

Market Dialogue – Waste Water Transport System Vårnes – Bekkevika - Vallø

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Vallø RA

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Tønsberg renseanlegg IKS

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1 Invitation to Market Dialogue – Waste Water Transport System Vårnes – Bekkevika – Vallø

1.1 Background

On behalf of Tønsberg Renseanlegg IKS, PPM Prosjekt invites contractors to a market dialogue concerning the contract(s) for the construction and execution of pumping stations at Bekkevika and Vårnes, as well as the transfer pipeline Bekkevika -> Vårnes -> Vallø Wastewater Treatment Plant.

Following new nitrogen-removal requirements from Public Authorities, a concept selection study (KVU) was carried out for the wastewater treatment plants in Tønsberg, Færder and Sandefjord. One of the decisions in this study was to decommission the treatment plants at Bekkevika and Vårnes and transfer the wastewater from these plants to the upgraded treatment plant at Vallø.

1.2 Purpose of the market dialogue

The purpose of this market dialogue is as follows:

- Gain insight into market capacity, availability and interest in the project
- Obtain input from market expertise on the choice of routes and solutions in relation to risks, opportunities, and cost and schedule drivers
- Gain insight into the market's assessment of alternative contracting strategies (contract type and division into contract packages)
- Obtain market recommendations regarding the procurement strategy (combined procurement vs. separate contract packages and direct procurement of materials), as well as strategies for risk and interface management

1.3 About the project

A new wastewater treatment plant will be established at Vallø in Tønsberg municipality. The treatment plant will be a joint intermunicipal company (IKS) for Tønsberg, Sandefjord and Færder and will treat wastewater previously handled at Bekkevika and Vårnes.

In connection with this, a new transfer pipeline will be established from Bekkevika via Vårnes to Vallø. The transfer pipeline is planned as a pressurised pipeline along the entire route.

Pumping stations

The wastewater treatment plants at Bekkevika and Vårnes will be replaced by new pumping stations. This is planned to be carried out by constructing new pumping stations adjacent to the existing treatment plants. The treatment plants will remain in operation until the transfer pipeline and pumping stations are complete, after which they will be connected to the new pumping stations. The pumping stations are expected to have a footprint of approximately 100–200 m².

