



Hanseatic
Energy
Hub

NON-TECHNICAL SUMMARY ENVIRONMENTAL IMPACT ANALYSIS

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The Non-Technical Summary of the Environment Impact Assessment (EIA) is providing an overview to assess the environmental impacts of the project. The EIA includes the identification, description and evaluation of significant environmental impacts that the planned project may have on environmental resources, as well as the derivation of suitable avoidance, minimization and compensation measures. The following pages are an extract from: Hanseatic Energy Hub GmbH Application for approval pursuant to § 4 BImSchG LNG terminal, 1.2 Brief description, Pages 18-24, 13.03.2023.

8. Environmental and nature conservation assessment

The following environmental and nature conservation documents are included in the application documents in Chapter 14.2:

- Environmental impact assessment (EIA report)
- Landscape conservation plan (LBP)
- FFH compatibility studies (FFH-VU)
- Species protection report (AFB)

The documents have been prepared as an integrated overall document, which means that there is a report that includes all studies and technical contributions.

8.1 EIA report

The aim of the EIA report is to assess the environmental impacts of the project. It includes the identification, description and evaluation of the significant environmental impacts that the planned project may have on environmental assets or resources, as well as the derivation of suitable avoidance, minimization and compensation measures.

According to § 2 (1) UVPG, the relevant objects of protection within the scope of the EIA are:

- people, especially human health,
- animals, plants and biodiversity,
- area, soil, water, climate, air and landscape,
- cultural heritage and other tangible assets
- as well as the interactions between these protected goods.

Figure 5 lists the impact factors examined in the EIA report. It shows which effects the project could have on which objects of protection, and the EIA report evaluates the significance of each individual impact factor. A distinction is made between

- construction-related impact factors (impact factors that are caused, for example, by construction activities and can lead to temporary, transient impacts),
- plant-related impact factors (permanent impact factors caused by the project, e.g. land use, sealing),
- operational impact factors (material or traffic flows associated with the project as well as emissions with effects on the objects of protection),
- accident- and disaster-related impact factors (impact factors related to the vulnerability of the project).

For the evaluation of the environmental impacts, the approach of a framework scale is applied. Here, the expected environmental impacts are assigned an assessment level of 0 - 4 depending on the intensity or severity of the impact:

- 4 = Inadmissibility range (legally binding limits are exceeded that cannot be overcome).
- 3 = Permissibility limit range (legally binding limit values are exceeded, which can exceptionally be overcome for reasons of overriding public interest or public welfare or other considerations).
- 2 = Impact range (significant impairments requiring compensation measures).
- 1 = Precautionary range (impairment does not reach the level of significance).
- 0 = impact-free range (no influence by the project)

	Area	Soil	Water	Climate	Air	Plants/biotopes	Animals	Biodiversity	Landscape	People and human health	Cultural heritage / other tangible
construction-related impact factors											
Land use for construction routes, sites, construction site facilities	X	X	X			X	X	X	X		X
Soil excavation, compaction, building foundations		X	X	X			X				
Noise emissions from construction operations and vehicles							X		X	X	
Vibration due to pile driving (pile foundation)		X	X				X		X	X	X
Dust and exhaust emissions from construction operations and construction vehicles				X	X	X	X			X	
Light emissions from construction operations							X		X	X	
Optical stimuli due to the operation of large machines (e.g. cranes)							X		X		
Temporary groundwater lowering/maintenance			X	X		X	X				
Danger of pollution due to construction operations (average) and discharge of construction pit water			X			X	X				
plant-related impact factors											
Permanent land use due to sealing/building over	X	X	X	X		X	X	X	X	X	X
Permanent surface deformation/change of the surface shape				X			X		X	X	
Permanent groundwater lowering		X	X	X			X				
Connection to deeper aquifers through pile foundation			X								
operational impact factors											
Pollutant emissions from plant operation		X	X	X	X	X	X			X	X
Noise emissions due to plant operation							X		X	X	
Noise emissions from operational traffic							X		X	X	
Light emissions from plant operation							X		X	X	
Other nuisance or health risks (odour, vibration, electromagnetism, radioactivity)							X		X	X	
Water withdrawal and discharge (material, thermal, hydraulic)			X			X	X			X	
Dealing with wastewater			X			X	X				
Waste handling			X			X	X			X	
accident- and disaster-related impact factors											
Mechanical impacts including temporary land uses	X	X	X			X	X	X	X	X	X
Material emissions to air, soil, water	X	X	X	X	X	X	X	X	X	X	X
Energetic effects due to heat, cold, pressure waves	X		X		X	X	X		X	X	X
Visual and acoustic disturbance								X	X	X	

