

MWP

Statutory Information Supporting Appropriate Assessment

River Barrow Pre-Dredging Surveys

Wexford County Council

October 2024

Contents

1.	Summary of Findings	1
2.	Introduction	2
2.1	Purpose of the Assessment	2
2.2	Project Overview	2
2.3	Application Documents Submitted	4
2.4	Legislative Context	4
2.5	MARA Assessment	5
2.6	Stages of Appropriate Assessment	5
2.7	Statement of Competency	5
3.	Methodology	5
3.1	Appropriate Assessment Screening	5
3.1.1	Guidance	5
3.1.2	Screening Steps	5
3.1.3	Zone of Influence	6
3.1.4	Assessment Criteria	7
3.2	Desktop Study	7
4.	Screening for Appropriate Assessment	8
4.1	Management of Natura 2000 Sites	8
4.2	Description of Project	9
4.2.1	Site Location and Context	9
4.2.2	Purpose of Project	11
4.2.3	Description of Existing Site	11
4.2.3.1	Desk Study Results	11
4.2.4	Characteristics of the Project	11
4.3	Identification of Natura 2000 Sites	13
4.3.1	Natura 2000 Sites outside the ZOI	13
4.3.1.1	Foraging Species and Management Unit Species	14
4.3.2	Natura 2000 Sites within the ZOI	17
4.3.2.1	Characteristics of Natura 2000 Sites	20
4.3.3	Conservation Objectives	21
4.3.3.1	Threats and Pressures	22
4.4	Assessment of Significance of Potential Impacts Sites	23
4.4.1	Water Quality	23
4.4.2	Habitat Loss and /or Alteration	24
4.4.3	Disturbance and/or Displacement of Species	27
4.4.4	Habitat or Species Fragmentation	28
4.4.5	In-Combination Effects	28
5.	Conclusion	29
5.1	Screening for Appropriate Assessment Conclusion	29
6.	References	31

Tables

Table 4-1: Characteristics of the Proposed Surveys	11
Table 4-2: Natura 2000 Sites excluded from further assessment including rationale for exclusion	13
Table 4-3: Natura 2000 Sites with the Grey Seal and Harbour Seal within a foraging range buffer of the proposed surveys works	16
Table 4-4: Nature 2000 Sites within the ZOI of the proposal	19
Table 4-5: QIs of the Natura 2000 sites identified within the ZOI	20
Table 4-6: River Barrow and River Nore SAC	22
Table 4-7: Lower River Suir SAC	22
Table 4-8: Hook Head SAC	23

Table 4-9: Saltee Islands SAC 23

Table 4-10: Spawning Periods of Fish Species 27

Table 4-11: Proposed Foreshore work in the vicinity of the proposed survey works 28

Figures

Figure 2-1: Licence Area 3

Figure 4-1: Barrow Survey Areas 10

Figure 4-2: Natura 2000 Sites identified within the Zone of Influence 18

Figure 4-3: Annex I Habitats within Proposed Licence Area 26

Appendices

Appendix 1 – Screening Determination Statement (Finding of No Significant Effects)

Appendix 2 – Stages of Appropriate Assessment

Appendix 3 – Figures and Maps

Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Status
24449	6007	A	October 2024	WM	OS	OS	FINAL

MWP, Engineering and Environmental Consultants

Address: [REDACTED]

www.mwp.ie



Disclaimer: This Report, and the information contained in this Report, is Private and Confidential and is intended solely for the use of the individual or entity to which it is addressed (the “Recipient”). The Report is provided strictly on the basis of the terms and conditions contained within the Appointment between MWP and the Recipient. If you are not the Recipient you must not disclose, distribute, copy, print or rely on this Report. MWP have prepared this Report for the Recipient using all the reasonable skill and care to be expected of an Engineering and Environmental Consultancy and MWP do not accept any responsibility or liability whatsoever for the use of this Report by any party for any purpose other than that for which the Report has been prepared and provided to the Recipient.

1. Summary of Findings

Project Title	Statutory Information Supporting Appropriate Assessment for the Activity of Predreging Surveys on the River Barrow
Project Proponent	Wexford County Council
Project Location	A 16 km stretch of the River Barrow downstream to Barrow Bridge, at the confluence of the River Suir
Screening for Appropriate Assessment	The Statutory Information Supporting Appropriate Assessment is undertaken to determine the potential for likely significant effects of proposed surveys in the river Barrow, individually, or in combination with other plans or projects, in view of the conservation objectives of certain Natura 2000 sites identified within this report.
Conclusion	<p>It has been objectively concluded during the screening process that the Natura 2000 sites within the Zone of Influence of the proposed surveys will not be significantly impacted by the proposed surveying work along the River Barrow. These sites area:</p> <ul style="list-style-type: none">• River Barrow and River Nore SAC (002162)• Lower River Suir SAC (002137)• Hook Head SAC (000764)• Saltee Islands SAC (000707)

2. Introduction

2.1 Purpose of the Assessment

This Statutory Information for Screening for Appropriate Assessment (SISAA) report has been undertaken to determine whether proposed pre-dredging surveys in the River Barrow are likely to result in significant effects on nearby sites with European conservation designations (i.e., Natura 2000 Sites). The application is for a Maritime Usage Licence to allow the proposed pre-dredging surveys to commence. This has been prepared to provide a sufficient level of information to the Competent Authority, in this case the Maritime Area Regulatory Authority (MARA), to screen the project for AA.

This report comprises a description of the proposed works, as described in [Section 4.2](#) below, particularly in relation to the aspects that could interact with the receiving environment, the identification in [Section 4.4](#) of the impacts that are reasonably foreseeable as potentially ensuing from it, and a determination as to whether these predicted impacts, either alone or in combination with the other plans or projects identified in [Section 4.4.5](#), are likely to have significant effects on the Natura 2000 sites identified in [Section 4.3](#), in view of those sites' conservation objectives.

The screening for AA report has been undertaken by an Environmental Scientist from Malachy Walsh and Partners (MWP), Engineering and Environmental Consultants. A Screening Determination Statement: Finding of No Significant Effects has been included as [Appendix 1](#).

2.2 Project Overview

Wexford County Council (WCC) are seeking a Maritime Usage Licence to perform surveys, benthic and oceanographic, to inform potential future dredging activity along a 16 km stretch of the River Barrow, from New Ross downstream to Barrow Bridge, at the confluence with the River Suir ([Figure 2-1](#)). The benthic surveys involve sampling from 26 locations, and 30 towed camera videos/still images around potential dredge areas. Oceanographic surveys include sediment sampling, tide level and current measurements, turbidity, side scan sonar (SSS) and magnetometer surveys. The survey results will be used to inform any potential future dredging activity to improve navigation along the river.

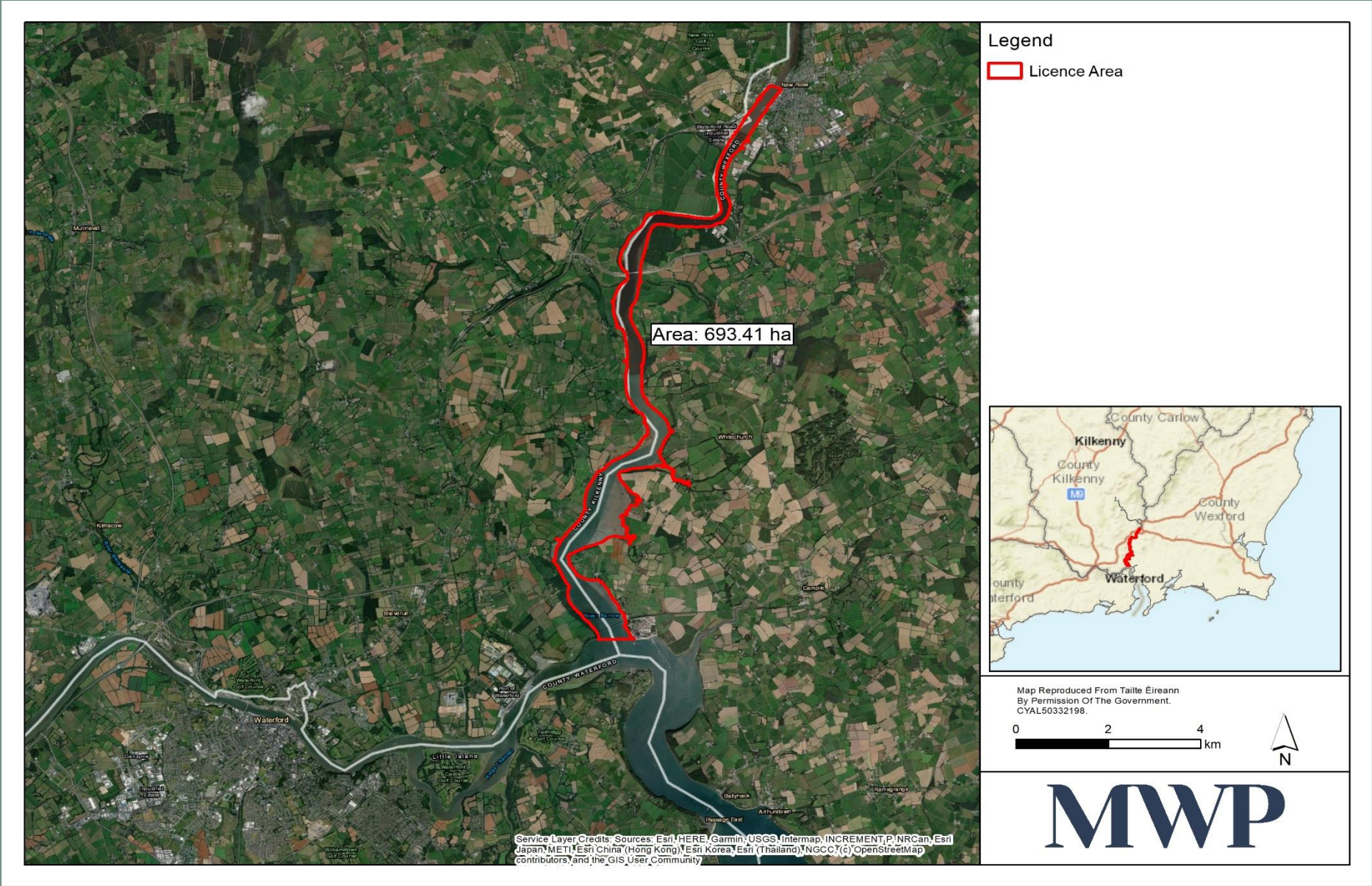


Figure 2-1: Licence Area

2.3 Application Documents Submitted

This application is for a Maritime Usage Licence to allow the aforementioned works to be performed. The following documents were also submitted along with this application:

- Assessment of Impacts of Maritime Usage (AIMU) Report
- National Marine Policy Framework Compliancy (NMPF) Report
- Risk Assessment for Annex IV Species

2.4 Legislative Context

The Maritime Area Planning (MAP) Act 2021 was enacted to aid in the regulating of development and activity in Ireland's maritime area, and established MARA as the new state agency to regulate these activities. These activities include, and are not limited to:

- Dredging Works, either navigational or ancillary to development,
- Marine environmental surveys for the purpose of scientific discovery and research,
- Marine environmental surveys for the purposes of site investigations,
- Installation of non-permanent platforms, pontoons, or slipways,
- Installation or placement of navigational markers or aids to navigation not undertaken by the Commissioner of Irish Lights,
- Use of explosives,
- Deposit of any substance or object, either in the sea or under the seabed,
- Maintenance of cables, pipelines etc,
- Harvesting of seaweed.