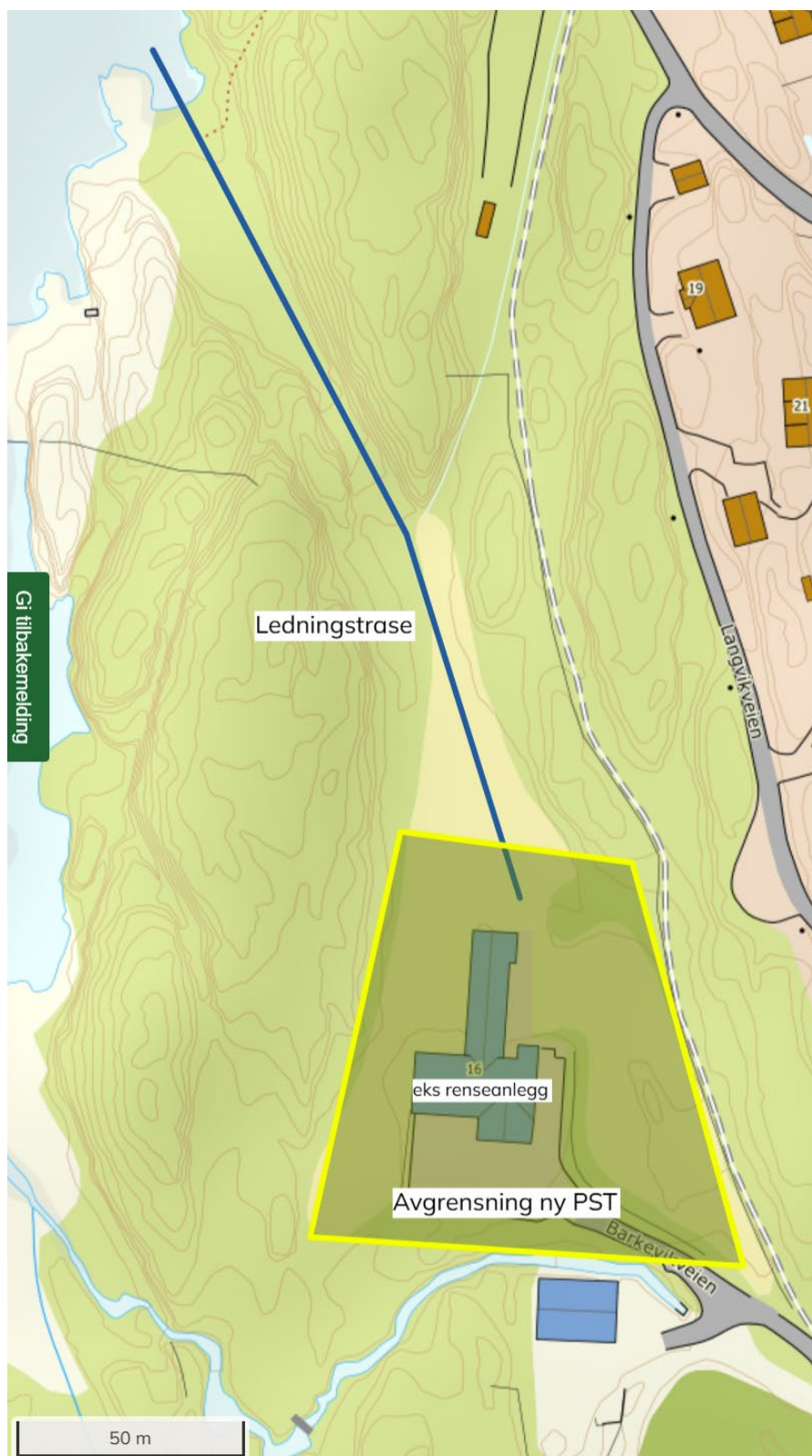


Figure 1 Vårnes wastewater treatment plant

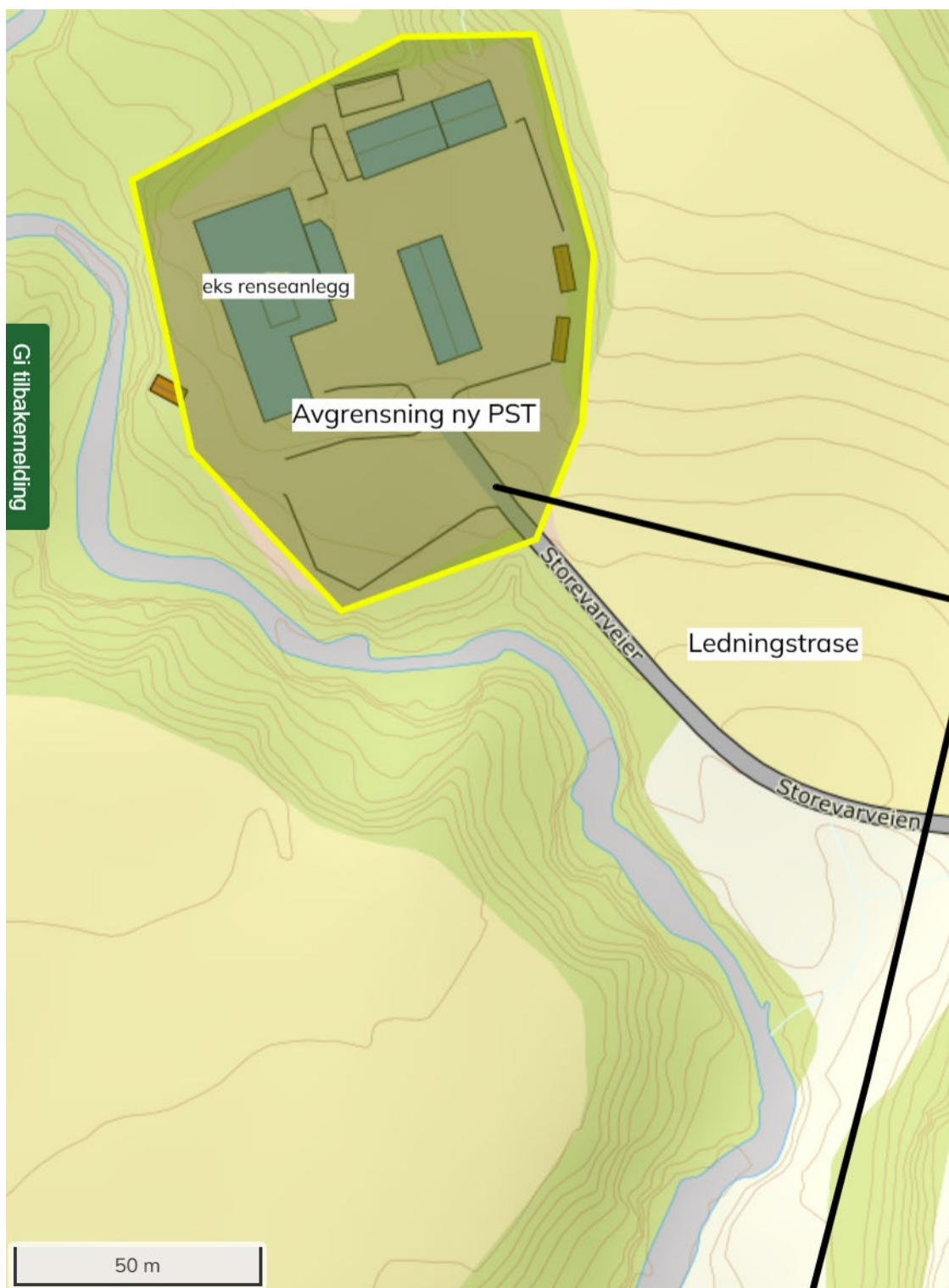


Figure 2 Vårnes wastewater treatment plant

Vallø outfall pipeline

As part of the upgrade of Vallø Wastewater Treatment Plant, the outfall system will also be upgraded. This is planned either by installing entirely new pipelines or by extending the two existing pipelines and adding an additional pipeline. See Figure 3.

