

MDM Ltd

# Newport Connect Cable Route Site Investigation Surveys

## Habitats Regulations Assessment Report

COMMERCIAL IN CONFIDENCE



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## 1. Introduction

### 1.1 Overview

Proposed plans or projects that have the potential to affect designated nature conservation sites are required to be considered through the Habitats Regulations Assessment (HRA) process under The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Habitats and Species Regulations 2017 (as amended<sup>1</sup>) (the Habitats Regulations).

This HRA Screening Report considers the activities required for the Newport Connect marine survey and site investigation works through the stages of the HRA process, and provides the information required by the relevant Statutory Consultee (and advisors) to fulfil its function as a 'competent authority' under the Habitats Regulations and determine if the proposed works are likely to have a significant effect on the conservation objectives of a European Site. The site investigation works (hereafter referred to as the S.I. works) are required to investigate the feasibility of constructing a new subsea telecoms cable system across the Severn Estuary.

### 1.2 Project details

McMahon Design and Management Ltd (MDM) is working to identify a cable route and cable landing locations for the development of a new subsea fibre optic cable system, known as Newport Connect, with proposed landfalls located at Uphill Beach Weston-Super-Mare and St Brides Wentloog, Newport.

The S.I. works will comprise a geotechnical survey (Table 1), which will be undertaken within a nominal cable route corridor of approximately 9.1 km in length in English waters and 18.1 km in Welsh Waters (hereafter referred to as the 'S.I. Survey Area').

### 1.3 Habitats Regulations Assessments

The Habitats Regulations require that an Appropriate Assessment of the implications of any development must be made by the relevant competent authority, in this case the Marine Management Organisation (MMO) in English waters and Natural Resources Wales (NRW) in Welsh waters, if a project (or plan) is likely to have a significant effect on the conservation

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<sup>1</sup> <https://www.legislation.gov.uk/uksi/2017/1013/contents/made>

objectives of a European Site (defined below), either alone, or in-combination with other plans or projects.

HRA is generally understood to be a progressive, four stage process which determines Likely Significant Effect (LSE) and, where required, assesses potential adverse impacts on the integrity of a European Site, examines alternative solutions and provides justification of Imperative Reasons of Overriding Public Interest (IROPI) (Planning Inspectorate 2017). Further detail on the process followed and the definition of particular terms, is provided in the methodology section (Section 3).

#### **1.4 Structure and purpose of the report**

This report provides information on the work activities and the HRA screening process. The report records the process and presents the results and conclusion.

The report provides information to allow the competent authority to determine whether there will be an adverse effect on the integrity of any European Site(s) in view of their conservation objectives (COs) as a result of the project.

In the context of an HRA, where the potential for likely significant effects cannot be excluded for a site, a competent authority must make an Appropriate Assessment of the implications of the plan or project for that site, in view of the site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the European Site. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are IROPI and if the necessary compensatory measures can be secured.

## 2. The proposed works

### 2.1 Location and context

The S.I. Survey Area is situated off the coast of north Somerset extending across the cable corridor and covering a distance of 9.1 km on the English side of the Severn Estuary and 18.1 km on the Welsh side of the estuary (Figure 1). The Survey Area covers the proposed landfall at Uphill Beach, Weston-Super-Mare, with a survey corridor through Weston Bay and traversing the Severn Estuary to the northwest before turning north at Flat Holm and continuing generally north eastwards to Newport. On the Welsh side, the survey corridor covers the proposed landfall at St Brides, Newport, with a survey corridor across the Peterstone Flats and traversing the Severn Estuary to the southwest. The route heads south westwards from the landfall at St Brides, turning south before Newport Deep and continuing generally south/westwards towards Flat Holm where it turns southeast towards Weston-super-Mare.

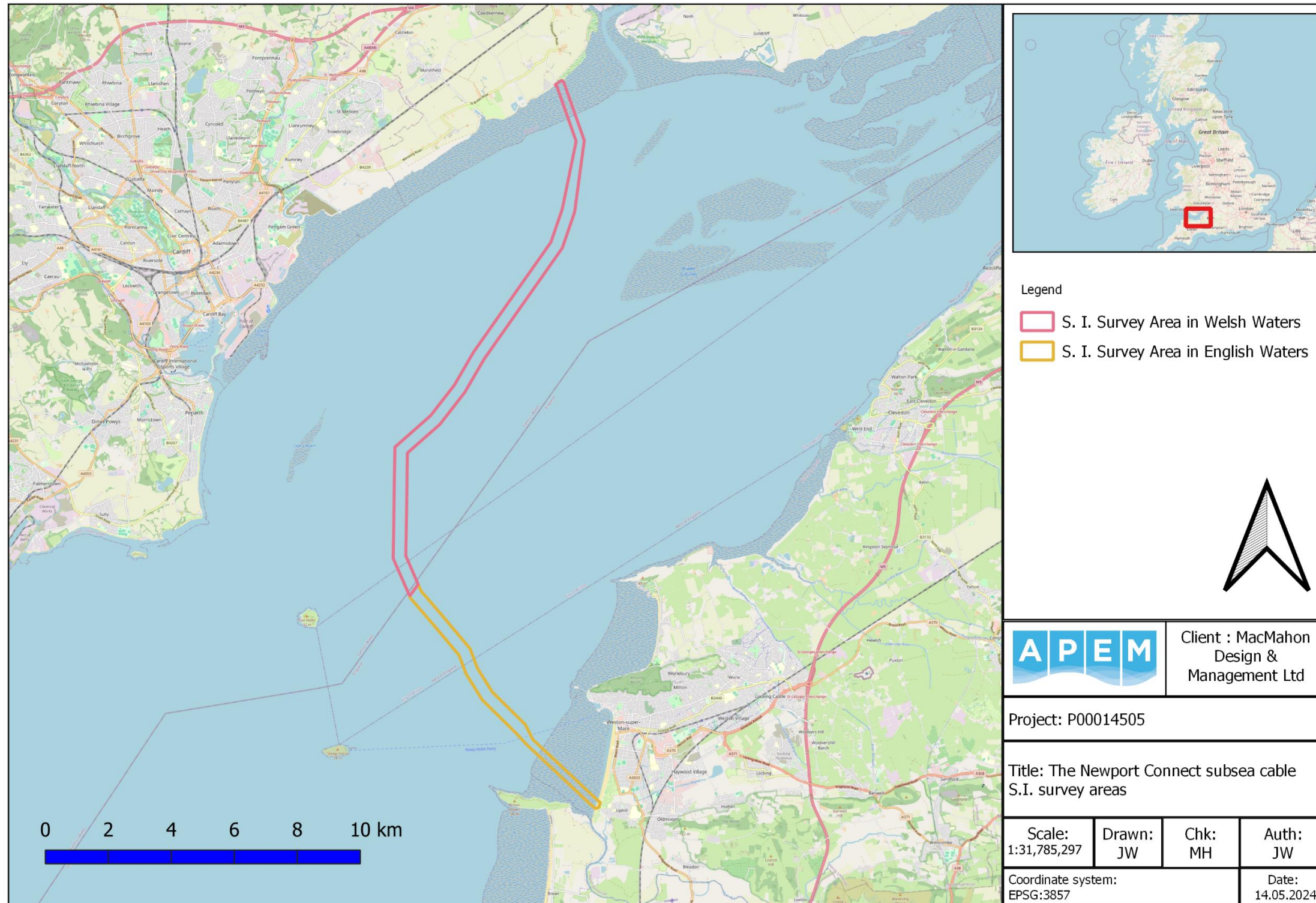


Figure 1. Location of the S.I. Survey Area in Welsh and English waters.

## 2.2 Summary of marine works

The objective of the S. I. works is to identify a feasible and safe route for the cable system design, deployment, survivability and subsequent maintenance. The works will also enable further understanding of site conditions including seabed characteristics, bathymetry, underlying geology, possible obstructions and environmental characteristics. The proposed programme of surveys is summarised in Table 1 below. Further information regarding survey methods can be found in the Method Statement that accompanies the marine licence application (MDM, 2023a; MDM, 2023b).

