UNOFFICIAL TRANSLATION

Klima-, Energi- og Forsyningsministeriet

Energinet
GAS TSO
Tonne Kjærsvej 65
7000 Fredericia
Denmark

Attn. Aaron Petersen DiBona

Office

Date

Ref. no. xx

/ [initials]

This is a translation from Danish.
This translation is provided for convenience only, and in the event of any conflict between the wording of the Danish and English versions, the wording of the Danish version shall prevail in all respects.

Permit for the Baltic Pipe natural gas pipeline in the Little Belt and Baltic Pipe (Europipe II Branch Pipeline) in the North Sea

Energinet Gas TSO A/S (hereinafter 'Energinet') and Gaz-System S.A. plan to construct Baltic Pipe (Europipe II Branch Pipeline) in the North Sea and the Baltic Pipe pipeline in the Little Belt for the transport of natural gas from Europipe II in the North Sea to Poland via Denmark from Norway. Energinet will be the owner of the section of the pipeline proposed to be constructed in the North Sea and the Little Belt and most of the onshore section of the pipeline. Gaz-System will be the owner of 400 metres of onshore pipeline by Faxe Bugt and the pipeline in the Baltic Sea. The Danish Environmental Protection Agency is the responsible environmental authority for the onshore section of the pipeline, while the Danish Energy Agency is the responsible authority for the offshore section. This permit comprises the part of the pipeline which, by letter of 16 November 2018 to the Danish Energy Agency, Energinet applied for a permit to construct in the North Sea and the Little Belt in the Danish continental shelf area and Danish territorial waters, respectively.

Construction and operation of pipeline installations for the transport of hydrocarbons in Danish territorial waters and on the continental shelf are subject to approval by the Minister for Climate, Energy and Utilities, cf. Section 3 a and Section 4(1) of Danish Consolidation Act no. 1189 of 21 September 2018 on the Continental Shelf and Certain Pipeline Installations in the Territorial Waters (the Continental Shelf Act) (*Lov om kontinentalsoklen og visse rørledningsanlæg på søterritoriet (kontinentalsokkelloven)*). The permit-granting authority has been delegated to the Danish Energy Agency, cf. Section 3(1) para (2) of Executive Order no. 1512 of 15 December 2017 on the Tasks and Responsibilities of the Danish Energy Agency, but was taken back by the Minister for Climate, Energy and Utilities

on 21 December 2018 so as to avoid unnecessary doubt about the decision-making powers.

1. Permit

1.1. Decision

The Minister for Climate, Energy and Utilities hereby grants Energinet a permit to construct the natural gas pipeline applied for in the North Sea (Baltic Pipe (Europipe II Branch Pipeline)) and in the Little Belt (Baltic Pipe).

The permit is granted in accordance with Sections 3 a and 4 of Danish Consolidation Act no. 1189 of 21 September 2018 on the Continental Shelf (the Continental Shelf Act) and Section 2 of Executive Order no. 1520 of 15 December 2017 on Certain Pipeline Installations in Territorial Waters and on the Continental Shelf.

This permit comprises the construction, including laying, of the natural gas pipeline in Danish waters in the North Sea and the Little Belt. Prior to the commissioning of the pipeline, Energinet must apply to the Danish Energy Agency for a permit to operate the pipeline, cf. Section 2 of Executive Order no. 1520 of 15 December 2017 on Certain Pipeline Installations in Territorial Waters and on the Continental Shelf.

The permit does not include necessary permits, approvals etc. pursuant to other legislation, and it does not exempt Energinet from obtaining the necessary permits and approvals pursuant to other legislation.

As part of the processing of the application, the Minister for Climate, Energy and Utilities obtained an assessment from the Minister for Foreign Affairs of whether the Baltic Pipe project is compatible with Danish foreign policy, security policy and defence policy, cf. Section 3 a(2) of the Continental Shelf Act.

On 12 October 2018, the Minister for Foreign Affairs sent the assessment to the Minister for Climate, Energy and Utilities from which it follows that the project is compatible with Danish foreign policy, security policy and defence policy.

Where a project involves the installation of pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 mm and a length of more than 40 kilometres, an environmental impact assessment must be carried out before a permit can be granted. The environmental impact assessment is prepared by the owner and is part of the necessary documentation in connection with the processing of the application. The environmental impact assessment includes impact assessments under the Habitats Directive and

the Conservation of Wild Birds Directive etc. When the environmental impact assessment has been prepared, a public consultation process is conducted, lasting at least eight weeks.

An environmental impact assessment must be conducted for the Baltic Pipe project, given that both of the above limit values are met (diameter of 805-914 mm and a length of 109 kilometres in Danish waters in the North Sea and the Little Belt); therefore, the applicant has prepared an environmental impact assessment report covering the North Sea and the Little Belt. As the project may have a transboundary impact on the environment, the Baltic Pipe pipeline project is subject to the Espoo Convention. Consequently, Denmark – like the other participating countries – is required to notify potentially affected countries about the project. If a neighbouring country expresses an interest in participating in the environmental impact assessment (EIA) process, this country must be involved in the subsequent EIA process. Therefore, Sweden, Germany and Poland have been involved in the EIA process. Baltic Pipe (Europipe II Branch Pipeline) in the North Sea and the Baltic Pipe pipeline in the Little Belt have been determined as having no transboundary environmental impact, and therefore the project is not subject to the Espoo Convention.

Under the agreement entered into between Norway and Denmark on the transport of Norwegian gas in the pipeline from Europipe II to Denmark, Norway has been involved in and consulted on issues concerning safety, health and environment with a view to coordinating and aligning safety, health and environmental legislation prior to the issuance of a construction contract. Norwegian authorities must grant permits to connect Baltic Pipe (Europipe II Branch Pipeline) with Europipe II, cf. Article 1 of the intergovernmental agreement.

The environmental impact assessment report was submitted to national consultation during the period from 15 February 2019 to 12 April 2019. The environmental impact assessment report contains an assessment of environmental impacts from the section of the pipeline to be laid in Danish waters (the Danish continental shelf area and Danish territorial waters, respectively).

The permit is granted on the basis of satisfactory completion of the assessment of the environmental impact of the project in Denmark, including completed consultations of the public and of the national authorities.

The permit is granted after consultations of, among others, the Danish Environmental Protection Agency, the Danish Ministry of Defence Estate Agency, the Danish Maritime Authority, the Danish Fisheries Agency, the Danish Coastal Authority, the Danish Working Environment Authority, the Ministry of Foreign Affairs of Denmark, the Danish Geodata Agency and the Agency for Culture and Palaces.

The permit may not be used until after the end of the four-week time limit for lodging an appeal running from the publication of the permit, cf. Section 6 a(4) and (5) of the Continental Shelf Act.

1.2. Terms and conditions

The permit under Sections 3 a and 4 of the Continental Shelf Act is granted on the following terms and conditions, cf. Section 4(2) of the Continental Shelf Act and Section 4 of Executive Order no. 1520 of 15 December 2017 on Certain Pipeline Installations in Territorial Waters and on the Continental Shelf:

1. Energinet's part of Baltic Pipe (Europipe II Branch Pipeline) in the North Sea (including PLEM) and the Baltic Pipe pipeline in the Little Belt constitute a section of the project. In order for the overall project to be realised, permits must also be granted for the other parts of the Baltic Pipe project (Europipe II Branch Pipeline) (including the PLEM structure) both in Denmark (onshore and offshore) and in Swedish and Polish waters, respectively. If Energinet and/or the remaining part of the Baltic Pipe project do not to obtain the other necessary permits to realise the pipeline project, or if for other reasons the company abandons the project in full or in part, this permit will lapse. If the pipeline project is not implemented according to the application, Energinet must inform the Danish Energy Agency accordingly.
2. Energinet must submit an updated schedule for the project, including the estimated time of the laying of the pipeline, before the laying of the pipeline commences. This schedule must be submitted to the Danish Energy Agency.
3. Energinet must enter into an agreement with the owners of the cable and pipeline installations crossed by the pipeline. The agreement is to ensure the indemnity of the owners as a result of this crossing.
4. In connection with the crossing of other infrastructure, Energinet must submit the design and choice of method to the Danish Energy Agency for approval after the formation of contract with the owner of the infrastructure to be crossed and before the laying of the pipeline.
5. Energinet must enable any future pipelines and cables to cross the natural gas pipeline.
6. Energinet must take out insurance to cover any damage caused by the activities carried out under the permit, even if such damage is accidental.
7. Materials for the stabilisation of the pipeline must not have any harmful impacts on the flora and fauna in the North Sea or the Little Belt, for instance through the introduction of invasive species when rocks are placed.

8. When rocks are placed, a lookout must be kept for marine mammals, and acoustic deterrent devices must be used before rocks are placed. Acoustic deterrent specifications must be approved by the Danish Energy Agency before rocks are placed.
9. In April to June, during the breeding period of the Arctic tern, construction activities generating airborne noise from steel pile driving in the Little Belt south of the island of Fænø must not take place if Arctic terns are found to be breeding at the designated breeding location at Fønsskov Odde.
10. To prevent harm to marine mammals in the Little Belt, double bubble curtains must be used to dampen the underwater noise at the construction sites. Sheet pile and pile driving in the Little Belt must be commenced with a soft-start procedure to allow porpoises and seals to leave the area before the actual driving is initiated.
11. In connection with construction work, the preventive measures described in the environmental impact assessment report must be observed. Moreover, the same terms and conditions apply as for the onshore section in the Section 25 permit issued by the Danish Environmental Protection Agency under the Danish Environmental Assessment Act (*Miljøvurderingsloven*) (EIA permit) for the Baltic Pipe project in terms of noise, Part 3, Subsection 4.
12. An agreement between Danish Fishermen PO and Energinet must be submitted to the Danish Energy Agency when it is available, but no later than before the laying of the pipeline commences.
13. Energinet must ensure that the pipeline is constructed outside the coastal eelgrass, reef and biogenic reef areas south of Fænø to provide the lowest possible impact.
14. Energinet must comply with the requirements set out by the Danish Maritime Authority for the implementation, operation and decommissioning of the project.
15. Energinet must comply with the requirements set out by the Danish Defence for the implementation of the project.
16. Energinet must comply with the requirements set out by the Danish Environmental Protection Agency for the implementation and operation of the project.
17. Energinet must prepare a monitoring programme for the construction phase, including in connection with the laying of the pipeline. The monitoring programme must include environmental conditions and must be approved by the Danish Energy Agency before the laying of the pipeline commences.
18. Energinet must ensure compliance with Section 29 h(1) of Consolidated Act no. 358 of 8 April 2014 (*Museumsloven*) under which the Agency for Culture and Palaces must be notified immediately if remains of monuments from the past or wrecks are found during construction work, and the work must be stopped.

19. Energinet must make an assessment of the pipeline after it has been laid, including a post-lay survey. This assessment with conclusions must be submitted to the Danish Energy Agency for approval to establish whether further seabed intervention works must be performed.
20. Energinet must comply with the requirements set out by the Danish Geodata Agency for the implementation of the project. The projected coordinates of the pipelines must be submitted to the Danish Geodata Agency, and the final location (coordinates) of the pipelines laid must be submitted to the Danish Energy Agency, the Danish Ministry of Defence Estate Agency and the Danish Geodata Agency when they are available.
21. Energinet must document the extent of physical loss, and physical disturbance of overall seabed habitat types must be assessed, documented and reported to the Danish Environmental Protection Agency. If possible, the assessment of the extent of physical loss and physical disturbance shall be carried out in relation to the overall habitat types defined by the Marine Strategy Framework Directive. The reporting of the extent of physical loss and physical disturbance of the overall seabed habitat types should be made no later than two months after the completion of the construction work.
22. For all phases of the project, Energinet must have an emergency response set-up in place to address the consequences of hydrocarbon spills or other unintended incidents. The plan for the emergency preparedness established must be submitted annually to the Danish Energy Agency.
23. Energinet must submit documentation for the management system for operation, inspection and maintenance of the pipeline before the pipeline can be commissioned. The management system must ensure that operations and conditions are constantly monitored to ensure that the integrity of the pipeline is maintained. The management system is reassessed using a risk-based approach based on the observations made of the pipeline's condition and based on the pipeline's operating conditions.
24. Energinet must ensure that the gas composition remains within the pipeline design specifications. Any significant change of the composition must be approved by the Danish Energy Agency.
25. Energinet must prepare a monitoring programme for the operational phase. The monitoring programme must include environmental conditions and be approved by the Danish Energy Agency prior to the commissioning of the pipeline.
26. Energinet must publish the results of the monitoring of the environmental conditions during the construction and operational phases when they become available.
27. Well in advance of the pre-commissioning phase, the Danish Energy Agency must be informed of the choice of method, including choice of chemicals, additives and any other processing; it is assumed that

environmental impacts and risks will have been reduced as much as possible.

