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Form

Record of a Habitats Regulations Assessment of a project

March 2016

OGN 200 Form 1

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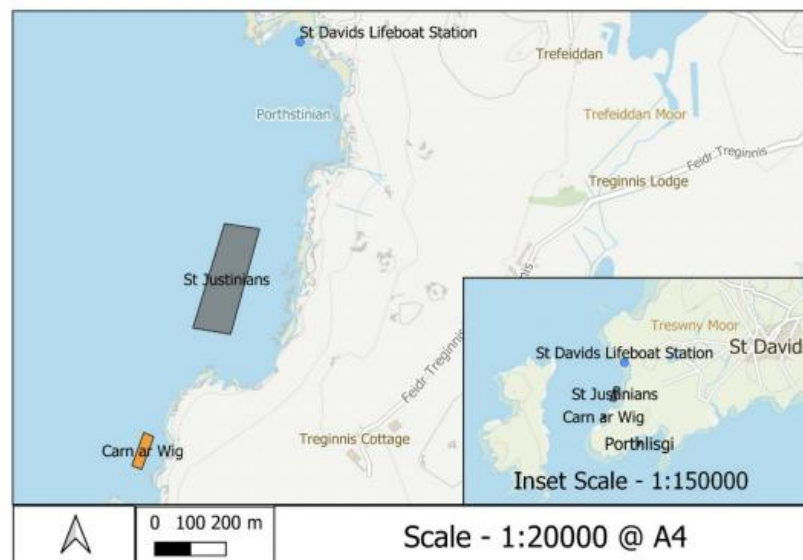
Review Date: February 2017

Record of a Habitats Regulations Assessment of a project

1. Project Details

1(a): Project details where an external party has applied to NRW for any form of authorisation	
Application reference number (if applicable)	DEML2151v1
Date application received	15/09/2023
Applicant details	Câr-y-Môr (For the Love of the Sea) Ltd
Activity proposed	Câr-y-Môr is a 3 hectare Integrated Multi-Trophic Aquaculture (IMTA) Seaweed and Shellfish site in Ramsey Sound. The farm will be composed of seaweed and shellfish (mussels) on ropes with Native oyster cages on the seabed for human consumption. The Farm is to be run by a community cooperative.
Relevant legislation	Conservation of Habitats and Species Regulations 2017 Marine and Coastal Access Act (2009)
Location	Application site name is St Justinian's, located in Ransey Sound. Coordinates and a map of the application area are presented below.

St Justinians Proposed Site	
Longitude	Latitude
-5.312440965606686	51.87332853640763
-5.3137350082397505	51.87070162364426
-5.3121900558471715	51.87054263792684
-5.311006965606687	51.87319753571296



Application documents

The application documents can be found on the Public register at:
<https://publicregister.naturalresources.wales/Search/Results?SearchTerm=DEML2151>

PEDW Appeal Decision Document CAS-02246-C1H3Q3

	<u>Documents submitted:</u> <i>Marine Works Band 2 Application Form (v2) (07/10/21)</i> <i>Biosecurity Plan v1 (04/10/21)</i> <i>Environmental Report v1(04/10/21)</i> <i>WFD Scoping v1 (06/10/21)</i> <i>Navigational Risk Assessment v1 (04/10/21)</i>
Environmental Statement	N/A
Pre-application correspondence	Correspondence with MLT with regard to supporting document requirements and submission of application. Input from Rowland Sharp to inform applicants Environmental report/HRA.
NRW team responsible for drafting this HRA report, and name of lead officer	Marine Licensing Team (Seran Davies)

2. Determining the need for a Habitats Regulations Assessment

2.1 Is the whole of the project directly connected with or necessary to the management of one or more Natura 2000 sites, for the purposes of conserving the habitats or species for which the Natura 2000 site(s) is/are designated?	No
2.2 Is there a possibility that the project could affect a different Natura 2000 site to the one(s) the project is intended to conserve?	N/A
2.3 Is it necessary to carry out an HRA?	Yes

3. Considering the likelihood of a significant effect (LSE)

3.1 Renewal of a permission on the same or more restrictive terms as the extant permission

Is this project a renewal of a current permission which complies with NRW approved criteria for ruling out significant effects of renewals (see section 6.2A of OGN 200) without conducting a project-specific LSE test?	No
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3.2 Likelihood of significant effects (LSE) test

3.2.1 Which Natura 2000 sites might be affected by the proposal?	Based on the project specification or information provided in the application, it is considered that the following Natura 2000 sites have features which could be affected by the project: <i>Pembrokeshire Marine Special Area of Conservation (SAC)/ Sir Benfro Forol SAC-UK0013116</i> <i>Bristol Channel Approaches SAC-UK0030396</i> <i>West Wales Marine / Gorllewin Cymru Forol SAC-UK0030397</i> <i>Cardigan Bay SAC / Bae Ceredigion SAC- UK0012712</i> <i>Pen Llyn a'r Sarnau SAC / Llyn Peninsula and the Sarnau SAC- UK0013117</i> <i>North Anglesey Marine / Gogledd Môn Forol SAC- UK0030398</i> <i>Ramsey & St Davids Peninsula Coast Special Protection Area (SPA)- UK9014062</i> <i>St David's SAC- UK0013045</i> <i>Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgoggwm a Moroedd Penfro SPA- UK9014051</i> <i>Grassholm SPA- UK9014041</i> The potential for the project to affect the following Natura 2000 sites was also initially considered, but can be ruled out without further consideration: N/A
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3.2.2 Screening assessment

	Assessment of likelihood of significant effect	
	I Relevant conservation objectives	II Potential impact pathway
Pembrokeshire Marine/Sir Benfro SAC		
Large shallow inlets & bays [1160]	<u>RANGE</u> The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the inlets and bays feature these include; • The embayment of St. Brides Bay • The ria of Milford Haven	<u>Loss of habitat & damage to habitat</u> Potential impact pathway from the infrastructure of the Project; most notably the anchors, associated chains and native oyster cages. Therefore, this potential impact pathway is to be screened in. <u>Impacts of shading/settlement from seaweed</u>

