

Project Outline

The Nord Stream 2 project envisages a modern and efficient gas pipeline passing through the Baltic Sea.

It is a major international infrastructure project that will expand Russia's access to the important European gas market and enhance supply security. Gas is an important source of export revenue for the Russian economy.

Nord Stream 2 builds on the success of the Nord Stream Pipeline, which has been in operation since 2011.

The results of annual monitoring show that the environmental impact caused by the construction and operation of Nord Stream was minor, local and short term only and, in some cases, considerably lower than predicted by the original environmental impact assessments.

There have been three stages of research work for the Nord Stream 2 project, which began in 2012:



Studying the Northern and Southern Corridors

Stage I. Evaluation of the Corridor to the North of St Petersburg

A desk study was carried out to evaluate the corridor to the north of St Petersburg along the route of Nord Stream's supply pipeline. The study concluded that it would not be technically feasible to lay new infrastructure alongside the existing pipelines.

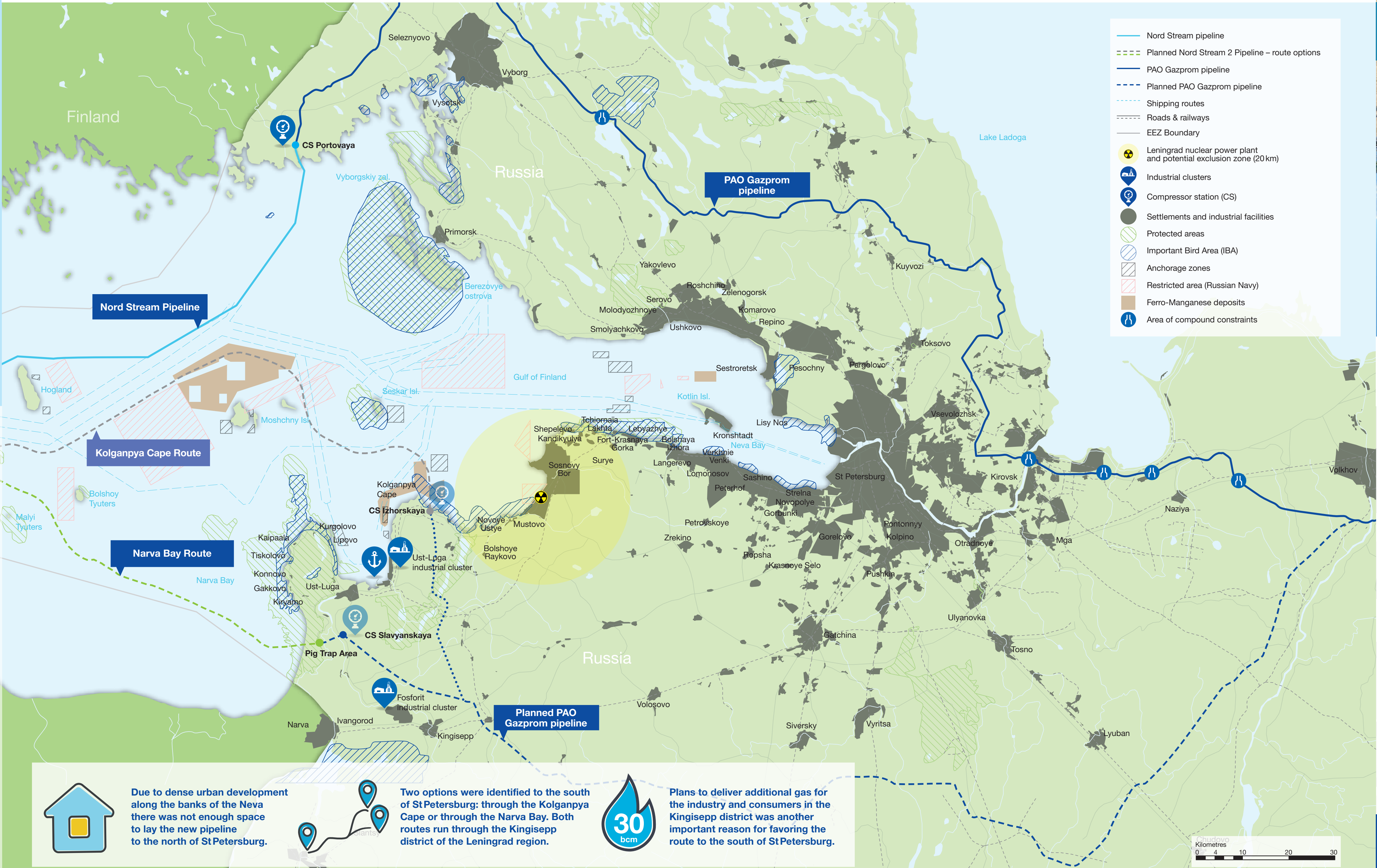
- > The safety distance requirements between high-pressure pipelines and settlements makes it unfeasible to lay new infrastructure along the route of Nord Stream's supply pipeline: seven bottlenecks were identified.
- > In particular, dense urban developments on the Neva river banks do not leave space for two additional pipelines and associated control and back-up infrastructure.
- > Building a second compressor station alongside the existing Portovaya facilities would double the burden on the environment in this area.
- > Due to the agreement between Gazprom and the Leningrad Region that envisages delivery of some 30 billion cubic metres of gas per year to the Kingisepp district in the south of the Leningrad region, it is most reasonable to combine the new supply infrastructure with the Nord Stream 2 feeding capacities.