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats of wild fauna and flora through the designation of Special Areas of Conservation (SACs) and the Birds Directive (79/409/EEC) seeks to protect birds of special importance through the designation of Special Protection Areas (SPAs). It is the responsibility of each member state to designate SPAs and SACs, both of which form part of Natura 2000, a network of protected sites throughout the European Community. The requirement for AA of the implications of plans and projects on the Natura 2000 network of sites comes from the Habitats Directive (Article 6(3)).

The Habitats Directive has been transposed into Irish law and the relevant Regulations are the European Communities (Birds and Natural Habitats) Regulations 2011. Under the European Communities (Birds and Natural Habitats) Regulations 2011, the Competent Authority is required to carry out a screening for AA of a proposed development, or in this case pre-dredging survey works, prior to issuing consent to assess, in view of best scientific knowledge and the site's conservation objectives, if that project or plan, individually or in combination with other plans or projects, is likely to have a significant effect on a Natura 2000 site. The screening for AA will determine whether an AA of the proposed survey works is required.

If it cannot be excluded, on the basis of objective information, that the proposed survey works, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site, in view of the site's conservation objectives, then AA of the proposed survey works is required. If it is determined that an AA is required in respect of the proposed survey works, an NIS must be prepared.

2.5 MARA Assessment

Within MARA, the Assessment, Research and Data (ARD) Unit is tasked with carrying out the environmental screening and environmental assessments for submitted proposals. This is carried out in accordance with the requirements of the Habitats Directive. The ARD Unit in MARA are responsible for undertaking Stage 1 AA Screening Assessments, and any Stage 2 AA if required. This assessment by ARD will then be returned to the applicant to incorporate any recommendations before submission to the Licencing Unit in MARA to make a determination on the application.

2.6 Stages of Appropriate Assessment

The AA process is a four-stage process with issues and tests at each stage. The purpose of the screening assessment (Stage 1) is to record in a transparent and reasoned manner the likely effects on Natura 2000 sites of a proposed development. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. The stages are set out in [Appendix 2](#).

2.7 Statement of Competency

This SISAA report has been prepared by William Murphy (MSc.) Environmental Scientist at MWP. William has 3 years' experience in ecological surveying, ecological impact assessment and the AA process. He is an appropriately qualified, trained and competent professional. He has completed numerous ecological assessments for a wide variety of projects. He is an experienced field ecologist and has a diverse ecological survey profile, including offshore marine aerial surveying and offshore renewable energy projects

3. Methodology

3.1 Appropriate Assessment Screening

3.1.1 Guidance

This SISSA or Stage 1, has been undertaken in accordance with the following:

- European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001)
- European Commission Guidance 'Managing Natura 2000 Sites' Brussels, 21.11.2018 C (2018) 7621 final (EC, 2000)
- Appropriate Assessment of Plans & Projects - Guidance for Planning Authorities prepared by the National Parks and Wildlife Service (NPWS) (DoEHLG, 2009 (rev. 2010))
- Appropriate Assessment Screening for Development Management, OPR Practice Note PN01 Office of the Planning Regulator, 2021.

3.1.2 Screening Steps

The screening analysis comprises of four steps:

1. ascertaining whether the plan or project is directly connected with or necessary to the management of a European site;
2. identifying the relevant elements of the plan or project and their likely impacts;
3. identifying which (if any) European sites may be affected, considering the potential effects of the plan or project alone or in combination with other plans or projects;
4. assessing whether likely significant effects on the European site can be ruled out, in view of the site's conservation objectives.

In the context of AA there is a clear difference between the 'impact' which is the source and the 'effect, which is how it relates to the conservation objectives. When assessing impact, European sites are only considered relevant where a credible or tangible source-pathway-receptor (S-P-R) link exists between the proposed development and a protected species or habitat type. In order for an impact to occur there must be a risk initiated by having a 'source' (e.g. excavation), and an impact pathway between the source and the receptor (e.g. a waterbody which connects the proposal site to the protected species or habitats). In establishing receptors potentially affected by the proposed survey works, the 'zone of influence' (ZOI) concept was applied (see [Section 3.1.3](#)).

The following criteria were used in determining European sites considered in screening, based on DoEHLG (2009):

- Any European sites within or adjacent to the plan or project area;
- Any European sites within the likely ZOI of the project

In the case of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment.

3.1.3 Zone of Influence

The 'zone of influence' (ZOI) for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

The zone of influence of the Proposed Surveys (the project) was identified during desk study using the available information on the Proposed Surveys and publicly available information as described in the desk study. According to OPR (2021), the zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).

The ZOI for this project was identified through a review of the nature of the project, known impacts and effects likely to arise as a result of the project, distance from European sites and their qualifying interests and any landscape¹ or ecological² connectivity between the Proposed Development and European sites.

¹ Landscape connectivity is a combined product of structural and functional connectivity, i.e. the effect of physical landscape structure and the actual species use of the landscape (Kettunen *et al.* 2007)

² Connectivity is defined as a measure of the functional availability of the habitats needed for a particular species to move through a given area. Examples include the flight lines used by bats to travel between roosts and foraging areas or the corridors of appropriate habitat needed by some slow colonising species if they are to spread (CIEEM, 2018).

Similarly, there may be indirect impacts to European sites via impacts to non-Qualifying Interest habitats within a site or such habitats outside a site, or via impacts to species for which a site has been designated beyond the site where this might affect the conservation objectives of the site. This is particularly relevant in relation to SPAs where areas outside the European site are often important for bird species.

Following identification of European sites, the potential effects associated with the proposal are identified before an assessment is made of the likely significance of these effects. As described above, the test for the screening for AA is to assess, in view of best scientific knowledge, if the survey works, individually or in combination with other plans/projects, is likely to have a significant effect on a European site. If there are any significant, potentially significant, or uncertain effects, it will be necessary to proceed to AA and submit an NIS.

3.1.4 Assessment Criteria

As set out in the NPWS guidance, the task of establishing whether a plan or project is likely to have an effect on a European site(s) is based on a preliminary impact assessment using available information and data, including that outlined above, and other available environmental information, supplemented as necessary by local site information and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could be significant. The precautionary principle approach is required.

Once the potential impacts that may arise from the proposal are identified the significance of these is assessed through the use of the following key indicators:

- Habitat loss and alteration
- Disturbance and/or displacement of species
- Habitat or species fragmentation
- Water quality

The criteria for assessing significance, in view of the site-specific conservation objectives is as follows:

- degree of habitat loss (absolute, relative), changes in habitats structure;
- risk of species populations' displacement, level of disturbance, reduction of species home range, feeding area, refuge areas, alteration of favourable condition for breeding
- importance of the habitats and species affected, e.g. representativeness, local variety;
- importance of the site (e.g. limit of distribution area for certain habitats and species, stepping stone, important for ecological connectivity);
- disruption or alteration of ecological functions; and
- changes to key ecological features of the site (e.g. water quality).

3.2 Desktop Study

To complete the SISAA, certain information on the existing environment is required. A desk study was carried out to collate available information on the subject site's natural environment. This comprised a review of the following publications, data and datasets:

- National Parks and Wildlife Service (NPWS)
- National Biodiversity Data Centre (NBDC) (on-line map-viewer)

- Environmental Protection Agency (EPA) water quality data
- Geological Survey Ireland (GSI) area maps
- Other information sources and reports footnoted in the course of the report

In combination with this effort, the Irish Whale and Dolphin Group was contracted by MWP to carry out a '*Risk Assessment for Annex IV Species*'. This report is included as part of this submission.

Concise and site-specific information on species records available for the hectads S61, S62, and S72 was retrieved from the NBDC on-line database and reviewed.

GIS shapefiles downloaded from the websites of the NPWS and the EPA along with mapping of the proposed survey works were transferred to a GIS platform to allow information on the natural environment to be analysed.

Watercourse naming follows EPA nomenclature. Watercourse order is described using the classification system given in Strahler (1957) which defines stream size based on a hierarchy of tributaries (with 1st order streams being the smallest).

4. Screening for Appropriate Assessment

As set out in the NPWS guidance (DoEHLG, 2009 (rev. 2010)), the task of establishing whether a plan or project is likely to have an effect on a Natura 2000 Site is based on a preliminary impact assessment using available information and data, including that outlined above, and other available environmental information, supplemented as necessary by local site information and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could be significant. The precautionary principle approach is required. Screening for AA (Stage 1) determines the need for a full AA (Stage 2) and consists of a number of steps, each of which is addressed in the following sections of this report:

- 4.1 Establishes whether the proposed remediation works are necessary for the management of a Natura 2000 Site;
- 4.2 Description of Project;
- 4.3 Identification of Natura 2000 Sites potentially affected;
- 4.4 Identification and description of potential individual and cumulative impacts of the works;
- 5 Conclusion of screening stage

4.1 Management of Natura 2000 Sites

Plans or projects that are not directly connected with or necessary to the management of a Natura 2000 site do not require an AA. The proposal is not connected with or necessary to the conservation management of a Natura 2000 Site, and therefore is subject to screening for Appropriate Assessment if, either alone or in combination with other projects, is likely to cause significant at a Natura 2000 site.

4.2 Description of Project

4.2.1 Site Location and Context

The proposed surveys are in a 16 km section of the River Barrow estuary between New Ross Town jetty to the Barrow Bridge, located downstream at the confluence with the River Suir. It is proposed to undertake a benthic ecological survey, an oceanographic survey and to take a number of riverbed samples for analysis to inform assessments in relation to potential future dredging work.

There will be seven survey areas along this stretch of the River Barrow. Six of these areas are along the course of the river, while the seventh location is an intertidal area located adjacent to the Barrow that has been used previously for the dumping of dredged material. Both benthic and oceanographic surveys are planned for these areas. No Side Scan Sonar (SSS) or magnetometer will occur in the intertidal area north of the Pink Rock.

