FLOVENTIS
ENERGY

LLYR FLOATING OFFSHORE WIND PROJECT

LLŶR

Environmental Appraisal Report

Floating LiDAR – Band 2 Marine Licence Application

Prepared by: AECOM Ltd

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Acronyms and Abbreviations

Acronym or Abbreviation	Definition	Acronym or Abbreviation	Definition
AA	Appropriate Assessment	LSE	Likely Significant Effect
AEOSI	Adverse Effects On Site Integrity	MCA	Maritime and Coastguard Agency
CIEEM	Chartered Institute of Ecology and Environmental Management	MCZ	Marine Conservation Zone
CIS	Celtic and Irish Sea	MMO	Marine Management Organisation
EAR	Environmental Appraisal Report	MMSU	Mean Monthly Sea Level
EIA	Environmental Impact Assessment	MUMW	Management Unit
EMODnet	European Marine Observation Data Network	MW	Megawatt
EPS	European Protected Species	NM	Nautical Mile
FLiDAR	Floating Light Detection and Ranging	NNR	National Nature Reserve
HRA	Habitats Regulations Assessment	NRW	Natural Resources Wales
IAMMWG	Inter-Agency Marine Mammal Working Group	OCSW	Offshore Channel and South-West England
IEMA	Institute of Environmental Management and Assessment	SAC	Special Area of Conservation
IMO	International Maritime Organisation	SCANS	Small Cetaceans in European Atlantic waters and the North Sea
INNS	Invasive Non-Native Species	SPA	Special Protection Area
IROPI	Imperative Reasons of Overriding Public Interest	STAR	Seabird Tracking and Research
JNCC	Joint Nature Conservation Committee	SSSI	Site of Special Scientific Interest
LiDAR	Light Detection and Ranging		

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1. Introduction

1.1. The Project

Floventis Energy (hereafter referred to as 'the Applicant') is developing proposals for two 100 megawatt (MW) floating offshore wind development projects, known collectively as the Llŷr Floating Offshore Wind Project (hereafter referred to as 'the proposed Project').

The proposed Project consists of two adjacent array areas, known as Llŷr 1 and Llŷr 2, each with a capacity of up to 100 MW. These two array areas are located in the Celtic Sea, within Welsh Waters, offshore from the Pembrokeshire coastline (**Figure 1**). At its closest point, the boundary of the proposed Project is approximately 31 km from the Welsh coastline, and 38 km from the Lundy Island shore. Each Crown Estate Lease Option area (i.e., the array areas, Llŷr 1 and Llŷr 2) of the proposed Project covers an outline area of interest of 50 km^2, which will be refined through the EIA and design process.

To support the development of the proposed Project, a floating LiDAR (FLiDAR) system (hearafter referred to as the FLiDAR) is required to undertake a one-year campaign of measurement, plus 3 months of contingency equalling a total of 15 months (falling within a 2 year licence period) of conditions at the site of the proposed Project. The FLiDAR will be used to record weather and metocean data, such as: wind measurements (speed and direction), atmospheric measurements (surface wind, pressure, humidity, and temperature), and oceanographic measurements (wave parameters, water depth, temperature, and current profile).

1.2. The scope of works

The offshore deployment activities will consist of the FLiDAR being towed approximately 50 nautical miles (NM) from the Padstow Harbour to the deployment location (**Table 1**), to the proposed Project (**Figure 1**). This will be completed using a multi-purpose installation vessel.

Table 1. Floating LiDAR deployment location

Name	Water depth	WGS 84 latitude and longitude	Distance from coast
Llŷr FLiDAR	67 MMSL	51.334850, -5.299551	41 NM

The FLiDAR offshore deployment activities are scheduled to occur between 1st June and 31st July 2023. The deployment activity will only take up to 5 hours, with the vessel expected to be present on-site for up to 1 day including the return of the vessel to Padstow following deployment (estimated 10-hour transit). Once deployed, the FLiDAR will remain moored at the deployment location for 15 months (one-year deployment plus three months contingency), before demobilisation. There will be a regular programme of inspection and maintenance works in place. This is expected to include on-site inspections once every four months.

The FLiDAR will be connected to a mooring system once at the deployment location, having been transported on the vessel. The mooring system used for the FLiDAR, will consist of two 2.5 tonne concrete blocks, connected by a 280 m chain and Nylon DN44. Third party verification of the mooring system will be completed prior to deployment.

The demobilisation of the FLiDAR is expected to use the same methods as deployment.

For further details regarding the survey methodology and scope of works, please refer to the Method Statement (**Appendix A**).

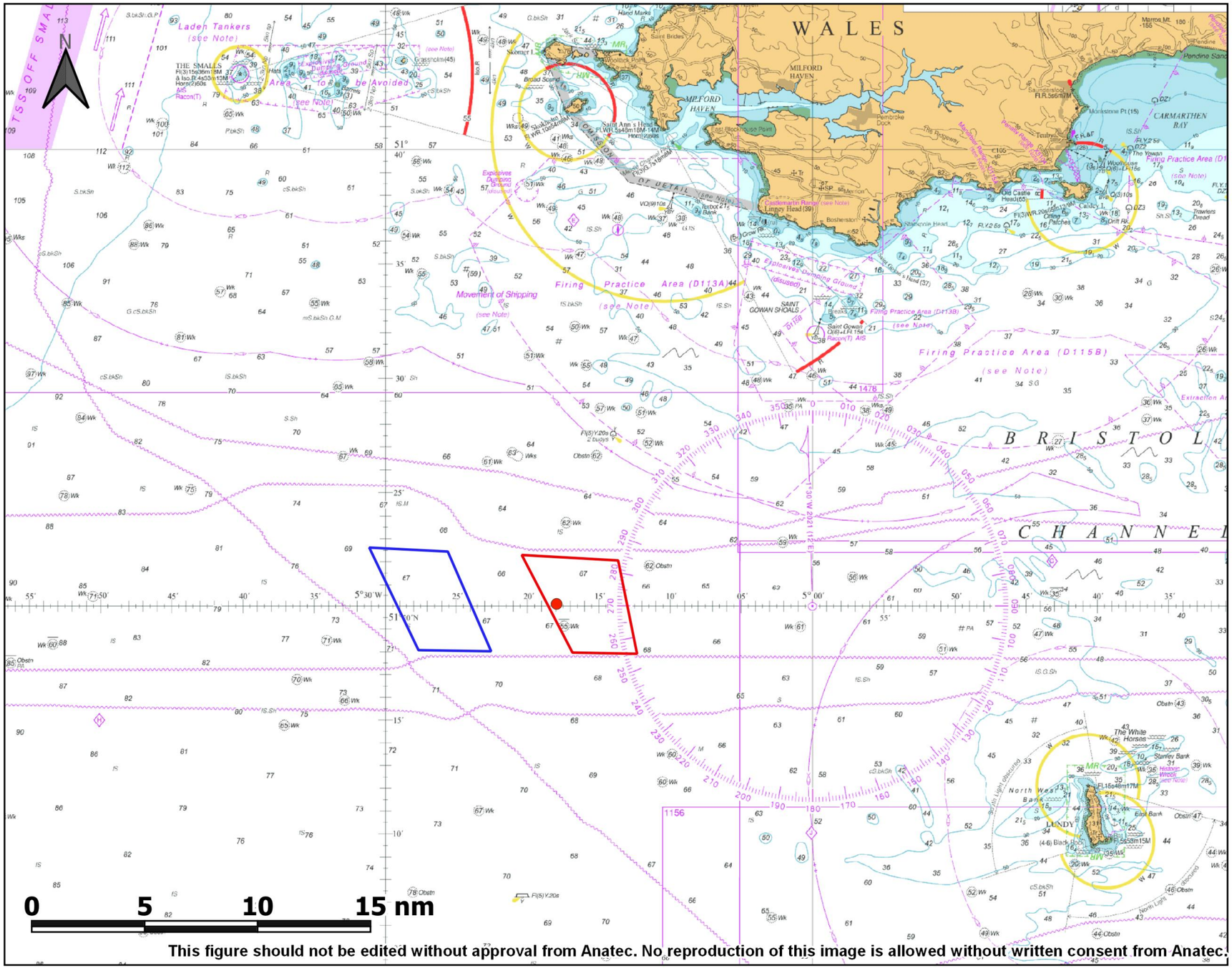
1.3. Assessment of satisfactory alternatives

The collection of metocean data, referred to within this report as the FLiDAR survey, is essential in detailing the conditions at the proposed Project site. The survey will inform the design and development of the arrays and therefore, the requirement for this survey is needed for the development of the proposed Project. Furthermore, there are no alternative methods available to collect these data.