**Table 1. Summary of proposed survey methodology and duration in English and Welsh waters**

Category	Survey	Sampling / Area	Duration
<b>English Waters</b>			
Geotechnical	Grab samples	Four to six (two per location, 0.01 m <sup>3</sup> volume per sample)	Approximately three weeks
	Bar probes	25 to 30 in the intertidal and five to 10 from low water to the 3 m water depth contour. Manually driven to 2.5 m depth. Bar probes have a diameter of 25 mm.	
	Vibrocoring (VC) / Gravity coring	Two to three samples (120 mm diameter) to 3 m depth within the nominal S.I. Survey Area	
	Cone Penetration Testing (CPT)	Two to three samples to 3 m depth within the nominal S.I. Survey Area	
Intertidal and Beach Surveys	Walkover surveys	At low spring tide by a project ecologist. A camera, GPS and marine metal detector will be deployed, scanning a series of survey lines in a grid pattern on the beach and intertidal zone	
<b>Welsh Waters</b>			
Geotechnical	Grab samples	Four to six (two per location, 0.01 m <sup>3</sup> volume per sample)	Approximately three weeks
	Vibrocoring (VC) / Gravity coring	Two to three samples (120 mm diameter) to 3 m depth within the nominal S.I. Survey Area	

Category	Survey	Sampling / Area	Duration
Intertidal and Beach Surveys	Cone Penetration Testing (CPT)	Two to three samples to 3 m depth within the nominal S.I. Survey Area	
	Walkover surveys	At low spring tide by a project ecologist. A camera, GPS and marine metal detector will be deployed, scanning a series of survey lines in a grid pattern on the beach and intertidal zones.	

### 3. Assessment Methodology

#### 3.1 Legislative and policy context

##### 3.1.1 UK (domestic) legislation

This section describes the legislation as it applies now that the UK has left the European Union (EU). Guidance from the Department for Environment, Food, and Rural Affairs (DEFRA) has been provided on the application of the relevant legislation in the post-Brexit period in their policy paper published on 1<sup>st</sup> January 2021<sup>2</sup>. The Habitats Regulations provide for the protection of particular habitats, plants and animals through the creation of, and specific decision-making procedures applied to, the national site network (Regulation 3 'Interpretation'). This national site network consists of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) that were designated both in that period when the UK was a member of the EU and since the UK left the EU.

Since those particular parts of the Habitats Regulations relating to the HRA process continue to refer to the designated sites collectively as 'European Sites', rather than as the 'national site network', that approach has been followed in this screening report.

##### 3.1.2 Policy requirements additional to domestic legislation

It is UK Government policy that all competent authorities should treat candidate SACs (cSACs) and potential SPAs (pSPAs) as being within the requirements of the Habitats Regulations. In

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<sup>2</sup> Available at: <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>.

Wales, this is identified in paragraph 4.6 and 4.7 of the Developments of National Significance Guidance (The Planning Inspectorate 2019).

Accordingly, in this report the term 'European Site' is used to refer collectively to SACs, cSACs, SPAs and pSPAs.

### *3.1.3 International legal and policy obligations*

The UK is a contracting party to the Convention on wetlands of international importance especially as waterfowl habitat, Ramsar, Iran, 1971 (the 'Ramsar Convention'), which seeks to protect wetlands of international importance, especially those wetlands utilised as waterfowl habitat.

It is UK Government policy that all competent authorities should treat Ramsar Sites in their decision-making processes as if they are SACs or SPAs and hence Ramsar Sites are considered within the requirements for HRA of the Habitats Regulations. In Wales, this is identified in paragraph 4.6 and 4.7 of the Developments of National Significance Application Guidance (The Planning Inspectorate 2019). As a consequence, in this report Ramsar Sites are referred to alongside European Sites collectively as European and Ramsar Sites.

### *3.1.4 Areas that are functionally linked to European and Ramsar Sites*

Animals that are interest features of European and Ramsar Sites may be mobile and not confined to the boundary of the designated site. For example, wintering waterbirds may forage or roost on agricultural land outside of the designated site. Although that agricultural land is not part of the European or Ramsar Site, it is 'functionally linked' because it serves a function for waterfowl that are interest features of the designated site. Account has to be taken of such functionally linked land in the HRA process since, for instance, the loss of such land to development could potentially adversely affect the survival of those wintering waterbirds and lead to a reduction in the population of birds within the designated site.

Functionally linked land has been defined as follows (Chapman & Tyldesley 2016):

"The term 'functional linkage' refers to the role or 'function' that land or sea beyond the boundary of a European Site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the European Site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status."

## 3.2 The HRA process

### 3.2.1 Overview

The requirements of the Habitats Regulations with regard to the implications of plans or projects are set out within Regulation 63. The step-based approach implicit within this Regulation is referred to as a ‘Habitats Regulations Assessment’ (HRA), which is the term that has been used throughout this report.

It is a requirement of any public body, referred to as a ‘competent authority’ within the Habitats Regulations, to carry out a HRA when they are proposing to carry out a project, implement a plan or authorise another party to carry out a plan or project. Competent authorities are required to record the process undertaken, ensuring that there will be no adverse effects on the integrity of any European or Ramsar Site as a result of a plan or project whether alone, or in combination with other plans or projects.

### 3.2.2 Assessment stages

The assessment of a plan or project goes through a number of stages, with guidance having been published to aid competent authorities to fulfil their responsibilities. Those stages are summarised in Table 2.

**Table 2. Stages in the HRA process**

Stage	Description	Legislative Context
Purpose	Determines if the purpose of the plan or project is directly connected with, or necessary, to the management of a European or Ramsar Site. If it is, then no further assessment is necessary.	Regulation 63(1)(b)
Scoping	The identification of any European or Ramsar Site that might be within scope of a HRA i.e. those sites that should be taken forward to the screening stage based on a wide consideration of spatial and ecological factors. Such a site may be located within the plan or project area but may also include sites located in neighbouring authority areas.	
Screening	Assessment of whether a plan or project, either alone or in combination with other plans or projects, is likely to have a significant effect on any qualifying feature (habitats and species) and the achievement of the conservation objectives of a European or Ramsar Site.  This is also known as the ‘test of likely significant effect’ (ToLSE).	Regulation 63(1)(a)

Stage	Description	Legislative Context
Appropriate Assessment	<p>Consideration of the effects of the proposals to determine whether or not it is possible to conclude with certainty that the development will not result in any adverse effect on the integrity of European or Ramsar Site, either alone or in combination with other plans or projects and with reference to the conservation objectives of the European or Ramsar Site.</p> <p>This is also known as the test of ‘adverse effect on integrity’ (AEoI).</p> <p>At this stage consent may be granted for the plan or project if it is possible to conclude with certainty that the proposal will not result in any adverse effect on the integrity of any European or Ramsar Site, either alone or in combination with other plans or projects.</p>	Regulation 63(5)
If it cannot be concluded with certainty that the proposal will not result in any adverse effect on the integrity of any European or Ramsar Site then proceed to:		
Assessment of alternative solutions	Assess whether there is an alternative solution to the plan or project i.e. one that better respect the European or Ramsar Sites. If no such alternative solution exists, the process continues to Assessment of IROPI.	Regulation 64(1)
Assessment of IROPI	Assess whether a plan or project can be justified as being needed for ‘imperative reasons of overriding public interest’ (IROPI).	Regulation 64(1)
Compensatory measures	Identify and secure any necessary compensatory measures to ensure that the overall coherence of the ‘national site network’ is protected.	Regulation 68

### 3.2.3 In-combination assessment

The Habitats Regulations, taken with Government policy, require the consideration of the potential effects of a project on European and Ramsar Sites both alone and in-combination with other plans or projects.

The identification of plans and projects to include in the in-combination assessment will be based on:

- approved plans;
- approved, but as yet unconstructed projects; and
- projects for which an application has been made, are currently under consideration and will be consented before the proposed development is operational.

### 3.3 Guidance on the HRA process

In preparing this report, consideration has been given to the relevant guidance issued by a number of Governmental, statutory and industry bodies.