1. Adjacent to the Town Pier in New Ross
2. Adjacent to the existing jetty at Marshmeadows
3. At Stokestown, between navigation buoys 31 and 33
4. An area south of the Pink Rock, between the Rose Scott Fitzgerald Kennedy Bridge and buoy no. 26
5. An area between buoys no. 20 and 24
6. An Area between buoy no. 2 and the Barrow Bridge.
7. An intertidal area north of the Pink Rock that has been previously used for dumping of dredged material

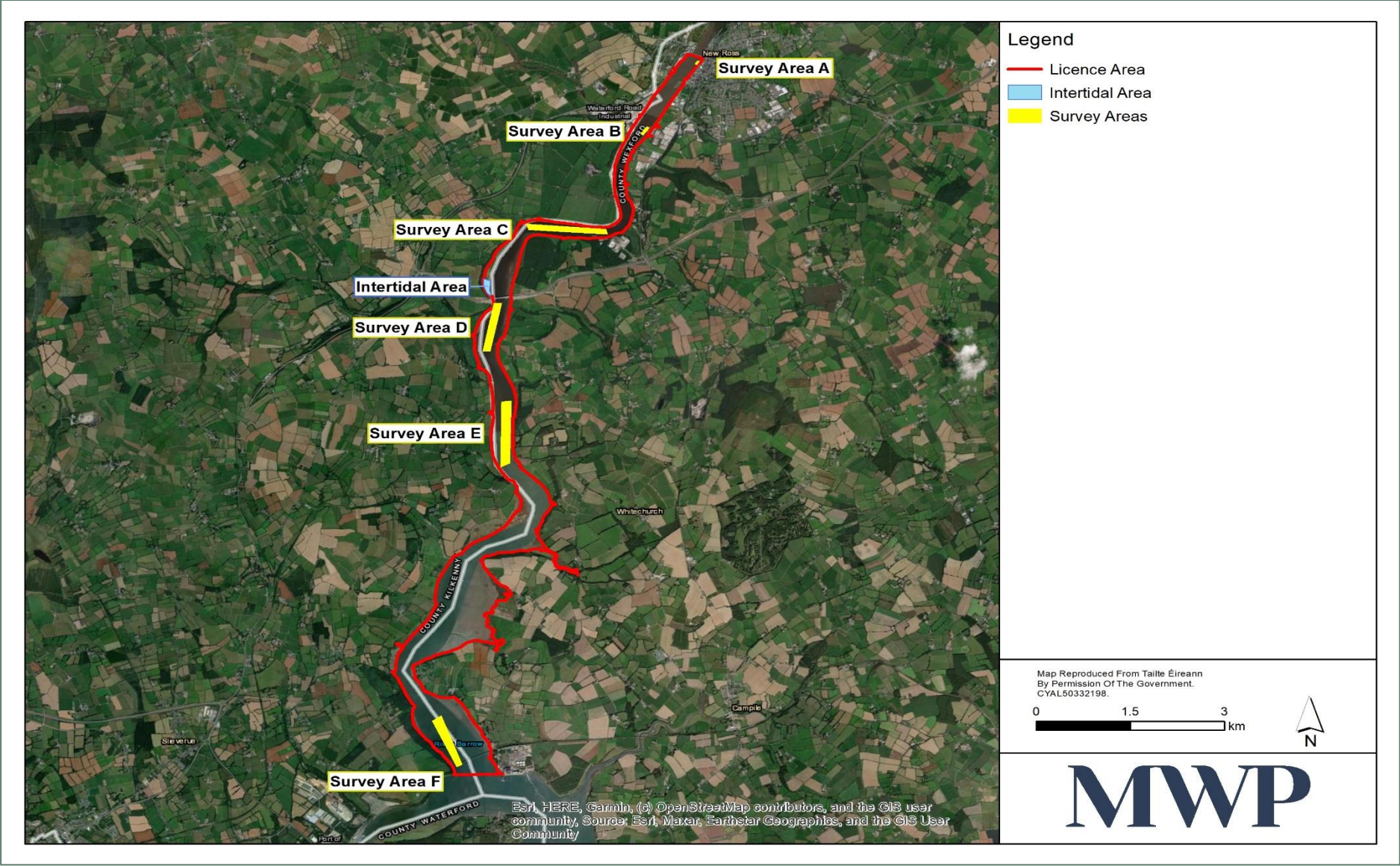


Figure 4-1: Barrow Survey Areas

4.2.2 Purpose of Project

The purpose of the project is to carry out benthic and oceanographic surveys that will inform potential future dredging works along this section of the river Barrow for navigational purposes.

4.2.3 Description of Existing Site

4.2.3.1 Desk Study Results

This section of the River Barrow is tidal and classed as a Transitional Waterbody under the Water Framework Directive (WFD), having a ‘Moderate’ status (2016-2021 Monitoring). The river is a border between the catchments of Barrow (Catchment code: 14) and Nore (Catchment code: 15). It also is the border between the subcatchments of the same name, Barrow_SC_150 and Nore_SC_140.

The Corine (2018) land cover categories for the proposed survey area comprises of ‘watercourses’. A review of bedrock mapping determined that the geological units underlying the river were majority Lower-Middle Ordovician slate, sandstone, greywacke, and conglomerate, with a small area near the confluence with the Suir classed as Ordovician volcanic rocks. Soil bordering the proposed survey areas are categorised as ‘Alluviums’, while the river itself is classed as ‘Water’.

4.2.4 Characteristics of the Project

The following table provides a summary of the characteristics of the project.

Table 4-1: Characteristics of the Proposed Surveys

<i>Size, scale, area, land-take</i>	<u>Survey Area Size</u> Area 1: 0.003 km ² Area 2: 0.009 km ² Area 3: 0.134 km ² Area 4: 0.115 km ² Area 5: 0.189 km ² Area 6: 0.133 km ² Total Area: 0.583 km ²
<i>Details of physical changes that will take place during the various stages of implementing the proposal</i>	<u>Benthic Surveys</u> Benthic surveys will take place at 7 locations, 6 along the river Barrow and 1 in a tidal pond adjacent to the river that has been used previously for the dumping of dredged material. A total of 26 samples via Day grab sampling will be performed, 21 being subtidal samples and 5 being intertidal. <u>Sub-tidal Video Survey</u>

	<p>A towed camera will be used to take videos and still images of the benthic habitat. This is non-invasive and will not result in any physical changes to the area.</p> <p><u>Oceanographic Surveys</u></p> <p>A Side Scan Sonar (SSS) and magnetometer will be used to survey the riverbed at the potential dredging areas for archaeological purposes. Estuary bed sampling will be performed using a Van Veen grab sampler, gathering 10 samples at each of the six potential dredge areas. 10 further samples will also be gathered at the same locations, with the two locations nearest New Ross, (Town Quays and Marsh Meadows) will be analysed for what is termed a Rilta/WAC suite of criteria – for the disposal of material to land and to classify the material for such disposal. The remaining 8 will be stored in case analysis is required. Tide level measurements will be taken at two locations and tidal current at three locations. At the three locations of the tidal current sampling, turbidity will also be measured as will suspended sediment concentration using Niskin Bottle deployment.</p>
<i>Description of resource requirements for the construction/operation and decommissioning of the proposal (water resources, construction material, human presence etc)</i>	<p><u>Survey vessels</u></p> <p>Three survey vessels will be used for the surveys:</p> <ul style="list-style-type: none"> • RV Reefrunner, 8.5m • MV Sharpshooter, 11.5m • MV Keltoi Warrior, 11.5m <p>Other equipment includes containers for transporting sediment samples, Niskin bottles, SSS and magnetometer, Van Veen Grab Sampler, tide gauges and tidal current monitors.</p>
<i>Description of timescale for the various activities that will take place as a result of implementation</i>	<ul style="list-style-type: none"> • Field surveying is estimated to take 3 days. • Tide gauges will be deployed for a period of 30 days. • Tidal current measurement equipment will be deployed for 14 days
<i>Description of wastes arising and other residues (including quantities) and their disposal</i>	<p>Main waste generated from the proposed surveys is disturbed sediment on the riverbed.</p>
<i>Identification of wastes arising and other residues (including quantities) that may be of particular concern in the context of the Natura 2000 network</i>	<p>No other wastes of concern would arise from the proposed survey works.</p>

<i>Description of any additional services required to implement the project or plan, their location and means of construction</i>	N/A
---	-----

4.3 Identification of Natura 2000 Sites

4.3.1 Natura 2000 Sites outside the ZOI

With regards to the proposal, the works do not include any element that has the potential to significantly affect the conservation objectives for which certain Natura 2000 sites are designated. These Natura 2000 sites are outside the zone of potential impact influence of the proposal due to the absence of plausible impact pathways and/or the attenuating effect of the distance intervening. Therefore, it is objectively concluded that significant effects on the conservation objectives of these sites are not reasonably foreseeable as a result of the proposed survey works. These sites, which are listed in Table 4-2 below, along with their distance from the subject site and the rationale for exclusion, will not be considered further in this report.

Table 4-2: Natura 2000 Sites excluded from further assessment including rationale for exclusion

Natura 2000 Site	Proximity to the proposed works	Reason for exclusion
Bannow Bay SAC 000697	c. 12 km southeast of survey area	<ul style="list-style-type: none">- Designated for a number of coastal and terrestrial habitats- No spatial overlap with proposed survey site- Due to the location and nature of the survey works, as well as the duration (3 days) of active surveying and intervening distance, there is no likelihood for far-ranging impacts to arise which may impact QI habitats designated for this SAC- Consequently, no plausible impact for significant effects to SAC
Bannow Bay SPA 004033	c. 12 km southeast of survey area	<ul style="list-style-type: none">- Designated for a number of a number of wintering bird species and associated habitat- No spatial overlap with the proposed survey areas- Active surveying is carried out by hand, over a short duration (3 days) whilst tidal gauge monitoring will be carried out via deployment of gauges and passive monitoring and will be carried out over a maximum of 14 - 30 days. These sampling efforts are temporary and considered extremely low risk to SCI bird species.

		<ul style="list-style-type: none"> - Consequently, there is no likelihood for significant impacts to arise to SCI bird species designated for the SPA
Tramore Dunes and Backstrand SAC 000671	c. 12.9 km southwest of survey area	<ul style="list-style-type: none"> - Designated for a number of coastal and terrestrial habitats - No spatial overlap with proposed survey areas - Due to intervening distance and low-impact nature of the surveys there is no effective S-P-R model pathway for impacts to arise. - No plausible impact for significant effects to SAC
Tramore Back Strand SPA 004027	c. 12.9 km southwest of survey area	<ul style="list-style-type: none"> - Designated for a number of a number of wintering bird species and associated habitat - No spatial overlap with the proposed survey areas - Active surveying is carried out by hand, over a short duration (3 days) whilst tidal gauge monitoring will be carried out via deployment of gauges and passive monitoring and will be carried out over a maximum of 14 - 30 days. These sampling efforts are temporary and considered extremely low risk to SCI bird species. - Consequently, there is no likelihood for significant impacts to arise to SCI bird species designated for the SPA

4.3.1.1 Foraging Species and Management Unit Species

Marine species are transient by nature, often having large ranges for feeding, migration, and breeding. Foraging ranges for grey seals (*Halichoerus grypus*) and harbour seals (*Phoca vitulina*) are a factor considered for marine and estuarine based projects using the S-P-R approach. The maximum foraging range for these species is 273 km for harbour seals and 448 km for grey seal (Carter et al, 2022). This can significantly increase the ZOI for these types of projects but allows for a comprehensive assessment of the receiving environment and the ecological pathways between proposed works. Similarly, JNCC Management Units (MU) are included under MARA guidance to include all European sites (Natura 2000 sites and Designated UK Sites) with Harbour Porpoise (*Phocoena phocoena*) and Bottlenose Dolphin (*Tursiops truncatus*) as a Qualifying Interest. This, similar to the aforementioned foraging ranges for seals, does have the potential to extend the ZOI for the proposed survey works using the S-P-R model.

