

**Liverpool Bay CCS Ltd**

# **HYNET CARBON DIOXIDE TRANSPORTATION AND STORAGE PROJECT - OFFSHORE**

**Environmental Statement**

**Volume 3, appendix G: Transboundary Impacts Screening**



EHE7228B  
Liverpool Bay CCS Limited  
Final  
February 2024  
Offshore ES  
Transboundary Impacts  
Screening

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Date
FINAL	Final	RPS	Eni UK Ltd	Eni UK Ltd	February 2024

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## Glossary

Term	Meaning
Environmental Impact Assessment	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement (ES).
The Applicant	This is Liverpool Bay CCS Ltd. Please use 'the Applicant' when referring to the entity making the application and the entity that ultimately develops/operates the HyNet Carbon Dioxide Transportation and Storage Project.
Transboundary impacts	Impacts that may arise from an activity within one state that affect the environment or other interests of another state.

## Acronyms and Initialisations

Acronym and Initialisation	Description
EIA	Environmental Impact Assessment
EU	European Union
GHG	Green House Gas
HRA	Habitats Regulations Assessment
MHWS	Mean High Water Springs
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
UNECE	The United Nations Economic Commission for Europe

## Units

Unit	Description
km	Kilometres
nm	Nautical miles

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# 1 TRANSBOUNDARY IMPACTS SCREENING

## 1.1 Introduction

This technical report identifies the potential transboundary receptors that may be affected by the construction, operation and maintenance, and decommissioning phases of the Proposed Development, and identifies those topics where transboundary impacts need to be assessed.

### 1.1.1 Background

Transboundary impacts relate to those that may arise from an activity within one state that affect the environment or other interests of another state. This report provides the screening assessment of the potential for transboundary impacts to occur on the environment or interests of other states as a result of the Proposed Development. The screening assessment is based on what is currently known of the likely spatial scale of impacts arising from the Proposed Development and the economic interests of other states in the vicinity.

The Applicant has completed a transboundary screening impact assessment, including a screening matrix (Table 1.1), for potential transboundary effects from the construction, operation and maintenance, and decommissioning phases of the Proposed Development. The results of the transboundary screening assessment are set out in sections 1.3 and 1.4.

### 1.1.2 Legislative context

The United Nations Economic Commission for Europe (UNECE) 1991 Convention on Environmental Impact Assessment (EIA) in a Transboundary Context (the Espoo Convention) (as amended) provides guidance on the assessment of Transboundary impacts to promote 'environmentally sound and sustainable development' and enhance international co-operation in assessing a project's environmental impact. The second amendment to the Espoo Convention (adopted in 2004) entered into force on 23 October 2017.

When an activity occurring in one country may have a significant impact on another country, the Espoo Convention (named after the Finnish city of Espoo where it was adopted) requires that EIAs consider potential impacts across national borders. The UK is also a signatory to the Convention on Access to Information, Public Participation in Decision Making, and Access to Justice in Environmental Matters (the 'Aarhus Convention') was adopted on 25 June 1998 and it entered into force on 30 October 2001. Its Protocol, which guarantees access to information, public participation in decision-making and access to justice in environmental matters, was adopted at the Fifth Environment for Europe Ministerial Conference in Kiev, Ukraine, in May 2003 and entered into force in October 2009.

In European Union (EU) member states, Directive 85/337/EEC (as amended) (the EIA Directive) implements both the Espoo and Aarhus Conventions. EIA Regulations were adopted to implement this Directive in UK law. Following the UK's departure from the EU, EU-derived legislation continues to have effect in domestic law under the EU (Withdrawal) Act 2018. The EU Exit Regulations establish that the regimes that inform planning decisions will remain as set out in the founding legislation. Therefore transboundary impacts are still to be considered as part of the EIA.

The Council Directive (92/43/EEC) (the Habitats Directive) was adopted in 1992, and the European Directive (2009/147/EC) on the conservation of wild birds (The Birds Directive) was adopted in 1979, and amended in 2009. The Directives were transposed into UK law by various regulations, those of relevance to the Proposed Development include:

- the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- the Conservation of Habitats and Species Regulations 2017 (as amended); and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended).

The instruments above are collectively referred to hereafter as the Habitats Regulations.