According to the approved territorial planning scheme that envisages expansion of the Russian Unified Gas Supply System, the supply pipeline for the Nord Stream 2 project will pass through the Kingisepp district.

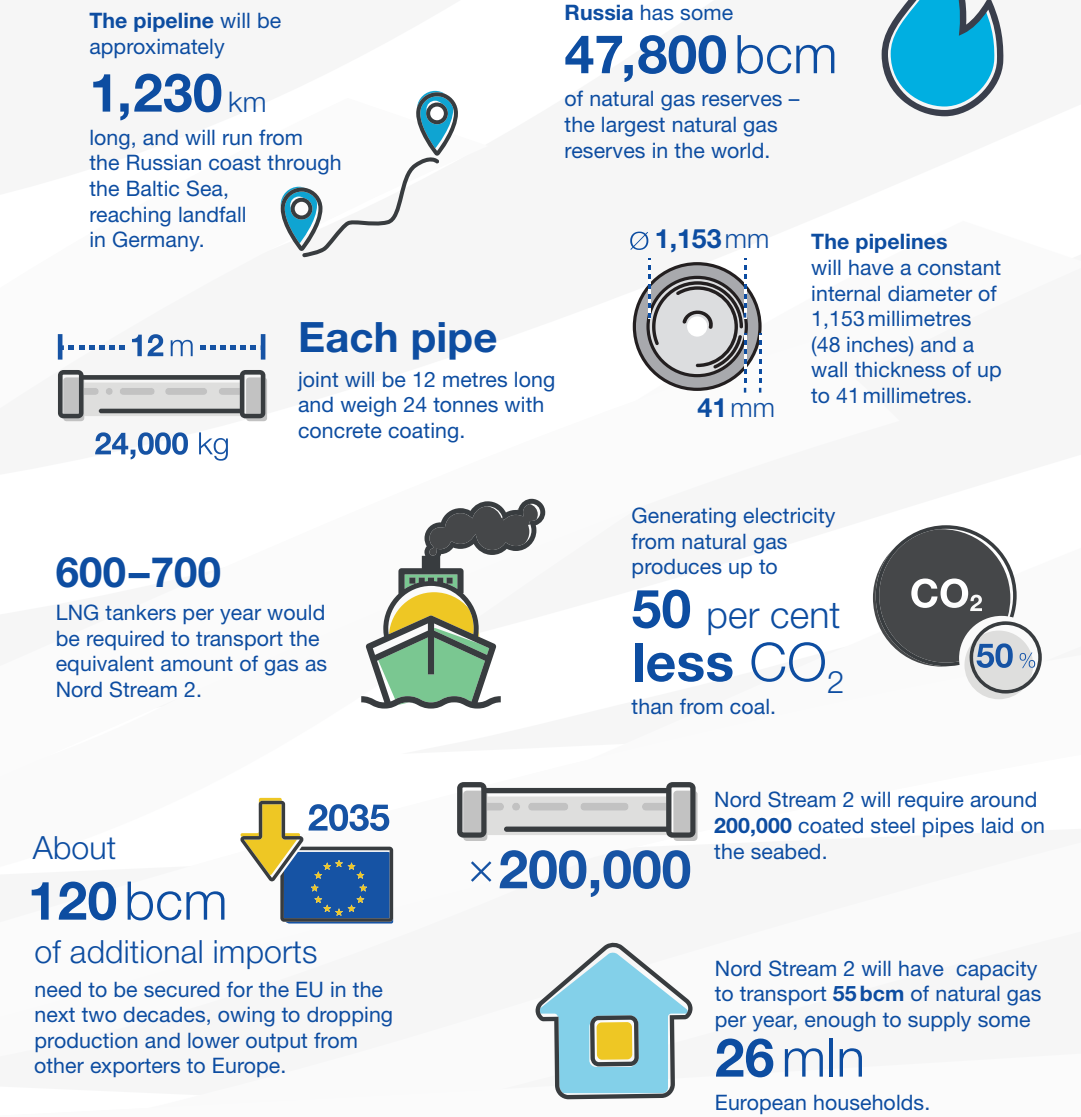
Two route options were identified to the south of St Petersburg: through the Kolganpya Cape and Narva Bay.