Figure 5: Expected impact factors of the LNG terminal and possible effects on the protected goods of the environment, nature and landscape

For people and human health the precautionary level (level 1) is not exceeded for any of the impact factors. The threshold of significance is not reached; this also applies to the assessment of noise and air pollutant emissions from the planned LNG terminal.

For the protected assets animals, plants and biological diversity, land and soil, some significant impacts are to be expected due to the land use during the construction period and the construction activities, which can, however, be compensated (level 2). The effects include, for example, the clearing of the construction site (clearing of trees), the required soil compaction or the sealing through the construction of paths and buildings. The operational and accident- and disaster-related impact factors do not exceed the threshold of significance for any of these protected assets and are assessed as level 0 or 1.

For the other protected goods (climate, air and landscape, cultural heritage and other material goods), all considered impact factors are assessed with the level 0 or 1, a materiality of the environmental impact is not given.

The non-technical summary of the EIA report can be found in Section I.10 in Chapter 14.2 of the application documents.

8.2 Landscape conversation plan

The task of the accompanying landscape conservation plan is the processing of the impact regulation, i.e. the determination of the significant impacts on nature and landscape associated with the project and the designation of mitigation and compensation measures. The significance results from the evaluation within the scope of the EIA report.

The following mitigation, minimization, and CEF measures are foreseen during construction and operation of the LNG terminal:

- Daytime construction time restrictions (V1 - To protect nocturnal species).
- Avoidance of trap effects (V2 - To protect otters from traps).
- Specifications for construction-related lighting (V3 - For the protection of the species otter, bats and evening primrose hawkmoth).
- Seasonal restrictions on pile driving during construction (V4: To protect marine mammals, fish, and breeding birds).
- Specifications for pile driving operations to scare animals away from the hazard area at an early stage (V5: To protect marine mammals and fish).
- Seasonal construction time regulations (V6 - Construction time regulations to protect bats and breeding birds).
- Roost checks for protection of bats (V7).
- Regular mowing of the project area (V8 - To protect the evening primrose hawk moth).
- Regulation on the start of construction and regular construction activity (V9 - For the protection of breeding birds).
- Preservation of woody habitat structures (V10 - To protect existing habitat structures of breeding birds).
- Creation of replacement nests (V11 - Creation of replacement nests for the Eurasian Buzzard)
- Installation of nesting boxes (V12 - To protect the starling and other birds of similar size that nest in tree holes).
- In order to ensure that the aforementioned avoidance, mitigation and CEF measures are implemented in a timely and appropriate manner, a UBB by expert consultants is planned (V13 – Environmental Construction Supervision).
- Preservation of vegetation stands (V14 - To protect against sprawling construction areas regarding vegetation stands worthy of preservation and proportionally protected).

The interventions associated with the project will be fully compensated. The following measures are planned for this purpose:

In the natural region of tidal flats and marshes (1.2), the company Dow Anlagengesellschaft mbH provides areas for the implementation of woody plantings in accordance with the tree protection statutes of the Hanseatic City of Stade and compensation for intervention deficits. Due to the location, the following compensation measures are planned in the compensation area "Stader Elbstraße":

- In order to ensure that the aforementioned avoidance, mitigation and CEF measures are implemented in a timely and appropriate manner, a UBB by expert consultants is planned (V13 – Environmental Construction Supervision).
- K01 - Development of near-natural still waters (SEZ)
 - Includes an area extension to compensate for a § 30 biotope
 - Development of variable shorelines with amphibious zones as well as proportional initial planting of species of reeds and tall herbs (positive effect on evening primrose hawkmoth)