	• Peripheral embayments and inlets For the coastal lagoons feature this is subject to the requirements for maintenance of the artificial impoundment structure and maintenance of the lagoons for the original purpose or subsequent purpose that pre-dates classification of the site. <u>STRUCTURE AND FUNCTION</u> The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; - geology, - sedimentology, - geomorphology, - hydrography and meteorology, - water and sediment chemistry, - biological interactions. This includes a need for nutrient levels in the water column and sediments to be: • at or below existing statutory guideline concentrations • within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: • at or below existing statutory guideline concentrations • below levels that would potentially result in increase in contaminant concentrations within sediments or biota • below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range. <u>Restoration and recovery</u> As part of this objective it should be noted that; the Milford Haven waterway complex would benefit from restorative action, for example through the removal of non-natural beach material, and the removal,	There is a potential impact pathway through shading of benthic habitats from the Project's infrastructure. Also seaweed and/or mussels self-seeding from the ropes and settling on the seabed leading to a change in benthic habitat. Therefore, this potential impact pathway is to be screened in. <u>Introduction of non-native invasive species</u> There is a potential impact pathway through the accidental introduction of invasive species through introduction of seeded ropes and oysters i.e. hitchhikers or species accidentally introduced due to poor biosecurity practices. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Indirect impacts caused from impacts to hydrodynamics</u> The Project's infrastructure may affect the local hydrodynamic regime, causing a secondary impact to this feature. Therefore, this potential impact pathway is to be screened in.
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	replacement or improved maintenance of rock filled gabions. There is also need for some restoration of the populations of several typical species of the Milford Haven waterway complex that are severely depleted with respect to historical levels as a consequence primarily of human exploitation. In the Milford Haven waterways complex inputs of nutrients and contaminants to the water column and sediments derived from human activity must remain at or below levels at the time the site became a candidate SAC. For the lagoons feature this is subject to the requirements for maintenance of the artificial impoundment structures of coastal lagoons and maintenance of the lagoons for their original purpose or subsequent purpose that pre-dates classification of the site.	<u>Impacts of Marine litter</u> The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they are allowed to degrade or from continual exposure to wave action. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (refer to entanglement impacts below). Therefore, this potential impact pathway is to be screened in.
Estuaries & Milford haven waterway complex [1130]	<u>TYPICAL SPECIES</u> The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include - species richness: - population structure and dynamics,	Due to the location of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Atlantic salt-meadow [1330]	- physiological health, - reproductive capacity - recruitment, - mobility - range	Due to the location of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Mud-flats and sand-flats not covered by seawater at low tide [1140]	As part of this objective it should be noted that: • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and be secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term.	Due to the location of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Coastal lagoons [1150]	<u>Restoration and recovery</u>	Due to the location of the project and the distance between the designated feature and the works there are no impacts predicted.

	For the inlets and bays features this includes the need for some restoration of the populations of several typical species which are severely depleted with respect to historical levels as a consequence, primarily of human exploitation. In the Milford Haven waterways complex inputs of nutrients and contaminants to the water column and sediments derived from human activity must remain at or below levels at the time the site became a candidate SAC.	Therefore, potential impact pathways to this designated feature can be screened out.
Reefs [1170]		<u>Loss of habitat/damage to habitat</u> There is a potential impact pathway identified from the infrastructure of the Project; most notably the anchors and the native oyster cages on subtidal reef habitat (no habitat loss is predicted for the intertidal rocky reef feature located >200m from the Project). Therefore, this potential impact pathway is to be screened in. <u>Impacts of shading/settlement from seaweed</u> There is a potential impact pathway through shading of benthic habitats from the Project's infrastructure. Also seaweed and/or mussels self-seeding from the ropes and settling on the seabed leading to a change in benthic habitat. Therefore, this potential impact pathway is to be screened in. <u>Introduction of non-native invasive species</u> There is a potential impact pathway through the accidental introduction of invasive species through introduction of seeded ropes and oysters i.e. hitchhikers or species accidentally introduced due to poor biosecurity practices. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project.

		Therefore, this potential impact pathway is to be screened in. <u>Indirect impacts caused from impacts to hydrodynamics</u> The Project's infrastructure may affect the local hydrodynamic regime, causing a secondary impact to this feature. Therefore, this potential impact pathway is to be screened in. <u>Impacts of Marine litter</u> The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they are allowed to degrade or from continual exposure to wave action. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (refer to entanglement impacts below). Therefore, this potential impact pathway is to be screened in.
Submerged or partially submerged sea caves [8330]		<u>Loss of habitat/damage to habitat</u> There is no potential impact pathway identified from the infrastructure of the Project due to distance of the feature from the Project installation area. Therefore, this potential impact pathway is to be screened out. <u>Impacts of shading/settlement from seaweed</u> There is no potential impact pathway through shading of benthic habitats from the Project's infrastructure. Also seaweed and/or mussels self-seeding from the ropes and settling on the seabed leading to a change in benthic habitat.

		Therefore, this potential impact pathway is to be screened out. <u>Introduction of non-native invasive species</u> There is a potential impact pathway through the accidental introduction of invasive species through introduction of seeded ropes and oysters i.e. hitchhikers or species accidentally introduced due to poor biosecurity practices. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Indirect impacts caused from impacts to hydrodynamics</u> The Project's infrastructure may affect the local hydrodynamic regime, causing a secondary impact to this feature. Therefore, this potential impact pathway is to be screened in. <u>Impacts of Marine litter</u> The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they are allowed to degrade or from continual exposure to
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		wave action. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (refer to entanglement impacts below). Therefore, this potential impact pathway is to be screened in.
Sandbanks which are slightly covered by seawater all the time [1110]		Due to the distance between the designated feature and the Project (>11km) there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Grey Seal (<i>Halichoerus grypus</i>) [1364]	<u>POPULATIONS</u> The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that for otter and grey seal; • Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal, populations should not be reduced as a consequence of human activity <u>RANGE</u> The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for otter and grey seal • Their range within the SAC and adjacent inter-connected areas is not constrained or hindered • There are appropriate and sufficient food resources within the SAC and beyond • The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to the grey seal and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in.