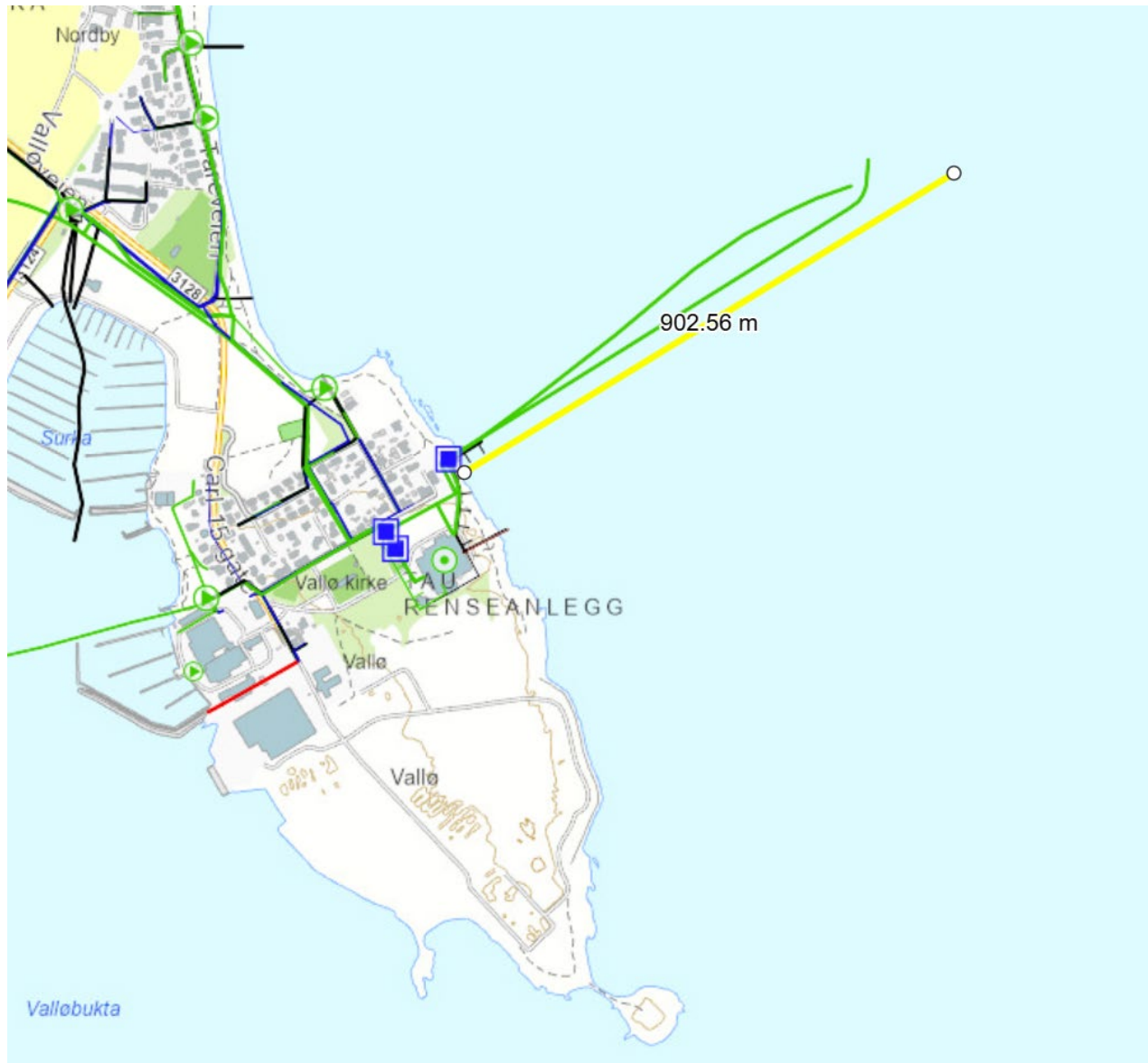


Figure 3 Tønsberg / Vallø wastewater treatment plant

Transfer pipeline

The transfer pipeline is divided into four stages (Stage 3 has been narrowed down to three alternatives; see Figure 5):

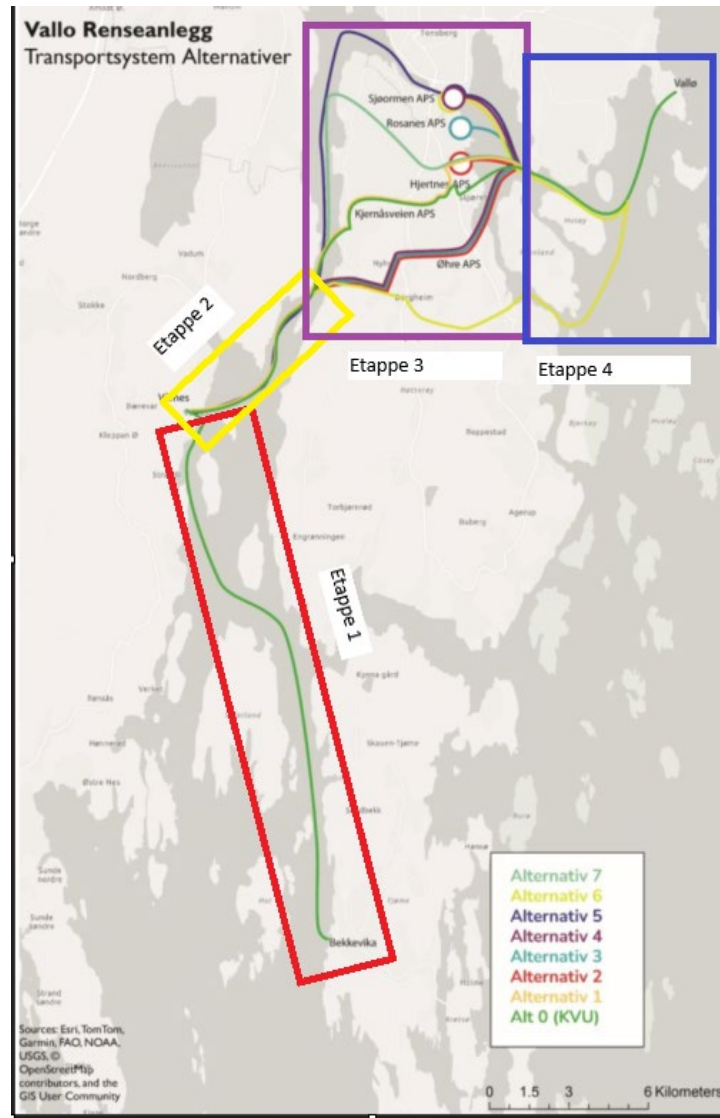


Figure 4 Transport system stages

Stage 1 Bekkevika to Vårnes:

- Length approx. 11,000 m
 - o Subsea route approx. 10,450 m
 - o Onshore route approx. 550 m
- Flow rate Bekkevika WWTP
 - o $Q_{maksdim}$: 279 m³/h (78 l/s)
 - o Q_{maks} : 349 m³/h (97 l/s)
- Pipe diameter 300–400 mm
- Depth approx. 20–50 m, maximum depth approx. 70 m

Stage 2 Vårnes to Hella:

- Length approx. 4,500 m
 - o Subsea route approx. 4,150 m
 - o Onshore route approx. 350 m
- Flow rate Vårnes WWTP
 - o $Q_{maksdim}$: 563 m³/h (156 l/s)
 - o Q_{maks} : 855 m³/h (238 l/s)
- Flow rate Bekkevika WWTP + Vårnes WWTP
 - o $Q_{maksdim}$: 842 m³/h (234 l/s)
 - o Q_{maks} : 1204 m³/h (334 l/s)
- Pipe diameter 600–700 mm
- Depth approx. 10–40 m, maximum depth approx. 40 m

Stage 3 Hella to Kalvetangen:

This stage currently has three alternatives, presented as E3-1, E3-2 and E3-3 as shown in Figure 5. An existing pumping station will also be connected to the new pipeline (potentially requiring new pumps).

E3-1

- Length approx. 5,500 m
 - o Subsea route approx. 2,000 m
 - o Onshore route approx. 3,500 m
- Flow rate existing pumping station
 - o Q_{maks} : ca1000 m³/h (278 l/s)
 - o Flow rate Bekkevika WWTP + Vårnes WWTP + existing pumping station
 - o $Q_{maksdim}$: 1842 m³/h (511 l/s)
 - o Q_{maks} : 2204 m³/h (612 l/s)
- Pipe diameter 600–900 mm
- Depth approx. 5–15 m, maximum depth approx. 15 m