The site of the proposed Project was identified through the appraisal of potential constraints and key considerations, including a range of engineering, environment, and economic determinants.

1.4. Purpose of this report

This Environmental Appraisal Report (EAR) provides an assessment of environmental impacts and forms part of a Band 2 marine licence application to Natural Resources Wales (NRW) for the deployment of a FLiDAR, under the Marine and Coastal Access Act 2009 (MCAA 2009). Consideration has also been given to the Welsh National Marine Plan (WNMP) (**Appendix C**) which sets out a single framework for sustainable development within the Wales marine area (Welsh Government, 2019).



Legend

- LlŷrLlŷr 1
- LlŷrLlŷr 2
- FLiDAR Location

anatec

Project:
A5023 Llŷr Floating Offshore Wind Survey Device

Figure Title:
Overview of FLiDAR Location

Date: 20/02/2023	**Drawn:** RR	**Checked:** SW

Coordinate System: WGS 84 / World Mercator

Figure 1. Location of floating LiDAR (FLiDAR).

2. APPROACH TO ASSESSMENT

2.1. Study Area

The Study Area used for the assessment has been defined as including the likely Zone of Influence (ZoI) where potential significant effects may arise from the activities. The 'Rochdale Envelope' approach has also been applied to ensure that the baseline characterisation data is sufficient to underpin an assessment in relation to the worst-case scenario of impact pathways. The ZoI, and therefore also the Study Area, recognises the mobility of the receptors considered and the potential impact pathways to these.

2.2. Data Sources

Publicly available ecological data exists for the Study Area. Where relevant, this information has been used to inform the EAR and baseline characterisation for the FLiDAR survey, including the following:

- European Marine Observation Data Network (EMODnet) Seabed Habitats Project data for broad-scale habitat maps of the Study Area (EMODnet, 2021);
- Fisheries sensitivity data, including data on nursey and spawning grounds (Coull *et al*., 1998; Ellis *et al*., 2012);
- UK sea fisheries annual statistics (MMO, 2020);
- Small Cetaceans in European Atlantic waters and the North Sea III (SCANS-III) surveys (Hammond *et al*., 2021);
- Special Committee on Seals (SCOS) reports and scientific advice (SCOS, 2021);
- The Joint Nature Conservation Committee (JNCC) website for details of Special Protection Areas (SPAs) and distribution of seabirds in the North-East Atlantic (Waggitt *et al*., 2020);
- Seabird foraging ranges (Thaxter *et al*., 2012; Woodward *et al*., 2019), including site and specific species studies; and
- Academic papers, online reports, and existing datasets as available for the Study Area.

2.3. Assessment Methodology

The impact assessment for the FLiDAR survey has been completed in accordance with relevant guidance including the Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018)[1] and the UK Institute of Environmental Management and Assessment (IEMA): Suite of General and Topic Specific Guidelines for Environmental Impact Assessment (various dates).

The aims of the impact assessment are to:

- Identify important environmental features which have the potential to be impacted by the deployment, operation and decommissioning of the FLiDAR;

[1] The CIEEM guidance states that an evidence-based approach should be taken, rather than assessing significance using a matrix.

- Provide a robust assessment of the potential environmental impacts and resultant effects of the activities, which may be beneficial (i.e., positive) or adverse (i.e., negative);
- Facilitate determination of the consequences of the activities in terms of national, regional, and local policies relevant to nature conservation and biodiversity and the wider environment, where the level of detail provided is proportionate to the scale of the development and the complexity of its impact pathways;
- Identify appropriate mitigation where possible, in relation to potential environmental impacts; and
- Set out the steps to be taken to adhere to legal requirements relating to the relevant environmental features (including designated sites within the ZoI) concerned.

3. STAKEHOLDER ENGAGEMENT AND CONSULTATION

3.1. Summary of Stakeholder Consultations

In addition to NRW, engagement prior to the submission of the Band 2 marine licence for the proposed FLiDAR survey, has included the Marine and Coastguard Agency (MCA), Trinity House, and the Milford Haven Port Authority (MHPA). A summary of this engagement to date, is provided in **Table 2**.

Table 2. Summary of the key issues raised by consultees and how each issue was addressed

Consultee	Main matter raised	How the issue has been addressed?	Location of response in chapter
MCA	The MCA stated that the activity does constitute a risk to navigation safety due to the size of the device, location, and duration of deployment. Therefore, a Band 1 marine licence was not applicable.	The Vessel Traffic Risk Assessment was updated to reflect the consultation responses. This has since been reviewed by the MCA who have confirmed that the navigational risk has been reduced to as low as reasonably possible (ALARP). A Band 2 Marine Licence was applied for, supported by this EAR.	Vessel Traffic Risk Assessment (**Appendix B**)
Trinity House	Trinity House stated that the activity is likely to obstruct and pose a danger to navigation. Therefore, a Band 1 marine licence was not applicable. Trinity House also detailed further licence conditions that they asked to be added to the Vessel Traffic Risk Assessment.	The Vessel Traffic Risk Assessment was updated to reflect the consultation responses. This has since been reviewed by Trinity House who have confirmed that the navigational risk has been reduced to ALARP. A Band 2 Marine Licence was applied for, supported by this EAR.	Vessel Traffic Risk Assessment (**Appendix B**)
MHPA	The MHPA noted that the location of the activity is outside of Port Limits.	No further actions taken.	Vessel Traffic Risk Assessment (**Appendix B**)
NRW (Marine Licencing)	NRW noted that a Band 1 Marine Licence Application must be accompanied by an email from the MCA, Trinity House and MHPA confirming any impact on the safety of others at sea.	The EAR supports the Band 2 Marine Licence Application.	The entirety of the EAR.

Consultee	Main matter raised	How the issue has been addressed?	Location of response in chapter
	Based on comments from the MCA and Trinity House, NRW recommended the application of a Band 2 Marine Licence.		
NRW (Marine Area Advice Team)	NRW requested more information in regard to Invasive Non-Native Species (INNS)	Further information on INNS was provided in the original Band 1 screening assessment. NRW confirmed these updates are satisfactory. This information has been incorporated into this EAR, and the introduction and spread of INNS as a potential impact pathway has been assessed and screened out of further consideration.	**Table 5**

4. BASELINE

The following section describes the baseline environmental conditions in relation to the proposed FLiDAR.

Due to the necessity to consult Shipping and Navigation stakeholders, consideration has been given to shipping and navigation in the Vessel Traffic Risk Assessment within **Appendix B**. No marine archaeological features have been identified at the proposed location; thus, marine archaeology has not been considered further within this report. In addition to this, impacts to the physical environment, commercial fisheries and other sea users have also been scoped out.

Relevant designated sites are considered within the HRA (**Section 7**). There are no Sites of Special Scientific Interest (SSSI), Marine Conservation Zones (MCZ), and National Nature Reserves (NNR) within the Study Area. The nearest of these sites is Castlemartin Range SSSI, which is located approximately 35.5 km from the Study Area. Therefore, these sites are not assessed further within this report.

4.1. Existing Baseline

4.1.1. Benthic Ecology

Using predictive broad-scale seabed habitat maps provided by EMODnet Seabed Habitat (EMODnet, 2021), the subtidal benthic habitat at the proposed FLiDAR deployment location was determined to consist of 'deep circalittoral sand' (EUNIS A5.27) (**Figure 2**). The seabed is homogenous over the surrounding area, dominated by this habitat, with small patches of 'deep circalittoral coarse sediment' (EUNIS A5.15) located approximately 13.5 km from the FLiDAR location (EMODnet, 2021).

There were no Section 7 priority species or habitats (Environment (Wales) Act 2016) identified within proximity of the FLiDAR location, nor were there any OSPAR Threatened and/or declining species and habitats or other notable species (i.e., Invasive Non-Native Species - INNS[2]). Within Welsh waters, these are typically found in nearshore areas along the Welsh Coastline.