28. A verifying third party must issue a Certificate of Compliance, documenting that the installations comply with applicable laws, standards and Energinet's technical specifications. The Certificate of Compliance must be submitted to the Danish Energy Agency when it is available, but before the commissioning of the pipeline installations.
29. Prior to the commissioning of the pipeline, an Offshore Inspection Release Note must be issued by the certifying company. The Inspection Release Note must be submitted to the Danish Energy Agency as soon as it is available.
30. Energinet must prepare a monitoring programme for the operational phase. The monitoring programme must include the safety considerations. The monitoring programme must be approved by the Danish Energy Agency and be implemented prior to the commissioning of the pipeline.
31. When the pre-commissioning activities have been completed, but before the commissioning of the pipelines, Energinet must submit the results of the activities to the Danish Energy Agency.
32. During the construction and operational phases, the pipeline installation is subject to supervision by the Danish authorities. As part of the Danish Energy Agency's supervision of the pipeline, the Danish Energy Agency may, at any time, request internal as well as external audits in order to gain insight into the auditing performed and the independent third-party verification.
33. Well before the pipeline (both in the North Sea and the Little Belt) is expected to be decommissioned, Energinet must prepare a plan for the decommissioning of the pipeline installations and submit this plan to the Danish Energy Agency for approval. The Danish Energy Agency can – after prior dialogue with Energinet – instruct the company to remove from the seabed the pipeline installations covered by this permit, in full or in part, within a specified deadline after final use, cf. Section 4(2) of Executive Order no. 1520 of 15 December 2017 on Certain Pipeline Installations in Territorial Waters and on the Continental Shelf.

1.3. Guidelines on appeals

The decision can be appealed in writing to the Energy Board of Appeal, Toldboden 2, 8800 Viborg, Denmark, within four weeks after the decision is published, cf. Section 6 a of the Continental Shelf Act.

According to Section 6 a(1) of the Continental Shelf Act, anyone with a significant and individual interest in the decision as well as local and national

associations and organisations whose main purpose is the protection of nature and the environment have the right to appeal. The same applies to local and national associations whose purpose is to safeguard significant recreational interests if the decision affects such interests.

Best regards,

Dan Jørgensen

2. The application

2.1. Applicant

The application material states that Energinet, Gas TSO A/S is the owner and also responsible for the day-to-day operations planned to be carried out.

Energinet's headquarters are located at Tonne Kjærsvej 65, 7000 Fredericia, Denmark.

2.2. Application material

The application has been processed based on the following key documents, submitted by Energinet on 25 January 2019:

- 'Baltic Pipe – Construction permit application'
  - Baltic Pipe – Construction permit application – Summary
  - Baltic Pipe – Description of Energinet's management system (eco-management and risk assessments)
  - Baltic Pipe – Quantitative risk analyses and DNVGL verification templates

- Environmental impact assessment (EIA) report
  - A Non-technical summary
  - A Introduction and summary conclusion Baltic Pipe
  - B Appendix 1 Little Belt crossing – Description of offshore construction activities
  - B Appendix 2 Baltic Pipe Little Belt construction work noise – Noise memo
  - B Little Belt Environmental impact assessment (EIA) report Baltic Pipe
  - C North Sea Environmental impact assessment (EIA) report Baltic Pipe
  - D Impact assessment Natura 2000 no. 112 Little Belt (*Lillebælt*)
  - E Appendix for sections under the Executive Order on Coordination
  - Natura 2000 and Appendix IV species (water)
  - Environmental impact assessment (EIA) report – Baltic Sea – Denmark

* Please note in relation to the environmental impact assessment (EIA) report that subreports for the North Sea, the Little Belt, the Baltic Sea and onshore are all part of the overall environmental impact assessment (EIA) report for the Baltic Pipe project in Denmark and do not constitute separate environmental impact assessment reports for each section of the pipeline, as could be indicated by the titles.

2.3. The Baltic Pipe project

The pipeline in Danish waters is a part of a large project, consisting, among other things, of a submarine pipeline for transporting gas from Norway to Poland. The application material states that the pipeline project in Danish waters applied for is a part of a large pipeline project going through the Danish part of the North Sea from Europipe II, running across Denmark through the Little Belt, the Baltic Sea and further south of the island of Bornholm to Poland.

The application concerns the construction of a 32-inch submarine pipeline in Danish waters in the North Sea and a 36-inch submarine pipeline in Danish waters in the Little Belt.

When fully operational, the capacity of the Baltic Pipe project will be 10 billion cubic metres of natural gas per year. The total length of the pipeline route is designed to be approx. 850 kilometres, with approx. 105 kilometres of the route in Danish waters in the North Sea and 4 kilometres in Danish waters in the Little Belt.

2.4. Location of the Danish part of the pipeline project

The Danish part of the pipeline project in the North Sea is located west of the Jutland west coast and across the Little Belt, south of Fænø and goes through Danish territorial waters and the Danish continental shelf area, cf. below: The routing of Baltic Pipe in the North Sea starts at a tee of the existing Europipe II gas pipeline and goes east to the landfall on the west coast of Jutland off Blåbjerg Klitplantage. The routing of Baltic Pipe in the Little Belt starts on the Jutland side east of Søndre Stenderup, and is led across the Little Belt in the waters between Fænø and Fønsskov Odde. The gas pipeline is brought ashore at Skrillinge Strand, from which it continues towards the south-east and across Funen and Zealand and the Baltic Sea to proceeding to northern Poland.

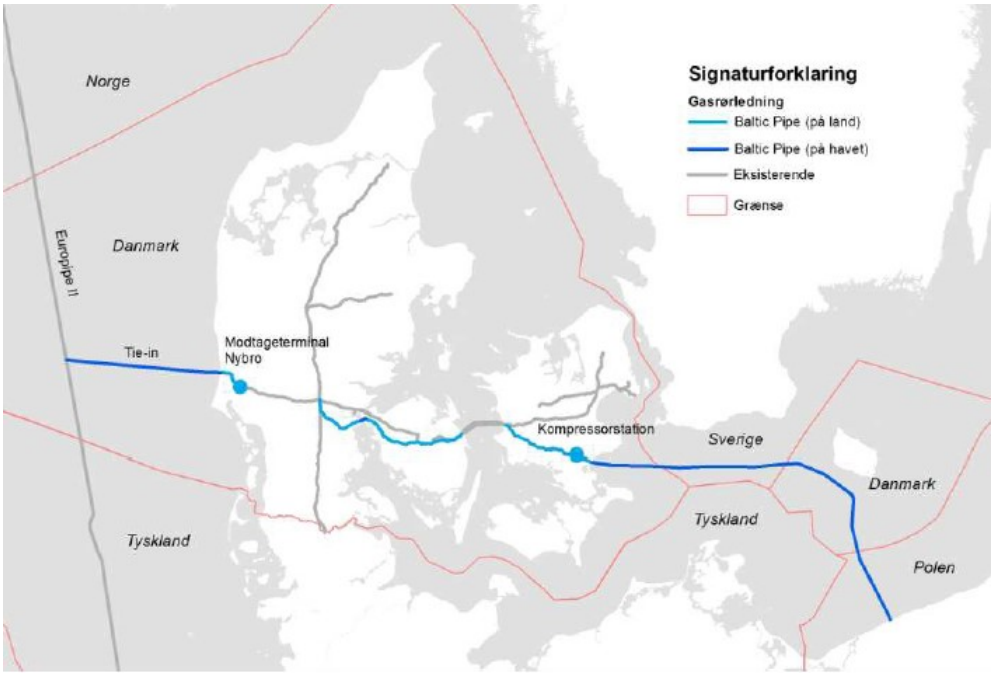

Figure 1 *Source: Figure 3-1, 'Construction permit application', February 2019.*

The coordinates of the specific location in Danish waters are set out in the 'Construction permit application'. The final coordinates of the location of the pipeline can only be finally determined when the pipeline has been laid.

2.5. Schedule

The application states that the laying of the pipeline is expected to start in 2020 with a view to being ready for the transport of gas by the end of 2022, cf. section 3.4. of the application.

The construction work, including pre and post-activities, are expected to take approx. 2.5 years, and work will be undertaken at several locations at the same time. The construction work is planned to start with the Little Belt crossing, and the total gas pipeline system is expected to be ready for the first gas on 1 October 2022.

The pipeline construction work in the North Sea, from the establishment of workplaces at the landfalls and offshore construction of the pipeline, is expected to take up to 11 months. Marine activities in the North Sea are expected to take up to seven months. In addition to this there is the installation of the PLEM structure and spools, expected to take four months, and pressure testing, expected to take three months. The pipeline construction work in the Little Belt, from the establishment of workplaces at the landfalls, offshore construction of the pipeline and subsequent pressure testing, is expected to take up to 10 months. Marine activities in the Little Belt are expected to take up to six months.

2.6. Technical consideration

2.6.1. Seabed intervention work

The application and the environmental impact assessment state that, in some areas, the laying of the pipeline requires additional stabilisation and/or protection against hydrodynamic loading (for instance waves and currents). Stabilisation can be achieved by trenching the pipeline in the seabed, or by installing rocks on the seabed around the pipeline.

As regards the gas pipeline in the North Sea, plans are to trench the pipe into the seabed to ensure stabilisation and protection from external impacts. The same applies to the Little Belt section to ensure the stability of the pipeline during operation, for instance due to current loads, and to protect it from damage from anchors, fishing gear etc.

In its application, the company states that the depth of the pipeline trench in the Little Belt ensures that, after construction, the gas pipeline can be covered by crushed rocks to seabed level.

2.6.2. Crossing of infrastructure

Section 8 of the application states that the Baltic Pipe route in the North Sea crosses communications cables and planned power cables. In the Little Belt, there is no knowledge of cable or pipeline crossings.

The company also states that, prior to each cable crossing, a crossing agreement will be entered into with the pipeline owner in question. Crossing agreements contain specific agreements on the technical details of the crossing. It is stated that concrete mattresses will be used to ensure separation between the two systems.

2.6.3. Content of hydrocarbons and composition of the gas

Section 7 of the application states that the gas is pure natural gas. Energinet states that the Baltic Pipe pipeline has been designed for dry, sweet (non-sour) natural gas, which means that the gas is free from H_2S. To ensure that the gas composition is suitable for the pipeline system, the transport contracts with gas suppliers contain composition restrictions that will be enforced throughout the life of the pipeline. These composition restrictions ensure that the H_2S content never exceeds the limit specified for dry, sweet (non-sour) natural gas. The difference in the composition for the North Sea (EPII) and the Little Belt pipeline, respectively, is due to expected mixing with gas from the Danish North Sea, biomethane and gas from Germany.

2.6.4. Design

The application states that the pipeline has been designed in accordance with recognised pipeline standards and practices. Specifically, the pipeline has been designed in accordance with DNVGL-ST-F101, with a design life of minimum 50 years. For the parts of the Baltic Pipe project in the North Sea (pipeline and PLEM structure) and the Little Belt, respectively, Energinet has appointed DNVGL as an independent third party to verify that the offshore pipeline system has been designed, manufactured, installed and commissioned in accordance with applicable technical, quality and safety requirements.

Inspection

The application states that, during the construction phase, several seabed surveys will be carried out as part of the supervision of the construction work. These seabed surveys will be performed using sonar supported by ROV inspections. When the entire pipeline has been laid and trenched, an as-built survey will be conducted. This survey provides 3D mapping of the pipeline, which, in addition to the exact position of the pipeline, also specifies the depth below the seabed. Sonar is also used, supplemented by ROV inspections.