The Habitats Regulations Appraisal (HRA) process implemented under the Habitats Regulations continues to apply post EU Exit, subject only to minor changes. However, these changes are considered to have no material implications on the requirement or process for an HRA for the Proposed Development. This report will hereafter refer to the 'Habitats Regulations' (as amended) with respect to the changes enacted by the EU Exit Regulations.

The Habitats Regulations (as amended) require that an HRA must be carried out on all plans and projects that have the potential to impact upon sites traditionally designated for supporting habitats or species of international importance (listed on the Annexes of the Habitats Directive and Birds Directive) and hereafter specified for protection within schedules to the Habitats Regulations (as amended).

Post EU Exit, these sites are known as Natura 2000 Sites where they are located within EU member states. In this report, and in accordance with EU Exit guidance issued by the Government, the term 'European site' has been retained to refer to the above sites protected in EU member states and the rest of the UK. However, these sites in the UK are now part of the National Site Network.

## 1.2 Consultation

The Applicant produced an EIA Scoping Report for the Proposed Development (Liverpool Bay CCS Limited, 2022; see volume 3, appendix A), which was submitted to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED). No issues specific to transboundary impacts and transboundary consultation were raised in the Scoping Opinion (OPRED, 2023; see volume 3, appendix B).

## 1.3 Screening of transboundary impacts

Figure 1.1 illustrates the proximity of the Proposed Development to other states. The distance from the Proposed Development to other states with which there may be transboundary impacts has been considered within this assessment.