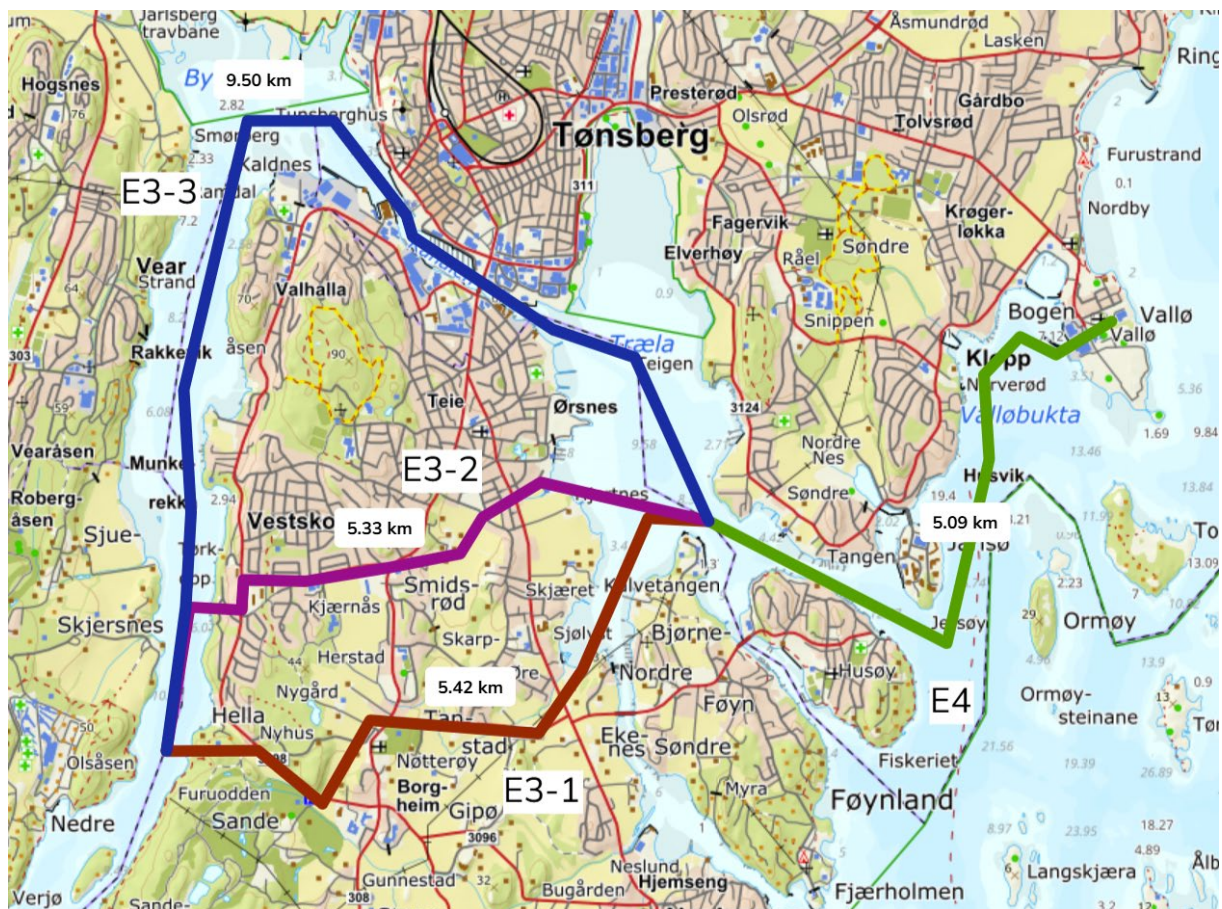
E3-2

- Length approx. 5,500 m
 - o Subsea route approx. 1,500 m
 - o Onshore route approx. 4,000 m
- Flow rate existing pumping station
 - o Q_{maks} : ca1000 m³/h (278 l/s)
- Flow rate Bekkevika WWTP + Vårnes WWTP + existing pumping station
 - o $Q_{maksdim}$: 1842 m³/h (511 l/s)
 - o Q_{maks} : 2204 m³/h (612 l/s)
- Pipe diameter 600–900 mm
- Depth approx. 5–15 m, maximum depth approx. 15 m

E3-3

- Length approx. 9,500 m
 - o Subsea route approx. 9,500 m
- Flow rate existing pumping station

- Q_{maks} : ca 1000 m³/h (278 l/s)
- Flow rate Bekkevika WWTP + Vårnes WWTP + existing pumping station
 - $Q_{maksdim}$: 1842 m³/h (511 l/s)
 - Q_{maks} : 2204 m³/h (612 l/s)
- Pipe diameter 600–900 mm
- Depth approx. 5–15 m, maximum depth approx. 15 m



Figur 4 Etappe 3

Stage 4 Kalvetangen to Vallø

- Length approx. 5,000 m
 - Subsea route approx. 4,500 m
 - Onshore route approx. 500 m
- Flow rate
 - $Q_{maksdim}$: 1842 m³/h (511 l/s)
 - Q_{maks} : 2204 m³/h (612 l/s)
- Pipe diameter 800–900 mm
- Depth approx. 5–25 m, maximum depth approx. 25 m

Outfall pipeline

- Length approx. 900 m
- Approx. flow rate
 - o $Q_{maksdim}$: 5 800 m³/h (1 611 l/s)
 - o Q_{maks} : 7 600 m³/h (2 111 l/s)
- Pipe diameter 900–1,800 mm (depending on solution)
- Depth approx. 5–50 m

Contractors are asked to provide input on:

- Do contractors foresee any challenges with the planned routes?
- Can contractors comment on any special considerations that should be taken into account when selecting the route for Stage 3?
- Ideal / problematic times of year for carrying out work along the route, considering temperature, climate, stakeholders, boat traffic and spawning periods? Any other considerations?
- Management of the interface between subsea and onshore pipelines
- Interfaces with shipping traffic and recreational/user interests
- Which pipe types, loads and weighting do contractors consider most advantageous for the various routes?
- Contractors' experience with directional drilling?
- Do contractors see any critical thresholds that would make execution substantially more expensive?
 - o Pipe diameter (for example: above XX diameter, is a larger vessel or larger trenchless equipment required)?
 - o Pump size (for example: above a flow rate of XX, do pumps cost five times as much?)
 - o Other cost/schedule drivers that should be taken into account?
 - o Depths along the route?