[2] https://smnr-nrw.hub.arcgis.com/apps/3ad6560d23d243c29f4fabd99a42eaa9/explore

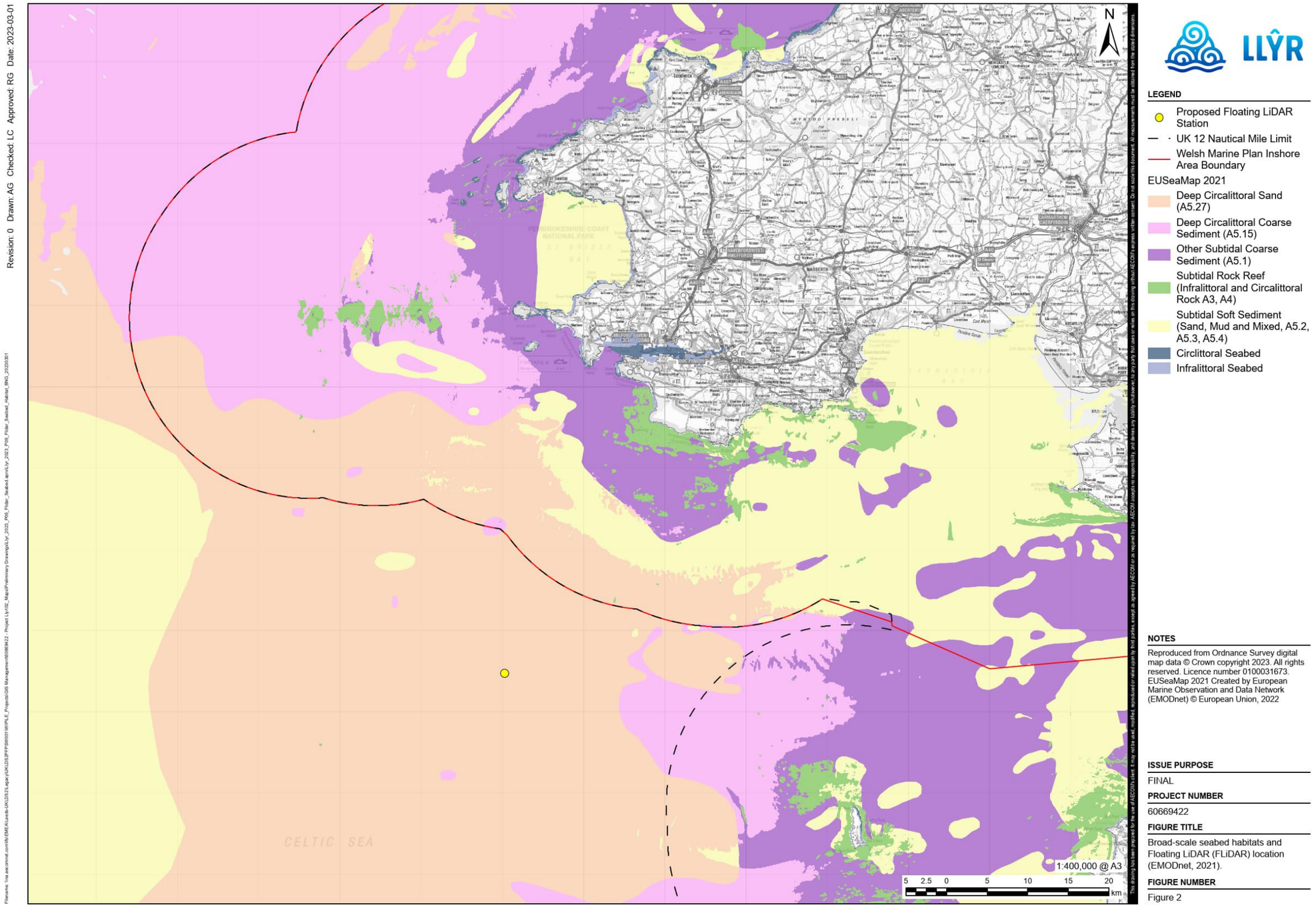


Figure 2. Broad-scale seabed habitats and Floating LiDAR (FLiDAR) location (EMODnet, 2021).

4.1.2. Fish and Shellfish

4.1.2.1. Overview

A number of fish and shellfish species of commercial importance are found within the Study Area. In general, pelagic species of commercial importance include cod (*Gadus morhua*) European hake (*Merluccius merluccius)*, mackerel (*Scomber scombrus)*, and whiting (*Merlangius merlangus)* (Coull *et al*., 1998; Ellis *et al*., 2012). However, pelagic species are highly mobile and their distribution may be changeable throughout the Study Area.

A number of demersal species, including the anglerfish (*Lophius piscator*ius), and flat fish, such as plaice (*Pleuronectes platessa)* and sole (*Solea solea)*, are commercial species also known to be present in the Study Area (Coull *et al*., 1998; Ellis *et al*., 2012).

Fisheries data from the MMO annual statistics show the presence of multiple shellfish species in the Study Area (the FLiDAR is located in International Council for the Exploration of the Sea (ICES) rectangle[3] 31E4 (MMO, 2021). The edible crab (*Cancer pagurus)*, recorded the highest landed weight (tonnes) in this ICES rectangle followed by the whelk (*Buccinum undatum)*.

Estuarine transitional habitats, such as in Milford Haven, Angle Bay, and the Severn Estuary occur regionally, and thus there is the potential for diadromous species such as Atlantic salmon (*Salmo salar)*, sea trout (*Salmo trutta)*, sea lamprey (*Petromyzon marinus)*, river lamprey (*Lampetra fluviatilis),* allis shad (*Alosa alosa)*, twaite shad (*Alosa fallax),* and European eel (*Anguilla Anguilla)* (JNCC, 2022) to migrate through the Study Area to coastal areas as part of their annual life cycles.

A number of elasmobranch species are reported to occur within the Study Area, including thornback ray (*Raja clavate)*, spotted ray (*Raja montagui)*, and tope shark (*Galeorhinus galeus)* (Ellis *et al*., 2012). Basking shark (*Cetorhinus maximus*) are also known to occur within the Celtic Sea and have been recorded close to Milford Haven (Witt *et al*., 2012).

4.1.2.2. Spawning and nursery grounds

Fisheries sensitivity maps presented by Coull *et al*., 1998; Ellis *et al*., 2012 are the recommended source of information when estimating the spawning and nursery grounds of fish species.

Sandy subtidal habitats, such as the biotope determined to occur at the FLiDAR, have the potential to support fish spawning (Ellis *et al*., 2012). Fisheries sensitivity maps[4] (Coull *et al*., 1998; Ellis *et al*., 2012) indicate that spawning and nursery grounds for a number of fish species may occur within the Study Area. This includes high intensity spawning grounds[5] of sandeel as well as cod*,* plaice*,* and sole (Ellis *et al*., 2012). As per Coull *et al.* (1998), potential spawning grounds of sprat (*Sprattus sprattus)*, were also identified within the Study Area. No high-intensity nursery grounds[6] were identified within the Study

[3] ICES statistical rectangles are used for the gridding of data to make simplified analysis and visualization. They are the smallest consistent spatial reference for commercially exploited fish and shellfish species.

[4] Although fisheries sensitivity maps provided by Coull *et al.* (1998) and Ellis *et al.* (2012) are considered to be old, these still represent the recommended sources for identifying spawning and nursery grounds in the UK.

[5]High intensity spawning grounds are considered to be areas for which the highest aggregation of fish for spawning are likely to occur, indicated by high catch rates of eggs and larvae (Ellis *et al*., 2012).

[6] High intensity nursery grounds are considered to be areas where the highest density of juveniles is likely to occur, indicated by high catch rates of juveniles (Ellis *et al*., 2012).

Area. Furthermore, the Celtic Sea is not considered to be an area of high importance for herring spawning and nursery grounds (Ellis *et al.,* 2012).

4.1.3. Marine Mammals

4.1.3.1. Cetaceans

Within the ICES Celtic Seas Ecoregion, thirteen cetacean species commonly occur or are resident (ICES, 2020). In alphabetical order, these species are: Atlantic white-sided dolphin (*Lagenorhynchus acutus)*, bottlenose dolphin (*Tursiops truncatus)*, common dolphin (*Delphinus delphis)*, fin whale (*Balaenoptera physalus)*, harbour porpoise (*Phocoena phocoena)*, killer whale (*Orcinus orca)*, long-finned pilot whale (*Globicephala melas)*, minke whale (*Balaenoptera acutorostrata)*, northern bottlenose whale (*Hyperoodon ampullatus)*, Risso's dolphin (*Grampus griseus)*, Sowerby's beaked whale (*Mesoplodon bidens)*, sperm whale (*Physeter macrocephalus)*, white-beaked dolphin (*Lagenorhynchus albirostris)*.