Guidance from Government bodies includes:

- Ministry of Housing, Communities and Local Government online Guidance on the use of Habitats Regulations Assessment <https://www.gov.uk/guidance/appropriate-assessment>
- Defra, NE, Welsh Government and NRW guidance on Habitat Regulations Assessments <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

Guidance from the Statutory Bodies includes:

- MMO online guidance on Marine Licensing: impact assessments <https://www.gov.uk/guidance/marine-licensing-impact-assessments>
- NRW online guidance on HRA in the marine licensing process <https://naturalresources.wales/permits-and-permissions/marine-licensing/marine-licence-habitats-regulations-assessment/?lang=en>
- NRW's position on the use of Marine Mammal Management Units for screening and assessment in Habitats Regulations Assessments for Special Areas of Conservation with marine mammal features  
<https://cdn.cyfoethnaturiol.cymru/media/695250/ps006-mmmus-in-hra-position-statement-may22.pdf>.

## 4. Identification of Sites and Features

### 4.1 European and Ramsar Site and Impact Pathway Identification Process

For the screening process, European and Ramsar Sites in the vicinity of the activities for the proposed works which could potentially be influenced by the proposed works were identified. The different interest features within these sites were then considered individually.

It only requires one site interest feature to be considered to be potentially impacted by the work activities for the European and/or Ramsar Site to be screened into the HRA.

This screening used the conceptual 'source-pathway-receptor' model. The model was used to identify potential environmental effects resulting from the works activities. This process provides an easy to follow assessment route between impact sources and potentially sensitive receptors ensuring a transparent impact assessment. The parameters of the model are defined as follows:

- source – the origin of a potential effect (noting that one source may have several pathways and receptors);
- pathway – the means by which the effect of the activity could impact a receptor; and
- receptor – the element of the receiving environment that is impacted.

Where there is no pathway, or the pathway is so long that the effect from the source has dissipated to a negligible level before reaching the receptor, there is justification for the screening out of that particular receptor.

Where the receptor (site interest feature) only occurs in the area on a seasonal basis and/or that receptor is not present in the period in which particular activities of the proposed works are a source of a potential effect, there is justification for the screening out of that particular receptor.

Potential adverse effects of the proposed works on European and Ramsar Sites were identified using a combination of the following:

- Advice on Operations (AoO) from Natural England was considered for the Wash and North Norfolk SAC due to the similarity of qualifying features to the Severn Estuary SAC;
- Conservation Advice for European Marine Sites under regulation 37(3) of the Habitats Regulations (2017)<sup>3</sup>; and
- Professional judgement based on experience of conducting numerous assessments of similar projects in the vicinity of European and Ramsar Sites.

Impact pathways indicated as being of Medium-High Risk which could be associated with the proposed works and that could affect European and Ramsar Site features were considered in this screening. These impact pathways were as follows:

- Abrasion/disturbance of the substrate on the surface of the seabed;
- Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion;
- Habitat structure changes - removal of substratum (extraction);
- Pollution (from vessels and equipment including Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination);
- Underwater noise;

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<sup>3</sup> Accessed via <https://naturalresources.wales/guidance-and-advice/environmentaltopics/wildlife-and-biodiversity/protected-areas-of-land-and-seas/conservation-advice-foreuropean-marine-sites/?lang=en>

- Above water noise;
- Visual disturbance;
- Short-term reduction in prey availability (all aspects of survey generating underwater noise and vibration).

Low risk impact pathways would not usually be taken through to screening. However, for some impact pathways indicated as low risk for habitats within the SAC, the feature habitats are indicated to be sensitive to these impact pathways in the AoO. Consequently, a precautionary approach has been taken and the following low risk impact pathways were also considered in this screening:

- Introduction or spread of invasive non-native species (INNS).

The following medium-high risk pressures were not anticipated to be associated with the proposed works and / or did not have the potential to affect designated site features, therefore they were not included in the screening, in line with the AoO guidance:

- Barrier to species movement;
- Physical change (to another seabed type);
- Physical change (to another sediment type);
- Physical loss (to land or freshwater habitat); and
- Smothering and siltation rate changes (heavy).
- Changes in suspended solids (water clarity);
- Smothering and siltation rate changes (light);

#### 4.2 European and Ramsar Site Identification Screening Criteria

The following criteria were used to identify European sites that should be taken through to screening, using a precautionary approach (reasons for the distances considered are indicated below):

- Inclusion of any site within a potential Zone of Influence (Zoi) of 2 km of the investigation area (i.e. including sites with only habitat features, only mobile features, or a combination of the two). This is considered to be highly precautionary for sites with just habitat features;
- Inclusion of any site up to 50 km from the investigation area that contains mobile receptors (not including birds) that have the potential to occur within the investigation area – this applies to marine mammals and fish species;

- For marine mammals, protected sites can be incorporated at greater distances for this receptor, based on NRW guidance (NRW 2022). Where NRW guidance is not applicable or available, the ZoI is set at 50 km, which should be regarded as precautionary.
- Inclusion of sites within a connectivity distance of 10 km from the investigation area for waders and waterfowl (excluding non-breeding geese and swans), and within 20 km for sites with non-breeding geese and swans as qualifying features given typical commuting ranges between roosting and foraging grounds (Mitchell 2012; SNH 2016); and
- Connectivity is based on the mean maximum (plus one standard deviation (1 SD)) foraging ranges for seabirds (Woodward *et al.* 2019).

For benthic habitat features, a 2 km ZoI was applied. The potential impacts of the expected survey activities include abrasion/penetration of substrate, smothering/siltation rate change and pollution, which pose a potential risk to benthic habitat features. Given the nature of the activities, potential effects will be restricted to the immediate Survey Area with the exception of an accidental spill event, which may extend beyond the immediate Survey Area. However, the 2 km ZoI is considered highly precautionary for habitat features.

For some species of marine mammal, such as harbour seals, grey seals and bottlenose dolphins, telemetry data (seal species) and photo-identification data (seal species and bottlenose dolphins), can assist in identifying connectivity to protected areas. These data are often used in the process of designating protected areas. For example, harbour seals show high site fidelity, and although some telemetry tagged individuals have travelled beyond 100 km (Thompson *et al.* 1998; Wilson *et al.* 2015), the majority of seal trips are less than 50 km from their preferred haul-out site (Carter *et al.*, 2022). Grey seals along the Welsh coast also demonstrate connectivity between haul-out sites up to 230 km apart; however, photo-identification studies show that on average, grey seals typically remain within 50 km of their preferred haul-out site (Langley *et al.* 2020). For other more elusive and challenging species to study at the individual-level, such as harbour porpoise, protected areas are often identified as areas with higher densities of the species compared to other regions.

There is no guidance or literature to support a specific distance for the consideration of sites with mobile fish features. Consequently, a distance of 50 km has been used for mobile marine fish species (including anadromous species) as a precautionary approach. Migratory fish could potentially pass through the ZoI if transiting to sites near the S. I. Survey Area, however, there would likely also be many routes for migration available outside the ZoI. For migratory fish features of sites further than 50 km from the S. I. Survey Area it is considered that individuals will likely not need to transit through the S. I. Survey Area during migration, and if they did, it would only be a small proportion of the population of migratory fish from the SAC. In addition, they would also be able to avoid an area during S. I. works, if required.

For SPAs with birds as qualifying features, an area of interest of 10 km has been adopted for coastal and intertidal bird species (waders and waterfowl, excluding non-breeding geese and swans), extended to 20 km for non-breeding geese and swans given typical commuting ranges between roosting and foraging grounds (Mitchell 2012; SNH 2016). For breeding seabird species, published mean-maximum (plus 1SD) foraging ranges have been used to establish potential connectivity between the S.I Survey Area and designated sites (Woodward *et al.* 2019). For those sites with features where there could be connectivity, they have been considered in the screening stage. SPAs with features that have foraging ranges which do not overlap with the S. I Survey Area have not been included in screening.