1.4 Contracting strategy

The project is considering carrying out the contracts described above using the following alternative contract strategies:

Alternative A

One contract for the complete delivery of pumping stations and the pipeline network. Under this alternative, one tender will be announced for the entire scope, and the contract will be awarded to one contractor.

Alternative B

Separate contracts, with the pumping stations (buildings and pumps) and the pipeline network forming separate contract packages.

Alternative C

The pumping stations are divided into two separate contracts (buildings and pumps). The pipeline network is separated into its own contract, potentially with onshore and subsea pipelines as two separate contracts.

Alternative D

The pumping stations are divided into two separate contracts (buildings and pumps). The pipeline network is divided into separate contracts for onshore and subsea pipelines, potentially with a separate contract for each route.

Contractors are asked to provide input on:

- Which of the alternatives above do contractors consider best suited to the project?
- If separate contracts are recommended, where do contractors believe the interfaces between the different contracts should be set, and how should these interfaces be managed?
- Where should responsibility for interface coordination lie?
- Which contracting model do contractors believe provides the best schedule control?
- Is the recommendation regarding contracting model affected by the choice of route for Stage 3?

1.5 Contract strategy

The project is considering carrying out the contracts described above using the following alternative contract strategies:

- **Employer-designed contract**
 - o Contract form: Norwegian Standard NS 8405
 - o Design is carried out by the Client in cooperation with the Client's consultants. Technical documentation with bills of quantities in accordance with NS 3420 will be issued for a fixed-price competition.
 - o Framework applications and permits are the Client's responsibility
 - o The contractor executes the works in accordance with the Client's design documentation
- **Design and build contract**
 - o Contract form: Norwegian Standard NS 8407
 - o The Client develops the preliminary design to maturity level (Model Maturity Index) MMI 200 in cooperation with the Client's consultants. The tender documents are published for a tender in which tenderers submit a fixed price for detailed design and execution.
 - o The design-and-build contractor assumes design responsibility and carries out the detailed design
 - o The design-and-build contractor is responsible for framework applications and permits
 - o Changes are handled in accordance with the change regime in NS 8407
- **Competitive dialogue.**
 - o Kontraktsform: Norwegian Standard NS 8405
 - o The Client develops the preliminary design to maturity level MMI 200 in cooperation with the Client's consultants. An invitation to apply for participation in a competitive dialogue (qualification) is published.
 - o The Client qualifies a selection of tenderers and conducts an ongoing dialogue with them to develop and clarify possible solutions to the requirement. The dialogue may cover technical, legal and financial matters. Participation and contributions to the dialogue will typically be compensated based on hourly rates.
 - o When the Client considers that one or more suitable solutions have been identified, the dialogue is concluded and the qualified suppliers are invited to submit tenders

based on the solutions developed and specified through the dialogue. After the tender is complete, the Client awards the execution phase contract to one of the tenderers

- The contractor executes the works in accordance with the tender documentation

If Contracting Strategy Alternative B, C or D is selected, combining contract forms may also be considered, with different contract forms applying to the separate contracts.

Contractors are asked to provide input on:

- Which of the alternatives do contractors consider best suited to the project?
- Do the contractors have experience with competitive dialogue procedures?
- What advantages/disadvantages do contractors see in the Client taking responsibility for applications?
- If NS 8407 is selected, what level of detail / MMI level do contractors consider appropriate for the preliminary design? Which applications should be completed before contractor onboarding?
- If an execution contract under NS 8405 is selected:
 - What design and baseline data are required to execute the works?
 - Would contractors benefit from a 3D model of the facility as part of the execution documentation?
 - Would a 3D alignment for the subsea pipelines be sufficient?
 - Are the pumping station required to be fully modelled in 3D?

1.6 Schedule

Tentative schedules will depend on the selected contract strategy.