The Inter Agency Marine Mammal Working Group (IAMMWG) (2021) have defined Management Units (MU) for the seven most common cetacean species found in UK waters. The Study Area falls within the Celtic and Irish Sea (CIS) MU for harbour porpoise, the Offshore Channel and South-West England (OCSW) MU for bottlenose dolphin, and the Celtic and Greater North Sea (CGNS) MU for common dolphin and minke whale (as well as white-beaked dolphin, Atlantic white-sided dolphin, and Risso's dolphin). The FLiDAR location is approximately 6.63 km from Bristol Channel Approaches/Dynesfeydd Môr Hafren SAC which is designated to maintain the conservation status of harbour porpoise.

Cetacean distribution in the UK was surveyed in 2016 as part of the SCANS-III surveys, involving standard boat-based line transect surveys and aerial transect surveys (Hammond *et al*., 2021). These surveys provide abundance and density estimates for the UK, divided into SCANS blocks, with the proposed survey activities located in SCANS-III Block D. Within Block D, five cetacean species were observed in high enough numbers to be able to determine estimates of total abundance and density (**Table 3**).

Table 3. Density and abundance of most common cetaceans observed in SCANS-III survey area Block D (Hammond et al., 2021).

Species	Density (individuals/km^2)	Abundance
Common dolphin	0.374	18,187
Harbour porpoise	0.118	5,734
Bottlenose dolphin	0.061	2,938
Minke whale	0.011	543
Striped dolphin	0.005	262
Unidentified common or striped dolphins	0.655	31,800

4.1.3.2. Pinnipeds

The UK supports important populations of both seal species occurring in the North-East Atlantic – the grey (*Halichoerus grypus*) and harbour (*Phoca vitulina*) seal. There is a breeding population of grey

seal on the Pembrokeshire coast, within the Pembrokeshire Marine/Sir Benfro Forol Special Area of Conservation (SAC) approximately 24 km from the FLiDAR location. This site, for which the grey seal is a primary reason for designation, supports the largest breeding colony of grey seals on the west coast of the UK (south of the Solway Firth) representing over 2% of annual UK pup production (JNCC, 2020). Grey seals forage in open seas, frequently travelling up to 135 km offshore and staying out for up to 30 days (SCOS, 2021), so have the potential to be present within the Study Area.

According to the most recent available data, there are no harbour seal haul out sites within the Study Area and less than 10 individuals have been recorded in Wales in recent surveys (SCOS, 2021). Harbour seals normally forage within 40-50 km of their haul out sites and the absence of haul out sites in Wales explains the low abundance in the Study Area. Thus, only very occasional individuals are likely to be present in the Study Area, and this would be at periods outside their normal breeding and moulting season in mid to late summer, during which they will be hauled out elsewhere outside the Study Area.

4.1.4. Ornithology

The marine ornithology baseline for this EAR has been determined through review of existing datasets of the Study Area. Birds which are designated as a qualifying feature of European sites (including SPA and Ramsar Sites) represent populations of highest conservation importance and sensitivity. Therefore, the designated sites with qualifying breeding seabird populations whose foraging ranges overlap with the Study Area have been considered (**Table 4**).

Table 4. Designated sites and qualifying breeding seabird populations whose foraging ranges overlap with the Study Area.

Site Name	Distance (from FLiDAR location) (km)	Designated Features
Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA	17.21	Annex I Species (Breeding) • European storm petrel (*Hydrobates pelagicus*) * • Red-billed chough (*Pyrrhocorax pyrrhocorax*) • Manx shearwater (*Puffinus puffinus*) * • Atlantic puffin (*Fratercula arctica*) * • Lesser black-backed gull (*Larus fuscus*) * • Seabird assemblage *
Castlemartin Coast SPA	35.90	Annex I Species (Breeding) • Chough (*Pyrrhocorax pyrrhocorax*)
Grassholm SPA	43.46	Annex I Species (Breeding) • Gannet (*Morus bassanus*)*
Bae Caerfyrddin / Carmarthen Bay SPA	55.34	Annex I Species (Wintering) • Common scoter (*Melanitta nigra*) *

Site Name	Distance (from FLiDAR location) (km)	Designated Features
Burry Inlet SPA (and Ramsar)	77.29	Annex I Species (Wintering) • Oystercatcher (*Haematopus ostralegus*) • Knot (*Calidris canutus*) • Turnstone (*Arenaria interpres*) • Pintail (*Anas acuta*) • Shoveler (*Anas clypeata*) • Teal (*Anas crecca*) • Wigeon (*Anas penelope*) • Dunlin (*Calidris alpina*) • Curlew (*Numenius arquata*) • Grey plover (*Pluvialis squatarola*) • Redshank (*Tringa totanus*) • Shelduck (*Tadorna tadorna*)

**Species that forage offshore*

5. EMBEDDED AND GOOD PRACTICE MEASURES

This section details the embedded mitigation and good practice measures which will be incorporated into the proposed deployment, operation and decommissioning FLiDAR activities. These measures are also outlined in **Appendix A** (Method Statement).

All ships carrying out activities in relation to the FLiDAR must comply with the International Convention for the Prevention of Pollution from Ships (the MARPOL Convention 73/78) (IMO, 2021), with the aim of preventing and minimising pollution from ships. Most critically, all vessels shall have a contingency plan for marine oil pollution (Shipboard Oil Pollution Emergency Plan - SOPEP).

Spills from offshore activity can occur due to leaks, equipment failure, accidents, or human error. Spills mainly result from vessel activity but could also occur while handling substances used to maintain the buoy. The FLiDAR is predominantly powered by renewable energy sources (solar panels and waves) but also contains a methanol fuel cell. Therefore, a specific spill kit containment shall be available on the buoy for a worker to react quickly and avoid contamination to the sea. In case a spill is detected, notifications shall be issued to local authorities in due time.

In order to prevent the introduction of INNS, the below measures will be taken:

- The installation vessel shall adhere to the International Maritime Organisation (IMO) Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines) (IMO, 2011);
- All equipment, materials, machinery and PPE used will be in a clean condition prior to their arrival on site, and upon removal from site, to minimise risk of introducing INNS into the marine environment; and

- The FLiDAR hull has been coated with antifouling paint, as has the installation vessel, which shall also be cleaned prior to deployment.

6. APPRAISAL OF POTENTIAL IMPACTS

The summary of potential impact pathways and subsequent effects associated with the FLiDAR survey are outlined in **Table 5.** A subsequent more detailed assessment of potential effects for the impact pathway taken forward, considers the embedded mitigation measures which are described in **Section 5.**

Table 5. Summary of potential impacts of the Floating LiDAR (FLiDAR).

Potential impact pathway	Rationale	ZoI	Detailed assessment (in/out)
Direct loss and physical disturbance to benthic habitats and species	The placement of the mooring weights used as part of the FLiDAR mooring system and associated chain connected to the FLiDAR, has the potential to result in the temporary disturbance and/or loss of benthic habitats and species. Potential disturbance of habitat through scour as a result of slack in the chain, is estimated to be 50 m^2 in a worst-case scenario.	50 m^2	In
Temporary increase in suspended sediment concentration (SSC) and sediment deposition on benthic habitats and species	The placement of the mooring weights on the seafloor, associated with the deployment of the FLiDAR, has the potential to result in a temporary increase in SSC by disturbing and suspending sediments into the water column. Any suspended sediment is likely to settle out and could deposit on nearby subtidal habitats and species, with the potential to smother certain sessile benthic organisms. However, given that the sediment in this area consists of mostly sand, sediment is expected to settle rapidly and over very short distances (i.e. 10s of metres). Furthermore, the size of the mooring weights are small and are unlikely to disturb a large volume of sediment. Therefore, any increase in SSC and impacts on the benthos are anticipated to be negligible.	100 m	Out
Introduction and spread of Invasive Non-native Species (INNS)	INNS can spread rapidly and impact local fauna. The effects may not be constrained to the immediate survey area, and the introduction of structures to the seabed may also allow for localised spread of any existing INNS populations. There are no occurrence records of INNS at the proposed FLiDAR location, as per the NRW Wales Environmental Portal[7]. However, both the installation vessel and FLiDAR represent a potential pathway to introduce INNS via biofouling.	1 km	Out

[7] https://smnr-nrw.hub.arcgis.com/apps/3ad6560d23d243c29f4fabd99a42eaa9/explore

