch of the procurement process.

The payment mechanism will be based on established Finnish practice.

- The payment profile as well as availability and service level considerations will be discussed with market operators before the launch of the procurement process.

The maximum contract period will be 20 years.

- The contract period will be discussed with market operators before the launch of the procurement process.

Funding

The financial structure of the company that will be set up to coordinate the project can be freely decided by the bidders.

- The Finnish Transport Agency will only disqualify financial and ownership arrangements that prevent the comparison of bids or risk management by the contractor.

The project will not receive assistance from the EU but will be financed entirely with funds provided by the company.

- Based on the Finnish Transport Agency's current knowledge, the project will also not be eligible for assistance from the European Investment Bank, as the causeway will not be a part of a TEN-T network.

Bidders must familiarise themselves with the new tax rules applicable to PPPs (VAT, Finnish Business Tax Act and BEPS).

- The Finnish Transport Agency believes that the new tax rules make the taxation of PPP companies more straightforward.

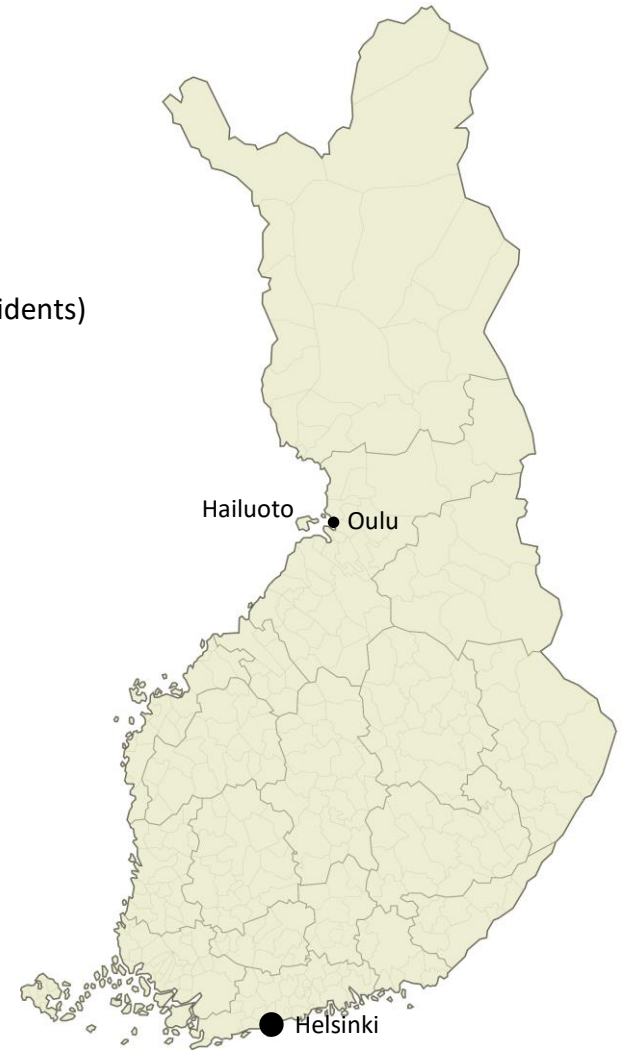
Off-balance-sheet financing will not be a mandatory requirement.

- The Finnish Transport Agency has not been instructed to execute the project off the Finnish Government's balance sheet.

Facts about Finland

Finland

Population (2018)	5.52 million
Area	338,000 km^2
Capital	Helsinki (642,000 residents)
Local authorities involved in the project	Oulu (201,000 residents); Hailuoto (1,000 residents)
Currency	Euro (€)
Unemployment (2017)	8.6 %
Inflation (2017)	0.7 %
GDP (2018)	EUR 224 billion
National debt (2017)	61.4% of GDP
Local authorities involved in the project	0.6%
Value-added tax rate	(10%, 14%,) 24%
Corporate tax rate	20%
Income tax rate	Progressive
Credit rating	AA+ (S&P ja Fitch), Aa1 (Moody's)
Transparency International's Corruption Perceptions Index (2017)	85 (3rd least corrupt country in the world)