	<u>SUPPORTING HABITATS AND SPECIES</u> The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include; - distribution, - extent, - structure, - function and quality of habitat, - prey availability and quality. As part of this objective it should be noted that; • The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. • The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. • Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. • Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour • For otter there are sufficient sources within the SAC and beyond of high quality freshwater for drinking and bathing.	<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
Otter (<i>Lutra lutra</i>) [1355]		<u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
Shad <i>Alosa</i> spp [1102 & 1103]		No potential impact pathways are identified and impacts to this designated feature can therefore be screened out.
River Lamprey (<i>Lampetra fluviatilis</i>) [1099]		No potential impact pathways are identified and impacts to this designated feature can therefore be screened out.
Sea lamprey (<i>Petromyzon marinus</i>) [1095]	<u>Restoration and recovery</u> In the Milford Haven waterways complex inputs of nutrients and contaminants to the water column and sediments derived from human activity must remain at or below levels at the time the site became a candidate SAC. As part of this objective it should be noted that for the otter, populations should be increasing	No potential impact pathways are identified and impacts to this designated feature can therefore be screened out.
Shore Dock (<i>Rumex rupestris</i>) [1441]		Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.

St Davids SAC		
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	4.1.1 Maritime cliff and crevice vegetation Extent should be stable in the long term. Quality (including in terms of ecological structure and function) should be being maintained, or where appropriate improving. Populations of the habitat's typical species must be being maintained or where appropriate increasing. 4.1.2 Maritime grassland The extent should be stable in the long term, or where appropriate increasing. Quality (including in terms of ecological structure and function) should be being maintained, or where appropriate improving. Populations of the habitat's typical species must be being maintained or where appropriate increasing. Factors affecting the extent and quality of the habitat and its typical species (and thus affecting the habitat's future prospects) should be under appropriate control. 4.1.3 Maritime heathland The extent should be stable in the long term, or Where appropriate increasing. Quality (including in terms of ecological structure and function) should be being maintained, or Where appropriate improving. Populations of the habitat's typical species must be being maintained or where appropriate increasing. Factors affecting the extent and quality of the habitat and its typical species (and thus affecting the habitat's future prospects) should be under appropriate control.	No potential impact pathways are identified and impacts to this designated feature can therefore be screened out .
European dry heath [4030]	The extent should be stable in the long term, small decrease are acceptable as management reverts dry heath to maritime heath.	No potential impact pathways are identified and impacts to this designated feature can therefore be screened out .

	Quality (including in terms of ecological structure and function) should be being maintained, or where appropriate improving. Populations of the habitat's typical species must be being maintained or where appropriate increasing. Factors affecting the extent and quality of the habitat and its typical species (and thus affecting the habitat's future prospects) should be under appropriate control.	
Floating water Plantain [1831]	The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The distribution of the population should be being maintained, or where appropriate increasing. There should be sufficient habitat, of sufficient quality, to support the population in the long term. Factors affecting the population or its habitat should be under appropriate control.	No potential impact pathways are identified and impacts to this designated feature can therefore be screened out .
Ramsey & St Davids Peninsula Coast SPA/SAC		
Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]	The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The breeding population of Chough is at least 11 pairs • Breeding success averages at least 2.5 chicks/pair • Sufficient suitable habitat is present to support the populations • The factors affecting the feature are under control	The Project is wholly marine and not considered to impact the grassland cliffs. The activities and vessels associated with the Project are not considered to have a disturbance effect on this feature. Therefore, potential impact pathways to this designated feature can be screened out.
Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgoggwm a Moroedd Penfro SPA		
European storm petrel (<i>Hydrobates pelagicus</i>) [A014]	Conservation objectives for these features: • The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term. • The distribution of the population should be being maintained, or where appropriate increasing. • There should be sufficient habitat, of sufficient quality, to support the population in the long term. • Factors affecting the population or its habitat should be under appropriate control.	<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project.

		Therefore, this potential impact pathway is to be screened in. <u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to this species and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk.
Red-billed chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]		The Project is wholly marine and not considered to impact the grassland cliffs. The activities and vessels associated with the Project are not considered to have a disturbance effect on this feature. Therefore, potential impact pathways to this designated feature can be screened out.
Short eared owl (<i>Asio flammeus</i>) [A222]		The Project is wholly marine and not considered to impact the grassland cliffs. The activities and vessels associated with the Project are not considered to have a disturbance effect on this feature. Therefore, potential impact pathways to this designated feature can be screened out.
Manx shearwater (<i>Puffinus puffinus</i>) [A013]		Foraging areas for this species have been confirmed as to the North and the West of the SPA (based upon GPS tracking e.g. Guildford et al, 2008¹). No overlap with the Project located to the east some 250m off the mainland is anticipated. Therefore, potential impact pathways to this designated feature can be screened out.
Atlantic puffin (<i>Fratercula arctica</i>) [A204]		<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project.

¹ Guildford, T.C., Meade, J., Freeman, D., Biro, T., Evans, F., Bonadonna, D. Boyle, S., Roberts, C. and Perrins, M. GPS Tracking of the foraging movements of Manx Shearwaters *Puffinus puffinus* breeding on Skomer Island, Wales. IBIS: International Journal of Avian Science. Vol 150. Issue 3. Pp 462-473.

		Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to this species and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk.
Lesser black-backed gull (<i>Larus fuscus</i>) [A183]		<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to this species and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk.

Sea bird assemblage [SBA]		<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to this species and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk.
Grassholm SPA		
Gannet (<i>Morus bassanus</i>) [A016]	The objectives for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The population will not fall below 30,000 pairs in three consecutive years, • It will not drop by more than 25% of the previous year's figures in any one year. • There will be no decline in this population significantly greater than any decline in the North Atlantic population as a whole.	<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project.

		Therefore, this potential impact pathway is to be screened in. <u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to this species and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk.
Bristol Channel approaches / Dynesfeydd Môr Hafren SAC		
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	To avoid deterioration of the habitats of the harbour porpoise or significant disturbance to the harbour porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise. To ensure for harbour porpoise that, subject to natural change, the following attributes are maintained or restored in the long term: 1. The species is a viable component of the site. 2. There is no significant disturbance of the species. 3. The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to marine mammals and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in.