There is no guidance or literature to support a specific distance for the consideration of sites with seabird features, however, based on professional judgement sites up to 236 km from the S.I. Survey Area have been included in the screening stage to include all sites for seabirds with a lower mean-maximum foraging range (e.g. lesser black-backed gull) which may have connectivity to the S. I. Survey Area. In addition, more distant SPAs which have the potential to be functionally linked (see Section 3.1.4), may be connected to the S. I. Survey Area should they host seabirds with extremely large foraging ranges, such as Manx shearwater, Leach's storm petrel, European storm petrel, fulmar and gannet which have mean maximum +1 SD foraging ranges of between 315.2 and 1,346.8 km. However, no sites over 236 km from the S. I. Survey Area have been considered in this report as it is not anticipated that birds from these colonies will reach the S. I. Survey Area in sufficient numbers to warrant inclusion within the assessment based on the limited spatial and temporal nature of the proposed survey work. These locations, over 236 km from the S. I. Survey Area, also have no straight-line route to the site without crossing over land and as seabirds generally avoid overland flights this means that foraging distances that would need to be travelled to fly to the S. I. Survey Areas are, in effect, much greater than they would be if measured in a straight line.

### 4.3 Identified European and Ramsar Sites and Features of Interest

Qualifying features of the European and Ramsar Sites that fall within the scoping criteria and the distance of these sites from the S. I. Survey Area are indicated in **Error! Reference source not found.**

**Table 3. Screened in European and Ramsar Sites**

Site	Distance from S. I. Survey Area (km)	Qualifying Features	Features considered to have potential impact pathways based on screening criteria
<b>SACs</b>			
Severn Estuary SAC (UK0013030) - England	0	[1130] Estuaries [1140] Mudflats [1330] Atlantic Salt Meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1110] Sandbanks which are slightly covered by seawater all the time [1170] Reefs [1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatalis</i> [1103] Twaite shad <i>Alosa fallax</i>	All qualifying features
Severn Estuary / Môr Hafren SAC (UK0013030) - Wales	0	[1130] Estuaries [1140] Mudflats [1330] Atlantic Salt Meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1110] Sandbanks which are slightly covered by seawater all the time [1170] Reefs [1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatalis</i> [1103] Twaite shad <i>Alosa fallax</i>	All qualifying features
River Usk / Afon Wysg SAC (UK0013007)	2.45	[3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and Callitricho-Batrachion vegetation [1095] Sea lamprey <i>Petromyzon marinus</i> [1096] Brook lamprey <i>Lampetra planeri</i>	[1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatalis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i>

Site	Distance from S. I. Survey Area (km)	Qualifying Features	Features considered to have potential impact pathways based on screening criteria
		[1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i> [1163] Bullhead <i>Cottus gobio</i> [1355] Otter <i>Lutra lutra</i> [1102] Allis shad <i>Alosa alosa</i>	[1355] Otter <i>Lutra lutra</i> [1102] Allis shad <i>Alosa alosa</i>  The features taken through to the test of LSE are those migratory fish species that may be passing through the S.I. Survey Area on their way to the River Usk. There is no impact pathway between the proposed works and the other features of the site.
River Wye / Afpn Gwy SAC (UK0012642)	25.83	[3260] Water courses of plain to montane levels with the <i>Rununculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [7140] Transition mire and quaking bogs [1092] White-clawed crayfish <i>Austropotamobius pallipes</i> [1095] Sea lamprey <i>Petromyzon marinus</i> [1096] Brook lamprey <i>Lampetra planeri</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i> [1163] Bullhead <i>Cottus gobio</i> [1355] Otter <i>Lutra lutra</i> [1102] Allis shad <i>Alosa alosa</i>	[1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i> [1102] Allis shad <i>Alosa alosa</i>  The features taken through to the test of LSE are those migratory fish species that may be passing through the S.I. Survey Area on their way to the River Wye. There is no impact pathway between the proposed works and the other features of the site.
<b>SPAs</b>			
Severn Estuary SPA (UK9015022) - England	0	[A037] Bewick's swan (non-breeding) <i>Cygnus columbianus</i> [A048] Common shelduck (non-breeding) <i>Tadorna tadorna</i> [A051] Gadwall (non-breeding) <i>Anas strepera</i> [A149] Dunlin (non-breeding) <i>Calidris alpina alpina</i>	All qualifying bird features

Site	Distance from S. I. Survey Area (km)	Qualifying Features	Features considered to have potential impact pathways based on screening criteria
		[A162] Common redshank (non-breeding) <i>Tringa totanus</i> [A394] Greater white-fronted goose (non-breeding) <i>Anser albifrons</i>	
Severn Estuary SPA (UK9015022) - Wales	0	[A037] Bewick's swan (non-breeding) [A048] Common shelduck (non-breeding) [A051] Gadwall (non-breeding) [A149] Dunlin (non-breeding) [A162] Common redshank (non-breeding) [A394] Greater white-fronted goose (non-breeding)	All qualifying bird features
Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro (UK9014051) SPA	126.287 km	[A222] Short-eared owl <i>Asio flammeus</i> [A204] Puffin <i>Fratercula arctica</i> [A014] Storm petrel <i>Hydrobates pelagicus</i> [A183] Lesser black-backed gull <i>Larus fuscus</i> [A013] Manx shearwater <i>Puffinus puffinus</i> [A346] Chough <i>Pyrhocorax pyrrhocorax</i>	[A183] Lesser black-backed gull <i>Larus fuscus</i> [A013] Manx shearwater <i>Puffinus puffinus</i> [A204] Puffin <i>Fratercula arctica</i> [A014] Storm petrel <i>Hydrobates pelagicus</i>  (Short-eared owl <i>Asio flammeus</i> and Chough <i>Pyrhocorax pyrrhocorax</i> were scroped out of the assessment on the basis that the distance from the project site is too great to effect chough or short-eared owl populations in the SPA)
Grassholm SPA (UK9014041)	167.236 km	[A016] Gannet <i>Morus bassanus</i>	[A016] Gannet <i>Morus bassanus</i>
<b>Ramsars</b>			
Severn Estuary (Site number 67)	0	Ramsar criterion 1 – Habitats Directive Annex I features present	All qualifying features

Site	Distance from S. I. Survey Area (km)	Qualifying Features	Features considered to have potential impact pathways based on screening criteria
		<p>Ramsar criterion 3 – Unusual estuarine communities, reduced diversity and high productivity</p> <p>Ramsar criterion 4 - This site is important for the run of migratory fish between sea and river via estuary.</p> <p>Ramsar criterion 8 - The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded.</p> <p>Ramsar criterion 5 – Waterfowl</p> <p>Ramsar criterion 6 - Species/populations occurring at levels of international importance</p> <p>[A037] Bewick’s swan <i>Cygnus columbianus</i>                      [A048] Common shelduck <i>Tadorna tadorna</i>                      [A051] Gadwall <i>Anas strepera</i>                      [A149] Dunlin <i>Calidris alpina alpina</i>                      [A162] Common redshank <i>Tringa totanus</i>                      [A394] Greater white-fronted goose <i>Anser albifrons</i></p>	