The application states that, during the operational phase of the pipeline, inspections will generally be carried out and the offshore pipeline will be cleaned at intervals not exceeding four years. This interval corresponds to best practice for the industry. At regular intervals, external inspections of the pipeline are also carried out, using ROV. The inspections comprise seabed surveys and possibly surveying of the gas pipeline. Pigging (internal cleaning), like seabed surveys, is conducted at intervals not exceeding four years.

Pipeline pressure conditions

The company will design the pipeline across its length to have a maximum design pressure at the PLEM structure and the North Sea of 163.4 barg and 80 barg for the Little Belt.

Pipeline temperature conditions

Section 7.2 of the application states that the offshore design temperature is -20 to +20°C for the PLEM structure and the North Sea, and -10 to +25°C for the Little Belt.

Pipeline diameter and wall thickness

The company designs the pipeline with a nominal diameter of 16 inches and 32 inches at the PLEM structure, 32 inches in the North Sea and 36 inches in the Little Belt. In accordance with the DNVGL-ST-F101 design standard used, the wall thickness will be between 15.9-25.4 mm at the PLEM structure, 19.1-22.2 mm in the North Sea and 20.6 mm in the Little Belt.

Materials and corrosion conditions

The Baltic Pipe project in the North Sea will be constructed using individual steel pipes with an average length of 12.2 metres to be welded together in a continuous laying process.

In the Little Belt, the installation will be carried out in stages. The steel quality in the application for the PLEM structure and the Little Belt has been stated as SAWL 450 FD carbon steel, while in the North Sea, it has been stated as SAWL 485 FD, chosen in accordance with the DNVGL-ST-F101 design standard used.

Internally, the steel pipes will be coated with an epoxy-based material to reduce friction in the pipe, thereby improving flow conditions and reducing the pressure loss.

Externally, the steel pipes will be coated with a three-layer polyethylene coating in order to prevent corrosion. The external three-layer polyethylene anti-corrosion coating consists of an internal layer of fusion-bonded epoxy, an intermediate layer of adhesive and an outer layer of polyethylene. Further corrosion protection is achieved by incorporating sacrificial anodes of aluminium and zinc for the PLEM structure and the North Sea. The sacrificial anodes provide a dedicated and independent protection system in addition to the anti-corrosion coating. In the Little Belt, impressed current cathodic protection (ICCP) will be used as an independent anti-corrosion system.

A concrete weight coating containing iron ore will be applied on top of the external anti-corrosion coating. The concrete coating will be reinforced with steel netting (concrete armour). While the primary purpose of the coating is to stabilise the pipeline, the coating will also provide external protection from foreign objects such as fishing gear.

The application states that the concrete-coated pipes will be transferred to the pipe-laying vessel in the North Sea, where they will be welded together and non-destructive testing will be carried out. Before the pipe-laying process begins, a heat-shrink sleeve will be installed on the bare steel parts, and a coating will be applied externally around the welded pipe joints to fill in the remaining space between the concrete coating on either side of the welded joint and to protect the joint against corrosion.

2.6.5. Laying of the pipeline

Pipe-laying in the North Sea will be performed using a conventional S-lay process from a pipe-laying vessel with dynamic positioning or held in place by several anchors deployed around the vessel. Pipes are delivered to the pipe-laying vessel by pipe-supply vessels. On the pipe-laying vessel, the pipes are assembled into a continuous pipeline and lowered to the seabed.

The process onboard the pipe-laying vessel comprises the following general steps that constitute a production process: chamfering of pipes, welding of pipes, non-destructive testing of welds, corrosion protection of welds and progressive laying on the seabed.

Abandonment of the pipeline may become necessary if weather conditions make positioning difficult or cause too much movement in the pipe-laying vessel. An average laying rate of about 1-6 kilometres per day is expected, depending on weather conditions, water depth and pipe wall thickness.

During the construction work, safety zones must be established around the actual pipe-laying vessel and any support vessels to maintain safety both at the workplace and for other mariners in the North Sea. The safety distance is expected to be in the order of 2 kilometres (1 nautical mile) for a dynamically positioned pipe-laying vessel and in the order of 3 kilometres (1.5 nautical miles) for an anchored pipe-laying vessel.

In the Little Belt, the pipe will be installed on the seabed by pulling it from the Jutland side towards the Funen side. A pipe-stringing area will be established at the planned landfall on the Jutland side. Here, the pipeline sections will be welded together in lengths of up to 1 kilometre. Once the joining weld and subsequent coatings are completed, the pulling operation can be resumed. In order to cross the Little Belt, this operation must be repeated until the 4-kilometre crossing length has been reached.

During the construction work, safety zones must be established around the vessels involved to maintain safety both at the workplace and for other mariners in the Little Belt. Restriction zones will be agreed with the national maritime authorities, and maritime traffic will subsequently be notified and requested to avoid the restriction zone during the construction period. This information will be provided through Notices to Mariners (*Efterretninger for Søfarende, EfS*).

When the pipeline has been laid, it must be pre-commissioned prior to commissioning. This is to verify the mechanical integrity of the pipeline and ensure it is ready for operation and commissioning. Pre-commissioning is to ensure that the pipeline has no leaks and that welds etc. have been performed correctly. These tests involve inspections using cleaning pigs and pressure testing of the pipeline. In its application material, Energinet has stated that pre-commissioning will be carried out as wet pre-commissioning with pressure testing with seawater, both in the North Sea and in the Little Belt.

For the pressure testing of the pipeline in the Little Belt, about 3,000 cubic metres of water will be needed, which is expected to be obtained from the Little Belt. The water will be filtered before being pumped into the pipeline.

For the pressure testing of the pipeline in the North Sea, approx. 49,000 cubic metres of filtered seawater will be used. By measuring the pipeline pressure, it can be ensured that there are no leaks. The PLEM structure will be pressure tested separately using filtered seawater and MEG.

2.6.6. Decommissioning

The pipeline is designed for a lifetime of minimum 50 years. When a pipeline reaches the end of its useful life, or its operation is no longer economically viable, it must be decommissioned. The company states that decommissioning will be undertaken in accordance with national or international industry guidelines/standards at the time of decommissioning.

2.7. Safety considerations

2.7.1. Risk assessment

The application includes a risk assessment of potential risks relating to third-party personnel as well as environmental risks during the construction phase. The risk assessments use a standard methodology under which risks are identified and relevant probabilities and impacts are then assessed. The risk assessment has been carried out in accordance with DNVGL-ST-F101 in the North Sea and in the Little Belt as well as risk management guidelines and formal safety assessments of sea and seabed operations and potential environmental risks during the operational phase.

Management system for the design and installation phase

The company has described its management system in 'Baltic Pipe – Description of Energinet's management system' in the application. The company states that its management system is certified according to ISO 55001:2014 requirements. The company has set up a Health, Safety and Environmental (HSE) strategy.

2.7.2. Route selection

In general, for the entire pipeline route, the company has based its route selection in the application on a set of criteria defined by the company, cf. 'Baltic Pipe – Construction permit application', section 3, including technical and safety considerations, environmental aspects and studies, surveys and geophysical, geotechnical and environmental tests obtained.

In its application regarding the North Sea, Energinet states that, since there are no significant environmental, technical or economic arguments for an alternative routing between the valve system of Europipe II and the landfall at Blaabjerg, this route has been selected.

In its application, Energinet also states that it has been assessed that it will not be possible to obtain a routing permit through Natura 2000 site no. 112 Little Belt, as this could adversely affect the integrity of the designated site, and as a feasible alternative exists which does not affect the integrity of the designated Natura 2000 site.

The company has specifically assessed the route for the Danish sector and selected the preferred route in the Danish sector based on a risk assessment of various alternatives.

2.7.3. Safety of navigation

The company assesses that an impact on navigation during laying and operation cannot be ruled out, and that there may be impacts for a limited period during the construction phase both in the North Sea and the Little Belt, cf. 'Baltic Pipe – North Sea Environmental impact assessment (EIA) report' and 'Baltic Pipe – Little Belt Environmental impact assessment (EIA) report', section 6.9.

This impact will mainly be during the pipeline laying phase. In order to minimise the impact on maritime traffic during the construction phase, a safety zone is expected to be established around the pipe-laying vessel, cf. section 2.7.6 of this permit.

The company states that construction activities may impact maritime traffic in the North Sea and the Little Belt if navigation becomes obstructed or limited due to the construction work or the safety zone established around the construction work vessels. During the operational phase, restrictions will be placed on anchoring in a safety zone established around the pipeline and for the PLEM structure in the North Sea.

2.7.4. Fishery

Fishing considerations are described in section 4.1 of the application.

The application states that it has been assessed that cumulative impacts to fisheries in the North Sea will occur due to the construction of Baltic Pipe and Viking Link as well as existing restrictions from Horns Rev 3 and Syd Arne and other data and telecoms cables in the area. It is stated that, during the operational phase, bottom-dragging equipment will be prohibited within a zone of 200 metres on either side of the pipeline, regardless of whether the pipeline is trenched or lying freely on the seabed, cf. the provisions of the Executive Order on this subject (Executive Order no. 939 of 27 November 1992).

The application also states that no trawling has been recorded in the project area at the Little Belt since 2013, and, consequently, the project is not assessed to have a significant impact on trawling in the Little Belt.

In the Little Belt project area, a number of pound nets will have to be removed as a result of the Baltic Pipe pipeline. The impact on pound net fishing is assessed to be significant, given that, in general, the nets must be removed and cannot be re-established after the Baltic Pipe pipeline has been constructed.

2.7.5. Diving work

In section 9.5.1 of the application, it is stated that diving work is expected in the North Sea during the construction of the pipe section connecting the PLEM structure and the pipeline with bolted flanges. The company states that currently it cannot be ruled out that diving work will be required in connection with the pipe-laying process in the Little Belt and the North Sea. Diving work will be used only if this cannot be avoided.

2.7.6. Restriction zone / safety zone

According to the application, a restriction zone in the order of 3,000 metres (equivalent to 1.5 nautical miles) will be required for an anchored pipe-laying vessel and about 2,000 metres (equivalent to 1 nautical mile) for a DP pipe-laying vessel during the pipe-laying phase in the North Sea.

According to the application, restriction zones will be required during the pipe-laying phase in the Little Belt. These zones will be agreed with national maritime authorities, and maritime traffic will subsequently be notified and requested to avoid the restriction zone during the construction period. This information will be provided through Notices to Mariners.

2.7.7. Chemical and conventional munitions and military exercise areas

According to the application, there are known occurrences of abandoned munitions on the seabed of the North Sea. These munitions are from World War I and II and from the post-war period, consisting primarily of unexploded sea mines and bombs. Most of these bombs and mines have either exploded as planned, been cleared or have eroded to such an extent that they are harmless; however, there is still a risk that abandoned munitions could contain explosives that could still explode during the construction work.

There are no known occurrences of abandoned munitions on the seabed in the Little Belt where the pipeline is constructed, and the risk of UXO detonation during the construction work is assessed to be low.

According to the application, a study was prepared by a consultant in autumn 2018, assessing the risk of unexploded ordnance (UXO) on the seabed in and around the Baltic Pipe project area. In addition to an ALARP risk assessment, the study identified areas that should be inspected further to provide an accurate assessment of risk. These areas will be inspected during 2019 for the Little Belt and during 2020 in the North Sea. If, based on these inspections, risk of munition remains is assessed to exist, further inspections will be conducted in cooperation with the Danish Defence. The overall risk of UXO detonation during the construction work is assessed to be low, both for the Little Belt and the North Sea.

Military restriction areas are found off the west coast of Jutland, both north and south of the Baltic Pipe pipeline. There is also a prohibition zone along the coast. Restriction area 1 comprises EK R 33 Vejers, EK D 380 Kallesmærsk E and EK D 381 Kallesmærsk W. Navigation, anchoring and fishing in the restriction area is prohibited during blasting. It is stated in the application that the Baltic Pipe project will not affect military use of these areas. The distance between the restriction area and the Baltic project is approx. 2 kilometres. Restriction area 2 comprises 15 Nymindegab. Navigation, anchoring and fishing in the restriction area is prohibited during blasting. It is stated in the application that the Baltic Pipe project will not affect the military use of this area. The distance between the restriction area and the Baltic project is approx. 2 kilometres.