		<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
North Anglesey Marine / Gogledd Môn Forol SAC		
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	To avoid deterioration of the habitats of the harbour porpoise or significant disturbance to the harbour porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise. To ensure for harbour porpoise that, subject to natural change, the following attributes are maintained or restored in the long term: 1. The species is a viable component of the site. 2. There is no significant disturbance of the species. 3. The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to marine mammals and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u>

		There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
West Wales Marine / Gorllewin Cymru Forol SAC		
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	To avoid deterioration of the habitats of the harbour porpoise or significant disturbance to the harbour porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise. To ensure for harbour porpoise that, subject to natural change, the following attributes are maintained or restored in the long term: 1. The species is a viable component of the site. 2. There is no significant disturbance of the species. 3. The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to marine mammals and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u>

		There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
Cardigan Bay SAC / Bae Ceredigion SAC		
Sandbanks which are slightly covered by seawater all the time [1110]	RANGE The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include; • Intertidal bedrock reefs	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Reefs [1170]	• Intertidal cobble, pebble with Sabellaria alveolata (biogenic) reefs • Subtidal bedrock reefs • Subtidal pebble, cobble and boulder reefs • Sea caves STRUCTURE AND FUNCTION The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; - geology, - sedimentology, - geomorphology, - hydrography and meteorology, - water and sediment chemistry, - biological interactions.	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Submerged or partially submerged sea caves [8330]	The physical biological and chemical structure and functions necessary for the long-term maintenance and quality of the habitat are not degraded. Important elements include; - geology, - sedimentology, - geomorphology, - hydrography and meteorology, - water and sediment chemistry, - biological interactions. This includes a need for nutrient levels in the water column and sediments to be: • at or below existing statutory guideline concentrations • within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range. Contaminant levels in the water column and sediments derived from human activity to be: • at or below existing statutory guideline concentrations • below levels that would potentially result in increase in contaminant concentrations within sediments or biota	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.

	• below levels potentially detrimental to the long-term maintenance of the feature species populations, their abundance or range taking into account bioaccumulation and biomagnification. TYPICAL SPECIES The presence, abundance, condition and diversity of typical species is such that habitat quality is not degraded. Important elements include - species richness: - population structure and dynamics, - mobility- range - physiological health, - reproductive capacity- recruitment, As part of this objective it should be noted that: • populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term • the management and control of activities or operations likely to adversely affect the habitat feature is appropriate for maintaining it in favourable condition and is secure in the long term.	
Grey Seal (<i>Halichoerus grypus</i>) [1364] Bottlenose dolphin (<i>Tursiops truncatus</i>) [1349]	POPULATIONS The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements include: - population size - structure, production - condition of the species within the site. As part of this objective it should be noted that for bottlenose dolphin and grey seal; • Contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression For grey seal populations should not be reduced as a consequence of human activity RANGE	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to marine mammals and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u>

	The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin and grey seal • Their range within the SAC and adjacent inter-connected areas is not constrained or hindered • There are appropriate and sufficient food resources within the SAC and beyond • The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing SUPPORTING HABITATS AND SPECIES The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include; - distribution- extent- structure - function and quality of habitat- prey availability and quality. As part of this objective it should be noted that; • The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. • The management and control of activities or operations likely to adversely affect the species feature is appropriate for maintaining it in favourable condition and is secure in the long term. • Contamination of potential prey species should be below concentrations potentially harmful to their physiological health. • Disturbance by human activity is below levels that suppress reproductive success, physiological health or long-term behaviour Restoration and recovery As part of this objective it should be noted that for the bottlenose dolphin populations should be	There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
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	increasing.	
Pen Llyn a'r Sarnau SAC / Llyn Peninsula and the Sarnau SAC		
Reefs [1170]	RANGE The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. For the reef feature these include: -Rocky intertidal reefs -Rocky subtidal reefs	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Large shallow inlets & bays [1160]	-Extensive boulder and cobble reefs – the Sarnau -Biogenic reefs (horse mussel <i>Modiolus modiolus</i> reef / green crenella <i>Musculus discors</i> reef and Honeycomb worm <i>Sabellaria alveolata</i> reef -Carbonate reef formed by methane gas leaking from the seabed.	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Sandbanks which are slightly covered by seawater all the time [1110]	For the intertidal mudflat and sandflat feature these include: -<i>Mya arenaria</i> and polychaetes in muddy gravel -Eel grass <i>Zostera marina</i> beds. -Muddy gullies in the Mawddach estuary.	Due to the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Estuaries [1130]	For the Salicornia feature this includes: -Communities characterised by the species <i>Sarcocornia perennis</i>. For the intertidal mudflats and sandflats and sandbanks features this requires an overall stability or increase in the amount of the feature, taking into account the areas of long term stability and localised losses and additions arising from environmental processes.	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Coastal Lagoons [1150]	For estuaries this includes the stability of sandy sediments in proportion to the muddy sediments. Restoration and recovery As part of this objective it should be noted that; for the estuaries feature additional land which should form an integral part of the estuarine ecosystem should be restored	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Mudflats and sandflats not covered by seawater at low tide [1140]	STRUCTURE AND FUNCTION The physical, biological and chemical structure and functions necessary for the long-term maintenance and	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted.

	quality of the habitat are not degraded. Important elements include: -geology -sedimentology -geomorphology, -hydrography and meteorology -water and sediment chemistry -biological interactions.	Therefore, potential impact pathways to this designated feature can be screened out.
Atlantic salt meadows [1330]	This includes a need for nutrient levels in the water column and sediments to be: -at or below existing statutory guideline concentrations within ranges that are not potentially detrimental to the long term maintenance of the features species populations, their abundance and range.	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Salicornia and other annuals colonising mud and sand [1310]	Contaminant levels in the water column and sediments derived from human activity to be: -at or below existing statutory guideline concentrations below levels that would potentially result in increase in contaminant concentrations within sediments or biota below levels potentially detrimental to the long-term maintenance of the features species populations, their abundance or range.	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.
Submerged or partially submerged sea caves [8330]	For Atlantic saltmeadows this includes the morphology of the saltmarsh creeks and pans Restoration and recovery As part of this objective it should be noted that; for the estuaries feature the structure and functions of the estuaries that have been damaged/degraded by the constraints of artificial structures such as flood banks, are restored. TYPICAL SPECIES The presence, abundance, condition and diversity of typical species are such that habitat quality is not degraded. Important elements include: -species richness -population structure and dynamics, -physiological health, -reproductive capacity -recruitment, -mobility -range As part of this objective it should be noted that:	Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.