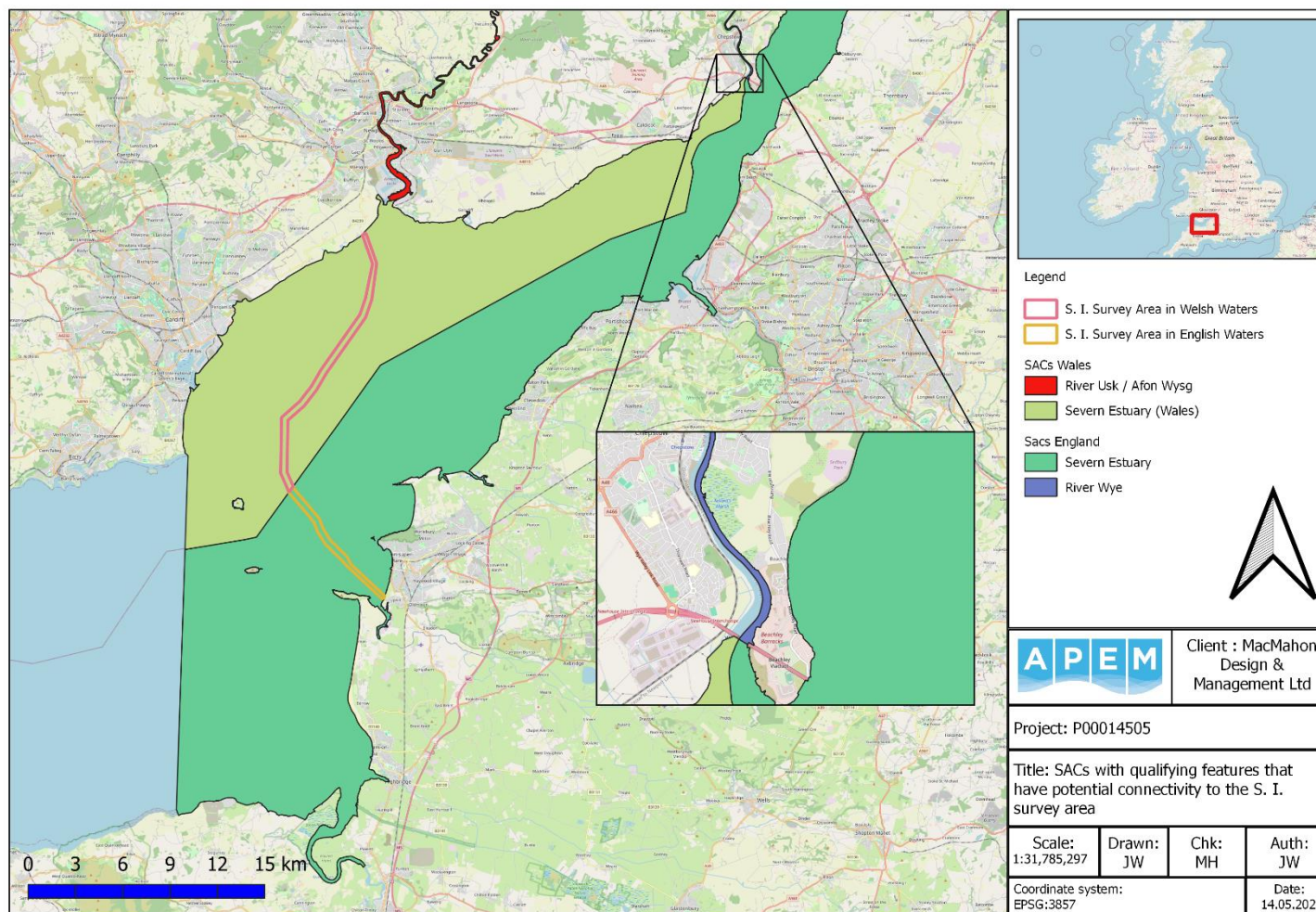
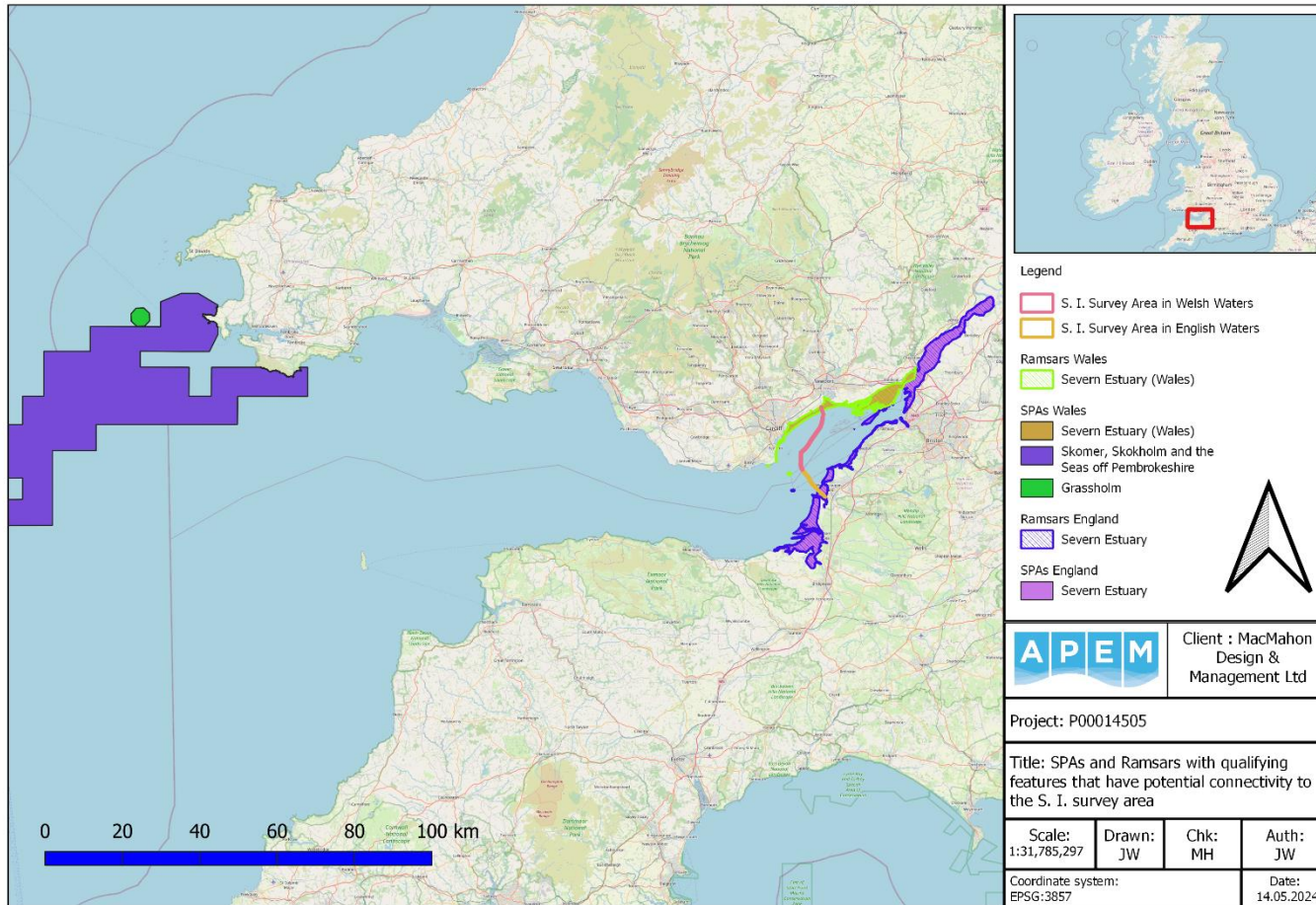