The application states that Energinet will coordinate the construction of Baltic Pipe in the North Sea with the Danish Defence to ensure that there is no conflict between the construction work and any military exercises in the areas.

The application states that there are no military exercise areas in the vicinity of the Little Belt crossing.

2.7.8. Environment

The company has described the environmental conditions in 'Baltic Pipe – Environmental impact assessment (EIA) report', describing the environmental conditions in the areas in the North Sea and the Little Belt where the pipeline is to be laid, and the company's assessment of how the section of the pipeline affects the environment in the North Sea and the Little Belt. The Baltic Pipe project is a large construction project that may have transboundary impacts. Under Section 38(1) of Danish Consolidated Act no. 1225 of 25 October 2018 on Environmental Impact Assessment of Plans and Programmes and of Specific Projects (the Environmental Assessment Act), neighbouring states must be consulted about projects that are expected to have transboundary impacts. The environmental impact assessment report states that the Danish Environmental Protection Agency is the 'Point of

Contact' in relation to the Espoo Convention, and the Danish Environmental Protection Agency has assessed that the project may have transboundary impacts and is thus subject to the Espoo Convention. However, this applies only to the part of the project running through the Baltic Sea. The Little Belt and North Sea project areas are not assessed to have significant adverse transboundary impacts on the environment. As regards the part of the Baltic Pipe project to be constructed in the Baltic Sea, Espoo consultations have been conducted with Sweden, Germany and Poland.

2.7.9. Nature conservation areas

It is stated in 'Baltic Pipe – Construction application permit' and 'Baltic Pipe – Environmental impact assessment (EIA) report' that a number of marine areas designated by the Danish authorities as Natura 2000 sites are outside, but adjacent to, the preferred route. These are Special Protection Areas (SPAs) for conservation of bird species designated under the EU Conservation of Wild Birds Directive, or Special Areas of Conservation (SACs) designated the Habitats Directive. These are:

The North Sea:

- The southern North Sea (no. 246). The distance to the pipeline corridor is approx. 20 kilometres.
- The Jutland Wadden Sea (no. 89). The distance to the pipeline corridor is > 20 kilometres.
- Ringkøbing Fjord and Nymindestrømmen (no. 69). The distance to the pipeline corridor is approx. 4 kilometres.

The Little Belt:

- The Little Belt (no. 112). The distance to the pipeline corridor is 800 metres to the west (the Jutland side) and adjacent to the pipeline corridor to the east (the Funen side).

Under the Ramsar Convention of 1971, certain wetlands are specially protected areas. The closest Ramsar area in relation to the pipeline in Danish territory is the Little Belt that is adjacent to the pipeline corridor. This area is identical to a Natura 2000 bird conservation and habitat area, cf. 'Baltic Pipe – Environmental impact assessment (EIA) report (Little Belt)', section 6.14.2.

The application states that no activities have been planned within the designated Natura 2000 sites in connection with the Baltic Pipe project in the North Sea or the Little Belt. The Natura 2000 site closest to the proposed Baltic Pipe route is the Little Belt nature conservation area.

The application also states that a materiality assessment has been conducted to identify all elements of the Baltic Pipe project that – either alone or in combination with other projects or plans – could have a material impact on Natura 2000 sites. The materiality assessment concluded that the

project will not have material impacts on the 'Southern North Sea' Natura 2000 site, the Jutland Wadden Sea or Ringkøbing Fjord and Nymindestrømmen during the construction and operation of Baltic Pipe. An impact assessment of Natura 2000 site Little Belt has been conducted, the conclusion of which is that the project will not adversely affect the Natura 2000 site during construction and operation. In addition, a materiality assessment has been conducted of impacts on the 'Æbelø, sea south of and Nærå Strand' (*Æbelø, havet syd for og Nærå Strand*) Natura 2000 site, where sediment may be deposited from the Trelde Næs excavation disposal site, which has been identified as an excavation disposal site that may potentially be used. The materiality assessment established that there is no risk of material impacts.

2.7.10. Cultural heritage

The application material states that, in 2017, geotechnical and geophysical surveys were undertaken both in the North Sea and in the Little Belt. The purpose of these surveys was to provide information to serve as the basis for a number of assessments, including marine archaeological assessments. Assessments of the risk that the project will harm cultural heritage on the seabed are conducted by the museum responsible for the various aquatic areas. For the Little Belt crossing, the responsible museum is Langelands Museum, while Strandingsmuseum St. George has the responsibility for the North Sea.

The application material states that if cultural heritage objects are identified on the seabed during the construction work, the construction work will be stopped and the relevant museum will be contacted to protect the cultural heritage object.

The application material states that Energinet, in cooperation with the Agency for Culture and Palaces, has prepared a policy for handling marine archaeology, and the Baltic Pipe project complies with this policy.

In the North Sea, four areas have been located in which wrecks may occur along the line routing applied for. Seven anomalies were identified during the geophysical survey. The application also assesses that potential Stone Age settlements or structures from settlements may occur, given that at a distance of 25 kilometres from the south to the north from the landfall on the west coast of Jutland finds from the Stone Age have been registered.

The application material states that, in the Little Belt, 10 locations of cultural heritage interest were identified along the Baltic Pipe route corridor applied for. Nine of these locations have been assessed as potential wrecks or wreck-related debris. The application also states that six areas in the vicinity

of the landfall on the Funen side have been designated for Langelands Museum to conduct marine archaeological surveys. The surveys proposed by the application will clarify whether remains of prehistoric settlements or other cultural heritage interests should be taken into consideration in connection with the construction of the Baltic Pipe gas pipeline in the Little Belt. Against this backdrop, it has been assessed that there is no risk of a significant impact on marine archaeological interests when it comes to Stone Age settlements.

During the operational phase, the risk of impacts on marine archaeology in the North Sea is limited to impacts in relation to routine surveys of the pipeline and any repair and maintenance work. Such work would be carried out in the same area as the construction work. The safety zones established around relevant archaeological sites will also apply after the commissioning of the installation, and consequently no anchoring or construction work may be carried out in these zones. Against this backdrop, it is assessed that there is no risk of significant impacts on marine archaeology during the operational phase.

3. Environmental impact assessment (EIA)

Energinet has prepared an environmental impact assessment (EIA) report for the project, the final version of which was submitted to the Danish Energy Agency in February 2019. The environmental conditions of the pipeline project applied for appear from:

- A Non-technical summary
- B Little Belt Environmental impact assessment (EIA) report Baltic Pipe
- C North Sea Environmental impact assessment (EIA) report Baltic Pipe

The Danish Energy Agency has reviewed the report and found that it complies with the requirements of Section 20 of the Environmental Impact Assessment Act (*Miljøkonsekvensloven*).

The company's environmental impact assessment of the pipeline project applied for has been prepared pursuant to the Continental Shelf Act, the Environmental Assessment Act and Executive Order no. 434 of 2 May 2017 on impact assessment regarding international nature conservation areas and the protection of certain species in connection with preliminary investigations, offshore exploration for and production of hydrocarbons, storage in the subsoil, pipelines etc. offshore (the Executive Order on Offshore Impact Assessment).

A scoping phase (first public hearing phase) was completed, calling for ideas and proposals for the environmental impact assessment report from authorities and citizens, during the period from 21 December 2017 to 22 January 2018. In this context, a number of public meetings were held in January 2018 in several locations representative of the project in Denmark.

In connection with the call for ideas and proposals of the first public hearing phase, responses to consultation were received from authorities, organisations and citizens.

The responses to consultation submitted were included in the considerations regarding the location and design of the installation, as well as in the authority's decision as to the surveys and assessments to be incorporated in the environmental impact assessment report by Gaz-System S.A. A detailed account of how the responses to consultation have been included in the scoping process can be found, among other things, in the scoping memo on the Danish Energy Agency's website on scoping of the project area and the contents of the environmental impact assessment report, respectively.

All responses to consultation submitted for the offshore section of the Baltic Pipe project during the scoping phase and the position on these responses are summarised in the scoping memo.

The environmental impact assessment report was submitted for consultation among the Danish authorities involved, organisations and the public during the period from 15 February 2019 until 12 April 2019. This is in line with the requirement for a minimum consultation period of eight weeks, cf. Section 35(4) of Executive Order no. 1225 of 25 October 2018.
The Danish Energy Agency participated in public meetings on the pipeline project applied for on 13 and 14 March 2019 in Næstved and Middelfart, respectively.

The Espoo part of the environmental impact assessment report has been prepared on the basis of the Espoo Convention (Convention on Environmental Impact Assessment in a Transboundary Context), cf. Executive Order no. 71 of 4 November 1999 on the Convention of 25 February 1991 on Environmental Impact Assessment in a Transboundary Context.

In the consultation concerning Nationally, the North Sea and the Little Belt, the Danish Energy Agency received comments from:

The Danish Health Authority
Citizen
The Danish Environmental Protection Agency
Ørsted
The Danish Ministry of Defence Estate Agency
Danish Fishermen PO
Fænø Gods
Middelfart Municipality
Citizens' group
Kolding Municipality
Ålbo Camping
Associations
The Danish Maritime Authority

A summary of comments received in connection with the national and international consultation process is available in Appendices 2 and 3.

The Danish Energy Agency presented the replies received from the consultation on the environmental impact assessments to the company and, at the request of the Danish Energy Agency, Energinet has commented on them.

On the basis of the report and its own assessments of the significance of the identified impacts and the adequacy of the proposed preventive measures, the Danish Energy Agency finds that the Baltic Pipe project in the North Sea and the Little Belt can be constructed and operated without unacceptable impacts on people, the environment, society etc. if the framework for the construction and operation of the project, as described in the submitted application and the environmental impact assessment report of February 2019, including the preventive measures described in the environmental impact assessment report, is implemented and the conditions for the permit, cf. section 1.2, are complied with.
In connection with the decision, the Danish Energy Agency has placed particular emphasis on the following factors:

Overall Natura 2000 sites and Annex IV species
The environmental impact assessment report contains an assessment of the project in relation to the protection purposes of the Natura 2000 sites which are located at distances of up to 10 km from the project area. This should be seen in relation to the fact that the vast majority of the project is a line installation, the impact of which is primarily local in nature. In accordance with the provisions concerning the coordination of assessments, cf. Part 5 of the Executive Order on Environmental Assessments, and the Executive Order on Offshore Impact Assessments, a general assessment of the project's sections in water was prepared in accordance with the joint procedure, cf. Section 8 of the Executive Order on Environmental Assessments. These materiality assessments are grouped together in 'Natura 2000 and Annex IV species (water)' and in section 4.7.9 of the present permit.
The conclusion on the basis of both the habitat assessments mentioned above and the environmental impact assessment report is that the project installations in water will not harm the species and natural habitats in the designation basis of the Natura 2000 sites.
An impact assessment entitled 'Natura 2000 assessment – Little Belt' (*Natura 2000 vurdering – Lillebælt*) was carried out for the 'Little Belt' nature conservation area, and is included as an appendix to the environmental impact assessment report. The conclusion on the basis of the impact assessment is that the project installations in water will not have any harmful impact on the species and natural habitats in the designation basis of the area, as a number of preventive measures, such as bubble curtains, will be implemented.
There are a number of specially protected species (Annex IV species) in the areas close to where the gas pipeline will be laid. Significant impact on these species will be avoided by implementing a number of measures, such as bubble curtains and a soft-start procedure.
The environmental impact assessment report and the Agency's assessment under the Executive Order on Offshore Impact Assessments also show that the

project will not deliberately disturb Annex IV species in their natural area of distribution, especially in periods in which the animals breed, look after young, overwinter or migrate, and will not damage or destroy breeding or rest areas in the natural areas of distribution of the animal species included in Annex IV of the Habitats Directive.

After an overall assessment of the available material, including the consultation responses and the comments on them, the Danish Energy Agency, in consultation with the competent authorities, assessed that the environmental impact assessment of the part of the pipeline project for which an application was made for installation in Danish maritime waters was completed with a satisfactory result.