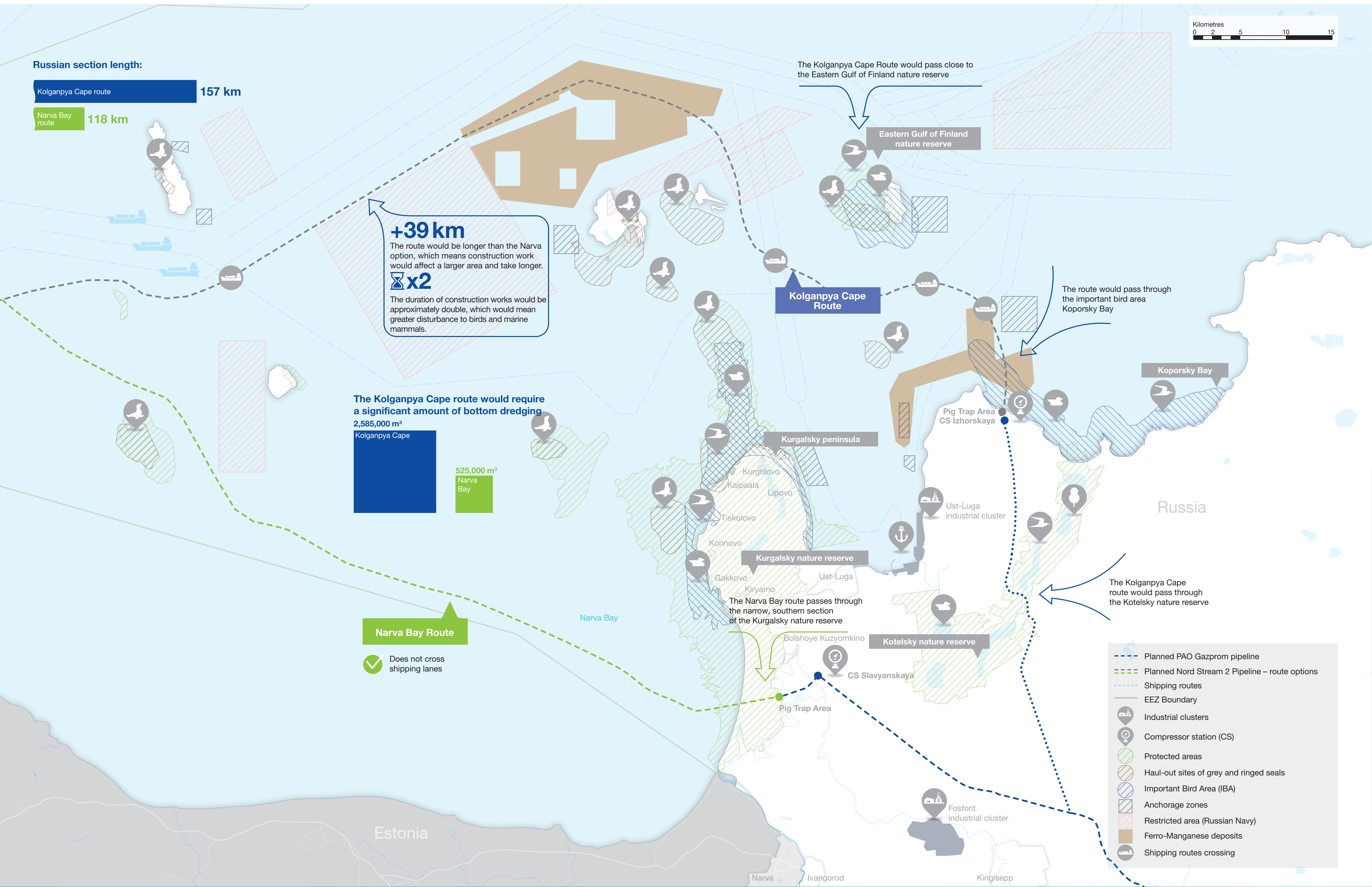
Stages I-II. Studying the Technical and Environmental Constraints of the Northern and Southern Routes