	-populations of typical species subject to existing commercial fisheries need to be at an abundance equal to or greater than that required to achieve maximum sustainable yield and secure in the long term -the management and control of activities or operations likely to adversely affect the habitat feature, is appropriate for maintaining it in favourable condition and is secure in the long term. Restoration and recovery As part of this objective it should be noted that; for the reefs feature the potential for expansion of the horse mussel <i>Modiolus modiolus</i> community off the north Llŷn coast is not inhibited.	
Grey Seal (<i>Halichoerus grypus</i>) [1364]	POPULATIONS The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. As part of this objective it should be noted that : -for bottlenose dolphin, otter and grey seal; contaminant burdens derived from human activity are below levels that may cause physiological damage, or immune or reproductive suppression -grey seal populations should not be reduced as a consequence of human activity RANGE The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. As part of this objective it should be noted that for bottlenose dolphin, otter and grey seal -Their range within the SAC and adjacent inter-connected areas is not constrained or hindered -There are appropriate and sufficient food resources within the SAC and beyond The sites and amount of supporting habitat used by these species are accessible and their extent and quality is stable or increasing	<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to the grey seal and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project.

	SUPPORTING HABITATS AND SPECIES The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing. Important considerations include; -distribution, -extent, -structure, -function and quality of habitat, -prey availability and quality. As part of this objective it should be noted that; -The abundance of prey species subject to existing commercial fisheries needs to be equal to or greater than that required to achieve maximum sustainable yield and secure in the long term. -The management and control of activities or operations likely to adversely affect the species feature, is appropriate for maintaining it in favourable condition and is secure in the long term. -Contamination of potential prey species should be below concentrations potentially harmful to their physiological health.	Therefore, this potential impact pathway is to be screened in. <u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
Bottlenose dolphin (<i>Tursiops truncatus</i>) [1349]		<u>Impacts from Entanglement</u> There is the potential impact pathway of entanglement in relation to the grey seal and the deployment of ropes for the infrastructure of the project. There is also the issue of ghost fishing gear attaching itself to the ropes and causing a further entanglement risk. There is the potential impact pathway of the seaweed farm to attract fish to the area which could in turn attract predators such as marine mammals, increasing their risk of entanglement. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Disturbance</u> There are potential disturbance impacts to this feature from the vessels associated with the Project. Therefore, this potential impact pathway is to be screened in. <u>Impacts from Displacement</u> There is potential for this feature to be displaced by the infrastructure of the Project. Therefore, this potential impact pathway is to be screened in.

		<u>Accidental pollution incident</u> There is a potential impact pathway through accidental pollution incidents from vessels associated with the project. Therefore, this potential impact pathway is to be screened in.
Otter (<i>Lutra lutra</i>) [1355]		Due to the small nature of the project and the distance between the designated feature and the works there are no impacts predicted. Therefore, potential impact pathways to this designated feature can be screened out.

3.2.3 Screening decision of the project ‘alone’	
(a) If ALL rows in column II of Table 3.2.2 are GREEN	The project is not likely to have a significant effect on any Natura 2000 site, because there is no impact pathway from the project to any Natura 2000 features, and no further consideration under the Habitats Directive/Regulations is required in order to determine the application.
(b) If there are NO rows coloured RED in column II of Table 3.2.2, and there are ANY rows which are BLUE	The project is not likely to have a significant effect on any Natura 2000 sites when considered alone, but the possibility of significant effects in combination with other plans and projects needs to be considered.
(c) If ANY rows in Column II of Table 3.2.2 are RED	The project is likely have a significant effect on one or more Natura 2000 sites and therefore an appropriate assessment is required.

4. Appropriate assessment of the project when considered alone

4.1 Assessment of project as currently defined

Natura 2000 site feature (from Table 3.2.2 – RED rows only)	Impact pathway(s) (from Table 3.2.2)	Description of impacts	Assessment in view of conservation objectives	Can adverse effect on site integrity be ruled out? 'YES' or 'NO' *
Pembrokeshire Marine /Sir Benfro SAC				
Large shallow inlets & bays [1160]	Loss of habitat and damage to habitat	The Project is located within this feature. Benthic habitat will be covered by the footprint of the anchors, ground chains and shellfish (oyster) baskets on the seabed. Neighbouring benthic habitat may be damaged when the above Project infrastructure is installed. Additionally, the benthic habitat may become scoured by the continual movement of the ground chains by the local currents and tidal regime.	The Project methodology includes the placement of anchor blocks, chains and oyster baskets using divers and marine contractors. The ground chains between the anchor blocks, which the ropes are to be attached to, will be taught between blocks to limit movement. There is uncertainty regarding how the Project's infrastructure will interact with this feature; for example water movement may result in baskets, anchors, ground chains moving round, leading to localised scour. Over the long-term licence period this may result in a more significant impact which may not be recoverable. Due to this uncertainty, adverse effect cannot be ruled out for the 20 year duration of the licence.	No
	Shading/settlement from seaweed leading to a change in habitat	The growing of seaweed on ropes in the water column is likely to affect light attenuation which may affect existing benthic habitats and species.	The Project is located within 10m water depth or less and sufficient distance has been planned between the seaweed/shellfish lines for work boat access and to avoid lines from	Yes

		Additionally, seaweed and/or shellfish self-seeding from the ropes and baskets and growing/settling on the seabed may change the existing benthic habitat structure and function. Any settlement during the operational phase e.g. seaweed detritus, organic matter from shellfish may also result in degradation of the seabed and smothering of other features.	crossing over each other. Seaweed will be harvested in the Spring clearing the water column for several months of the year. Due to the size and design of the Project and the constrained growing season, significant effects from shading are unlikely to occur and impacts to this feature and the designated site are not anticipated. Bivalve farms in intertidal high-energy and well flushed areas have been found to have a low impact on sediments, with high dispersal of organic particles (e.g. Gallardi et al. 2014²; Campbell et al. 2018³). Settlement to the seabed and subsequent accumulation from organic matter and detritus is therefore not expected to occur. The seaweed and bivalve species to be used for this Project are natural species sourced from within a 25km radius of the Project Area. Furthermore, the monitoring of the seabed at the two trial farms locations (one of which is within Ramsey Sound to the south of this location) show no evidence of such deposits. In line with the conservation objectives, it is not considered likely that the proposed works will have a significant effect on the overall quality and range of the designated features.	
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² Gallardi, D. (2014). Effects of Bivalve Aquaculture on the Environment and Their Possible Mitigation: A Review. Fisheries and Aquaculture Journal, 05(03). doi:10.4172/2150-3508.1000105

³ Campbell I, Macleod A, Sahlmann C, Neves L, Funderud J, Overland M, Hughes A and Stanley M (2018). The environmental risks associated with the development of seaweed farming in Europe - prioritizing key knowledge gaps. Front. Mar. Sci. 6:107. doi:10.3389/fmars.2019.00107.