4. Comments and assessment by the authorities

The present permit was submitted for consultation among the relevant Danish authorities with a view to assessing the project applied for. The comments by the authorities are included under the relevant subjects. The Danish Energy Agency's comments on and assessment of the individual subjects are also included, where available. The subjects are the same as in Energinet's application, cf. section 2.

4.1. Applicant

The Danish Energy Agency has no further comments on this subject.

4.2. Application material

The Danish Energy Agency finds that the application material submitted by Energinet is satisfactory, and therefore has no further comments on this subject.

4.3. The Baltic Pipe project

The Danish part of the Baltic Pipe pipeline is only a section. The Baltic Pipe pipeline must also be approved by Norway, Sweden and Poland for the entire project to be realised. If Energinet and Gaz-System S.A. do not obtain the necessary permits to realise the pipeline project, or the companies abandon the project in full or in part for other reasons, this permit will lapse. If the pipeline project is not implemented according to the application, Energinet must inform the Danish Energy Agency accordingly (terms and conditions 1).

Energinet must take out insurance to cover any damage caused by the activities carried out under the permit, even if such damage is accidental (terms and conditions 6).

The Danish Energy Agency has no further comments on this subject.

4.4. Location of the Danish part of the pipeline project

The coordinates of the specific location in Danish waters are set out in the application's 'Construction permit application'. The final coordinates of the location of the pipeline and thus the mileage points can only be finally determined when the pipeline has been laid.

The Danish Geodata Agency states that it expects Energinet to apply for a maritime survey permit and to comply with the general terms and conditions for maritime surveys. See http://gst.dk/soekort/soeopmaaling/privat-soeopmaaling/

The Danish Geodata Agency expects, among other things, to receive the coordinates of the gas pipeline (both planned and as-built) for addition of the gas pipeline to maritime charts, cf. terms and conditions 20.

Energinet must comply with the requirements set out by the Danish Geodata Agency for the implementation of the project. The projected coordinates of the pipeline must be submitted to the Danish Geodata Agency, and the final location (coordinates) of the pipelines laid must be submitted to the Danish Energy Agency, the Danish Ministry of Defence Estate Agency and the Danish Geodata Agency when they are available.

4.5. Schedule

Energinet must submit an updated schedule to the Danish Energy Agency before the pipeline is laid, cf. terms and conditions 2.

4.6. Technical consideration

4.6.1. Seabed intervention work

As regards the gas pipeline in the North Sea, plans are to trench the pipe into the seabed to ensure stabilisation and protection from external impacts. Similar to the pipeline in the North Sea, plans are to trench the pipeline in the little Belt into the seabed to ensure the stability of the pipeline during operation.

It is vital to the Danish Energy Agency's assessment of the intervention works that they are not changed and that the length of the planned sections does not change significantly.

After the pipeline has been laid, Energinet must prepare an assessment of the pipeline, including carrying out a post-lay survey. The assessment must be approved by the Danish Energy Agency, which may, among other things, require further seabed intervention works (terms and conditions 19).

4.6.2. Crossing of infrastructure

In the application, Energinet identified that the Baltic Pipe pipeline in the North Sea crosses communications cables and planned power cables. Concrete mattresses will be used in connection with the crossings on the seabed to maintain the necessary vertical separation. In the Little Belt, there is no knowledge of cable or pipeline crossings.

Energinet must ensure that agreements are entered into with the owners of the infrastructure crossed (terms and conditions 3) and then submit the design and method of execution of the crossing to the Danish Energy Agency

for its approval prior to commencement of the work (terms and conditions 4).

Energinet must ensure that any future pipelines and cables can cross the natural gas pipeline applied for in Danish territorial waters and the Danish part of the continental shelf, cf. terms and conditions 5.

4.6.3. Content of hydrocarbons and composition of the gas

After the submission of the application, Energinet specified the composition of the gas to be transported in the pipeline. It is vital to the permit that the composition of the gas remains within the design specification of the pipeline, including that it is dry, sweet natural gas, as applied for in the application. Any significant change of the composition must be approved by the Danish Energy Agency, cf. terms and conditions 24.

4.6.4. Design

A verifying third party must issue a Certificate of Compliance documenting that the installations comply with applicable legislation, standards and Energinet's technical specifications. The Danish Energy Agency requests that the Certificate of Compliance be submitted to the Danish Energy Agency when it is available. However, it must be submitted before the commissioning date of the pipeline installation (terms and conditions 28).

The management system in the project phase prior to commissioning must ensure and document that Danish legislation and requirements and rules issued under Danish legislation are complied with in both normal and critical situations, including the establishment of appropriate emergency preparedness for unintended incidents, cf. terms and conditions 23. Changes to the emergency preparedness must be submitted to the Danish Energy Agency and, once a year, Energinet must send the current plan for the established emergency preparedness to the Danish Energy Agency. The time of the annual submission is to be agreed with the Danish Energy Agency.

Before the pipeline is commissioned, an Inspection Release Note must have been issued by the certifying company. The Inspection Release Note must be submitted to the Danish Energy Agency as soon as it is available, cf. terms and conditions 29.

The Danish Energy Agency expects Energinet to audit the Baltic Pipe project according to a fixed plan, and points out in this connection that the Danish Energy Agency may at any time request an updated list of audits and the necessary insight into the audits performed and independent third-party verification, where this is required or chosen as documentation for the implementation of the project (terms and conditions 32).

4.6.5. Laying of the pipeline

Pre-commissioning

In the application, Energinet has specified the method it expects to use for commissioning or pre-commissioning the Baltic Pipe pipeline. Commissioning will be carried out as wet commissioning with pressure testing with seawater in both the North Sea and the Little Belt.

On the current basis, the Danish Energy Agency can accept the wet commissioning of the pipeline as pre-commissioning and that the permit is conditional on wet commissioning as pre-commissioning. Well in advance of the pre-commissioning phase, the Danish Energy Agency must be informed of the choice of method, including any choice of chemicals, additives and any other processing (terms and conditions 27), as it is assumed that environmental impacts and risks will have been reduced as much as possible.

When the pre-commissioning activities have been completed, but before the commissioning of the pipelines, Energinet must submit the results of the activities to the Danish Energy Agency, cf. terms and conditions 31.

Operation and maintenance

The Danish Energy Agency assumes that Energinet will carry out continuous monitoring of the transported natural gas flow and composition to ensure that they are within the design specifications for the pipeline, and that operations are carried out within the design specifications of the pipeline. Maintenance and operation are assumed to comply with and follow the manufacturer's instructions and to be implemented in Energinet's management system for maintenance so that this can be subject to the supervision of the authorities (terms and conditions 32).

The management system for operation, inspection and maintenance of the pipeline must be prepared and implemented before the pipeline is commissioned. The inspection plan should state how often and to what extent a visual inspection (fittings, marine vegetation, integrity of all types of seabed intervention etc.) will be carried out with ROV, acoustic surveys etc. with a view to establishing the condition of the pipeline and the seabed, cf. terms and conditions 23 of the permit.

The Danish Energy Agency would draw attention to the fact that operation, inspection and maintenance must be reassessed using a risk-based approach based on documented observations of the condition of the pipeline and the current operating conditions of the pipeline.

Energinet must prepare a monitoring programme for the operational phase. The monitoring programme must include the safety considerations. The

monitoring programme must be approved by the Danish Energy Agency prior to the commissioning of the pipeline, cf. terms and conditions 25.

4.6.6. Decommissioning

In the environmental impact assessment report, Energinet states that the pipeline is designed for a lifetime of minimum 50 years. Energinet states that decommissioning will take place in accordance with the applicable rules and standards at the time of decommissioning. The application states that, when the pipeline is taken out of operation, it will be emptied of gas and cleaned. The pipeline will then either be left in the seabed or be taken up and disposed of in accordance with applicable rules and guidelines.

The Danish Energy Agency points out that the full or partial decommissioning of the Baltic Pipe pipeline in Danish waters requires the approval of the relevant Danish authorities and that the current basis for such decommissioning is removal and full clean-up with the least possible intervention and impact on the marine environment (terms and conditions 33).

4.7. Safety and environmental conditions

4.7.1. Risk assessment

Energinet must submit documentation for the management system for operation, inspection and maintenance of the pipeline in both North Sea and the Little Belt, respectively, before the pipeline can be commissioned. The management system must ensure that operations and conditions are constantly monitored to ensure that the integrity of the pipeline is maintained. The management system is reassessed using a risk-based approach based on the observations made of the pipeline's condition and based on the pipeline's operating conditions (terms and conditions 23).

4.7.2. Route selection

The safety risks for the pipeline in the North Sea and the Little Belt are assessed by the company to be acceptable and reduced in respect of the ALARP principle in designated areas to ensure the lowest risk.

The Danish Energy Agency has no further comments on the route selection.

4.7.3. Safety of navigation

The Danish Maritime Authority notes that it has been involved in the project with a view to ensuring the safety of navigation. Including HAZID workshops for crossing the Little Belt.

If any closure of navigation to/from Gamborg Fjord is necessary, it is assumed that this will be agreed with the users of the area. A permit for closure, if any, must be applied for from the Danish Maritime Authority.

In their consultation responses, the Danish Maritime Authority/the Danish Ministry of Industry, Business and Financial Affairs state that the Executive Order on safety of navigation in connection with construction works and other activities etc. in Danish waters (no. 1351 of 29 November 2013) must be complied with, and the assessment form for the assessment of the safety of navigation in connection with works at sea, cf. Executive Order no. 1351 of 29 November 2013, must be complied with.

The Danish Maritime Authority also points out that the application states that information will be regularly sent to Notices to Mariners about the position of the construction vessel. The Danish Maritime Authority states, more precisely, that normal practice is for a general notice to be published in Notices to Mariners about the project (for each section) in good time before the start of work. This must include information that the pipe-laying vessel is subject to a dynamic safety zone.

The Danish Energy Agency draws attention to the fact that Energinet must comply with the requirements made by the Danish Maritime Authority for the implementation, operation and decommissioning of the project (terms and conditions 14).

4.7.4. Fishery

Agreement between Danish Fishermen PO and Energinet

An agreement must be entered into between Danish Fishermen PO and Energinet before the pipeline is laid. In the agreement, the parties are expected to have a common understanding of how the pipeline will be placed on the seabed in a satisfactory manner for the fisheries sector, and agreement is expected to have been reached between the parties on the question of compensation for loss of earnings for the commercial fishermen affected by the laying and operation of the pipeline.

The agreement must be submitted to the Danish Energy Agency when it is available, and no later than before the laying of the pipeline is commenced, cf. terms and conditions 12.

4.7.5. Diving work

The Danish Energy Agency notes that the Danish Maritime Authority lays down requirements for safety, health and the environment in connection with diving activities in Danish waters and from Danish vessels. Against this background, the Danish Energy Agency draws attention to the fact that Energinet and third parties must comply with the requirements made by the Danish Maritime Authority for the implementation, operation and decommissioning of the project (terms and conditions 14).

4.7.6. Restriction zone and safety zone

The Danish Energy Agency notes that the safety zone during the laying of the pipeline and the restriction zone after its laying must be agreed with the Danish Maritime Authority.

4.7.7. Chemical and conventional munitions and military exercise areas

In its consultation responses, the Danish Ministry of Defence Estate Agency states that the pipeline is brought ashore through a prohibition area, cf. Section 5 of Executive Order no. 135 of 4 March 2005 on prohibition of navigation, anchoring and fishing etc. in certain areas in Danish waters in which all navigation in the area is prohibited for vessels with a gross tonnage above 5. The area is a prohibition area because there is a well-known presence in the area of munitions or objects which may be hazardous (Unexploded Ordnance/UXO). Defence Command Denmark will therefore require a UXO survey for this area. Applications for navigation in the prohibition area must be submitted to the Danish Maritime Authority.

In addition, the Danish Ministry of Defence Estate Agency states that there is a risk of UXO in several sections of the pipeline. On this basis, Defence Command Denmark recommends that a UXO survey be carried out before the work in the seabed is commenced. Following the completion of the UXO survey, a list of possible UXO finds is prepared, and reviewed with the Mine Clearance Service of the Danish Navy.