Regarding MU, the area designated for Bottlenose Dolphin relevant to the proposed survey works is the Irish Sea (Code: IS) and encompasses an area of 50,145 km². Within this MU, there are two Natura 2000 sites with Bottlenose Dolphin listed as a QI, the Hook Head SAC (IE0000764) and Cardigan Bay SAC/ Bae Ceredigion SAC (UK0012712). The location of the Hook Head SAC at the mouth of the River Barrow will see this site discussed in the following section. However, given the location of the Cardigan Bay SAC on the Welsh coast, it is unlikely to have any *significant* impacts related due to the purposed survey works. Cardigan Bay SAC is located c.160 km east

of the proposed survey works, has no spatial overlap, and given the short-term duration of the survey works this site has been screened out for further assessment.

For Harbour Porpoise, the relevant MU is significantly larger, known as the Celtic and Irish Seas (Site Code CIS), and is c. 516,893 km². This MU encompasses part of the northwest of France, west coast of Wales and England, and Ireland's east, south, and west coasts. The Hook Head SAC is discussed in the following section as Harbour Porpoise is a QI of that site. The sites listed below also have Harbour Porpoise as a QI, but it has been determined that given the considerable intervening distance between these sites, the short-term nature of the proposed survey works, and their negligible effect to the environment, these sites are not considered to be part of the ZOI and will therefore not experience any significant effects related to the proposed survey works and are screened out for further assessment. These sites include:

- Abers - Côte des legends ZSC (FR5300017)
- Anse de Vauvillle (FR2502019)
- Baie de Morlaix ZSC (FR300015)
- Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard ZSC (FR5300012)
- Baie de Morlaix ZSC (FR300015)
- Blasket Islands SAC (IE002172)
- Baie du Mons Saint-Michel ZSC (FR2500077)
- Baie de Saint-Brieuc – Est ZSC (FR5300066)
- Banc et récifs de Surtainville ZSC (2502018)
- Blackwater Bank SAC (IE0002953)
- Bunduff Lough and Machair/Trawalua/Mullaghmore SAC (IE000625)
- Carnsore Point SAC (IE0002269)
- Cap d'Erquy-Cap Frehel ZSC (FR5300011)
- Chausey ZSC (FR2500079)
- Chaussee de Sein ZSC (FR5302007)
- Codling Fault Zone SAC (IE0003015)
- Cote de Granit rose-Sept-Iles ZSC (FR5300009)
- Côtes de Crozon ZSC (FR5302006)
- Estuaire de la Rance ZSC (FR5300061)
- Inishmore Island SAC (IE000213)
- Kenmare River SAC (IE002158)
- Kilkieran Bay and Islands SAC (IE0002111)
- Lambay Island SAC (IE000204)
- Mers Celtiques -Talus du golfe de Gascogne ZSC (FR5302015)
- Nord Bret DH ZSC (FR2502022)
- Ouessant-Molene ZSC (FR5300018)
- Recifs du talus du golfe de Gascogne ZSC (FR5302016)
- Récifs et lands de la Hague ZSC (FR2500084)
- Roaringwater Bay and Islands SAC (IE0000101)
- Rockabill to Dalkey Island SAC (IE0003000)
- West Connaught Coast SAC (IE002998)
- Tregor Goelo ZSC (FR5300010)
- Bristol Channel Approaches cSAC (UK0030396)
- West Wales Marine cSAC (UK0030397)
- North Anglesey Marine cSAC (UK0030393)
- North Channel cSAC (UK0030399)

In consideration of the foraging range for harbour seals and grey seals, 273 km and 448 km respectively (Carter et al; 2022), a buffer was created around the proposed survey works and any Natura 2000 sites that fell within the buffer with the relevant seal species as a QI was recorded and are presented below in Table 4-3. The table below shows that while there are several Natura 2000 European sites identified within the buffer, the actual pathway from many of these Natura sites exceed the foraging range for both species and many of these sites can be screened out of the ZOI. For the remaining sites that do lie within the foraging range of these seal species, due to the short-term duration of the surveys and their negligible impact to the environment, it is highly unlikely that these proposed surveys will result in any significant impact which may affect these QI seal species. A review of documented sightings of these species on the NBDC Biodiversity Maps was also performed for completeness of this assessment. There are no recorded sightings of Harbour Seal within the section of the estuary where the

proposed surveys are planned for. There is a record of a Grey Seal sighting in this area of the river, but this was recorded in 1983, and there have been no further documented sightings.

Table 4-3: Natura 2000 Sites with the Grey Seal and Harbour Seal within a foraging range buffer of the proposed surveys works

Natura 2000 Site	Species	Distance via sea
Roaringwater Bay and Islands SAC	Grey Seal	c. 212 km
Blasket Islands SAC	Grey Seal	c. 335 km
Slyne Head Islands SAC	Grey Seal	c. 493 km
Inishbofin and Inishshark SAC	Grey Seal	c. 511 km
Lambay Island SAC	Grey Seal and Harbour Seal	c. 220 km
Duvillaun Islands SAC	Grey Seal	c. 570 km
Inishkea Islands SAC	Grey Seal	c. 575 km
Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Grey Seal	c. 709 km
Horn Head and Rinclevan SAC	Grey Seal	c. 784 km
Slaney River Valley SAC	Harbour Seal	c. 87 km
Glengarriff Harbour and Woodland SAC	Harbour Seal	c. 286 km
Kenmare River SAC	Harbour Seal	c. 278 km
Kilkieran Bay and Islands SAC	Harbour Seal	c. 480 km
Galway Bay Complex SAC	Harbour Seal	c. 508 km
Clew Bay Complex SAC	Harbour Seal	c. 569 km
Killala Bay/Moy Estuary SAC	Harbour Seal	c. 671 km
Ballysadare Bay SAC	Harbour Seal	c. 701 km
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Harbour Seal	c. 706 km
Donegal Bay (Murvagh) SAC	Harbour Seal	c. 733 km
Ouessant-Molène	Grey Seal	c. 441 km
Abers - Côte des légendes	Grey Seal	c. 443 km
Baie de Morlaix	Grey Seal	c. 460 km
Côte de Granit rose-Sept-Iles	Grey Seal	c. 459 km

Tregor Goëlo	Grey Seal	c. 484 km
--------------	-----------	-----------

4.3.2 Natura 2000 Sites within the ZOI

Identifying the Natura 2000 sites that may be affected takes into consideration all aspects of the project that could have potential effects on any Natura 2000 sites located within the ZOI of the proposed survey works. This takes into account all of the designating features (species, habitat types [Table 4-5](#)) that are significantly present on the sites and their conservation objectives.

Designated SACs and within the potential likely zone of impact of the proposal, including their proximity are shown in [Table 4-4](#) below. The locations of these Natura 2000 sites in relation to the subject site was considered and their locations are shown on a map in [Figure 4-2](#) below.

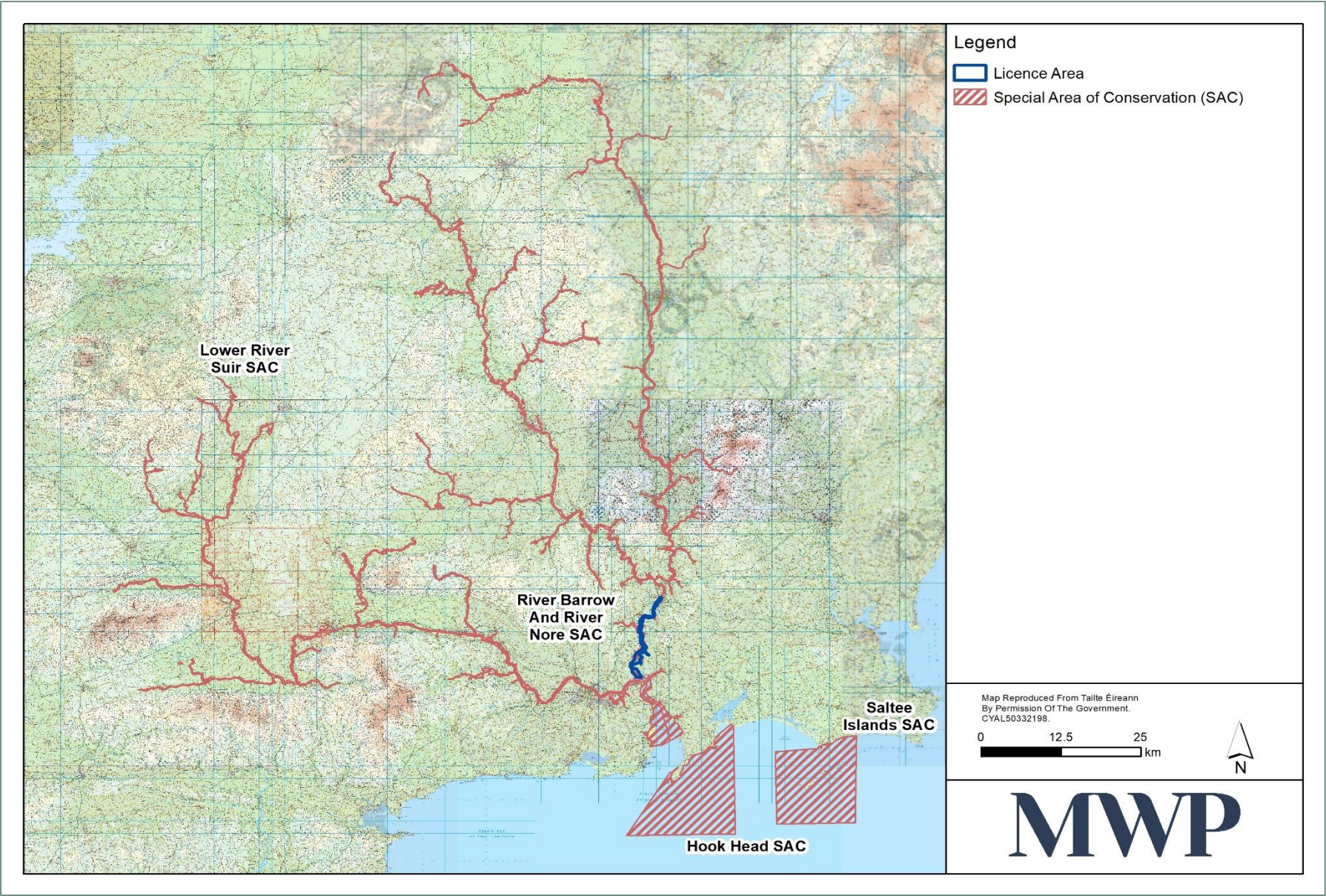


Figure 4-2: Natura 2000 Sites identified within the Zone of Influence

Table 4-4: Nature 2000 Sites within the ZOI of the proposal

Natura 2000 Site	Proximity to the proposed works	Reasons for inclusion and Qualifying Interests	Hydrological/Ecological Connection (Yes/No)
River Barrow and River Nore SAC 002162	Works within SAC	<ul style="list-style-type: none"> - Designated for tidal and riparian habitats, Otter, Freshwater Pearl Mussel, Lamprey species, Desmoulin's Whorl Snail, Salmon, Twaite Shad, and White-Clawed Crayfish - Proposed works located in the River Barrow and River Nore SAC 	Proposed survey works take place within the River Barrow and River Nore SAC, direct hydrological connection
Lower River Suir SAC 002137	c. 605 m southwest of survey area	<ul style="list-style-type: none"> - Adjacent to River Barrow and River Nore SAC - No spatial overlap with proposed surveys - Designated for tidal and riparian habitats, Freshwater Pearl Mussel, Otter, Twaite Shad, Salmon, Lamprey species, and White-Clawed Crayfish 	Direct Hydrological connection, SAC located downstream of proposed survey works, c. 650 m from nearest proposed survey area
Hook Head SAC 000764	c. 17 km south of survey area	<ul style="list-style-type: none"> - No spatial overlap with proposed surveys site - Designated for coastal habitats, Bottlenose Dolphin and Harbour Porpoise - Downstream from proposed surveys work - QIs of marine mammals that may travel between sites 	Direct hydrological linkage c. 17 km from area of proposed survey works transient marine mammals' species as QIs
Saltee Islands SAC 000707	c. 38 km southeast of survey area	<ul style="list-style-type: none"> - No spatial overlap with proposed surveys site - Designated for coastal habitats, Grey Seal - Downstream from proposed surveys work - QIs of marine mammals that may travel between sites 	Hydrological linkage c. 38 km from area of proposed survey works transient marine mammals' species as QIs