- K02 - Development of reed beds (NR – land reeds)
 - Includes a functional partial compensation for \$ 30 biotopes
- K03 - Planting of woody plants for the development of site-typical forest and woody plant stands
 - Development of marshy willow floodplain forest (WWS), marshy willow floodplain scrub (BAS), other willow floodplain scrub (BAZ) and wet scrub of nutrient-rich sites (BFR) to compensate for the loss of trees and shrubs as defined in the tree protection statutes of the city of Stade.
- K04 - Extensification of grassland use
 - Development of mesophilic grassland

For further compensation (incl. forest conversion) of the predicted impacts on nature and landscape due to the construction of the LNG terminal including transfer pipelines, the developer has concluded an agreement with the Niedersächsischen Landgesellschaft (NLG) for the assumption of costs for the development and compensation of areas from the NLG pool.

A complete concept from the compensation pool "Schwingetal bei Wiepenkathen" of the Niedersächsische Landgesellschaft mbH (NLG) is available for the compensation areas "Wiepenkathen". This includes the following compensation measures:

- M01 - Restoration of fenland/rewetting.
 - Backfilling drainage ditches
 - Renaturation of spring areas
- M02 - Development of near-natural, site-typical forest stands
 - Development and promotion and stabilization of alder (spring) quarry forest/alder and ash forest of spring areas (WAR, WEQ)
- M03 - Development of site-typical biotopes of the open land with:
 - Development of mesophilic grassland/wet grassland (GM, GN)
 - Watering for the promotion of meadow birds

The LBP can be found in Section II in Chapter 14.2 of the application documents.

8.3 FFH compatibility studies

According to the provisions of Section 34 (1) of the Federal Nature Conservation Act (BNatSchG), projects which, individually or in combination with other projects or plans, are likely to have a significant impact on a protected area of the Natura 2000 network (FFH sites and EU bird sanctuaries) must be assessed for their compatibility with the conservation objectives of the protected area before they are approved. The criteria for the Habitats Directive impact assessment are the conservation objectives defined for the area.

Taking into account the scope of the impact factors of the project, impacts on the following protected areas cannot be ruled out from the outset; therefore, these will be assessed in more detail as part of the FFH impact assessments:

- Breaches of antitrust laws and competition laws, in particular procurement rules
- FFH area Unterlebe (DE 2018-331)
- FFH area Schleswig-Holstein Elbe estuary and adjacent areas (DE 2323-392)
- EU Bird Sanctuary Lower Elbe (DE 2121-401)
- EU Bird Sanctuary Lower Elbe to Wedel (DE 2323-402)

The project will not lead to significant impairments of FFH areas in their components relevant to the conservation objectives or the purpose of protection. The regulations of § 34 BNatSchG in conjunction with § 26 NNatSchG are therefore not opposed to the project. In particular, the project is planned outside Natura 2000 areas. For the LNG terminal, significant impairments of the conservation objectives of the respective protected areas can be safely ruled out.

The FFH compatibility studies can be found in Section III in Chapter 14.2 of the application documents.

8.4 Species protection expert report

For the approval of the project, an assessment is required within the framework of a species protection law expert contribution (AFB) as to whether the access prohibitions of the special species protection according to § 44 para. 1 BNatSchG are affected by the planned project or whether prohibitions are fulfilled.

The AFB includes the identification of the species relevant to planning from a technical and legal point of view, the presentation of the impact factors of the project with their effects on the species relevant to planning, and the identification and presentation of the prohibited species. Measures are formulated that minimize the expected negative impacts on the species relevant to planning and avoid the prohibited acts.

Measures are recommended for the individual species in order to avoid the occurrence of prohibited statuses. For all species, it is shown that no deterioration of the conservation status of the populations is to be expected. The avoidance and mitigation measures are not expected to avoid a violation of the prohibited acts.

The planned avoidance, mitigation and CEF measures are not expected to result in a violation of the prohibition criteria according to § 44 para. 1 BNatSchG.

The AFB can be found in Section IV in Chapter 14.2 of the application documents.