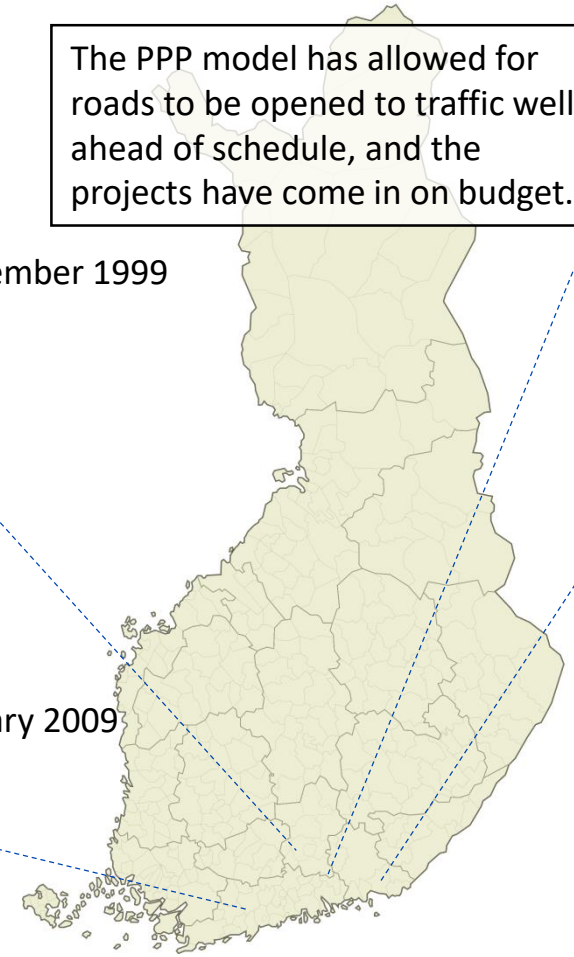


Finnish PPP projects

E75 Järvenpää–Lahti motorway
- 70 km (upgrade to a motorway, 8 bridges)
- Capital cost: EUR 84 million
- Total cost: EUR 240 million
- Contract signed in March 1997
- Opened to traffic in November 1998 and September 1999
- Contract ended in 2012
- Payments on the basis of a shadow toll based on traffic volumes

E18 Muurla–Lohja motorway
- 51 km (new road, 7 tunnels, 75 bridges)
- Capital cost: EUR 300 million
- Total cost: EUR 700 million
- Contract signed in October 2005
- Opened to traffic in November 2008 and January 2009
- Contract ends in 2029
- Payments on the basis of availability

The PPP model has allowed for roads to be opened to traffic well ahead of schedule, and the projects have come in on budget.



E18 Koskenkylä–Kotka motorway
- 53 km (new road, 1 tunnel, 68 bridges)
- Capital cost: EUR 285 million
- Total cost: EUR 623 million
- Contract signed in December 2011
- Opened to traffic in 2013/2014
- Contract ends in 2026
- Payments on the basis of availability

E18 Hamina–Vaalimaa motorway
- 32 km (new road, 1 tunnel, 44 bridges)
- Capital cost: EUR 250 million
- Total cost: EUR 600 million
- Contract signed in June 2015
- Opened to traffic in February 2017 and March 2018
- Contract ends in 2034
- Payments on the basis of availability

PPP operators in Finland

E75 Järvenpää–Lahti motorway

Owners:
- Hyder Investment BV
- Skanska BOT Ab
- Skanska Oy
- Private Capital Associates
- Teollisuus-Vakuutus
- Eläke-Varma
- Espoon Sähkö

Financiers:
- NIB
- Postipankki

E18 Muurla – Lohja motorway

Owners:
- Skanska ID AB
- Laing Roads Limited
- Lemminkäinen

Financiers:
- EIB
- NIB
- Nordea
- RBS
- HB

E18 Hamina – Vaalimaa motorway

Owners:
- Meridiam
- YIT

Financiers:
- EIB
- NIB
- OP

E18 Koskenkylä – Kotka motorway

Owners:
- Meridiam
- Ilmarinen
- YIT Rakennus Oy
- Destia Oy

Financiers:
- EIB
- NIB
- Pohjola Pankki

Other contractors

Link to a list of members of INFRA – Infra Contractors Association in Finland


Liikennevirasto
THANK YOU