	INNS	The introduction of invasive species can have an impact on the population of other species and can alter the ecosystems dynamics. This can lead to a reduction in biodiversity, decreased availability of key resources and higher predation of native species.	In view with the conservation objectives invasive species could degrade some of the designated features listed in table 3.2.2.	No
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	In view with the conservation objectives pollution events could alter water quality and could degrade some of the designated features listed in table 3.2.2.	No
	Hydrodynamics	The Project infrastructure could alter the hydrodynamic regime, which may lead to secondary impacts to this feature.	The Project is located within a bay that lies out of the strongest flows associated with Ramsey Sound and is moderately sheltered from wave action but still exposed to moderately strong currents. Although located within shallow water, the ropes within the water column and the associated anchors and the oyster baskets on the seabed are not expected to alter wave action, tidal flow or affect the dominant currents and no impacts are anticipated to this feature. Additionally, monitoring of the seabed at the two trial farms locations show no evidence of the interruption of tidal flow.	Yes
	Marine Litter	The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. There are 3,872 (15 inch) floats intended for use with the 352 seaweed lines and a further 800 (250 litre) pencil floats intended for use on the 160 shellfish lines. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they	The Project site will be continuously monitored with regular weekly dive checks planned (as stated within the Project's methodology). Therefore, if any flotations appear to be breaking they will be replaced. Additionally, following experience at their trial sites, the equipment and way it is set up has been adjusted to maximise withstanding inclement weather. To protect the equipment the owners also intend to lower lines deeper into the water prior to storm events to protect from wave damage.	Yes

		are allowed to degrade or from continual exposure to wave action. Additionally, there is also a risk of storm damage causing the rope infrastructure to break loose. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (this has been assessed within the entanglement impacts below).	Any plastic waste found on site will always be collected and removed. It is also planned to trial a waste plastic collector at the site and report findings via their work with Bangor University. Impacts to this feature from Marine Litter are therefore considered negligible.	
Reefs [1170]	Loss of habitat and damage to habitat	Benthic habitat will be covered by the footprint of the anchors, ground chains and shellfish (oyster) baskets on the seabed. Neighbouring benthic habitat may be damaged when the above Project infrastructure is installed. Additionally, the benthic habitat may become scoured by the continual movement of the ground chains by the local currents and tidal regime.	The main reef habitat type located within the SAC is rocky reef and encapsulates bedrock, boulders, cobbles and pebbles. The site-specific survey of the Project Area shows the benthic habitat to be mixed; with bedrock and boulders, cobbles and mobile sand and gravel. However, it is noted this survey is very limited in extent and NRW mapping confirms the Project Area to be located directly on top of a reef feature of the SAC When placing and removing the infrastructure the Project have committed to using experienced marine contractors and lifting bags and divers to guide and place the anchors and oyster baskets on the seabed, thereby minimising damage to surrounding habitat. It is also the intention to locate the anchors and ground chains in the areas of softer sediment identified within the Project Area. However, micro-siting of chains/anchors may not always be feasible to avoid impact on Annex I reef features. There is uncertainty regarding how the Project's infrastructure will interact with this feature; for	No

			example water movement may result in baskets, anchor blocks, ground chains moving around, leading to localised scour. Over the long-term licence period this may result in a more significant impact, which may not be recoverable. Due to this uncertainty, adverse effect cannot be ruled out for the 20 year duration of the licence.	
	Shading/settlement from seaweed leading to a change in habitat	The growing of seaweed on ropes in the water column is likely to affect light attenuation which may affect existing benthic habitats and species. Additionally, seaweed and/or shellfish self-seeding from the ropes and baskets and growing/settling on the seabed may change the existing benthic habitat structure and function. Any settlement during the operational phase e.g. seaweed detritus, organic matter from shellfish may also result in degradation of the seabed and smothering of other features.	The Project is located within 10m water depth or less and sufficient distance has been planned between the seaweed/shellfish lines for work boat access and to avoid lines from crossing over each other. Seaweed will be harvested in the Spring clearing the water column for several months of the year. Due to the size and design of the Project and the constrained growing season, significant effects from shading are unlikely to occur and impacts to this feature and the designated site are not anticipated. Bivalve farms in intertidal high-energy and well flushed areas have been found to have a low impact on sediments, with high dispersal of organic particles (e.g. Gallardi et al. 2014; Campbell et al. 2018 (refer to footnotes page 30)). Settlement to the seabed and subsequent accumulation from organic matter and detritus is therefore not expected to occur. The seaweed species to be used for this Project are natural species sourced from within a 25km radius of the Project Area. Bivalves are to be sourced from a Cefas approved hatchery. Furthermore, the monitoring of the seabed at the two trial farms locations (one of which is	Yes