Potential impact pathway	Rationale	ZoI	Detailed assessment (in/out)
	The installation vessel will have been operating in UK waters prior to deployment. However, it is currently in a dry dock in Falmouth where it is being cleaned and antifouled. The exact movements of the vessel after cleaning are currently unknown but the vessel will remain in Falmouth for the foreseeable future. The installation vessel will not enter Padstow Harbour to collect the FLiDAR, and instead will stand off in the Camel Estuary during a suitable weather window, when the FLiDAR will be towed to the installation vessel using the harbour's RIB. Prior to deployment operations, an acceptance test on the FLiDAR will be completed to check if it is still functional, lasting 4-5 days. The installation vessel will then proceed to the deployment location, once there is a suitable weather window to do so. The FLiDAR was first manufactured in August 2022, during which time the hull was coated with antifouling paint. It was then sent to Rotterdam for pre-validation testing, between 1st October 2022 and 17th November 2022. Since this time, the FLiDAR has been stored dry on the quay at Rotterdam and will be transported to Padstow by road in March. With the adherence to relevant guidance and implementation of the environmental mitigation measures (see **Section 5**), the risk of introduction and spread of INNS through biofouling as part of the installation vessel and FLiDAR movements would be minimised and therefore the probability of transmission is considered to be low.		
Changes in underwater soundscape	The vessel associated with the deployment activities, and those required for any further maintenance or inspection works, will generate underwater sound. However, as there will only be a single vessel operating for a short and temporary period in each instance, this is not expected to exceed ambient levels within the Study Area. Furthermore, the FLiDAR will not generate any acoustic sound sources which would result in potential disturbance to marine mammals and migratory fish. Therefore, any impacts are anticipated to be negligible.	1 km	Out

Potential impact pathway	Rationale	ZoI	Detailed assessment (in/out)
Changes in airborne sound and visual stimuli	Any airborne sound and visual stimuli effects to ornithology receptors as a result of the deployment vessel and associated maintenance and inspection vessels will be limited in number, short term, temporary and will not exceed baseline levels (because of the FLiDAR's location in the busy Bristol Channel). The offshore location of the FLiDAR means that there is widespread alternative foraging grounds, if seabirds avoid any survey activities. Therefore, any impacts are considered to be negligible.	1 km	Out
Collision of marine mammals with Project vessels	The increase in the number of vessels as part of the FLiDAR deployment, demobilisation, and maintenance / inspection activities, will not represent a significant increase in vessel traffic above baseline levels. It is anticipated that only a single vessel will be used in each instance. Therefore, the potential for project vessels to collide with marine mammals is considered to be negligible.	0 km	Out
Changes in water quality from accidental spills	With the adherence to relevant guidance and implementation of the environmental mitigation measures, the risk of an accidental release of vessel fuel and oils as part of the FLiDAR survey activities is considered to be low. This is particularly the case, given the small number of vessels required and the short duration of survey activities.	1 km	Out

6.1. Direct loss and disturbance to benthic habitats and species

The mooring weights, and associated slack in the chain connected to the FLiDAR, have the potential to result in the scour and temporary disturbance and/or loss of benthic habitats and potential disturbance to seabed-dependent species (including spawning fish species, such as sandeel) (**Section 4.1.2.2**).

The sediment habitat in the location of the FLiDAR, consists of 'deep circalittoral sand' (EUNIS A5.12) which is homogenous over a large area. This biotope complex is considered to have a 'Medium' sensitivity and resilience to abrasion of the seabed (Tyler-Walters *et al.*, 2018). However, the area of seabed habitat which could be potentially disturbed as a result of the FLiDAR survey is considered to be negligible because the footprint of the weights is very small (1.6 m x 1.6m). Any scour from slack in the chain is estimated to occur within a maximum area of 50 m^2 in a worst-case scenario. Furthermore, any disturbance will be localised, short-term and temporary in nature, meaning recovery of this habitat will occur, following removal of the FLiDAR. Therefore, any potential effect is considered to be **Not Significant**.

7. HABITATS REGULATIONS ASSESSMENT

7.1. Legislative Framework

7.1.1. Legislative requirement for a Habitats Regulation Assessment

Protection of sites of nature conservation importance at a European level originated when the UK was part of the European Union (EU) and was required to enact EU laws into its domestic laws. The EU legislation relevant to such sites were the European Directive 92/43/EEC on the 'Conservation of Natural Habitats and Wild Fauna and Flora', referred to as the 'Habitats Directive', and Council Directive 2009/147/EC (Birds Directive) the Conservation of Wild Birds (the codified version of Council Directive 79/409/EEC on the conservation of wild birds) referred to as the 'Wild Birds Directive'. Sites falling under the definitions provided in these Directives are referred to as European sites and reflect the fact that these sites are of a European level of importance.

These directives were most recently transposed into domestic law by the Conservation of Habitats and Species Regulations 2017 (England and Wales) (known as the Habitats Regulations) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (known as the Offshore Regulations).

The UK left the EU on 31 January 2020 under the terms set out in the EU (Withdrawal Agreement) Act 2020 ('the Withdrawal Act'), this established a transition period, which ended on 31 December 2020. The Withdrawal Act retains the body of existing EU-derived law within UK domestic law. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 amended the 2017 Habitat Regulations to decouple the 2017 Habitats Regulations from the EU Directives, whilst maintaining the protection and processes related to European sites.

The Habitats Regulations (and the Offshore Regulations) enable the protection of sites that host habitats and species of European Importance. These sites are listed below and are collectively referred to as European sites (the term Habitats Sites has also come into use in England and Wales to refer to these sites post-Brexit, but the term European sites is used here for convenience and familiarity):

- Special Area of Conservation (SAC);
- Special Protection Area (SPA); and
- Ramsar Sites.

The sites covered by HRA includes Ramsar sites which are not formally covered by the Regulations (since they do not stem from European Directives) but are included in the process because of guidance in the National Planning Policy Framework which takes account of the fact that they are wetlands of international importance.

Plans and projects can only be permitted if it is determined that there will be no adverse effect of site integrity (AEOSI). If adverse effects on integrity are identified, alternatives must be considered to avoid the effects. If there are no alternatives, and an adverse effect on integrity remains, a further

assessment is made, under the Habitats Regulations, as to whether the scheme is required for imperative reasons of overriding public interest (IROPI). If the scheme meets the IROPI test, compensatory measures will be required to maintain the overall national site network.

In order to ascertain whether or not site integrity will be affected, an assessment should be undertaken of the plan or project in question. While the competent authority (e.g. the local planning authority) makes the formal decision as to whether significant effects are likely, they are entitled to request the applicant to produce the necessary information to assist them.

7.2. Assessment Methodology

This HRA has been carried out with reference to general guidance on HRA published by the UK government in February 2021 (Defra *et al*., 2021). This assessment of Likely Significant Effect (LSE) and AEOSI takes account of relevant EU case law (for instance, the Holohan and People over Wind cases, discussed below).

The stages of HRA, according to PINS Advice Note 10, are outlined in **Figure 3** below.

Whilst the need for Appropriate Assessment (AA) must be determined by the competent authority, the information needed to allow the competent authority to make this determination must be provided by the applicant. The information needed for the competent authority to establish whether there are any AEOSI of the site from the proposed Project is therefore provided in this Report.

The HRA Process is divided into four stages (**Figure 3**).

7.2.1. HRA Stage 1 – Screening for Likely Significant effect

The objective of the LSE test is to 'screen out' those aspects of a project and/or the European sites that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction (i.e., a pathway) with European sites. Where an LSE cannot be ruled out the remaining aspects are then taken forward to AA. The assessment must also consider the potential for effects 'in combination' with other plans and projects.

Where it is determined that a conclusion of 'no Likely Significant Effect' cannot be drawn, the HRA assessment proceeds to the next stage of HRA known as AA.

7.2.2. The Rochdale Envelope

In July 2018, the Planning Inspectorate published Advice Note Nine: Rochdale Envelope (The Planning Inspectorate, 2018), explaining how the principles of the Rochdale Envelope should be used by planning applications for the Environmental Impact Assessment (EIA) process, though it is equally applicable to non-statutory Environmental Appraisal.

The Rochdale Envelope[8] is applicable where some of the details of a Proposed Development (in this case, proposed activities) cannot be confirmed when an application is submitted, and flexibility is needed to address uncertainty. Notwithstanding, all significant potential effects of a Proposed Development must be properly addressed.

It encompasses three key principles:

- The assessment should use a cautious worst-case approach;
- The level of information assessed should be sufficient to enable the Likely Significant Effects of a Proposed Development to be assessed; and
- The allowance for flexibility should not be abused to provide inadequate descriptions of projects.

This HRA has given due consideration to the use of a Rochdale Envelope approach. A cautious worst-case (i.e., the potentially most impactful) scenario has been assessed in relation to impact pathways.