Figure 2. SACs scoped into the screening assessment



**Figure 3. SPAs and Ramsars scoped into the screening assessment**

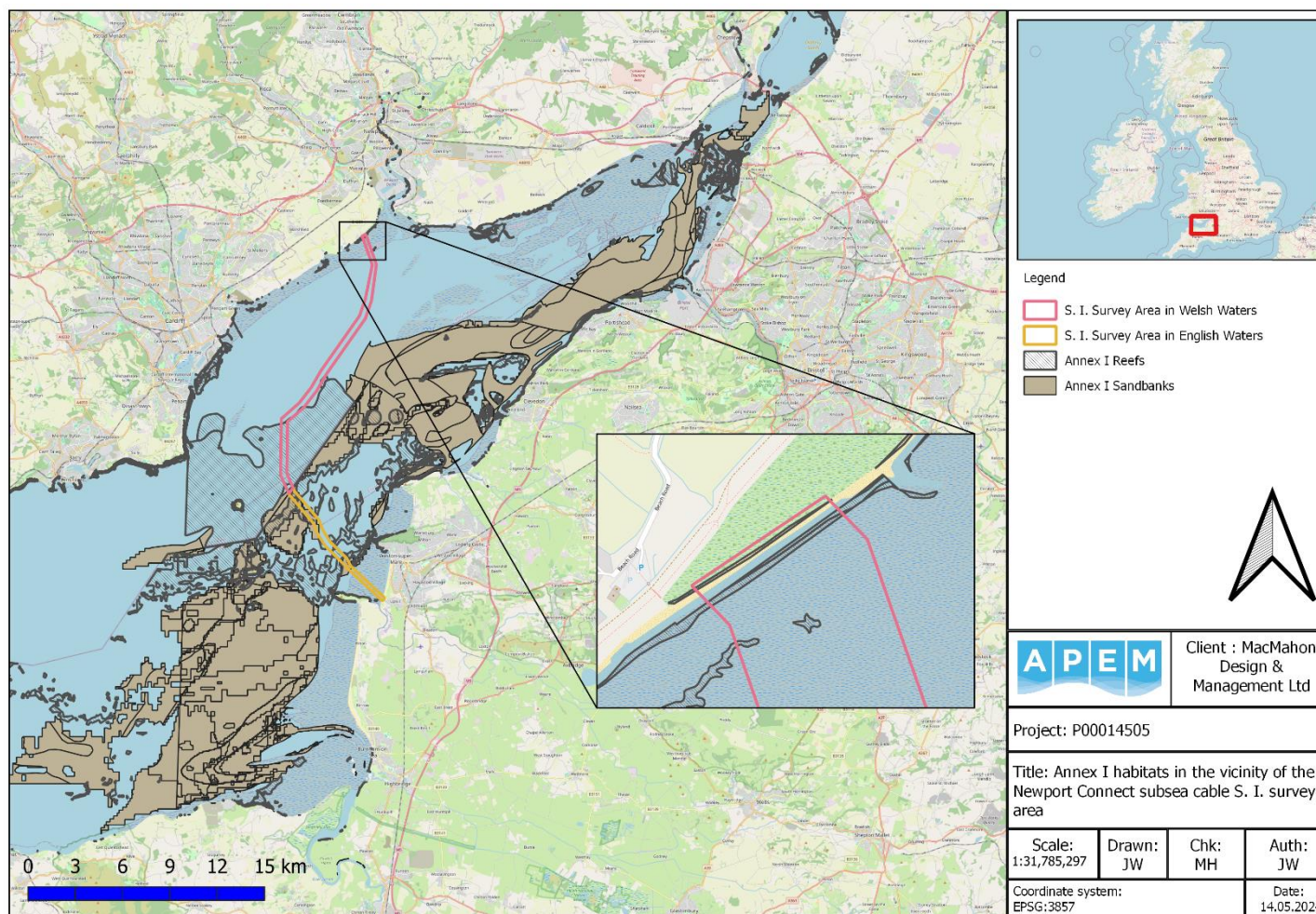


Figure 4 Annex I benthic habitats in the vicinity of the S.I. Survey Area (EMODnet, 2024).

## 5. Screening: Testing for LSE

The table below details the test for LSE for the qualifying features within the European Sites taken forward for assessment (Table 4).

**Table 4. HRA screening for European and Ramsar Sites within the vicinity of the Project.**

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
<b>SACs</b>					
Severn Estuary SAC (UK0013030) - England	[1130] Estuaries [1140] Mudflats [1110] Sandbanks which are slightly covered by seawater all the time [1170] Reefs [1330] Atlantic Salt Meadows ( <i>Glauco-Puccinellietalia maritimae</i> )	Abrasion / disturbance of the substrate on the surface of the seabed  Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion  Habitat structure changes - removal of	No	The proposed S. I. Survey Area directly overlaps with qualifying habitat features within the SAC. Survey activities have the potential to cause abrasion/disturbance of the seabed, especially relating to invasive survey activities such as grab sampling, Cone Penetration Testing (CPT) and vibrocoring. The objective of the survey is to investigate the nature of the sedimentary habitats within the S.I. Survey Area. As such, areas of reef habitat will not be sampled and sample locations will be determined based upon the results of an already completed geophysical survey, which will ensure samples are not located in areas of reef and no impact on areas of reef is expected to occur.  Up to six grab samples, three CPTs and three cores will be taken within the SAC. Grab samples will remove approximately 0.01m <sup>3</sup> of sediment per grab. The cores have a diameter of 120 mm and will remove a sediment core up to 3 m depth (approximately 0.04m <sup>3</sup> of sediment per core). This constitutes a very small surface area of disturbance and volume of sediment removed relative to the extent of the subtidal sandbank habitat feature, which covers 21,889 ha of the SAC, and is not considered to be	<b>Screened out</b>

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
		substratum (extraction)		<p>significant. The CPT is a steel rod with a conical tip of 35.7 mm diameter. This will be pushed into the sediment at a steady rate until the target penetration depth of 3 m or refusal. This also represents a very small surface area of disturbance relative to the extent of this habitat in the SAC.</p> <p>Bar probes will be manually driven into the sediment to investigate the nature of the sediments up to 2.5 m depth. The bar probe is 25 mm in diameter. Bar probe investigations will be undertaken across the intertidal and shallow subtidal zones. No sediment will be removed during the bar probe survey and sediment is expected to quickly infill the very small areas of mudflat and subtidal sandbank that will be disturbed / penetrated. Based on the habitat mapping provided by Magic Maps, the S.I. survey area does not overlap with Atlantic saltmarsh habitat within the SAC and no impact on areas of saltmarsh is expected to occur.</p> <p>Given the nature of the sampling, the radius of effects is limited, and all effects are considered to be localised to the immediate area. Furthermore, sediments are expected to quickly infill where the samples are taken from, and the disturbed areas are expected to fully recover.</p>	

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
				As such, it is considered that these pressures would not cause an LSE on the features of the Severn Estuary SAC.	
		Pollution (from vessels and equipment including Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination)	No	Pollution will be controlled by adhering to relevant MARPOL guidance for pollution prevention and marine pollution legislation for which compliance is required by law. All vessels will be MARPOL compliant. Published guidelines and best working practices will be followed to ensure that the likelihood of accidental spills is extremely low. This compliance is a basic requirement under UK law and should be adhered to even when no European Sites are involved and is therefore not considered mitigation for the purposes of HRA. Furthermore, in the event of a spill, the volumes of potential contaminants released would likely be small and would rapidly disperse, thus any effects would be anticipated to be negligible, and therefore will have no LSE.	
		Introduction or spread of invasive non-native species (INNS)	No	All activities will follow best practice guidance for cleaning and maintenance of equipment and vessels to reduce the potential of transporting or introducing INNS. The transport of INNS through ballast water is unlikely as the vessels used are expected not to require ballast due to their size. As such, there would be no LSE on the qualifying features of the SAC as a result of introduction of INNS.	

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
	[1103] Twaite shad <i>Alosa fallax</i>  [1095] Sea lamprey <i>Petromyzon marinus</i>  [1099] River lamprey <i>Lampetra fluviatilis</i>	Underwater noise	No	Survey activities are unlikely to disturb mobile fish features as the S.I. works are geotechnical in nature and are not activities that generate significant levels of noise. The S.I. works are anticipated to be completed within approximately three weeks and activities will be temporary and transient meaning exposure to underwater noise will be short term both temporally and spatially. Mobile fish features will be able to move away from the noise source and will not be prevented from passing through the estuary.  As such, no effects are predicted for fish features of the SAC and there will be no LSE.	
Severn Estuary / Môr Hafren SAC (UK0013030) - Wales	[1130] Estuaries [1140] Mudflats [1330] Atlantic Salt Meadows ( <i>Glauco-Puccinellietalia maritima</i> ) [1110] Sandbanks which are slightly covered by seawater all the time [1170] Reefs	Abrasion / disturbance of the substrate on the surface of the seabed  Penetration and/or disturbance of the substratum below the surface of the	No	The proposed S. I. Survey Area directly overlaps with qualifying habitat features within the SAC. Survey activities have the potential to cause abrasion/disturbance of the seabed, especially relating to invasive survey activities such as grab sampling, Cone Penetration Testing (CPT) and vibrocoring. The objective of the survey is to investigate the nature of the sedimentary habitats within the S.I. Survey Area. As such, areas of reef habitat will not be sampled and sample locations will be determined based upon the results of an already completed geophysical survey, which will ensure samples are not located in areas of reef and no impact on areas of reef is expected to occur.	<b>Screened out</b>

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
		seabed, including abrasion  Habitat structure changes - removal of substratum (extraction)		<p>Up to six grab samples, three CPTs and three cores will be taken within the SAC. Grab samples will remove approximately 0.01m<sup>3</sup> of sediment per grab. The cores have a diameter of 120 mm and will remove a sediment core up to 3 m depth (approximately 0.04m<sup>3</sup> of sediment per core). This constitutes a very small surface area of disturbance and volume of sediment removed relative to the extent of the subtidal sandbank habitat feature, which covers 21,889 ha of the SAC, and is not considered to be significant. The CPT is a steel rod with a conical tip of 35.7 mm diameter. This will be pushed into the sediment at a steady rate until the target penetration depth of 3 m or refusal. This also represents a very small surface area of disturbance relative to the extent of this habitat in the SAC.</p> <p>Given the nature of the sampling, the radius of effects is limited, and all effects are considered to be localised to the immediate area. Furthermore, sediments are expected to quickly infill where the samples are taken from, and the disturbed areas are expected to fully recover.</p> <p>As such, it is considered that these pressures would not cause an LSE on these features.</p>	