Nord Stream 2 in Numbers



Stage III. Evaluating Landfall Options in the Kingisepp District



Stage III. Evaluating Landfall Options in the Kingisepp District

Reliable infrastructure, including gas transportation, is essential for new industries, new investments and the sustainable development of the Kingisepp district.

Kolganpya Cape route

- > The route would be 39 kilometres longer than the Narva option, which means construction work would affect a larger area and take longer.
- > A significant amount of dredging, approximately four times as much as for the Narva Bay route, would be required owing to shallow water with numerous rocky outcrops and boulders, shipping lane crossing, restricted military exercise areas and anchorage areas.
- > Due to the greater volume of work and length of time that would be required, the impact on biodiversity would be greater than for the Narva Bay route.
- > Crossing shipping lanes would require restrictions to ship traffic during the construction stage and would elevate the risk during operation.
- > This route would also cross the habitats of grey and ringed seals.
- > This route would have a greater impact on the Eastern Gulf of Finland nature reserve. This territory is a key habitat of grey and ringed seals.
- > The Gazprom supply pipeline would pass through the Kotelsky nature reserve. Nord Stream 2 would cross the Koporsky Bay important bird area and would pass by the Eastern Gulf of Finland nature reserve established in 2017.

Narva Bay route

- > The route is shorter than the Kolganpya Cape route, meaning work will take less time.
- > Significantly less dredging (1/4) is required compared to the Kolganpya Cape route because there is less shallow water and no boulders.
- > Thanks to the smoother seabed, limited intervention works will be required.
- > The greater distance from shipping routes, ports and industrial and other facilities means less impact to ship traffic during construction and reduced risk during operation.
- > The route is far from the habitats of grey and ringed seals, thus reducing the impact, for instance, on the Eastern Gulf of Finland nature reserve.
- > 3.7 kilometres of the gas pipeline will pass through the southern section of the Kurgalsky nature reserve and the Kurgalsky Peninsula Ramsar site. This route does not pass through any important bird areas.

Taking all factors into consideration, Narva Bay is the optimal route. It minimises social and environmental impacts.

Narva Bay Route: Crossing the Kurgalsky Nature Reserve

Caring for the environment is our priority. We will employ state-of-the-art technologies and invest in the region's sustainable development. Our aim is not just to minimise potential impacts but to have a positive effect on biodiversity and local communities.

The onshore segment of the Narva Bay route passes through a maximum of 3.7 kilometres of the southern and marginal section of the Kurgalsky reserve.



The onshore construction corridor will impact only an area of 0.175 km² or 0.10% of the Kurgalsky reserve's overall onshore territory.



The biodiversity of flora and fauna is lower here than in the northern section which is home to key protected species.



- > Part of the onshore route goes through areas that have been modified by fire and include some young plantations.
- > The pipeline service facilities (pig trap area) and the Gazprom compressor station will be built outside the reserve.
- > The route avoids sensitive habitats such as the Kurgalsky reef, broadleaf forests and the central part of the Kader swamp as much as possible. Only the northernmost marginal part of the Kader swamp will be impacted.
- > Of most value is a primary coniferous forest along the seashore, approximately one kilometre of which will be crossed.

Crossing the Reserve: the Proposed Route Avoids Sensitive Habitats as Much as Possible