[8] The Rochdale Envelope arises from two cases: R. v Rochdale MBC ex parte Milne (No.1) and R. v Rochdale MBC ex parte Tew [1999], which are cases that dealt with outline planning applications for a proposed business park in Rochdale.

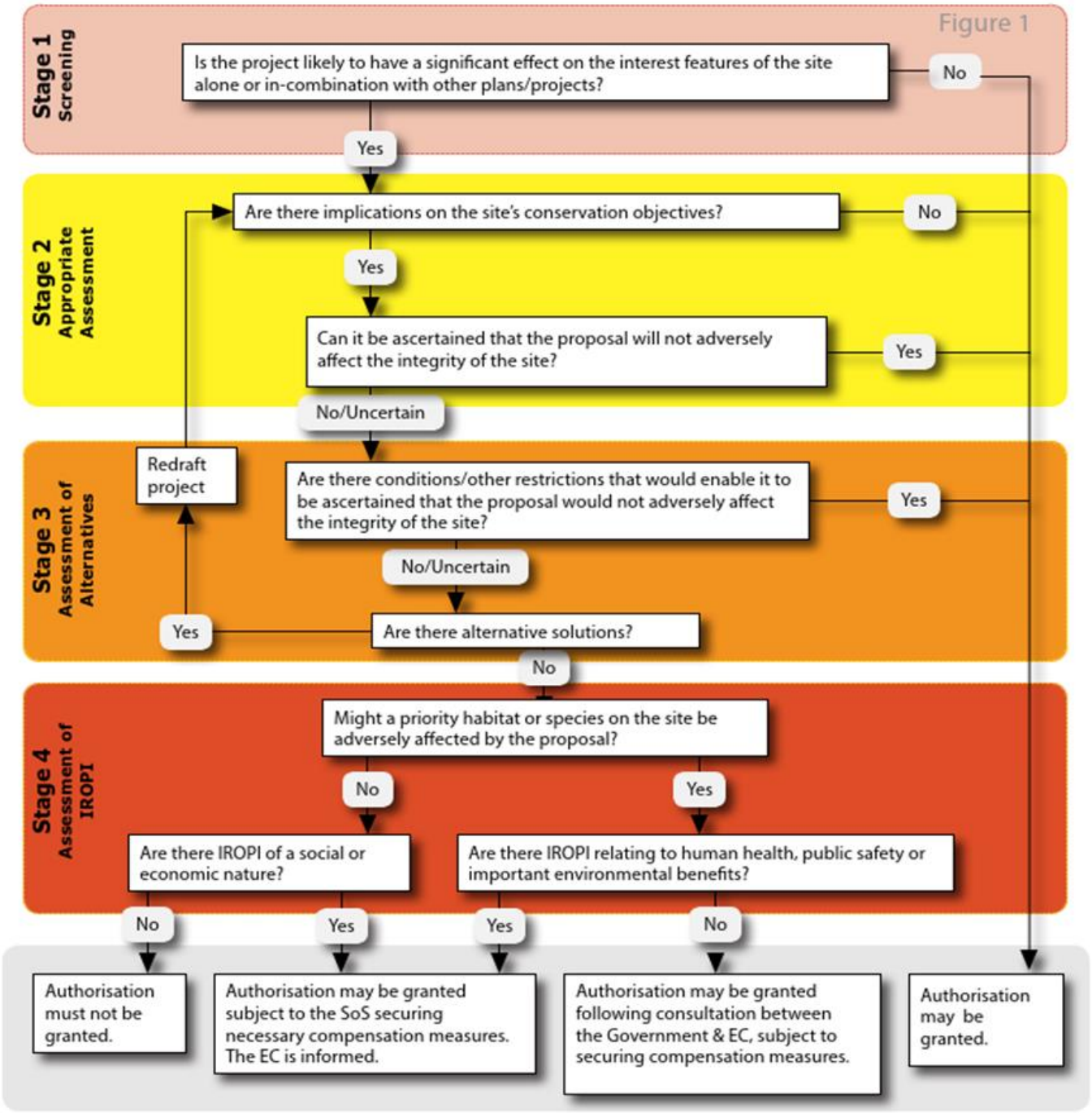


Figure 3. Four Stage approach to Habitats Regulations Assessments of Projects.

7.3. Study Area

There is no guidance that dictates the scope of an HRA and the Study Area for this HRA is largely dictated by the linkages between impact pathways and European site designations. Thus, the Study Area for this HRA extends to those European sites that are included in the test of LSE (**Figure 4**). The relevant European sites considered further, all fell within a 100 km distance from the FLiDAR. The scope of the assessment is primarily guided by the identified impact pathways (the source-pathway-receptor model) for the receptors assessed, detailed in **Section 6** of this report.

The Study Area used has been defined by the ZoI for the farthest-reaching potential impact that could result from the proposed survey activities. As noted in **Section 7.2.2**, the Rochdale Envelope has also been applied to ensure that the baseline data are sufficient to underpin a cautious worst-case assessment of impact pathways. The ZoI, and therefore also the Study Area, recognise the mobility of each receptor and the likely impact pathways to these.

The baseline conditions for marine ecological receptors were determined on the basis of a desk-based study and have been presented in further detail within **Section 4** of this report.

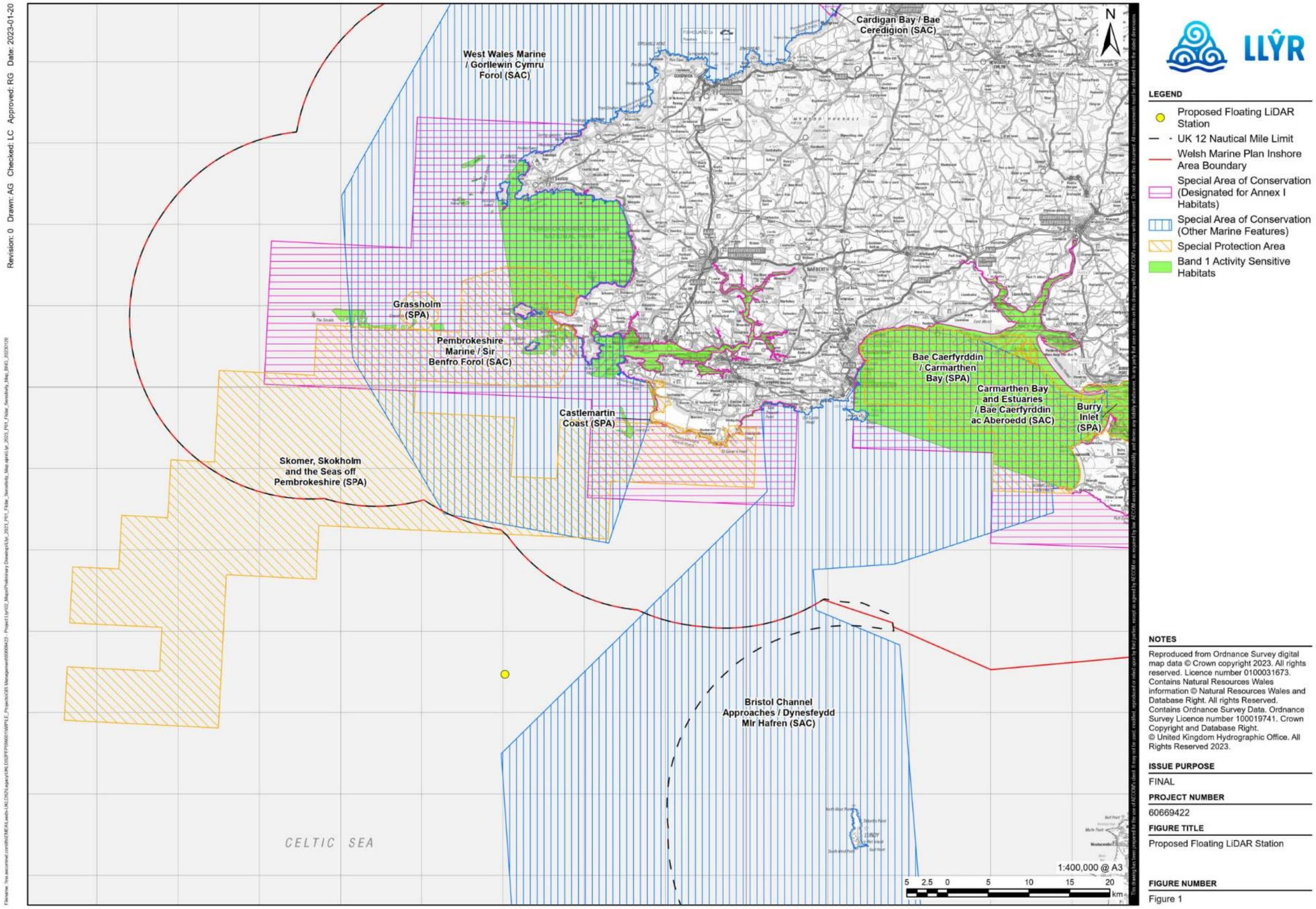


Figure 4. Location of floating LiDAR (FLiDAR) and European sites.