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
		Pollution (from vessels and equipment including Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination)	No	Pollution will be controlled by adhering to relevant MARPOL guidance for pollution prevention and marine pollution legislation for which compliance is required by law. All vessels will be MARPOL compliant. Published guidelines and best working practices will be followed to ensure that the likelihood of accidental spills is extremely low. This compliance is a basic requirement under UK law and should be adhered to even when no European Sites are involved and is therefore not considered mitigation for the purposes of HRA. Furthermore, in the event of a spill, the volumes of potential contaminants released would likely be small and would rapidly disperse, thus any effects would be anticipated to be negligible, and therefore will have no LSE.	
		Introduction or spread of invasive non-native species (INNS)	No	All activities will follow best practice guidance for cleaning and maintenance of equipment and vessels to reduce the potential of transporting or introducing INNS. The transport of INNS through ballast water is unlikely as the vessels used are expected not to require ballast due to their size. As such, there would be no LSE on the qualifying features of the SAC as a result of introduction of INNS.	

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
	[1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i>	Underwater noise	No	Survey activities are unlikely to disturb mobile fish features as the S.I. works are geotechnical in nature and are not activities that generate significant levels of noise. The S.I. works are anticipated to be completed within approximately three weeks and activities will be temporary and transient meaning exposure to underwater noise will be short term both temporally and spatially. Mobile fish features will be able to move away from the noise source and will not be prevented from passing through the estuary.  As such, no effects are predicted for fish features of the SAC and there will be no LSE.	
River Usk / Afon Wysg SAC (UK0013007)	[1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i> [1102] Allis shad <i>Alosa alosa</i>	Underwater noise	No	The River Usk is immediately upstream of the S.I. Survey Area and migratory fish species transiting to or from the river would need to pass through the area of the works. As detailed above, survey activities are unlikely to disturb mobile fish features as the S.I. works would not generate significant levels of noise. The S.I. works are anticipated to be completed within approximately three weeks and activities will be temporary and transient meaning exposure to underwater noise will be short term both temporally and spatially. Mobile fish features will be able to move away from the noise source and will not be prevented from passing through the estuary.	<b>Screened out</b>

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
		Introduction or spread of invasive non-native species (INNS)	No	<p>As such, no effects are predicted for fish features of the SAC and there will be no LSE.</p> <p>All activities will follow best practice guidance for cleaning and maintenance of equipment and vessels to reduce the potential of transporting or introducing INNS. The transport of INNS through ballast water is unlikely as the vessels used are expected not to require ballast due to their size. No vessels or equipment are required to enter or be used in the River Usk SAC. As such, there would be no LSE on the qualifying features of the SAC as a result of introduction of INNS.</p>	
River Wye / Afon Gwy SAC (UK0012642)	[1095] Sea lamprey <i>Petromyzon marinus</i> [1099] River lamprey <i>Lampetra fluviatilis</i> [1103] Twaite shad <i>Alosa fallax</i> [1106] Atlantic salmon <i>Salmo salar</i> [1102] Allis shad <i>Alosa alosa</i>	Underwater noise	No	The River Wye meets the Severn Estuary approximately 25 km upstream of the S.I. Survey Area. As such, migratory fish species would need to pass through the area on their way to or from the river. As, discussed above, the survey activities are unlikely to disturb mobile fish features as the S.I. works activities do not generate significant levels of noise. The S.I. works are anticipated to be completed within approximately three weeks and activities will be temporary and transient meaning exposure to underwater noise will be short term both temporally and spatially. Mobile fish features will be able to move away from the noise source and will not be prevented from passing through the estuary.	<b>Screened out</b>

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
				As such, no effects are predicted for fish features of the River Wye SAC and there will be no LSE.	
		Introduction or spread of invasive non-native species (INNS)	No	All activities will follow best practice guidance for cleaning and maintenance of equipment and vessels to reduce the potential of transporting or introducing INNS. The transport of INNS through ballast water is unlikely as the vessels used are expected not to require ballast due to their size. As such, there would be no LSE on the qualifying features of the SAC as a result of introduction of INNS.	
<b>SPAs</b>					
Severn estuary SPA (UK9015022)	[A037] Bewick's swan [A048] Common shelduck [A051] Gadwall [A149] Dunlin [A162] Common redshank [A394] Greater white-fronted goose	Short term reduction in prey availability	No	The proposed work is not anticipated to impact prey availability for the SPA Qualifying Features as the surveys are to take place in the marine environment. Bewick's swan and greater white-fronted goose will forage terrestrially during the non-breeding season, dunlin, redshank and shelduck will forage within the intertidal habitat, and gadwall will forage in freshwater habitats. As such, there is no potential for LSE.	<b>Screened out</b>
	[A037] Bewick's swan <i>Cygnus columbianus</i> [A048] Common shelduck <i>Tadorna tadorna</i>	Visual and noise disturbance	No	While the survey area overlaps with that of the SPA, the addition of one survey vessel is not considered to be significantly distinct from the background conditions of the Severn Estuary given its high utilisation by vessels.	<b>Screened out</b>

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
	[A051] Gadwall <i>Anas strepera</i> [A149] Dunlin <i>Calidris alpina alpina</i> [A162] Common redshank <i>Tringa totanus</i> [A394] Greater white-fronted goose <i>Anser albifrons</i>			The intertidal bar probe works that would be undertaken across the beach at the proposed Uphill landfall are limited both spatially and temporally and are anticipated to be completed within one to two days depending on tides. This area of the beach is a popular recreational activity area so is already a disturbed part of the SPA. Any potential disturbance from the intertidal works would be no greater than the baseline disturbance in this area.  As such, there is no potential for LSE from this impact pathway.	
Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro (UK9014051)	[A204] Puffin <i>Fratercula arctica</i> [A014] Storm petrel <i>Hydrobates pelagicus</i> [A183] Lesser black-backed gull <i>Larus fuscus</i> [A013] Manx shearwater <i>Puffinus puffinus</i>	Short term reduction in prey availability; Visual and noise disturbance	No	Gull species are wide ranging and rarely dive. They show minimal disturbance response to boat presence and are often attracted to them due to local fishing activities. The addition of one extra survey vessel does not represent a significant increase in vessel activity in the area and it is considered highly unlikely the S.I. works would have any significant effect. The proposed S.I. Survey Area is within the mean max foraging range +1 S.D for lesser black-backed gull. The proposed work is not expected to significantly impact the foraging or breeding behaviour as a) the work is carried over short time scales intermittently over the breeding and post breeding seasons, b) activities carry a low degree of disturbance effects, c) there are low densities of these species over the majority of the S.I works area and d) the proposed works are unlikely to exclude the protected species	Screened out

Site name	Qualifying features scoped into screening (include sub-features and supporting habitats)	Pressure	LSE?	Justification	Screened in / Screened out?
				<p>from significant proportions of the habitat, minimising effects on behaviours and foraging opportunities. All species are screened out of further assessment given that while the survey area is within their foraging ranges, there is a wide area of suitable foraging habitat available outside of the survey area and to the works are therefore unlikely to be a significant disruption to their foraging.</p>	
<b>Ramsar Sites</b>					
<p>Severn Estuary Ramsar (Site number 67)</p>	<p>[A037] Bewick’s swan <i>Cygnus columbianus</i>                      [A048] Common shelduck <i>Tadorna tadorna</i>                      [A051] Gadwall <i>Anas strepera</i>                      [A149] Dunlin <i>Calidris alpina alpina</i>                      [A162] Common redshank <i>Tringa totanus</i>                      [A394] Greater white-fronted goose <i>Anser albifrons</i></p>	<p>Short term reduction in prey availability; Visual and noise disturbance</p>	<p>No</p>	<p>While the survey area overlaps with that of the Ramsar, the addition of one survey vessel is not considered to be significantly distinct from the background conditions of the Severn Estuary given its high utilisation by vessels.</p> <p>The intertidal bar probe works that would be undertaken across the beach at the proposed Uphill landfall are limited both spatially and temporally and are anticipated to be completed within one to two days depending on tides. This area of the beach is a popular recreational activity area so is already a disturbed part of the Ramsar. Any potential disturbance from the intertidal works would be no greater than the baseline disturbance in this area.</p> <p>As such, there is no potential for LSE from this impact pathway.</p>	<p><b>Screened out</b></p>

## 5.1 LSE Conclusion

Following the test for LSE on the European and Ramsar Sites, the following sites have been screened out of further assessment:

- Severn Estuary / Môr Hafren SAC
- River Usk / Afon Wysg SAC
- River Wye / Afon Gwy SAC
- Severn Estuary SPA
- Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SAC
- Grassholm SPA
- Severn Estuary Ramsar.