4.3.2.1 Characteristics of Natura 2000 Sites

Table 4-5: QIs of the Natura 2000 sites identified within the ZOI

Natura 2000 Site	Qualifying Interests
River Barrow and River Nore SAC (002162)	Habitats Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Petrifying springs with tufa formation (Cratoneurion) [7220] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]
	Species <i>Vertigo moulinsiana</i> (Desmoulin's Whorl Snail) [1016] <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Alosa fallax fallax</i> (Twaite Shad) [1103] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter) [1355] <i>Trichomanes speciosum</i> (Killarney Fern) [1421]
Lower River Suir SAC (002137)	Habitats Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0] <i>Taxus baccata</i> woods of the British Isles [91J0]
	Species

	<p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> <p><i>Alosa fallax fallax</i> (Twaite Shad) [1103]</p> <p><i>Salmo salar</i> (Salmon) [1106]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p>
Hook Head SAC (000764)	<p>Habitats</p> <p>Large shallow inlets and bays [1160]</p> <p>Reefs [1170]</p> <p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p> <p>Species</p> <p><i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]</p> <p><i>Phocoena phocoena</i> (Harbour Porpoise) [1351]</p>
Saltee Islands SAC (000707)	<p>Habitats</p> <p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Large shallow inlets and bays [1160]</p> <p>Reefs [1170]</p> <p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p> <p>Submerged or partially submerged sea cave [8330]</p> <p>Species</p> <p><i>Halichoerus grypus</i> (Grey Seal) [1364]</p>

4.3.3 Conservation Objectives

According to the Habitats Directive, the *conservation status of a natural habitat* will be taken as 'favourable' within its biogeographic range when:

- Its natural range and areas it covers within that range are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- The conservation status of its typical species is favourable as defined below.

According to the Habitats Directive, the conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' within its biogeographic range when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future

- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The specific conservation objectives for each site are available on www.npws.ie. The site-specific conservation objectives were available for following sites:

- River Barrow and River Nore SAC
- Lower River Suir SAC
- Hook Head SAC
- Saltee Islands SAC

These have been accessed for the sites listed in the tables above on the [10/10/2024].

All conservation objectives together with other designated site information are available on <http://www.npws.ie/protectedsites/>.

4.3.3.1 Threats and Pressures

The most important pressures and activities with effect on the identified SACs using the S-P-R model are outlined in the Natura 2000 standard data form. These include 'High', 'Medium', and 'Low' ranking threats. Each identified SAC within the ZOI has its threats and pressures shown below.

Table 4-6: River Barrow and River Nore SAC

Rank	Threats and pressures Description	inside/outside/both [i o b]
Low	Port Areas	l
Medium	Intensive Cattle Grazing	i
Low	Sand and Gravel Quarries	b
Low	Netting from passive fishing	i
Medium	Use of Fertilizers (Forestry)	b
Low	Removal of hedges, copses or scrub	i
Low	Intensive Fish Farming, Intensification	i
Medium	Human induced changes in hydraulic conditions	b
Medium	Changes in abiotic conditions	i
High	Modifying structures of inland waterways	i
Medium	Water abstractions from surface water	i
Low	Industrial or commercial areas	o
Low	Leisure Fishing	i
High	Dykes and Flooding defence in inland waterway systems	i
Medium	Fishing and Harvesting Aquatic Resources	o
High	Pollution to surface waters (limnic, terrestrial, marine and brackish)	b
Medium	Invasive non-native species	i
High	Agricultural Intensification	b
Medium	Forestry Activities not referred to above	b
Medium	Peat Extraction	o
Medium	Forest and Plantation management and use	b
Medium	Dredging/ removal of limnic sediments	i
Medium	Reduction in migration/ migration barriers	i
High	Erosion	i

Table 4-7: Lower River Suir SAC

Rank	Threats and pressures Description	inside/outside/both [i o b]
High	Urbanised areas, human habitation	b
Low	Cultivation	i
Low	Reclamation of land from sea, estuary or marsh	l
High	Pollution to surface waters (limnic, terrestrial, marine & brackish)	b

Medium	Landfill, land reclamation and drying out, general	b
Low	Invasive non-native species	i
Low	Port Areas	b
High	Discharges	b
Low	Sylviculture, Forestry	o
High	Dykes and flooding defence in inland water systems	i
High	Fertilisation	o

Table 4-8: Hook Head SAC

Rank	Threats and pressures Description	inside/outside/both [i o b]
High	Scuba Diving, Snorkelling	i
High	Fishing and harvesting aquatic resources	i
High	Dumping, depositing of dredged deposits	i
High	Erosion	i

Table 4-9: Saltee Islands SAC

Rank	Threats and pressures Description	inside/outside/both [i o b]
High	Pollution to surface waters (limnic, terrestrial, marine & brackish)	i
Low	Utility and service lines	i
High	Sea defence or coast protection works, tidal barrages	i
Low	Pelagic Trawling	i
Low	Bait digging and collection	i
Low	Nautical Sports	i

4.4 Assessment of Significance of Potential Impacts Sites

This section considers the list of sites in [Section 4.3.1.1](#) above, together with the potential ecological impacts identified in the previous section and determines whether the project is likely to have significant effects on a Natura 2000 site. An evaluation based on the S-P-R model to determine which Natura 2000 sites are the plausible ecological receptors for potential impacts of the proposed survey works will be conducted in below. The evaluation takes cognisance of the scope, scale, nature and size of the project, its location relative to the European sites listed in [Table 4-4](#) above, and the degree of connectedness that exists between the project and the Natura site's potential ecological receptors.

The likelihood of significant effects from the project to the Natura 2000 sites identified above was determined based on several indicators which are:

- Water Quality
- Habitat Loss and/or alteration
- Habitat or species fragmentation
- Disturbance and/or displacement of species

The likelihood of significant in-combination effects is assessed in [Section 4.4.5](#).

4.4.1 Water Quality

Surveying of this nature has relatively limited potential to release suspended sediments and pollutants into the estuary, which could impact water quality in coastal waters. The use of Van Veen grabs for benthic sampling has very limited potential to impact water quality via an increase in suspended sediments within the water column as a result of grab sampling. In consideration of the size of the grab sample (0.1m²), the tidal influence of this area

of the Barrow wherein sediments would resettle quickly, any disturbance from this sampling would be momentary in duration with any disturbed sediments likely resettling within minutes.

Whilst boats introduce a risk of pollutants, i.e., hydrocarbons, being released into the aquatic environment, their use in this project is very limited and with proper licenced operation and maintenance they are considered to not be a risk which may result in likely significant effects.

Factoring in both, any impact on water quality from the proposed survey works is considered to be negligible and temporary given the proposed surveys duration. Disturbed sediment and benthos from the grab sampling will be dispersed and resettle quickly and research vessels are serviced regularly to prevent any potential impacts related to their operation.

Consequently, considering the identified potential impacts, it is deemed no likely significant impacts will occur from the proposed survey works that would directly negatively impact the four SACs:

- River Barrow and River Nore SAC
- Hook Head SAC
- Lower River Suir SAC
- Saltee Islands SAC

It was determined there would be no likely significant negative effects to those sites QIs or their conservation objectives.

4.4.2 Habitat Loss and/or Alteration

Annex I habitats were assessed in the area of the proposed surveys. Only marine and coastal habitats were assessed in this screening due to the fact that the surveys are entirely based within the marine environment. Within the survey area, Annex I habitats were identified with which there was slight overlap, Estuaries (1130) and Tidal Mudflats (1140). Within the Estuary QI for the River Barrow and River Nore SAC, there is the presence of community complexes, which include: Muddy Estuarine Community Complex, Sand to Muddy Fine Sand Community Complex, Fine Sand with *Fabulina fabula* community, and *Sabellaria alveolate* reef, however, the proposed survey works don't overlap with these community complexes. There are two objectives that are to support these community complexes, which are:

1. *To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC*
2. *To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC.*

Grab sampling will interact with the two habitats within the River Barrow and River Nore SAC. The proposed survey works are cognisant of the conservation objectives for this SAC regarding marine habitats, wherein *'The Department takes the view that licencing of activities likely to cause continuous disturbance of each community type should not exceed an approximate area of 15%'* (NPWS, 2011).

The assessment has considered the potential impact of the proposed survey works on the receiving habitats. In consideration of the small scale and operation of the surveys, the shallow grabs and low volume of material that will be collected during sampling, and the short duration of the proposed surveys, habitat loss and/or alteration is not considered likely to occur as a result of the proposed operation. the surveys will not result in a permanent loss of habitat due to the shallow take of the grab and will not result in alteration to the status or function of the habitat and is in keeping with the conservation objectives of the SAC. Other Natura 2000 sites identified within the zone of influence are:

- Lower River Suir SAC
- Hook Head SAC

- Saltee Islands SAC

The above Natura 2000 sites are also deemed to not experience any habitat loss or alteration from the proposed survey works as there are no surveys planned for within these Natura 2000 sites and due to the intervening distance, there is no likelihood for indirect habitat alteration as a result of the proposed surveys.