7.4. Screening of Likely Significant Effects

This first stage of the HRA is essentially a high-level risk assessment to decide whether a full Appropriate Assessment is required. It provides an overview of the potential impacts and effects that may occur during the Project, and associated zones of influence (ZoI). The essential question is:

> *'Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon any European site?'*

European designated sites considered within this section are those with qualifying features that have the potential to fall within or utilise the area within (i.e., foraging ranges/migration) the ZoI of Project related activities.

7.4.1. Impact pathway summary

An overview of the most likely impact pathways associated with the proposed survey activities is provided in **Table 6** below. However, all impact pathways outlined in **Table 5** have been considered in the assessment. The impact pathways were identified using prior ecological knowledge, an appraisal of the sensitivity of European sites, and information and guidance in published academic research articles.

Table 6. Likely impact pathways associated with the Floating LiDAR (FLiDAR).

Potential impact pathway	Rationale	ZoI
Direct loss and physical disturbance to benthic habitats and species	The placement of the mooring weights used as part of the FLiDAR mooring system and associated chain connected to the FLiDAR, has the potential to result in the temporary disturbance and/or loss of benthic habitats and species. Potential disturbance of habitat through scour as a result of slack in the chain, is estimated to be 50 m^2 in a worst-case scenario.	50 m^2

7.4.2. Relevant European sites

The location of the proposed FLiDAR and the European sites which have been screened in for the test of LSE is presented in **Figure 4**, whilst the screening assessment is outlined in **Table 7** below.

Table 7. Screening of European sites for Likely Significant Effect (LSE) during the Floating LiDAR (FLiDAR) survey activities.

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
Bristol Channel Approaches/Dynesfeydd Môr Hafren SAC (UK0030396)	6.63	*Annex II Species* • Harbour porpoise *Phocoena phocoena*.	*Annex II Species* The FLiDAR will not consist of any acoustic sound sources which would result in potential disturbance to marine mammals designated as part of this European site. Only one installation vessel will be required for the deployment, maintenance/inspection, and decommissioning of the FLiDAR, which will be present for a maximum of one day in each instance. This does not represent a significant increase in underwater sound or collision risk beyond baseline levels.	**No LSE**
Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA (UK9014051)	17.21	*Annex I Species (Breeding)* • European storm petrel *Hydrobates pelagicus* (A014); • Red-billed chough *Pyrrhocorax pyrrhocorax* (A346); and • Short-eared owl *Asio flammeus* (A222); • Manx shearwater *Puffinus puffinus* (A013); • Atlantic puffin *Fratercula arctica* (A204); and • Lesser Black-backed Gull *Larus fuscus* (A183).	*Annex I Species* The FLiDAR and associated vessel activity is not considered to represent a significant increase in airborne sound or visual disturbance beyond baseline levels. Therefore, the survey will not result in the disturbance of birds associated with this European site.	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
		• *Seabird assemblage* (including kittiwake, guillemot, razorbill).		
West Wales Marine/Gorllewin Cymru Forol SAC (UK0030397)	18.12	Annex II Species • Harbour porpoise *Phocoena phocoena* (1351).	*Annex II Species* The FLiDAR will not consist of any acoustic sound sources which would result in potential disturbance to marine mammals designated as part of this European site. Only one installation vessel will be required for the deployment, maintenance/inspection, and retrieval of the FLiDAR, which will be present for a maximum of one day in each instance. This does not represent a significant increase in underwater sound or collision risk beyond baseline levels.	**No LSE**
Pembrokeshire Marine/Sir Benfro Forol SAC (UK0013116)	23.96	*Annex I Habitats* • Mudflats and sandflats not covered by seawater at low tide (1140); • Coastal lagoons (1150); • Large shallow inlets and bays (1160); • Reefs (1170); • Sandbanks which are slightly covered by sea water all the time (1110);	*Annex I Habitats* The Annex I habitats which are a designated feature of this SAC, are considered to be well beyond the zone of influence (ZoI) of the FLiDAR survey activities. Therefore, a potential pathway of effect is not considered to exist. *Annex II Species* The FLiDAR will not consist of any acoustic sound sources which would result in potential disturbance to marine mammals and migratory fish designated as part of this European site. Only one installation vessel will be required for the deployment, maintenance/inspection, and retrieval of the FLiDAR, which will be present for a maximum of one day in	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
		• Atlantic salt meadows *Glauco-Puccinellietalia maritimae* (1330); • Submerged or partially submerged sea caves (8330); and • Estuaries (1130). *Annex II Species* • River lamprey *Lampetra fluviatilis* (1099); • Sea lamprey *Petromyzon marinus* (1095); • Otter *Lutra lutra* (1355); • Grey seal *Halichoerus grypus* (1364); • Allis shad *Alosa alosa* (1102); • Twaite shad *Alosa fallax* (1103); and • Shore dock *Rumex rupestris* (1441).	each instance. This does not represent a significant increase in underwater sound or collision risk beyond baseline levels.	
Castlemartin Coast SPA (UK9014061)	35.90	*Annex I Species (Breeding)* • Chough Pyrrhocorax pyrrhocorax (A346).	*Annex I Species* The FLiDAR and associated vessel activity is not considered to represent a significant increase in airborne sound or visual disturbance beyond baseline levels. Therefore, the survey	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
			will not result in the disturbance of birds associated with this European site.	
Grassholm / Ynys Gwales SPA (UK9014041)	43.46	*Annex I Species (Breeding)* • Gannet *Morus bassanus* (A016).	*Annex I Species* The FLiDAR and associated vessel activity is not considered to result in significant disturbance to birds designated as part of this SPA.	**No LSE**
Carmarthen Bay and Estuaries/Bae Caerfyrddin ac Aberoedd SAC (UK0020020)	51.03	*Annex I Habitats* • Mudflats and sandflats not covered by seawater at low tide (1140); • Coastal lagoons (1150); • Large shallow inlets and bays (1160); • Reefs (1170); • Sandbanks which are slightly covered by sea water all the time (1110); • Atlantic salt meadows *Glauco-Puccinellietalia maritimae* (1330); • Estuaries (1130); and • *Salicornia* and other annuals colonizing mud and sand (1310).	*Annex I Habitats* The Annex I habitats which are a designating feature of this SAC, are considered to be well beyond the ZoI of the FLiDAR survey activities. Therefore, a potential pathway of effect is not considered to exist. *Annex II Species* The FLiDAR will not consist of any acoustic sound sources which would result in potential disturbance to migratory fish designated as part of this site. Only one installation vessel will be required for the deployment, maintenance/inspection, and retrieval of the FLiDAR, which will be present for a maximum of one day in each instance. This does not represent a significant increase in underwater sound or collision risk beyond baseline levels.	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
		Annex II Species • River lamprey *Lampetra fluviatilis* (1099); • Sea lamprey *Petromyzon marinus* (1095); • Otter *Lutra lutra* (1355); • Allis shad *Alosa alosa* (1102); and • Twaite shad *Alosa fallax* (1103).		
Bae Caerfyrddin / Carmarthen Bay SPA (UK9014091)	55.34	*Annex I Species (Wintering)* • Common scoter *Melanitta nigra* (A065).	*Annex I Species* The FLiDAR and installation vessel is not considered to result in significant disturbance to birds designated as part of this SPA.	**No LSE**
Burry Inlet SPA (and Ramsar) (UK9015011)	77.29	*Annex I Species (Wintering)* • Oystercatcher *Haematopus ostralegus* (A130); • Knot *Calidris canutus* (A143); • Turnstone *Arenaria interpres* (A169); • Pintail *Anas acuta* (A054); • Shoveler *Anas clypeata* (A056); • Teal *Anas crecca* (A052);	*Annex I Species* The FLiDAR and installation vessel is not considered to result in significant disturbance to birds designated as part of this SPA.	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
		• Wigeon *Anas penelope* (A050); • Dunlin *Calidris alpina* (A672); • Curlew *Numenius arquata* (A160); • Grey plover *Pluvialis squatarola* (A141); • Redshank *Tringa totanus* (A162); and • Shelduck *Tadorna tadorna* (A048).		
Cardigan Bay/Bae Ceredigion SAC (UK0012712)	90.27	*Annex I Habitats* • Reefs (1170); • Sandbanks which are slightly covered by sea water all the time (1110); and • Submerged or partially submerged sea caves (8330). *Annex II Species* • Grey seal *Halichoerus grypus* (1364); • Sea lamprey *Petromyzon marinus* (1095); • Bottlenose dolphin *Tursiops truncatus* (1349).; and	*Annex I Habitats* The Annex I habitats which are a designating feature of this SAC, are considered to be well beyond the ZoI of the FLiDAR survey activities. Therefore, a potential pathway of effect is not considered to exist. *Annex II Species* The FLiDAR will not consist of any acoustic sound sources which would result in potential disturbance to migratory fish designated as part of this site. Only one installation vessel will be required for the deployment, maintenance/inspection, and retrieval of the FLiDAR, which will be present for a maximum of one day in each instance. This does not represent a significant increase in underwater sound or collision risk beyond baseline levels.	**No LSE**