Employer-designed contract

Activity	Week no.	Year
Publication of qualification documents	21	2028
Deadline for submission of qualification application	25	2028
Announcement of qualification results	26	2028
Publication of tender documents	26	2028
Tender deadline	32	2028
Consolidated feedback before negotiations	34	2028
Negotiations	36	2028
Tender deadline after negotiations	39	2028
Award letter	41	2028
Contract award	42	2028
Contract signing	43	2028
Project onboarding	43	2028
Start of execution	44	2028
Completion / handover	44	2030

Design and build contract

Activity	Week no.	Year
Publication of qualification documents	45	2026
Deadline for submission of qualification application	49	2026
Announcement of qualification results	50	2026
Publication of tender documents	50	2026
Tender deadline	3	2027
Consolidated feedback before negotiations	4	2027
Negotiations	5	2027
Tender deadline after negotiations	7	2027
Award letter	8	2027
Contract award	9	2027
Contract signing	10	2027
Project onboarding	10	2027
Start of detailed design	10	2027
Completed framework application	40	2028
Start of execution	44	2028
Completion / handover	44	2030

Contractors are asked to provide input on:

- Views on the schedule for each of the two contracting models, with regard to the time allocated and the timing of execution
- Views on the intervals between start of design -> applications -> start of execution

1.7 Market capacity and procurement of materials

The project is aware that the market capacity for this project, particularly for the pipeline network, is limited. The Client therefore wishes to consider alternative methods and strategies for procuring the materials, including within the various contracting and contract strategies described above.

Contractors are asked to provide input on:

- Market capacity for this type of project in terms of the availability of subcontractors and labour?
- Are contractors aware of other projects that may occupy market capacity during the period planned for this project? If so, do contractors see any synergies between these projects that should be utilised?
- What is the production capacity of relevant pipe manufacturers?
- What is the expected lead time from order to delivery ready for installation for equipment relevant to this project? What are the lead times for the specified pipe diameters?
- Do contractors consider any of the pipe diameters, or combinations of pipe diameters, to complicate, increase the cost of, or delay production? If so, which alternative pipe diameters should be considered?
- Should standardisation of pipe diameters be considered?
- What advantages, disadvantages, risks/opportunities do contractors see in the Client ordering critical materials (especially pumps and pipes) directly from the manufacturer/wholesaler versus through the contractor?
- Procedures for managing risk from ordering through to handover?

- Experience with / procedures for securing material prices over the long term and mitigating material shortages and unstable lead times

1.8 Environment and sustainability

Optimising environmental performance and sustainability is a central part of the project's overall objectives. The Client therefore wishes to ensure that the competition is designed to stimulate and reward environmental performance and sustainability in tenders and solutions to the greatest extent possible.

Contractors are asked to provide input on:

- Which environmental requirements/provisions do contractors consider relevant to these contracts?
- Suggestions for measurable environmental requirements that can be included in the tender documents and contract?
- Suggestions for minimum (mandatory) requirements that can be included in the tender documents and contract
 - o Handling of excavated material, disposal, transport, choice of materials, etc.

1.9 Practical implementation of the dialogue

The market dialogue will be conducted as individual meetings between the Client and contractors based on the questions in this appendix.

Contractors interested in participating in the market dialogue are asked to provide written input on the discussion topics detailed above and submit their written responses via Merccell. Responses must be received no later than **21 September 2026 at 12:00**. If contractors have additional questions or input beyond the topics listed in this invitation, we ask that these be included in the written response as a separate chapter.

Contractors who do not have access to Merccell may submit responses by email to Stefan.dokken@ppmprosjekt.no.

Depending on interest, the Client may consider arranging a joint session with all interested parties in addition to the one-to-one meetings. Meetings will take place digitally via Teams or physically at one of the project offices. In any joint meeting, key points will be discussed in general terms, while the one-to-one meetings will include a review of each contractor's response.

The joint session and/or one-to-one meetings are expected to be held in weeks 39 and 40. The Client notes that it reserves the right to limit the number of contractors invited to the dialogue, without further justification.

Written input, as well as information provided by contractors in one-to-one meetings, is confidential and shall only be shared internally within the Client's project organisation. The Client also notes that any questions raised in the written input and/or during the meetings, as well as the Client's answers to those questions, will subsequently be shared with all participants in the market dialogue (cf. the equal-treatment principle under the Norwegian Public Procurement Act).

Any questions or comments regarding this market dialogue should be submitted in writing via Merzell or by email.

We look forward to a constructive dialogue.

Kind regards,
Stefan Dokken



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