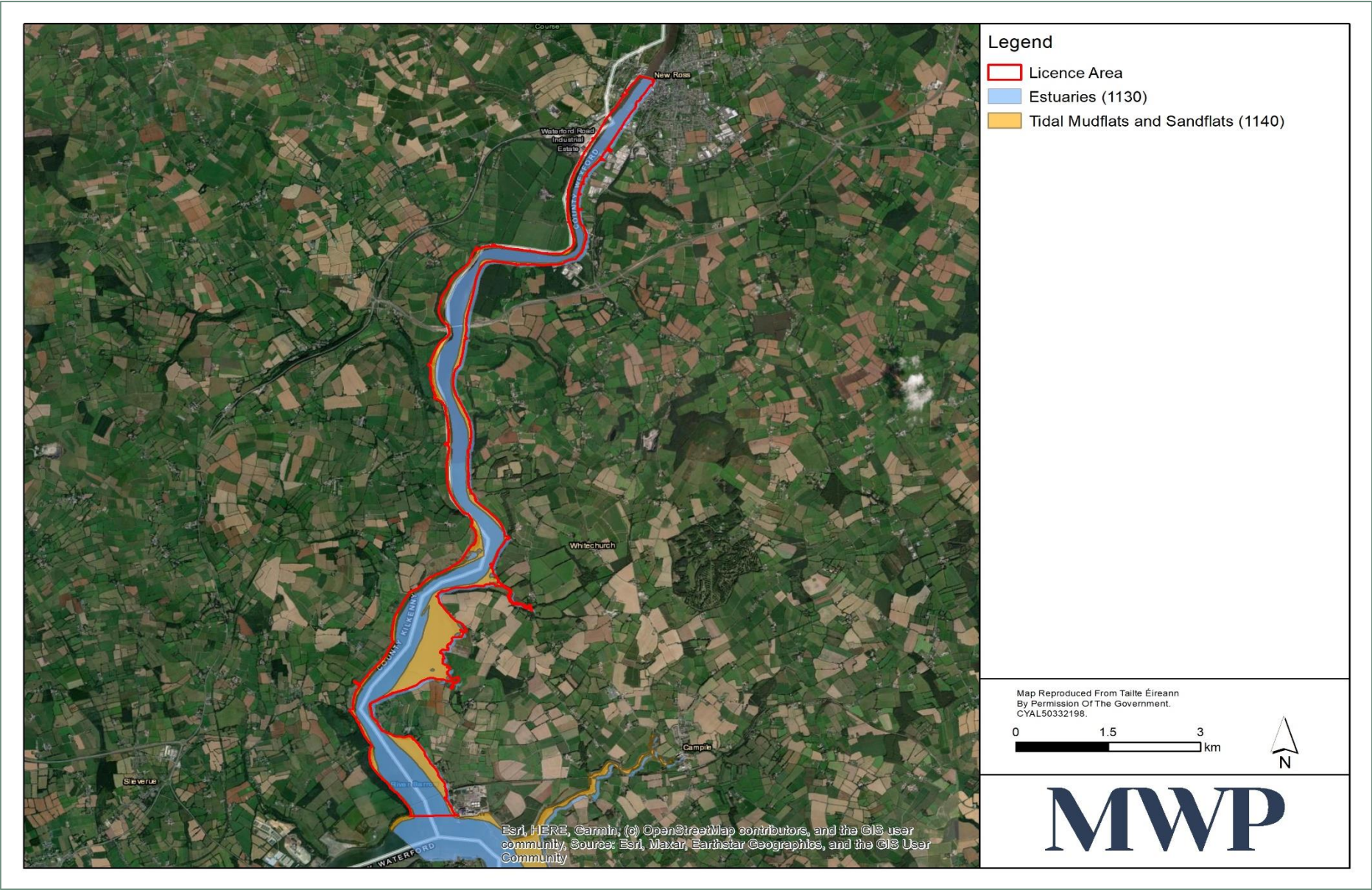


Figure 4-3: Annex I Habitats within Proposed Licence Area

4.4.3 Disturbance and/or Displacement of Species

Otters are a designated QI species for the River Barrow and River Nore SAC. During the proposed survey works, otters may experience some temporary disturbance due to the presence of the research vessels. This temporary disturbance of otter is likely negligible, given that otters present in the area are likely accustomed to the level of marine traffic in the area and are an elusive species often avoiding human activities where they occur. In consideration of these factors, combined with the short-term duration of the proposed survey works, there are no likely significant impacts to occur to the existing otter species along this section of the River Barrow and River Nore SAC.

Several fish species including Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*Lampetra fluviatilis*), Twaite Shad (*Alosa fallax fallax*), and Salmon (*Salmo salar*) are designated for the River Barrow and River Nore SAC. Of these species, the Twaite Shad, Sea Lamprey, and Salmon are anadromous species, spawning and breeding in freshwater but spend the majority of their life cycle in the sea. Brook and River Lamprey are exclusively freshwater species. Table 4-10 below provides information on the spawning times of these species. There may be some disturbance of these species during the proposed surveys, but again given the short-term duration it is not considered likely that there will be any significant effects to the disturbance or displacement of any fish QI species designated for the River Barrow and River Nore SAC.

The presence of the research vessel may disturb birds initially in the area of the proposed surveys, displacing them. The area of the proposed surveys is not designated as an SPA, and none of the Natura 2000 Sites within the ZOI are an SPA, however, a list of protected bird species within 10 km hectads S61, S62, and S72 of the Irish gird were assessed, and aquatic birds from this list are as follows:

- Bar Tailed Godwit (*Limosa lapponica*)
- Common Kingfisher (*Alcedo atthis*)
- Little Egret (*Egretta garzetta*)
- Sandwich Tern (*Sterna sandvicensis*)
- Whooper Swan (*Cygnus cygnus*)

However, given the size of the vessel, short duration of the surveys, and the active vessel traffic already present in the estuary, it is considered unlikely that the proposed surveys would have significant effects displacing or disturbing bird species in the area.

Other physical disturbance can be caused by the presence of the research vessels in the area, and the use of the SSS in the oceanographic surveys. Fish species are not negatively impacted by the operation of SSS, and the deployment of tidal gauges for a maximum of 30 days present no likelihood for significant effects to QI fish species. There are no marine mammals other than Otter listed as a QI in the River Barrow and River Nore SAC, but there are marine mammals that are QIs of the Hook Head SAC, which is within the ZOI, Common Bottlenose Dolphin and Harbour Porpoise. A Risk Assessment for Annex IV Species was carried out to assess impacts on marine mammals and was considered not likely to have significant effects on those species during the proposed surveys.

Table 4-10: Spawning Periods of Fish Species

Fish Species	Spawning Period
Salmon	November to March
Twaite Shad	April to June
Brooks Lamprey	March to May

River Lamprey	March to April
Sea Lamprey	May to July

4.4.4 Habitat or Species Fragmentation

Habitat fragmentation has been defined as ‘reduction and isolation of patches of natural environment’ (Hall, *et al.*, 1997) cited in (Franklin, *et al.*, 2002) which results in spatial separation of habitat areas which had previously been in a state of greater continuity. Adverse effects of habitat fragmentation on species include the increased isolation of populations which can detrimentally impact on the resilience or robustness of the populations.

The proposed survey works are temporary and of a short duration, and, as assessed above, will not affect the area in terms of habitat loss or alteration, preventing fragmentation of the existing habitats. The proposed surveys works don’t include any physical or permanent barriers that would inhibit species mobility within the river and lead to species fragmentation. In consideration of this, it was deemed that the proposed surveys would not have a significant negative effect on the receiving habitats or species that would result in their fragmentation.

4.4.5 In-Combination Effects

In-combination effects are a requirement of the Habitat Directive to be considered even if the project that is subject to the assessment is deemed to have no significant effects on the receiving environment. A review of foreshore licence submissions to the Department was undertaken to identify any other developments or activities within the vicinity of the counties of Waterford, Wexford, and Kilkenny. Searches went back a time span of five years to 2019. There were no returns when searching for County Kilkenny or County Wexford for any developments within the vicinity of the proposed surveys. Waterford returned a single relevant application, FS006684, regarding dredging works, shown in Table 4-11 below. Considering the location of the survey works up-river of the proposed foreshore works detailed in reference no. FS006684 which demonstrates a lack of spatial overlap, as well as the short timescale of the proposed survey works, in-combination effects may occur however these are unlikely to be significant given the nature of the proposed survey works.

Table 4-11: Proposed Foreshore work in the vicinity of the proposed survey works

Foreshore Ref No.	Description	Expiry Date	Potential In combination effects
FS006684	Dredging works along the channel of the river Suir at the confluence with the river Barrow to clear navigation channel to Waterford Port	31/12/2025	<ul style="list-style-type: none">- Increase in amount of suspended sediment in the water if works occur at the same time- Presence of vessels in the area at the same time may increase disturbance of species

There is no record of any commercial fishery activity along the section of the River Barrow where the proposed surveys works are planned for, and as such will not have a cumulative effect on the area. Marine traffic in the area for 2022 and 2023 was checked using marinetraffic.com. The density maps generated use Automatic Identification System (AIS) data to populate route densities for vessel usage. This section of the River Barrow is an

active route for access to New Ross Port, and the short-term presence of the research vessel in the area is unlikely to have a significant effect in the area.

In consideration of all the potential cumulative impacts mentioned above, it is deemed that there are likely to be no significant negative cumulative impacts on the receiving environment from the proposed survey works. The route has no commercial fishing activity that can be interrupted due to the proposed surveys. The area already experiences a high density of vessels travelling to and from New Ross Port and the presence of the research vessel for the short duration of the surveys is deemed not to have any significant cumulative effect in the vicinity. Given the nature of the dredging work on the Suir and the proposed surveys of this application, organising them so they don't occur at the same time negates any in-combination effect they may have. There is also the possibility that this work has already been completed. The proposed survey works will be scheduled for a time when the dredging work in the Suir is not active, as this will negate any potential significant in-combination effects on the surrounding environment.

5. Conclusion

5.1 Screening for Appropriate Assessment Conclusion

In conclusion, to determine any potential significant effects of the proposed project on nearby Natura 2000 sites, a screening process for Appropriate Assessment was undertaken. This included assessments of Designated Sites in the UK under the JNCC Management Unit approach. An assessment of sites within the foraging range of Grey Seals and Harbour Seals was also performed, and this saw a number of French Natura 2000 sites included as well as some additional Irish sites. These are presented in [Section 4.3.1.1](#), and following their initial inclusion within a buffer of the proposed surveys works related to their foraging range, the individual pathway via water resulted in the majority of these sites being screened out due to the distance ultimately being larger than the foraging range.

Six Natura 2000 sites were initially considered on the basis of their proximity to the proposed works site being within the 15 km (as proposed in Scott Wilson *et al.*, 2006), whilst two QI marine mammals saw an additional two Natura 2000 sites being considered. These sites include:

- River Barrow and River Nore SAC
- Lower River Suir SAC
- Bannow Bay SAC
- Bannow Bay SPA
- Tramore Backstrand SPA
- Tramore Dunes and Backstrand SAC
- Hook Head SAC
- Saltee Islands SAC

Following NPWS guidance (DoEHLG, 2009) the ZOI was assessed on a case-by-case basis with consideration to the nature, size, and location of the project, the sensitivities of the ecological receptors and the potential for cumulative effects on these sites. No further sites were deemed appropriate for consideration. This assessment saw four of the Natura 2000 sites screened out initially due to there being no direct linkage between the sites and the proposed survey works using the S-P-R model, which are:

- Bannow Bay SAC
- Bannow Bay SPA
- Tramore Backstrand SPA
- Tramore Dunes and Backstrand SAC

Of the remaining four Natura 2000 sites, it has been objectively concluded during this screening process that the proposed survey works along the River Barrow (New Ross to Barrow Bridge), either individually or in combination with other plans or projects, are not likely to have significant effects on the following four Natura 2000 sites

located within the ZOI of the proposed survey area in view of those sites' Conservation Objectives, and further assessment is considered unnecessary:

- River Barrow and River Nore SAC (Site code: 002462)
- Lower River Suir SAC (Site code: 002137)
- Hook Head SAC (Site code: 000764)
- Saltee Islands SAC (Site Code: 000707)

This screening for Appropriate Assessment was undertaken to determine the potential for likely significant effects of the proposed works, individually, or in combination with other plans or projects, in view of the conservation objectives of any Natura 2000 site. It has been objectively concluded that sites considered are not likely to be significantly affected by the proposed works and can therefore be screened out for Appropriate Assessment.