			within Ramsey Sound to the south of this location) show no evidence of such deposits. In line with the conservation objectives, it is not considered likely that the proposed works will have a significant effect on the overall quality and range of the designated features.	
	INNS	The introduction of invasive species can have an impact on the population of other species and can alter the ecosystems dynamics. This can lead to a reduction in biodiversity, decreased availability of key resources and higher predation of native species.	In view with the conservation objectives invasive species could degrade some of the designated features listed in table 3.2.2.	No
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	In view with the conservation objectives pollution events could alter water quality and could degrade some of the designated features listed in table 3.2.2.	No
	Hydrodynamics	The Project infrastructure could alter the hydrodynamic regime, which may lead to secondary impacts to this feature.	The Project is located within a bay that lies out of the strongest flows associated with Ramsey Sound and is moderately sheltered from wave action but still exposed to moderately strong currents. Although located within shallow water, the ropes within the water column and the associated anchors and the oyster baskets on the seabed are not expected to alter wave action, tidal flow or affect the dominant currents and no impacts are anticipated to this feature. Additionally, monitoring of the seabed at the two trial farms locations show no evidence of the interruption of tidal flow.	Yes
	Marine Litter	The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. There are 3,872 (15 inch) floats	The Project site will be continuously monitored with regular weekly dive checks planned (as stated within the Project's methodology).	Yes

		intended for use with the 352 seaweed lines and a further 800 (250 litre) pencil floats intended for use on the 160 shellfish lines. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they are allowed to degrade or from continual exposure to wave action. Additionally, there is also a risk of storm damage causing the rope infrastructure to break loose. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (this has been assessed within the entanglement impacts below).	Therefore, if any flotations appear to be breaking they will be replaced. Additionally, following experience at their trial sites, the equipment and way it is set up has been adjusted to maximise withstanding inclement weather. To protect the equipment the owners also intend to lower lines deeper into the water prior to storm events to protect from wave damage. Any plastic waste found on site will always be collected and removed. It is also planned to trial a waste plastic collector at the site and report findings via their work with Bangor University. Impacts to this feature from Marine Litter are therefore considered negligible.	
Submerged or partially submerged sea caves [8330]	INNS	The introduction of invasive species can have an impact on the population of other species and can alter the ecosystems dynamics. This can lead to a reduction in biodiversity, decreased availability of key resources and higher predation of native species.	In view with the conservation objectives invasive species could degrade some of the designated features listed in table 3.2.2.	No
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	In view with the conservation objectives pollution events could alter water quality and could degrade some of the designated features listed in table 3.2.2.	No
	Hydrodynamics	The Project infrastructure could alter the hydrodynamic regime, which may lead to secondary impacts to this feature.	The Project is located within a bay that lies out of the strongest flows associated with Ramsey Sound and is moderately sheltered from wave action but still exposed to moderately strong currents. Although located within shallow	Yes

			water, the ropes within the water column and the associated anchors and the oyster baskets on the seabed are not expected to alter wave action, tidal flow or affect the dominant currents and no impacts are anticipated to this feature. Additionally, monitoring of the seabed at the two trial farms locations show no evidence of the interruption of tidal flow.	
	Marine Litter	The Project infrastructure includes the use of floatation devices to keep the ropes vertical in the water column. There are 3,872 (15 inch) floats intended for use with the 352 seaweed lines and a further 800 (250 litre) pencil floats intended for use on the 160 shellfish lines. A potential impact has therefore been identified from these floats breaking off and contributing to marine litter if they are allowed to degrade or from continual exposure to wave action. Additionally, there is also a risk of storm damage causing the rope infrastructure to break loose. The ropes required for the Project may also act to entrap existing marine litter which may cause secondary impacts to other features (this has been assessed within the entanglement impacts below).	The Project site will be continuously monitored with regular weekly dive checks planned (as stated within the Project's methodology). Therefore, if any flotations appear to be breaking they will be replaced. Additionally, following experience at their trial sites, the equipment and way it is set up has been adjusted to maximise withstanding inclement weather. To protect the equipment the owners also intend to lower lines deeper into the water prior to storm events to protect from wave damage. Any plastic waste found on site will always be collected and removed. It is also planned to trial a waste plastic collector at the site and report findings via their work with Bangor University. Impacts to this feature from Marine Litter are therefore considered negligible.	Yes
Otter (<i>Lutra lutra</i>) [1355]	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site given its proximity to the intertidal area (<200m).	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes

	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	The conservation objective for grey seal populations at this site is that they should not be reduced as a consequence of human activity. In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the SAC and any displacement of marine mammal species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	Yes

	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Bristol Channel approaches / Dynesfeydd Môr Hafren SAC				
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the SAC and any displacement of marine mammal species from this very small area would not result in a likely significant effect nor prevent	Yes

			the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
West Wales Marine / Gorllewin Cymru Forol SAC				
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the SAC and any displacement of marine mammal species from this very small area would not	Yes

			result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Bristol Channel approaches / Dynesfeydd Môr Hafren SAC				
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the SAC and any displacement of marine mammal	Yes

			species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Cardigan Bay SAC / Bae Ceredigion SAC				
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the	Yes

			SAC and any displacement of marine mammal species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Bottlenose dolphin (<i>Tursiops truncatus</i>) [1349]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the	Yes

			SAC and any displacement of marine mammal species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Pen Llyn a'r Sarnau SAC / Lleyn Peninsula and the Sarnau SAC				
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the	Yes

			SAC and any displacement of marine mammal species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Bottlenose dolphin <i>(Tursiops truncatus)</i> [1349]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	No
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would suppress reproductive success, physiological health or long-term behaviour, which are the conservation objectives for this feature.	Yes
	Displacement	The permanent infrastructure of the Project may displace marine mammals from utilising the habitat e.g. for foraging purposes	The size of the Project site (3 hectares) is less than 0.01% of the areas of the Pembrokeshire Marine SAC and also the West Wales SAC. The habitat the Project is located within is present throughout (and not restricted to) the SAC and any displacement of marine mammal	Yes

			species from this very small area would not result in a likely significant effect nor prevent the conservation objectives from being achieved.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality and affect prey species thereby preventing this conservation for the feature from being achieved..	No
Skomer, Skokholm and the Seas off Pembrokeshire/Sgomer, Sgoggwm a Moroedd Penfro SPA				
European storm petrel (<i>Hydrobates pelagicus</i>) [A014] Atlantic puffin (<i>Fratercula arctica</i>) [A204] Lesser black-backed gull (<i>Larus fuscus</i>) [A183] Sea bird assemblage [SBA]	Entanglement	The infrastructure of the Project, most notably the ropes, may present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk.	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition. Gannets have been observed visiting and foraging at the existing trial sites in Pembrokeshire and it is therefore likely that they and other foraging seabird species would also visit this location. There will be no nets at the site (infrastructure is propose as shellfish cages on seabed and ropes, the latter of which will be kept taut and monitored to ensure they remain as such). There have been no incidences of sea bird entanglement⁴ at the existing two trial locations (both are located within proximity to this site) and, given the same infrastructure is to be used at this location, it is therefore likely that the risk of entanglement to these features is negligible/low. The Applicant have committed to removing ghost fishing gear as soon as encountered (conditioned within the Marine Licence through	Yes