Designated site	Approximate distance from the FLiDAR location (km)	Designated features (feature / habitat code)	Justification	Screening decision
		• River lamprey *Lampetra fluviatilis* (1099).		

7.4.1. Summary of the test of Likely Significant Effect

Based on the ZoI of the potential impact pathways (**Table 6**) and the screening for LSE in **Table 7**, it can be concluded that the FLiDAR survey activities are not considered to result in any potential pathways of effects to European designated sites and their features. It is therefore considered that AA is not necessary.

7.4.2. In-combination plans and project

It is a requirement of the Conservation of Habitats and Species Regulations that the impacts of any plan or project being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European site in question.

Any effects as a result of the FLiDAR survey activities will be temporary, short-term, and highly localised. Therefore, it has been concluded that any effects due to the survey activities are not significant, and therefore it not considered to have any in-combination effects with other projects which may occur concurrently.

8. Water Framework Directive

8.1. Background

The Water Framework Directive (WFD) (2000/60/EC) was implemented in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (HM Government, 2017).

The WFD requires all European countries to manage the water environment to consistent standards. This will be achieved through a number of objectives, which include:

- Preventing deterioration in the status of aquatic ecosystems, protecting them, and improving the ecological condition of waters; and
- Aiming to achieve at least good status for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027.

Any new development must ensure that these two fundamental requirements of the Directive are not compromised.

8.2. Baseline

The location of the proposed activities lies beyond the boundaries of any WFD waterbodies (**Figure 5**). The closest WFD body is Pembrokeshire South which is approximately 33 km away from the proposed FLiDAR location and is currently considered to be in 'Good' status.

8.3. Appraisal

Due to the location of the proposed FLiDAR lying significantly beyond the boundaries of any WFD waterbodies, it is determined that the survey activities will not hinder the status of any WFD waterbodies, nor prevent them from achieving their objectives. In addition, taking into account the small scale, short-term, and temporary nature of the activities, it is not considered that the proposed activities will have any detrimental effect on the water quality of the surrounding area.

Therefore, any risks to WFD waterbodies have been screened out, and no further assessment is required.

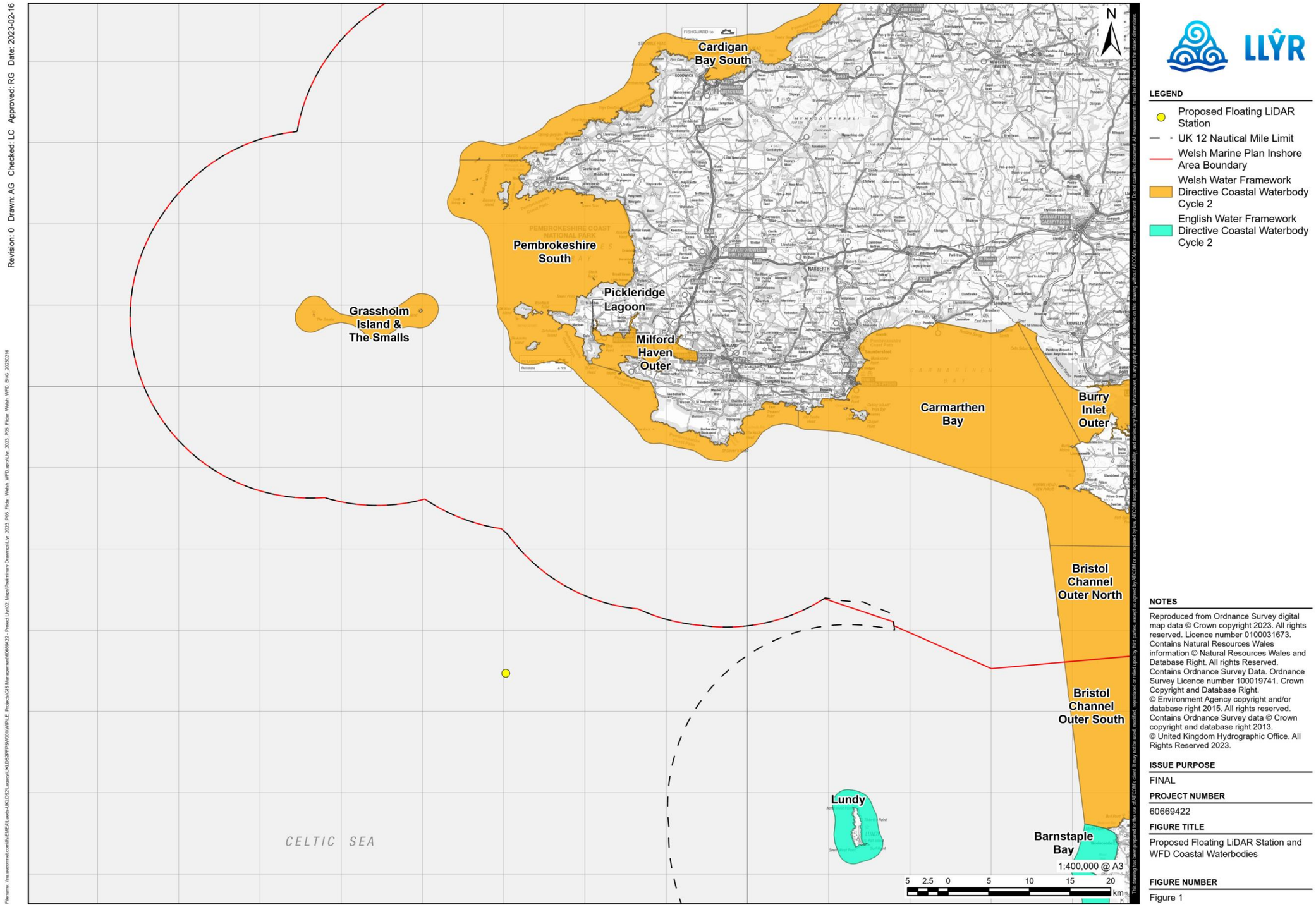


Figure 5. Location of floating LiDAR (FLiDAR) and Water Framework Directive (WFD) waterbodies.

9. ADDITIONAL MITIGATION AND ENHANCEMENT MEASURES

No mitigation and enhancement measures have been proposed to prevent effects to marine ecology. However, a number of project controls and best practise measures have been adopted which are outlined in **Section 5**.

Furthermore, mitigation measures have been provided in relation to shipping and navigation in **Appendix B**.

10. CONCLUSIONS

10.1. Key findings of Environmental Appraisal Report

This EAR has concluded that any effects to the marine environment as a result of the proposed survey activities are **not significant**, given the conclusions presented in **Section 6**.

10.2. Key findings of Habitats Regulations Assessment

The HRA that has been prepared in support of this EAR, screened out all designated sites from the need for AA for all impact pathways. No likely significant effects alone or in combination with other plans or projects are anticipated.

A conclusion of **No Likely Significant Effects** was determined, and **no further stages of HRA will be required** (see **Section 7**).

10.3. Key findings of Water Framework Directive assessment

It was determined that a WFD appraisal was not required for the FLiDAR survey. Given the significant distance from which the FLiDAR is located from any WFD waterbodies, it is not considered that the survey activities will have any detrimental effect on the current water quality status of these waterbodies.

11. REFERENCES

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Appendix A Method Statement

Appendix B Vessel Traffic Risk Assessment

Appendix C Welsh National Marine Plan Signposting