6. References

Carter, M.I., Boehme, L., Cronin, M.A., Duck, C.D., Grecian, W.J., Hastie, G.D., Jessopp, M., Matthiopoulos, J., McConnell, B.J., Miller, D.L. and Morris, C.D., 2022. Sympatric seals, satellite tracking and protected areas: habitat-based distribution estimates for conservation and management. *Frontiers in Marine Science*, 9, p.875869.

Department of the Environment, Heritage and Local Government (DoEHLG) (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.

Directorate General Environment (DGE), 2013. Interpretation Manual of European Union Habitats- EUR 28. The European Commission.

European Commission (EC), 2018. Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities.

European Commission (EC), 2021. Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities.

Fossitt, J. A., 2000. A Guide to Habitats in Ireland. Kilkenny, The Heritage Council.

Franklin, Alan B., Noon, Barry R. & Luke George T., 2002. What is Habitat Fragmentation?, *Studies in Avian Biology* No. 25: 20-29.

JNCC, 2015. Management Units for cetaceans in UK waters. [Online] Available at: <https://data.jncc.gov.uk/data/f07fe770-e9a3-418d-af2c-44002a3f2872/JNCC-Report-547-FINAL-WEB.pdf>

JNCC, 2015a. Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC. [Online] Available at: <https://jncc.gov.uk/our-work/bristol-channel-approaches-mpa/>

JNCC, 2015b. North Anglesey Marine / Gogledd Môn Forol SAC. [Online] Available at: <https://sac.jncc.gov.uk/site/UK0030398>

JNCC, 2015c. North Channel SAC. [Online] Available at: <https://sac.jncc.gov.uk/site/UK0030399>

JNCC, 2015d. West Wales Marine / Gorllewin Cymru Forol SAC. [Online] Available at: <https://jncc.gov.uk/our-work/west-wales-marine-mpa/#site>

Natura 2000 Viewer, 2022. [Online] Available at: <https://natura2000.eea.europa.eu/>

NPWS, 2019. The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS, 2011. Conservation Objectives River Barrow and River Nore SAC (IE002162). [Online] Available at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002162.pdf

NPWS, 2024. Site Synopsis River Barrow and River Nore SAC (IE002162). [Online] Available at: <https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002162.pdf>

NPWS, 2017. Conservation Objectives Lower River Suir SAC (IE002137). [Online] Available at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002137.pdf

NPWS, 2023. Site Synopsis Lower River Suir SAC (IE002137). [Online] Available at:
<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY002137.pdf>

NPWS, 2011a. Conservation Objectives Hook Head SAC (IE000764). [Online] Available at:
https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000764.pdf

NPWS, 2024a. Site Synopsis Hook Head SAC (IE000764). [Online] Available at:
<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000764.pdf>

NPWS, 2014b. Addition of Harbour Porpoise and Bottlenose Dolphin as new Qualifying Interests and the addition of an Activity Requiring Consent to Hook Head Special Area of Conservation 000764 in County Wexford. [Online] Available at: https://www.npws.ie/sites/default/files/protected-sites/amendment_notifications/AN000764.pdf

NPWS, 2011b. Conservation Objectives Saltee Islands SAC 000707 and Saltee Islands SPA 004002. [Online] Available at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000707.pdf

NPWS, 2011b. Site Synopsis Saltee Islands SAC (000707). [Online] Available at:
<https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000707.pdf>

Office of the Planning Regulator (2021) Appropriate Assessment Screening for Development Management, OPR Practice Note PN01.

Appendix 1

Screening Determination Statement

(Finding of No Significant Effects)

SCREENING DETERMINATION STATEMENT

Name of project or plan	Proposed Surveys along the River Barrow
Description of the project	The proposed surveys are a collection of benthic and oceanographic surveys to provide information for potential dredging works along this 16 km stretch of the river Barrow for navigation.
List of agencies consulted: provide contact name and telephone or e-mail address.	N/a
Response to consultation:	N/a
Is the project or plan directly connected with or necessary to the management of the site?	No
Are there other projects or plans that together with the project or plan being assessed could affect the site?	No
Name and location of Natura 2000 site	- River Barrow and River Nore SAC - Lower River Suir SAC - Hook Head SAC - Saltee Islands SAC

THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS

Describe how the project or plan (alone or in combination) is/is not likely to have significant effects on Natura 2000 site(s) in view of the sites conservation objectives.	The proposed surveys are short-term and will not create any likely lasting significant effects in the area.
Conclusion	There is no likelihood of significant effects on any Natura 2000 site(s). The proposal can be screened out. Appropriate Assessment is not required.

DATA COLLECTED TO CARRY OUT THE ASSESSMENT

Who carried out the assessment?	William Murphy, Environmental Scientist with Malachy Walsh and Partners
Sources of data	Refer to References Section
Level of assessment completed	Stage 1 AA

Appendix 2

Stages of Appropriate Assessment

Stage 1 - Screening

This is the first stage of the AA process and that undertaken to determine the likelihood of significant impacts as a result of a proposed project or plan. It determines need for a full Appropriate Assessment.

If it can be concluded that no significant impacts to Natura 2000 Sites are likely then the assessment can stop here. If not, it must proceed to Stage 2 for furthermore detailed assessment.

Stage 2 - Natura Impact Statement (NIS)

The second stage of the AA process assesses the impact of the proposal (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 Site with respect to the conservation objectives of the site and its ecological structure and function. This is a much more detailed assessment than Stage 1. A Natura Impact Statement containing a professional scientific examination of the proposal is required and includes any mitigation measure to avoid, reduce or offset negative impacts.

If the outcome of Stage 2 is negative i.e. adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned.

Stage 3 - Assessment of alternative solutions

A detailed assessment must be undertaken to determine whether alternative ways of achieving the objective of the project/plan exists.

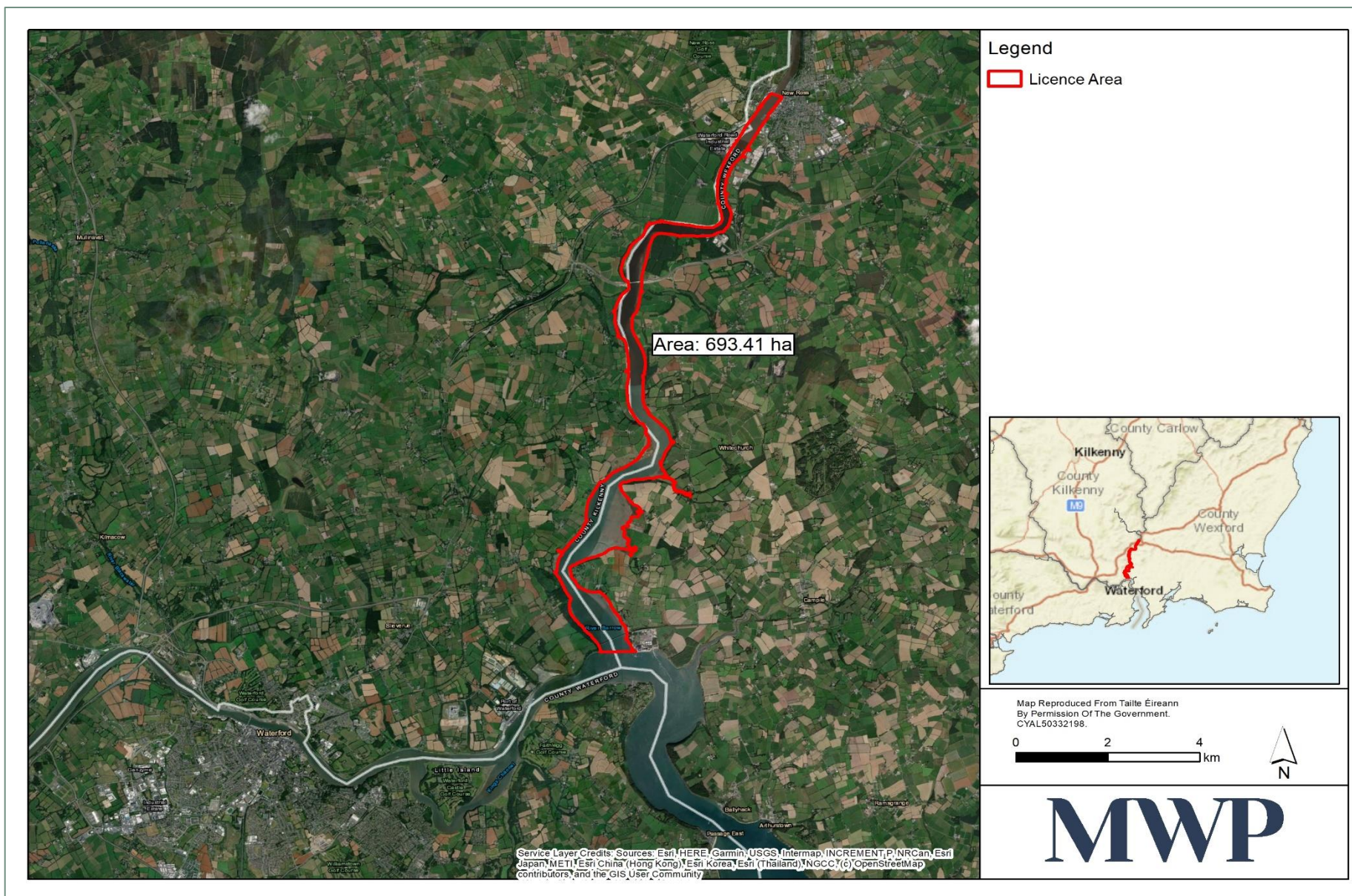
Where no alternatives exist the project/plan must proceed to Stage 4.

Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain

The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a Natura 2000 Site where no less damaging solution exists.