Defence Command Denmark would also state that, if remains of munitions or objects which may be hazardous (UXO) are found in connection with work on or in the seabed, the work must be stopped immediately and the Joint Operations Centre of the Danish Defence must be contacted, cf. Section 14 of Executive Order no. 1351 of 29 November 2013 on safety of navigation in connection with construction works and other activities etc. in Danish waters.

The Danish Defence emphasises that, during the phase of the survey involving identification of discovered anomaly/anomalies (UXO survey), a Mine Clearance team leader from the Mine Clearance Service must be present. Any costs incurred in this connection must be paid by the applicant.

In addition to the above, the Danish Ministry of Defence Estate Agency would note that the permits issued and contact details for the vessel or vessels carrying out the work must be made available to the Joint Operations Centre of the Danish Defence via the authority issuing the permit. If there are updates to the contact details, they may be sent directly to the Joint Operations Centre of the Danish Defence at the addresses below:

Contact details for the Joint Operations Centre of the Danish Defence:

	Phone	Email
Duty Officer:	+45 7285 0380	FKO-KTP-NMOC-VO@mil.dk
Maritime Assistance Service:	+45 7285 0371	mas@sok.dk
JOC Duty Manager:	+45 7285 0332	
Switchboard:	+45 7285 0000	

Any updates must be sent by the permit holder directly to the Joint Operations Centre of the Danish Defence.

Energinet must comply with the requirements and guidelines of the Danish Defence, cf. terms and conditions 15 of the permit.

4.7.8. Environment

NOVANA monitoring programme:

In its consultation response, the Danish Environmental Protection Agency states that the Danish Environmental Protection Agency would like to be notified when work is carried out in the Little Belt so that this can be taken into account in connection with the implementation of the NOVANA monitoring programme.

Monitoring:

In its consultation response, the Danish Environmental Protection Agency states that, following the construction of installations in the North Sea and the Little Belt, the extent of physical loss of and physical disturbance to the overall habitat types in the seabed must be assessed, documented and reported to the Danish Environmental Protection Agency. Furthermore, the Danish Environmental Protection Agency recommends that a monitoring programme be implemented for the spread of sediment, among other things to verify the basis for assessing potential environmental impacts as reported in the environmental impact assessment reports, and to document the degree of potential impact on marine-sensitive habitats, cf. terms and conditions 21.

Alignment and pipe laying:

In its consultation response, the Danish Environmental Protection Agency states that it is recommended, to the extent possible, for the alignment and pipe-laying method to be chosen on the basis of a criterion of the least possible environmental impact, including the impact on any NOVANA measuring stations. This also includes the construction of the pipeline outside of the coastal eelgrass and reef areas south of Fænø, with the result that there will only be impacts on these natural habitats where the pipeline is brought ashore on the Funen and Jutland sides and thus on a small part of the total areas of eelgrass and reefs in the study corridor.

Energinet must ensure that the pipeline is constructed outside the coastal eelgrass and reef areas south of Fænø so that there is as little impact as possible, cf. terms and conditions 13.

The Danish Energy Agency draws attention to the fact that the plan for emissions from the pipeline under Section 33 of Executive Order no. 1033 of 4 September 2017 of the Danish Act on the protection of the marine environment and Executive Order no. 909 of 10 July 2015 on emergency preparedness in case of pollution of the sea from oil and gas installations, pipelines and other platforms must, before the pipeline is commissioned, be submitted to the Danish Environmental Protection Agency for approval, and also draws attention to the provisions concerning the immediate reporting of spills in connection with the pipeline under Section 2 of Executive Order no. 874 of 27 June 2016 on reporting pursuant to the Danish Act on the protection of the marine environment.

Energinet must comply with the requirements made by the Danish Environmental Protection Agency for the implementation and operation of the project, cf. terms and conditions 16 of the permit.

Monitoring programmes

Energinet must prepare monitoring programmes for the construction phase and the operational phase. The programmes must include the environmental conditions and be approved by the Danish Energy Agency both before the laying of the pipeline is commenced and before the pipeline is commissioned, respectively, cf. terms and conditions 17 and 25.

The results of the monitoring programmes must be made public when they become available, cf. terms and conditions 26.

Invasive species

Materials for the stabilisation of the pipeline must not have any harmful impacts on the flora and fauna, for instance through the introduction of invasive species when rocks are placed, cf. terms and conditions 7.

Emergency preparedness

For all phases of the project, Energiniet must have established an emergency service to deal with the impacts of spills of hydrocarbons or other unintended incidents. A plan for the established emergency preparedness must be submitted annually to the Danish Energy Agency, cf. terms and conditions 22.

4.7.9. Nature conservation areas

The North Sea – Natura 2000 sites and Annex IV species

Natura 2000 sites

Within a distance of approx. 25 km from the Baltic Pipe survey corridor in the North Sea, there are three Natura 2000 sites: no. 246: Southern North Sea, no. 89: Wadden Sea, and no. 69: Ringkøbing Fjord, cf. Figure 2 below. The other Natura 2000 sites, shown with orange hatching on the map in Figure 2, are not included in the following descriptions and assessments. To the extent that these sites may be affected by onshore installations, they will be covered by the Natura 2000 assessment for the onshore part of the project.

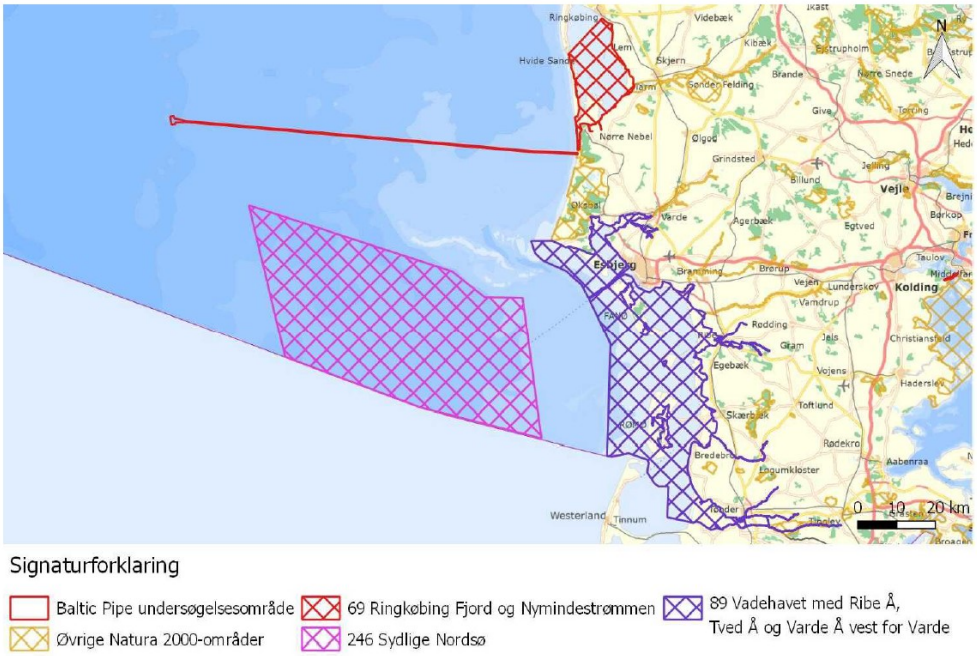

Figure 2 *Natura 2000 site no. 246: Southern North Sea (containing habitat)*

H255 and bird protection area F113

The site consists of habitat H255 and bird protection area F113. The site has not been designated as a Ramsar site. The site is around 20 km south of the survey corridor for the Baltic Pipe pipeline in the North Sea.

The designation basis for Natura 2000 site no. 246 includes, among other things, 'Sandbanks with shallow, permanent cover of sea water'. Due to the distance of approx. 20 kilometres between the survey corridor for Baltic Pipe in the North Sea and habitat H255, and as there is only a risk of impact on marine habitats due to sediment dispersion at a very short distance from the actual construction area, there is no risk that the construction and operation of the Baltic Pipe pipeline may affect habitats in Natura 2000 site no. 246, and the sandbank habitat is therefore not described any further.

Species in the designation basis for habitat no. 255 comprise porpoise, common seal and grey seal, while species in the designation basis for bird protection area F113 consist of red-throated diver, black-throated diver and little gull.
For an assessment of the impact on the designation basis in Natura 2000 site no. 246, reference is made to the document 'Natura 2000 and Annex IV species (water)'.

The Danish Energy Agency's assessment
On the basis of the document 'Natura 2000 and Annex IV species (water)' and the materiality assessment presented in it for Natura 2000 site no. 246, including the distance of approx. 20 km to the Baltic Pipe survey corridor, the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project may be assumed to have the potential to affect the designation basis for Natura 2000 site no. 246. Consequently, the Danish Energy Agency does not find that an impact assessment must be prepared for the site, cf. Section 4(4) of the Executive Order on Offshore Impact Assessments.

Natura 2000 site no. 89: Wadden Sea
The site comprises a large area and consists of a large number of habitats (H78, H86, H90 and H239) and bird protection areas (F49, F51, F52, F53, F55, F57, F60, F65 and F67). The Wadden Sea has also been designated as a Ramsar site (no. 27: Wadden Sea).

The Natura 2000 site is located more than 20 km south of the point at which Baltic Pipe is brought ashore. The nearest habitat (H78) and bird protection area (F57) are included in the present materiality assessment as only the marine components of the designation basis for habitat H78 and bird protection area F57 may be affected by activities from the Baltic Pipe pipeline in the North Sea.
Due to the distance between the Baltic Pipe survey corridor in the North Sea and the boundary of habitat H78 (approx. 22 km), and as there is only a risk of impact on marine habitats within the project area and within a short distance from the actual construction area, it is assessed that there is no risk of impact on marine habitats in the designation basis for H78.

The species in the designation basis for H78 which may be relevant in relation to any impacts from the construction and operation of the Baltic Pipe pipeline in the North Sea include marine mammals (porpoise, grey seal and common seal) and fish (salmon (Salmonidae sp.), sea lamprey (Petromyzon marinus), river lamprey (Lampetra fluviatilis), brook lamprey (Lampetra planeri), twaite shad (Alosa fallax) and houting (Coregonus oxyrinchus)). The probability of otter (Lutra lutra) occurring at the landfall or swimming in the coastal part of this exposed part of the North Sea, and therefore having the potential to be affected by the project, is assessed to be very low. If there is an otter in the area, it will be a sporadic occurrence, and the species will be able to go elsewhere in the short period during which construction work is carried out. Otters are therefore not included in the materiality assessment.

The bird species in the designation basis for F57 which are deemed to be relevant in relation to the Baltic Pipe project include the following: little gull, common tern (Sterna hirundo), Arctic tern (Sterna paradisaea), sandwich tern, eider (Somateria mollissima) and common scoter. All these species may forage in or near the survey corridor for the pipeline in the North Sea. Common terns and Arctic terns breed at the port in Esbjerg, among other sites, while sandwich terns mainly breed on Langli. A common feature of these species is that they sometimes fly far to find food (up to 50 km). Eiders and common scoters are migratory birds and overwinter at sea in and around the Wadden Sea. Eiders also breed in small numbers on fox-free islands in the Wadden Sea.
For an assessment of the impact on the designation basis in Natura 2000 site no. 89, reference is made to the document 'Natura 2000 and Annex IV species (water)'.

The Danish Energy Agency's assessment
On the basis of the materiality assessment presented for Natura 2000 site no. 89 and the fact that there is a distance of more than 20 km to the Baltic Pipe survey corridor, the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project may be assumed to affect the designation basis for Natura 2000 site no. 89. Consequently, the Danish Energy Agency does not find that an impact assessment must be prepared for the site, cf. Section 4(4) of the Executive Order on Offshore Impact Assessments.

Natura 2000 site no. 69: Ringkøbing Fjord and Nymindestrømmen
The site consists of habitat H62 and bird protection area F43 and is located approx. 4 km north of the landfall of the Baltic Pipe pipeline in the North Sea. Over the water, there is a distance of more than 25 km between the survey area for the Baltic Pipe pipeline in the North Sea and the Natura 2000 site.