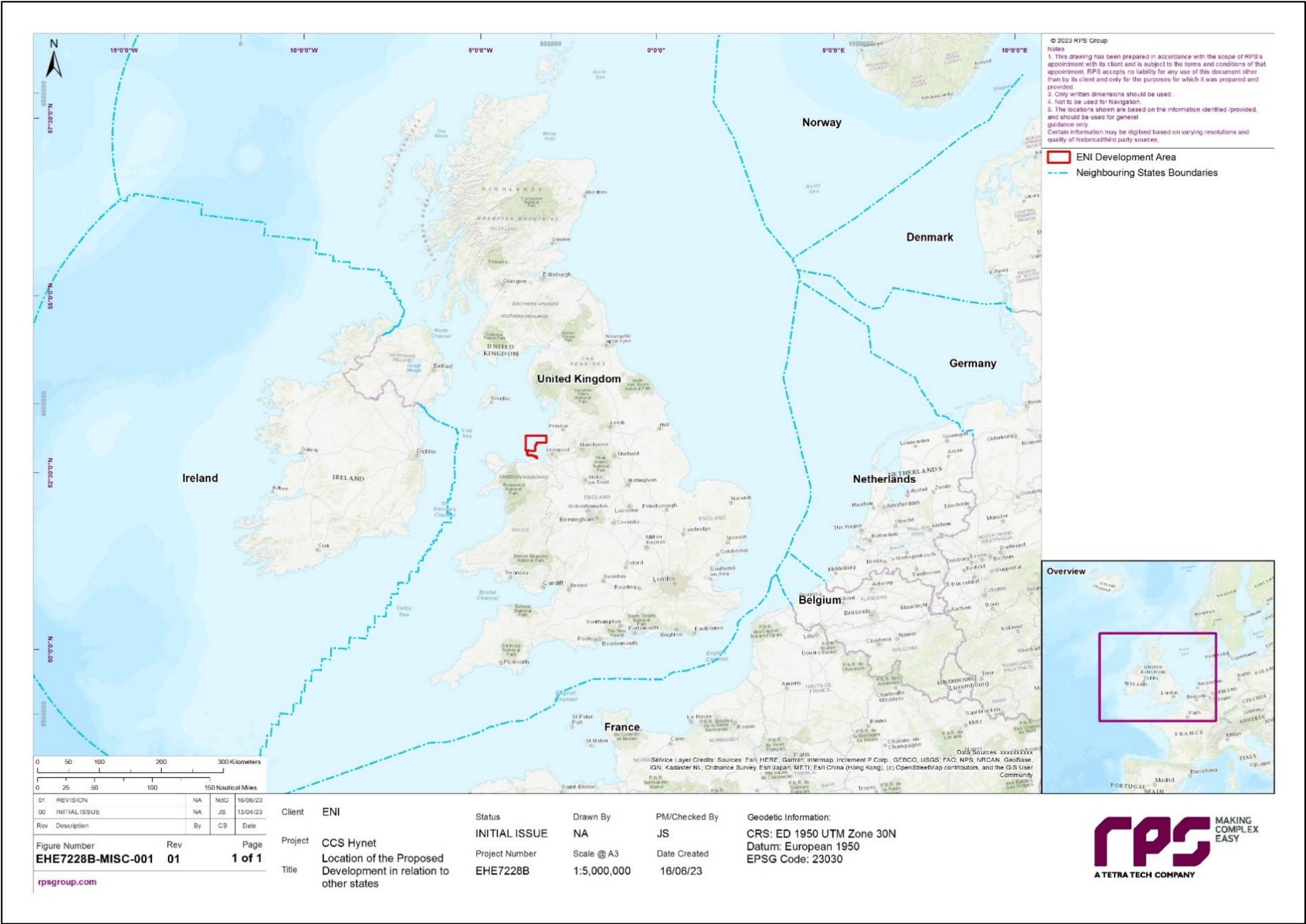


Figure 1.1: Proximity Of The Proposed Development In Relation To Other States

### 1.3.1 Offshore physical environment

The Applicant has carried out a transboundary screening assessment for all potential offshore physical environment receptors. The conclusion of the assessment undertaken for each topic is presented within the following sections. Where impacts have been screened out of the assessment by scoping (Liverpool Bay CCS Limited, 2022 and OPRED, 2023), they have not been considered within this transboundary screening assessment (e.g. air quality), on the basis that no significant effects to the environment are predicted and therefore will not result in a significant effect in another state.

#### 1.3.1.1 Physical processes

The physical processes study area has been defined as the area out to 8 km from the Proposed Development. The study area is therefore entirely outwith any other State and no potential transboundary impacts are predicted for this topic. Physical Processes has therefore been screened out as a topic for further assessment of transboundary impacts in the ES.

#### 1.3.1.2 Subsea noise

Subsea noise (see volume 3, appendix J) is not in itself a receptor but is part of the impact pathways that affect other receptor groups, detailed within the Fish and Shellfish Ecology and Marine Mammals sections of volume 2, chapter 7.

Transboundary impacts for underwater sound will therefore be considered within those receptor groups, and have consequently been screened out for further assessment in the ES.

#### 1.3.1.3 Air quality

It is proposed that air quality is to be scoped out of the ES (see volume 3, appendix C). The air quality effects during construction, operation, maintenance and decommissioning of the Proposed Development are not considered significant. As a result, this topic has been screened out of further assessment on transboundary impacts in the ES.

#### 1.3.1.4 Climate change

Potential impacts on climate change receptors include:

- greenhouse gas (GHG) emissions associated with construction/refurbishment activities, including materials, transport and use of plant/offshore marine vehicles;
- GHG emissions associated with materials and use of offshore marine vehicles required for operation and maintenance;
- GHG emissions associated with energy and fuel use during the operation phase;
- GHG emissions from decommissioning works (plant, fuel and vessel use) and recovery or disposal of materials; and
- carbon dioxide (CO<sub>2</sub>) transportation, sequestration and long-term storage.

All developments that emit GHGs may impact the atmospheric mass of GHGs as a receptor, resulting in a transboundary impact on climate change. Therefore, climate change will be further considered for transboundary impacts in the Environmental Statement (ES). The Proposed Development's transboundary impacts are assessed by defining the atmospheric mass of GHGs as a high sensitivity receptor. Each country has its own carbon and climate change policy and targets that are designed to limit GHG emissions within its defined budget and international commitments. A reference to UK Carbon Budgets and climate-related policy and objectives shall be included in the assessment for the Proposed Development.



### 1.3.2 Offshore biological environment

The Applicant has carried out a transboundary screening assessment for all potential offshore biological environment receptors. The conclusion of the assessment undertaken for each topic is presented within the following sections.

The HRA process will consider the potential for the Proposed Development to impact benthic, fish and shellfish, marine mammal, or offshore ornithology features of nature conservation designations outside of the UK.

#### 1.3.2.1 Benthic subtidal and intertidal ecology

The benthic subtidal and intertidal ecology study area has been defined as the area encompassing the development area, offshore pipeline (including intertidal habitats seaward of Mean High Water Springs (MHWS)), and associated cables in Liverpool Bay. The regional study area is defined as the area encompassing the wider Irish Sea habitats in UK waters, including neighbouring consented offshore wind farms and designated sites. Both study areas are therefore entirely outwith any other State and no potential transboundary impacts are predicted for this topic. Benthic subtidal and intertidal ecology has therefore been screened out of further assessment for transboundary impacts in the ES.