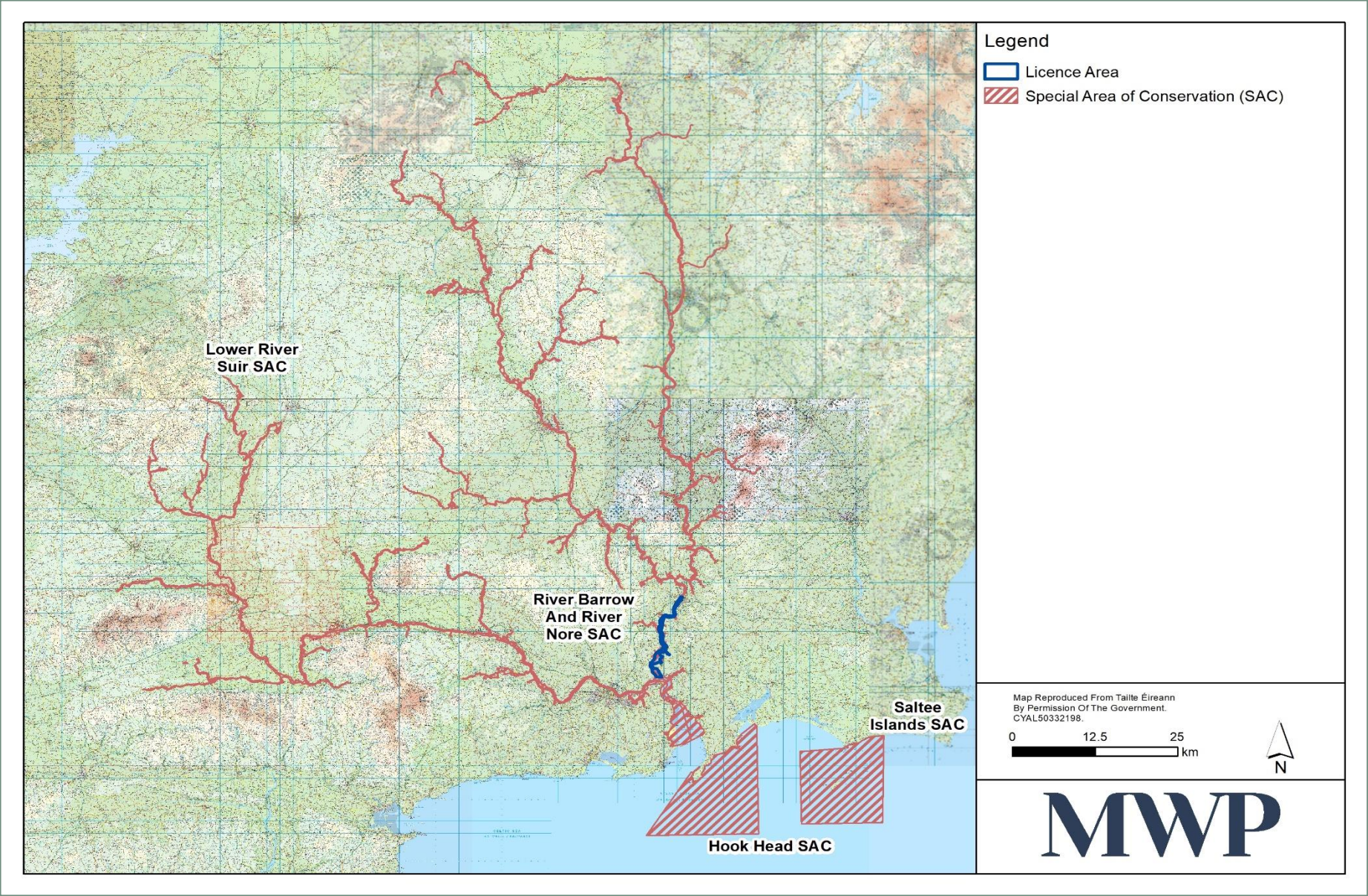
Appendix 3

Figures/Drawings

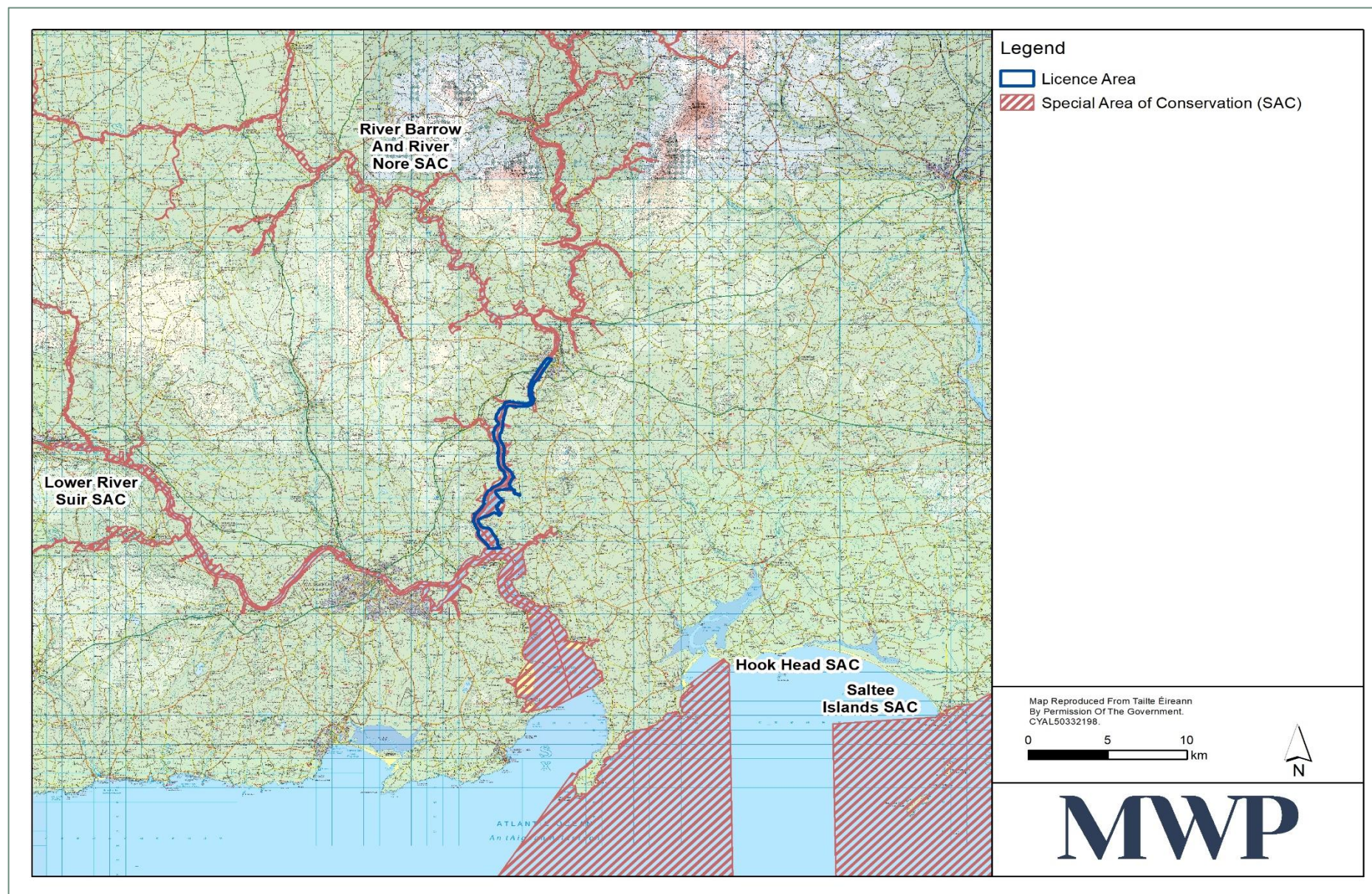


Map 1: Proposed Licence Area

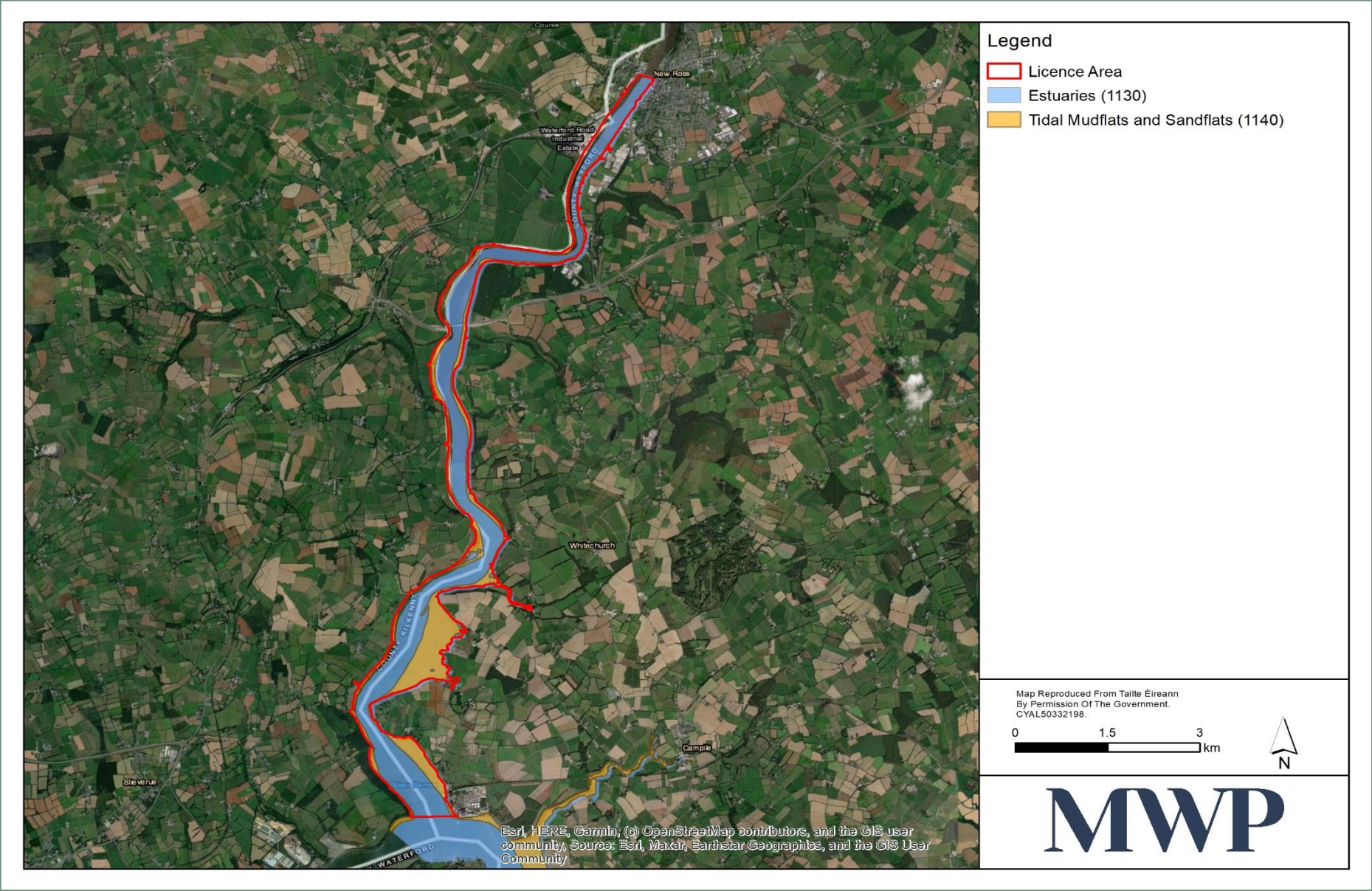




Map 3: Natura 2000 Sites within ZOI Full Extent



Map 4: Natura 2000 Sites within the ZOI



Map 5: Annex I Habitats within the Survey Area