It is assessed that there is no risk of impact on marine habitats in the designation basis for H62 as there is only a risk of impact on marine habitats as a result of sediment dispersion within the project area and at a short distance from the actual construction area, and as there is a distance of more than 25 km over the water between the project area and the nearest marine habitats.

In relation to the remainder of the designation basis for habitat no. 62, it is assessed that the only species that may be relevant in relation to the impacts from the construction and operation of the Baltic Pipe pipeline in the North Sea are the fish sea lamprey, river lamprey, twaite shad and salmon. All these species are also in the designation basis of Natura 2000 site no. 89, Wadden Sea, and it has been assessed in this connection that the probability of the presence of fish from the designation basis in the vicinity of the project area for Baltic Pipe is very low, and that any impacts from the project on fish will be insignificant in both the construction and operational phases, and fish are therefore not described and assessed further in the following.

Ringkøbing Fjord is one of Denmark's most important breeding and resting areas for a large number of birds, and the birds in the designation basis for F43 are associated with the fjord and the surrounding areas in different ways. The bird species in the designation basis for F57 which are deemed to be relevant in relation to the Baltic Pipe project include common tern, Arctic tern and sandwich tern.
For an assessment of the impact on the designation basis in Natura 2000 site no. 69, reference is made to the document 'Natura 2000 and Annex IV species (water)'.

The Danish Energy Agency's assessment
On the basis of the materiality assessment presented for Natura 2000 site no. 69 and the fact that there is a distance of more than 25 km to the Baltic Pipe survey corridor over the water, the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project may be assumed to affect the designation basis for Natura 2000 site no. 69. Consequently, the Danish Energy Agency does not find that an impact assessment must be prepared for the site, cf. Section 4(4) of the Executive Order on Offshore Impact Assessments.

Annex IV species
All Danish bat species are in Annex IV of the Habitats Directive. Certain bat species use the shoreline as a guide when travelling or foraging along the coast or across the sea, and bats will therefore be very likely to occur within or near the offshore project area. However, the density of bats along the west coast of Jutland is very low (Møller, Baagøe, & Degn, 2013). The Baltic Pipe project in the North Sea primarily comprises construction work on and in the seabed, and the construction work here will take place with slow-moving vessels in an area in which there is already a high volume of maritime traffic. It is therefore assessed that there is no risk of impact on bats as a result of the offshore project. Lights on the construction vessels may attract insects and thus bats, but this is assessed as an insignificant impact which does not have the potential to affect the ecological functionality of the breeding and resting areas of the bats.
The North Sea is home to a number of species of marine mammals. Grey seal (Halichoerus grypus), common seal (Phoca vitulina), porpoise (Phocoena phocoena), bottlenose dolphin (Tursiops truncatus) and minke whale (Balaenoptera acutorostrata) are widespread and observed regularly in large areas of the North Sea.
All whale species are covered by Annex IV of the Habitats Directive. Porpoises are commonly found in the North Sea, but the area where Baltic Pipe is to be installed is deemed to be of low importance to porpoises.
In addition to porpoises, sporadic occurrences of other whales are observed in the North Sea, for example sperm whale, common dolphin, humpback whale, minke whale, white-beaked dolphin and bottlenose dolphin, but occurrences in the Baltic Pipe survey area are rare, and these are usually a few individuals.
It is therefore assessed that porpoises are the only Annex IV species that is relevant in relation to the construction and operation of the Baltic Pipe pipeline in the North Sea.

For the impact on Annex IV species, reference is made to the assessment presented in the document 'Natura 2000 and Annex IV species (water)'.

The Danish Energy Agency's assessment

Based on the materiality assessment presented and the proposed preventive measures to minimise the impact on porpoises in the construction and operational phases, the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project will deliberately disturb the species mentioned in Annex IV (a) of the Habitats Directive in their natural area of distribution, particularly in periods of time in which the animals breed, display parental care, overwinter or migrate, or damage or destroy breeding or resting areas in the natural area of distribution of the species mentioned in Annex IV (a) of the Habitats Directive, cf. Section 8(1) and (2) of the Executive Order on Offshore Impact Assessments.

The Danish Energy Agency has reviewed the section on marine mammals in the environmental impact assessment. It is the assessment of the Danish Energy Agency that the placing of rocks will not constitute a significant impact on porpoises in the proposed area in the North Sea, provided that measures such as looking out for animals in the vicinity of the vessel and, if necessary, using acoustic deterrent devices are taken before the rocks are placed.

Before rocks are placed, it is necessary to look out for marine mammals from the vessel and, if necessary, use acoustic deterrent devices, cf. terms and conditions 8.

The Little Belt – Natura 2000 sites and Annex IV species

Natura 2000 sites

The eastern part of the study corridor for the Baltic Pipe pipeline in the Little Belt borders on Natura 2000 site no. 112: Little Belt, while in the western part there is an increasing distance between the corridor and the Natura 2000 site. In the far west (on the Jutland side), there is a distance of approx. 800 metres between the survey corridor and Natura 2000 site no. 112.

The pipeline must be buried across the Little Belt, which results in a quantity of excavated material to be removed. It is expected that the excavated sediment must be disposed of at the disposal site at Trelde Næs. The potential impacts on the designation basis for Natura 2000 site no. 108 from disposal primarily comprise sediment impact and noise and disturbances from the disposal activities. The disposal site is located about eight kilometres west of Natura 2000 site no. 108: Ærø, sea south of and Nærå.

The other marine Natura 2000 sites shown in Figure 3 are located so far away from the survey corridor in the Little Belt and the disposal site at Trelde Næs that it is

deemed that they will not have the potential to be affected by the project. To the extent that Natura 2000 sites may be affected by onshore installations, they will be covered by the Natura 2000 assessment for the onshore part of the project.

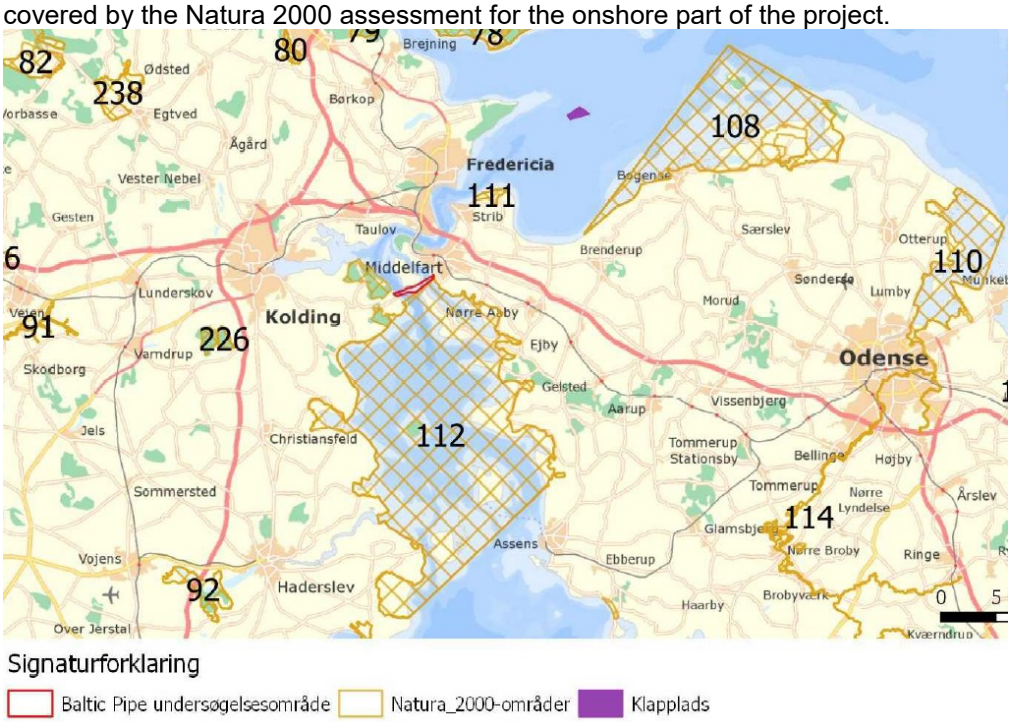

Figure 3 – Natura 2000 sites at the Little Belt

Natura 2000 site no. 108: Ærø, sea south of and Nærå Strand

Natura 2000 site no. 108 consists of habitat no. 92: Ærø, sea south of and Nærå, bird protection area no. 76: Ærø and coast at Nærå. The bird protection area has the same boundary as Ramsar site no. 16: the coast by Nærå and Ærø.

Both marine and terrestrial habitats and a number of species are in the designation basis for habitat H92. Only the marine components of the designation basis are deemed to be relevant in relation to the Baltic Pipe project in the Little Belt, i.e. sandbank, wading area, lagoon, bay, reef, porpoise and common seal.

The bird species in the designation basis for F76 which are deemed to be relevant in relation to the Baltic Pipe project include the following: sandwich tern, Arctic tern and little gull. These species may forage in or near the survey corridor for the pipeline in the Little Belt and in the area in which disposal will take place.

For an assessment of the impact on the designation basis in Natura 2000 site no. 108, reference is made to the document 'Natura 2000 and Annex IV species (water)'.

The Danish Energy Agency's assessment

On the basis of the materiality assessment presented for Natura 2000 site no. 108, including the fact that:

- it is assessed that increased sediment concentration in the water phase and sediment deposition as a result of disposal and the construction activities in the Little Belt cannot result in significant impacts on marine habitats or foraging or the food available to marine species in the designation basis, and

- that the period during which birds and marine mammals can be affected by noise and disturbance from the disposal activities will be short-lived, and that the disposal area and the surrounding areas are also considered to have limited value for marine mammals and birds in the designation basis, it is assessed overall that noise and disturbance from disposal will not result in significant impacts on species in the designation basis,

the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project will result in significant impacts on the designation basis for Natura 2000 site no. 108. Consequently, the Danish Energy Agency does not find that an impact assessment must be prepared for the site, cf. Section 4(4) of the Executive Order on Offshore Impact Assessments.

Natura 2000 site no. 112: Little Belt

Natura 2000 site no. 112 consists of habitat no. 96: the Little Belt and bird protection area no. 47: Little Belt. The bird protection area has the same boundary as Ramsar site no. 15: Little Belt. The designation basis is shown in the table below:

Designation basis for habitat area no. 96		
Natural habitats:	Sandbank (1110)	Wadden Sea surface (1140)
	Lagoon* (1050)	Bay (1160)
	Reef (1170)	Annual vegetation of drift line (1210)
	Perennial vegetation of stony bank (1220)	Vegetated sea cliff (1230)
	Annual vegetation, coastal salt meadow (1310)	Salt meadow (1330)
	Embryonic shifting dune (2110)	White dune (2120)
	Grey/green dune (2130)	Waters with benthic vegetation of *Chara* spp. (3140)
	Natural eutrophic lake (3150)	Water course (3260)
	Dry meadow on limestone* (Semi-natural dry grasslands on calcareous substrates) (6210)	Acid dry meadow* (*Nardus* grasslands on silicious substrates) (6230)
	Periodically wet meadow (*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils) (6410)	Hydrophilous tall herb fringe communities (6430)
	Degraded raised bog (7120)	Springs* (Petrifying springs with tufa formation) (7220)
	Alkaline fens (7230)	*Luzulo-Fagetum* beech forests (9110)
	Asperulo-Fagetum beech forests (9130)	Oak or oak-hornbeam forest (9160)
	Bog woodland* (91D0)	Alluvial forests (91E0)
Species:	Narrow-mouthed whorl snail (1014)	Desmoulin's whorl snail (1016)
	Crested newt (1166)	Porpoise (1351)

Designation basis for bird protection area no. 47		
Birds:	Whooper swan (T)	Scaup (T)
	Eider (T)	Golden-eye (T)

	Red-breasted merganser (T)	White-tailed eagle (Y)
	Marsh harrier (Y)	Spotted crake (Y)
	Corncrake (Y)	Avocet (Y)
	Ruff/reeve (Y)	Common tern (Y)
	Arctic tern (Y)	Little tern (Y)
	Short-eared owl (Y)	

Impact

The project will not result in physical impacts on reefs within the Natura 2000 site, and any impacts could only be achieved as a consequence of the physical impact on the reef outside the Natura 2000 site affecting the Natura 2000 site. If the pipeline is constructed through the reef, and the reef is not restored, the reef will be permanently destroyed, resulting in a reduction in the total area of reef in direct contact with reefs in Natura 2000 site no. 112. However, if the reef in the survey corridor is restored immediately after the construction work, it is assessed on the basis of the above that the project will not result in harmful impacts on the part of the reef site inside the Natura 2000 site. There are several other areas with reefs in the vicinity of the survey corridor, and recruitment and the recruitment basis for reef organisms in reef habitats in the Natura 2000 site cover a far larger area than the small part of the reef in the survey corridor which will be temporarily removed. It is therefore assessed that there is no risk that the temporary removal of the reef in the survey area will affect either the current functionality of the reef in the Natura 2000 site or the maintenance of the reef's continued functionality.