#### 1.3.2.2 Fish and shellfish ecology

The fish and shellfish ecology study area is defined as the area encompassing the ICES Statistical Area VIIa, development area, offshore pipeline (including intertidal habitats seaward of MHWS), and associated cables in Liverpool Bay.

Potential impacts on fish and shellfish ecology receptors include:

- temporary habitat loss and/or disturbance;
- subsea noise impacting fish and shellfish receptors;
- increased suspended sediment concentrations and associated deposition; and
- long-term subtidal habitat loss.

Impacts associated with habitat loss and suspended sediments are likely to be localised to the study area, which is entirely out with other states. However, subsea noise is likely to result in transboundary impacts. Increased subsea noise during the construction and decommissioning phases of the Proposed Development has the potential to injure and/or disturb fish receptors, including Annex II migratory fish species, and species that have commercial value. Therefore, there is potential for transboundary impacts associated with the construction and decommissioning phases of the Proposed Development for this topic. Therefore, fish and shellfish ecology has been screened in for transboundary impacts and will be further considered in the ES.

#### 1.3.2.3 Marine mammals

The marine mammal study area is defined as the area encompassing the Proposed Development area, (including the offshore pipeline, and associated cables in Liverpool Bay) plus a buffer of 10 km. The regional marine mammal study area is defined as the area encompassing the wider Irish Sea habitats and includes the neighbouring consented offshore wind farms and designated sites.

Potential impacts on marine mammal receptors include:

- injury, disturbance, and displacement from vessel activity and other noise producing activities;
- potential for barrier effects due to subsea noise;
- injury to marine mammals from collision risk with marine vessels; and
- effects on marine mammals due to changes in prey availability.

It is acknowledged that some marine mammals can travel large distances to forage and consequently the marine mammals under the protection of neighbouring states may be affected. Therefore, there is the potential for transboundary impacts associated with the Proposed Development to directly affect Annex II marine mammal species. Consequently, marine mammals have been screened in for transboundary impacts and will be further considered in the ES.

#### 1.3.2.4 Offshore ornithology

The offshore ornithology study area is defined as the area encompassing the development area, offshore pipeline and subsea cables (including intertidal habitats seaward of MHWS), associated inter-platform cables, and an additional 10 km buffer to account for the displacement of red-throated divers *Gavia stellata* – a qualifying feature of the Liverpool Bay Special Protection Area (SPA).

Potential impacts on offshore ornithology receptors include:

- temporary habitat displacement and disturbance;
- indirect impacts from construction/ decommissioning noise;
- disturbance of contaminated sediments releasing contaminants into the surrounding environment;
- accidental pollution in the surrounding area; and
- creation of roosting and nesting habitats among Proposed Development infrastructure.

The study area is entirely outwith any other State, however the potential effects related to the construction, operation and maintenance and decommissioning of the Proposed Development on seabirds are unlikely to be localised within the study area. Seabirds are known to have vast ranges and distributions, capable of travelling long distances from their breeding sites to forage. Therefore, there is potential that transboundary effects could occur, primarily within the non-breeding season. Consequently, offshore ornithology has been screened in for transboundary impacts and will be further considered in the ES.

### 1.3.3 Offshore human and socio-economic environment

The Applicant has carried out a transboundary screening for all potential human environment receptors. The conclusion of the assessment undertaken for each topic is presented within the following sections. Where impacts have proposed to be screened out of the assessment by scoping (Liverpool Bay CCS Limited, 2022 and OPRED, 2023), they have not been considered within this transboundary screening assessment (e.g. human health), on the basis that no significant effects to the environment are predicted and therefore will not result in a significant effect in another State.

#### 1.3.3.1 Commercial fisheries and aquaculture

The commercial fisheries and aquaculture study area is defined as the area encompassing the International Council for the Exploration of the Sea (ICES) Statistical Area VIIa (statistical rectangles 35E6 and 36E6), development area, offshore pipeline and subsea cables (including intertidal habitats seaward of MHWS) and associated inter-platform cables in Liverpool Bay. The study area is entirely out with any other State, however, as the Proposed Development extends beyond the 12 nm limit, where other states are currently permitted to fish, there is potential for transboundary impacts upon commercial fisheries during the construction, operation and maintenance and decommissioning phases of the Proposed Development. These include:

- loss or restricted access to fishing grounds;
- impacts on commercially valuable fish and shellfish species/resources;
- interference with fishing activity;
- temporary increases in steaming distances to fishing grounds; and
- loss or damage to fishing gear due to snagging gear on Proposed Development infrastructure.