The screening assessment indicated that there is no potential for LSE on qualifying features of any of the identified sites. Based on these conclusions, the proposed works have not been carried through to Stage 2 Appropriate Assessment.

## 6. In-combination Assessment

### 6.1 Projects-considered

The identification of plans and projects to include in the in-combination assessment is based on:

- Approved plans or projects with relevant ongoing activities;
- Approved but as yet unconstructed projects; and
- Projects for which an application has been made, are currently under consideration and will be consented before the proposed works begin.

To identify relevant projects or plans, a combination of the MMO Public Register, the NRW Public Register, Data Map Wales and local knowledge were used. Six projects were identified that are within the vicinity (10 km) of the works and have the potential to have an in-combination effect with the work activities. Distances to the proposed works are provided within brackets:

- Marine Aggregate Licence Areas:
  - Area 1602 (1.91 km)
  - Area 1601 (2.2 km)
  - Area 455 (6.78 km)
  - Area 526 (9.02 km)
  - Area 459 (9.11 km)

These licence areas are all currently active for the extraction of marine aggregates, however, given the distances of licence areas in relation to the proposed works, the nature of the proposed S. I. works and the temporary and short-term duration, it is concluded that there is no potential for the activities at the marine aggregate licence areas and proposed S. I. works to have in-combination effects on the European Sites and therefore there would be no LSE.

- Rhymney Great Wharf Polders Enhancement for Saltmarsh Restoration (approximately 5 km)

This project is seeking to re-establish and protect important saltmarsh habitats along the Rhymney Great Wharf by installing new polders and extending the existing polder system. The Project is also seeking to support the mudflats and sandflats not covered by sea water at low tide (intertidal mudflats and sandflats) feature by retaining sediment and also retaining or restoring transition zones between the two habitats.

A marine licence has been granted by NRW as of April 2024 and it is assumed that works are underway at this time.

Given the distance in relation to the proposed works, the nature of the proposed S. I. works and the temporary and short-term duration, it is concluded that there is no potential for the works and activities at Rhymney Great Wharf and the proposed S. I. works to have in-combination effects on the European Sites and therefore there would be no LSE.

## **6.2 In-combination assessment conclusion**

The in-combination assessment of potential effects arising from identified projects, in-combination with the proposed works, concluded that the S. I. work activities would not act in-combination to give rise to an LSE on any European Sites.

## 7. Conclusions

The activities required for S. I. works to investigate the feasibility of constructing a new subsea telecoms cable system, Newport Connect, have the potential to interact with European Sites. This assessment identified protected sites in the vicinity of the proposed works that could potentially be influenced by effects arising from the works.

Consideration was given to the relevant guidance issued by a number of governmental, statutory and industry bodies including, but not limited to, Welsh Government and NRW guidance on Habitat Regulations Assessments, NRW online guidance on HRA in the marine licensing process and Natural England's Advice on Operations. Following reference to this guidance, the following impact pathways were assessed:

- Above water noise;
- Abrasion / disturbance of the substrate on the surface of the seabed;
- Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion;
- Habitat structure changes - removal of substratum (extraction);
- Visual disturbance;
- Underwater noise changes and vibration;
- Pollution (from vessels and equipment including Hydrocarbon & Polycyclic Aromatic Hydrocarbon (PAH) contamination);
- Reduction in prey availability (all aspects of survey generating underwater noise and vibration); and
- Introduction or spread of invasive non-native species (INNS).

The test for LSE concluded that there was no potential for LSE from any of the above impact pathways on any of the designated features of the sites included in the screening. As such, the assessment was not progressed to Stage 2 Appropriate Assessment.

In addition, the in-combination assessment did not identify any other plans or projects within a 10 km buffer zone of the proposed works, that could result in in-combination effects.

## 8. References

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

Chapman, C. and Tyldesley, D. (2016) Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions. *Natural England Commissioned Reports*, Number 207.

Department for Environment, Food and Rural Affairs (DEFRA) (2021) North West Marine Plan Habitats Regulations Assessment: Appropriate Assessment 2021, DEFRA, London.

EMODnet broad-scale seabed habitat map for Europe (v2021), licensed under CC-BY 4.0 from the European Marine Observation and Data Network (EMODnet) Seabed Habitats initiative ([www.emodnet-seabedhabitats.eu](http://www.emodnet-seabedhabitats.eu)), funded by the European Commission. Accessed: 20/04/2024.

JNCC (2009) EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora: Citation for Special Area of Conservation (SAC) Severn Estuary / Môr Hafren

Kongsberg Maritime (2023)  $\mu$ PAP Portable Acoustic Positioning. Accessed 01/06/2023. Available from: [cNODE MiniS Data sheet \(kongsberg.com\)](https://www.kongsberg.com/cnode-mini-s-data-sheet).

Langley, I., Rosas da Costa Oliver, T., Hiby, L., Stringell, T.B., Morris, C.W., O'Cadhla, O., Morgan, L., Lock, K., Perry, S., Westcott, S. and Boyle, D. (2020) Site use and connectivity of female grey seals (*Halichoerus grypus*) around Wales. *Marine Biology*, 167, pp.1-15.

MacMahon Design & Management Ltd, 2023a, Works method statement & supporting information for marine survey & site investigation works at St Brides, Newport.

MacMahon Design & Management Ltd, 2023b, Works method statement & supporting information for marine survey & site investigation works at Weston Super Mare.

Ministry of Housing, Communities and Local Government (MHCLG) (2019) National Planning Policy Framework. MHCLG, London.

Mitchell, C. (2012) Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. *Wildfowl & Wetlands Trust / Scottish Natural Heritage Report*, Slimbridge. 108pp.

SNH (2016) Interim guidance on apportioning impacts from marine renewable developments to breeding seabird populations in special protected areas. In.

The Planning Inspectorate (2019) Developments of National Significance, Appendix 4: Habitats Regulations Assessment, *Welsh Government*.

Wall, D., Murray, C., O'Brien, J., Kavanagh, L., Wilson, C., Ryan, C., Glanville, B., Williams, D., Enlander, I., O'Connor, I., McGrath, D., Whooley, P. and Berrow, S. (2013) Atlas of the distribution and relative abundance of marine mammals in Irish offshore waters 2005 - 2011. Irish Whale and Dolphin Group, Kilrush, Co. Clare. 63pp.

Wilson, R. P., Liebsch, N., Gomez-Laich, A., Kay, W. P., Bone, A., Hobson, V. J., and Siebert, U. (2015). Options for modulating intra-specific competition in colonial pinnipeds: the case of harbour seals (*Phoca vitulina*) in the Wadden Sea. *PeerJ*, 3, e957.

Woodward, I., Thaxter, C.B., Owen, E. and Cook, A.S.C.P. (2019) Desk-based revision of seabird foraging ranges used for HRA screening. *BTO research report*, (724).

Wright, L., Ross-Smith, V., Austin, G., Massimino, D., Dadam, D., Cook, A., Calbrade, N. and Burton, N. (2012). Assessing the risk of offshore wind farm development to migratory birds designated as features of UK Special Protection Areas (and other Annex 1 species) (Report No. 592). *Report by British Trust for Ornithology (BTO)*. Report for The Crown Estate.