Regardless of the choice of restoration method, it is assessed that the physical impact on the reef in the survey corridor will be temporary and reversible as the reef will be restored and, within a period of time, fauna and flora will be re-established that are characteristic of reefs and that correspond to the current conditions.
In general, it can be concluded that when the reef in the survey corridor is restored immediately after the construction work and is thus only removed temporarily within the survey corridor, there will be no harmful impacts on the structure of the reef marine habitat within the Natura 2000 site. The distribution of reefs in the Natura 2000 site will be stable, and it is estimated that the project will not, in the short or long term, prevent or delay the possibility of obtaining favourable conservation status for the reef habitat in the designation basis for Natura 2000 site no. 112: Little Belt.
It is generally assessed that the impact on marine habitats due to sediment dispersion from the construction work will not result in harmful impacts on the area, structure and function of the marine habitats, and will thus not prevent the possibility of obtaining favourable conservation status for these habitats in the designation basis for Natura 2000 site no.

112: Little Belt.

Porpoises have one of their core areas of distribution in the Little Belt, and there is a special focus on the protection of the species there. On the basis of the assessments carried out, it may be concluded that the construction work can be carried out without having harmful impacts on porpoises in the Natura 2000 site. The assessment assumes that the construction-related assumptions specified in Table

6.41 are complied with in connection with the establishment of sheet pile walls and stay piles in the Little Belt.
In addition, it must be ensured that the blasting of any UXOs will be carried out as described in section 6.14.3.1.2 of the environmental impact assessment report for the Little Belt. Overall, it is assessed that the construction work, with the construction-related assumptions stated in the project description, including the temporal restrictions, will not lead to harmful impacts on porpoises in the designation basis for Natura 2000 site no. 112: Little Belt.

General assessment of impacts on porpoises from driving/vibro-driving of piles.
With the use of soft start before driving and the establishment of double bubble curtains around the construction areas during driving and vibro-driving, only a few individuals will experience noise impacts which may lead to impacts on the behaviour of both seals and porpoises, and permanent or temporary hearing damage will be completely avoidable for both construction methods. The effects on the stock of marine mammals in the form of possible restrictions on freedom of movement and access to food resources and the maintenance of the area's suitability for the marine mammals are deemed to be of limited importance and without significant negative effects for the stocks, both regionally and locally.

On the basis of the impact assessment in relation to airborne noise from driving steel piles south of Fænø, this activity cannot be permitted in the breeding period of the Arctic tern from 1 April - 1 July unless it is ensured, prior to the commencement of noisy construction activities south of Fænø, that Arctic terns are not breeding at the designated breeding location at Fønsskov Odde.

<u>The Danish Energy Agency's assessment</u>
Assuming that the Baltic Pipe pipeline is either constructed outside the reef which is directly connected to the reef in the Natura 2000 site, or that the reef is restored as soon as possible after the construction work, and that the restrictions specified in the 'Preventive measures' section for noisy construction activities are observed in respect of porpoises and Arctic terns, it is assessed that the project will not result in any harmful impacts on the designation basis for Natura 2000 site no. 112, cf. Section 4(1) of the Executive Order on Offshore Impact Assessments.

The Danish Energy Agency draws attention to the fact that Energinet must observe the preventive measures laid down by the environmental impact assessment report in connection with the implementation, operation and decommissioning of the project, cf. terms and conditions 11.
Terms are also stipulated for monitoring, cf. terms and conditions 17, 19, 25 and 30.

Preventive measures

Activity	Period	Comments
Total construction phase, the Little Belt	Up to 10 months	
Construction activities in the Little Belt	Up to six months	Expected period: May to October
Jutland: Pile-driving of sheet piles at the coast	Up to three weeks (offshore up to two weeks)	Work can be carried out only on weekdays during the daytime (7-18). Expected to be carried out in May. Effective pile-driving time of approx. six to seven hours per day is expected. Double bubble curtain will be used for offshore installations.
Funen: Pile-driving of sheet piles at the coast and winch for puller	Up to four weeks (offshore up to three weeks)	Work can be carried out only on weekdays during the daytime (7-18). Expected to be carried out in May. Effective pile-driving time of approx. six to seven hours per day is expected. Double bubble curtain will be used for offshore installations.
Driving of stay piles in the Little Belt: 7-10 stay piles	Up to three weeks	Work will be carried out on weekdays during the daytime (7-18). Expected to be carried out between mid-May and mid-June with a possibility of installation in August as backup. One pile will be driven at a time. Effective pile-driving time of approx. three to five hours per day is expected. Double bubble curtain will be used.
Pipeline trenching	Effective working time not exceeding four weeks. Trenching at Snævringen is expected to take one week.	Work will be carried out around the clock.
Pipeline trenching (maritime traffic)	In relation to the impact on maritime traffic, five weeks are expected	Worst case in relation to maritime traffic is different than for sediments spreading.
Pulling of pipeline across the Little Belt	Effective working time not exceeding one week.	Closing of Gamborg Fjord; establishment of safety zones – expected to be in place for up to two months.

Activity	Pile-driving during the following periods	Vibro-driving during the following periods
Sheet piling work on the Jutland side	May Two weeks offshore (7-18) Use of double big bubble curtains (DBBC).	May Up to two weeks (7-18) Use of double big bubble curtains (DBBC).
Sheet piling work on the Funen side	May Three weeks offshore (7-18) Use of double big bubble curtains (DBBC).	May Three weeks offshore (7-18) Use of double big bubble curtains (DBBC).
Steel piles south of the island of Fænø	Mid-May until mid-June (August, if not completed by mid-June) Use of double big bubble curtains (DBBC). Note! According to 6.14.3.1.3, during the period from 1 April until 1 July, it must be ensured prior to the driving of stay piles that no Arctic terns are breeding at Fønsskov Odde.	Mid-May until mid-June (August, if not completed by mid-June) Use of double big bubble curtains (DBBC).

Activity	Pile-driving – restrictions	Vibro-driving – restrictions
Steel piles south of the island of Fænø	Presupposes a requirement for the use of double big bubble curtains (DBBC). Note! According to 6.14.3.1.3, during the period from 1 April until 1 July, it must be ensured prior to the driving of stay piles that no Arctic terns are breeding at Fønsskov Odde.	No restrictions

Annex IV species and species and habitats in the designation basis for Natura 2000 sites are studied in connection with the basic analyses for the Natura 2000 plans and are also partly covered by the national background monitoring of birds and nature (NOVANA).
To ensure that the construction of the Baltic Pipe pipeline in the Little Belt does not exceed the impacts on the designation basis for Natura 2000 site no. 112 which are described and assessed in the above, the following monitoring of the construction work will be included:

If the pipeline is constructed through the reef area which is in direct contact with the reef in the Little Belt Natura 2000 site, it will be ensured and documented that the reef area will be restored straight after the construction work so that the current distribution and structure are maintained.
In connection with driving and/or vibro-driving of piles in the porpoise calving and mating period, it is recommended that measurements be made of the impulse noise from the driving or vibro-driving activities.
If it is not possible to avoid driving steel piles in the Little Belt south of Fænø during the Arctic tern breeding period (1 April - 1 July), it is necessary to examine regularly in the period up to the construction period whether Arctic terns are present and, if they are, whether they are nesting at Fønsskov Odde. If the examinations show that Arctic terns are not breeding at Fønsskov Odde, the driving of steel piles in the Little Belt south of Fænø may be permitted during the Arctic tern breeding period.

Annex IV species
All whale species are covered by Annex IV of the Habitats Directive. In addition to porpoises, which are commonly found in the Little Belt, other whale species may also occur in the Little Belt. In December 2015, for example, there was a dolphin in Kolding Fjord and, in February 2016, a dolphin was observed close to the coast by Søbadet in Middelfart. In addition, fin whales, humpback whales and even blue whales have previously been observed in the Little Belt. These are sporadic occurrences of these species, and the porpoise is the only whale which is commonly present in the Little Belt, and which breeds in Danish waters. Consequently, the porpoise is the

only Annex IV species which is relevant in relation to the construction and operation of the Baltic Pipe pipeline in the Little Belt.

The Danish Energy Agency's assessment

Based on the assessment presented, including the proposed preventive measures to minimise the impact on porpoises in the construction and operational phases, the Danish Energy Agency does not find that, during the construction phase and the operational phase, the project will deliberately disturb the species mentioned in Annex IV (a) of the Habitats Directive in their natural area of distribution, particularly in periods of time in which the animals breed, display parental care, overwinter or migrate, or damage or destroy breeding or resting areas in the natural area of distribution of the species mentioned in Annex IV (a) of the Habitats Directive, cf. Section 8(1)-(2) of the Executive Order on Offshore Impact Assessments.

The Danish Energy Agency has reviewed the section on marine mammals in the environmental impact assessment. It is the assessment of the Danish Energy Agency that the placing of rocks will not constitute a significant impact on porpoises in the suggested area in the Little Belt, provided that measures such as looking out for animals in the vicinity of the vessel and, if necessary, using acoustic deterrent devices are taken before the rocks are placed.

Before rocks are placed, it is necessary to look out for marine mammals from the vessel and, if necessary, use acoustic deterrent devices. Acoustic deterrent specifications must be approved by the Danish Energy Agency before rocks are placed, cf. terms and conditions 8.

4.7.10. Cultural heritage

Reference is also made to Section 29 h(1) of the Museum Act under which the Agency for Culture and Palaces must be notified immediately if monuments from the past or wrecks are found during construction work, and the work must be stopped, cf. terms and conditions 18.

The Danish Energy Agency has no further comments on cultural heritage.

Appendix 1: List of addresses of central Danish authorities involved

Energistyrelsen
(Danish Energy Agency)
Carsten Niebuhrs Gade 43
DK-1577 Copenhagen

The Danish Environmental Protection Agency
(Danish Environmental Protection Agency)
Tolderlundsvej 5
DK-5000 Odense C

The Danish Maritime Authority
(Danish Maritime Authority)
Casper Brandts Plads 9
DK-4220 Korsør

Forsvarskommandoen
(Defence Command Denmark)
Søværnskommandoen
Herningvej 30
DK-7470 Karup J

The Danish Ministry of Defence Estate Agency
(Danish Ministry of Defence Estate Agency)
Arsenalvej 55
DK-9800 Hjørring

Slots- og Kulturstyrelsen
(Agency for Culture and Palaces)
Center for Kulturarv
Fejøgade 1
DK-4800 Nykøbing Falster

Fiskeristyrelsen
(The Danish Directorate of Fisheries)
Nyropsgade 30
DK-1780 Copenhagen V

Kystdirektoratet
(The Danish Coastal Authority)
Højbovej 1
DK-7620 Lemvig

Arbejdstilsynet
(Danish Working Environment Authority)
Landskronagade 33
DK-2100 Copenhagen Ø

Udenrigsministeriet
(Ministry of Foreign Affairs of Denmark)
Asiatisk Plads 2
DK-1448 Copenhagen

Geodatastyrelsen
(Danish Geodata Agency)
Lindholm Brygge 31
9400 Nørresundby
Denmark

Appendix 2: Summary of national consultation responses

Energi-,
Forsynings- og
Klimaministeriet

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Energi-,
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