Commercial fisheries have therefore been screened in for potential transboundary impacts and will be further considered in the ES. Non-UK fleets with significant fishing activity, and permission to fish in the area, will be included as receptors throughout the impact assessment.

### **1.3.3.2 Shipping and navigation**

The shipping and navigation study area is defined as the area encompassing the development area, which includes the offshore pipeline and proposed subsea cable, associated inter-platform cables, and a buffer area extending 10 nm.

Potential impacts on shipping and navigation receptors include:

- increased vessel to vessel collision risk resulting from displacement (third party to third party);
- increased vessel to vessel collision risk resulting from displacement (third party to Project vessel);
- vessel allision risk;
- reduced access to local ports and harbours;
- fishing gear interactions with subsea cables;
- interference with navigation, communications, and position-fixing equipment; and
- reduction of Search and Rescue (SAR) capability.

Despite the study area being entirely outwith other states, transits to/from other countries, as well as shipping routes to/from other State ports, are considered to have potential transboundary impacts. Therefore, shipping and navigation has been screened in for potential transboundary impacts and will be further considered in the ES.

### **1.3.3.3 Aviation and radar**

It is proposed that civil and military aviation and communications is to be scoped out of the ES (see volume 3, appendix C). Given the pre-existing nature of the development area it is unlikely that there will be any potential effects and/or impacts resulting from the construction, operation and maintenance, or decommissioning of the development area. As a result, this topic has been screened out of further assessment on transboundary impacts in the ES.

### **1.3.3.4 Marine archaeology and ordnance**

The marine archaeology study area is defined as the development area with an additional 2 km buffer. The study area is located entirely outside of other states and no potential transboundary impacts are predicted for this topic. Marine archaeology has therefore been screened out of further assessment on transboundary impacts in the ES.

### **1.3.3.5 Infrastructure and other sea users**

The infrastructure and other sea users study area is defined as the development area plus a 1 km buffer. As the study area is entirely out with any other State and no potential receptors associated with other states have been identified, the Proposed Development is not expected to have any transboundary impacts for this topic. Infrastructure and other sea users have therefore been screened out of further assessment on transboundary impacts in the ES.

### **1.3.3.6 Socio-economics**

The Proposed Development plans on reutilising the historic offshore oil and gas platforms within Liverpool Bay and therefore, it is proposed that socio-economics is scoped out of the ES. As a result, socio-economics has been screened out of further assessment on transboundary impacts in the ES.

## 1.4 Conclusions

This Transboundary Impacts Screening has been carried out considering the location of the Proposed Development and the current Proposed Development Description (see volume 1, chapter 3). Table 1.1 summarises the assessment criteria used for the screening process. A topic area that either has a defined study area that crosses into another State and/or have receptors associated with the study area that belong to or are under the protection of another State, have been screened in. The exception to this is where receptors are covered within another topic area, such as in the case of subsea noise.

There is the potential for transboundary impacts associated with the Proposed Development for the following topics:

- Climate change;
- Fish and shellfish ecology;
- Marine mammals;
- Offshore ornithology;
- Shipping and navigation; and
- Commercial fisheries.

These topics will be further considered for transboundary impacts in the ES.

Table 1.1: Transboundary Screening Matrix

Criteria	Physical Processes	Subsea Noise	Air quality	Climate Change	Benthic Subtidal and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore Ornithology	Commercial Fisheries and Aquaculture	Shipping and navigation	Civil and Military Aviation and Communication	Marine Archaeology and Ordnance	Infrastructure and Other Sea Users	Socio-economics
Has a defined Study Area that crosses into another State														
Receptors belonging to or under protection from other states associated with the Study Area														
Receptors are not assessed within another topic														
Screening														
Key:														
	Does not match criteria													
	Matches criteria													
	Topic screened in													



## 1.5 References

Liverpool Bay CCS Limited (2022) HyNet Carbon Dioxide Transportation and Storage Project - Offshore EIA Scoping Report.

Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) (2023). Scoping Opinion for HyNet Carbon Dioxide Transportation and Storage Project - Offshore.