⁴ Câr-y-Môr Environmental Document to inform Habitats Regulations Assessment. Submitted document v2 January 2022.

			the Marine Mammal Entanglement Plan) and have also committed to report any instances of entanglement of seabirds and large fish species to NRW. No adverse effect on site integrity is anticipated from this impact pathway on these features.	
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would affect this species and undermine the conservation objectives of the site. Observations at the nearby trial sites have shown seabirds to utilise the farms for foraging even when vessels are in proximity. No adverse effect on site integrity is anticipated from this impact pathway on these features.	Yes
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality, directly impact this species e.g. oil on feathers and also impact prey species thereby preventing conservation objectives for the feature from being achieved.	No
Grassholm SPA				
Gannet (<i>Morus bassanus</i>) [A016]	Entanglement	The infrastructure of the Project, most notably the ropes, present an entanglement risk to this species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD)	In view with the conservation objectives the proposed works could impact the species being a viable component of the site in favourable condition.	Yes

		thereby attracting this species into the Project area for feeding opportunities which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.	Gannets have been observed visiting and foraging at the existing trial sites in Pembrokeshire and it is therefore likely that they and other foraging seabird species would also visit this location. There will be no nets at the site (infrastructure is propose as shellfish cages on seabed and ropes, the latter of which will be kept taut and monitored to ensure they remain as such). There have been no incidences of sea bird entanglement ⁵ at the existing two trial locations (both are located within proximity to this site) and, given the same infrastructure is to be used at this location, it is therefore likely that the risk of entanglement to these features is negligible/low. The Applicant have committed to removing ghost fishing gear as soon as encountered (conditioned within the Marine Licence through the Marine Mammal Entanglement Plan) and have also committed to report any instances of entanglement of seabirds and large fish species to NRW. No adverse effect on site integrity is anticipated from this impact pathway on these features.	
	Disturbance	Disturbance to this feature maybe generated by the Project, most notably from the divers and vessels working at the Project Site.	The bay where the Project is located is regularly visited by recreational and commercial potting vessels and the vessels and diving activities associated with the Project are not considered to generate disturbance levels that would affect this species and undermine the conservation objectives of the site. Observations at the	Yes

⁵ Câr-y- Môr Environmental Document to inform Habitats Regulations Assessment. Submitted document v2 January 2022.

			nearby trial sites have shown seabirds to utilise the farms for foraging even when vessels are in proximity. No adverse effect on site integrity is anticipated from this impact pathway on these features.	
	Pollution	No fertilisers or chemicals are to be used as part of the project; however, there is a potential impact pathway through accidental pollution incidents associated with the regular use of vessels and/or inspection equipment for the Project.	The conservation objectives for this feature include that contamination of potential prey species should be below concentrations potentially harmful to their physiological health. Accidental pollution incidents could alter water quality, directly impact this species e.g. oil on feathers and also impact prey species thereby preventing conservation objectives for the feature from being achieved.	No

4.2 Assessment of the project taking into account additional mitigating measures, conditions or restrictions

Natura 2000 Feature (from Table 4.1 – ‘NO’ rows only)	Description of adverse effect(s)	Can adverse effect(s) be mitigated?	Description of mitigation measures, and how they would be applied (e.g. contractual obligations, consent conditions)	Can adverse effect on site integrity be ruled out?
Large shallow inlets & bays [1160] Reefs [1170]	Loss of habitat and damage to habitat	Yes	To alleviate the uncertainty regarding how the infrastructure will interact with these features, a Monitoring Programme can be put in place and secured through Marine Licence conditions. A monitoring plan must be agreed with the Licensing Authority and will include not only the type and frequency of monitoring required but also the requirement that if impacts are identified through this monitoring scheme then mitigation will need to be proposed and implemented. If sufficient mitigation cannot be provided, then infrastructure will need to be removed from the site prior to significant long term alteration or impact to the feature.	Yes

Large shallow inlets & bays [1160] Reefs [1170] Submerged or partially submerged sea caves [8330]	Although the Project is for the growth of native species, the vessels and equipment to be used by the Project could introduce Invasive Non-Native Species (INNS) to the SAC. The Project infrastructure could also act as a vector for existing INNS within the SAC.	Yes	A biosecurity plan has been submitted and approved by NRW TE which documents the necessary steps the Project must take to prevent INNS. This includes the cleaning of equipment and vessels, the use of sterile ropes to seed the species and a training programme for all personnel in identifying INNS. This plan also includes Pacific Oyster removal (and appropriate disposal to land) if encountered when grading and sorting shellfish and specific requirements if storm events damage cages. This plan will be conditioned within the Marine Licence and will include a schedule for updating and renewal.	Yes
Large shallow inlets & bays [1160] Reefs [1170] Submerged or partially submerged sea caves [8330] Otter (<i>Lutra lutra</i>) [1355] Grey Seal (<i>Halichoerus grypus</i>) [1364] Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Accidental pollution events from the vessels/monitoring equipment associated with the Project may degrade habitats and/or prey items of designated features.	Yes	Mitigated for through standard Marine Licence conditions which ensure best practice is applied. This includes; pollution incident response, ensuring all vessels and equipment are in good working order and that pollution spill kits and bunds are carried onboard Project vessels.	Yes

Bottlenose dolphin (<i>Tursiops truncatus</i>) [1349] Gannet (<i>Morus bassanus</i>) [A016] European storm petrel (<i>Hydrobates pelagicus</i>) [A014] Atlantic puffin (<i>Fratercula arctica</i>) [A204] Lesser black-backed gull (<i>Larus fuscus</i>) [A183] Sea bird assemblage [SBA]				
Grey Seal (<i>Halichoerus grypus</i>) [1364] Harbour Porpoise (<i>Phocoena phocoena</i>) [1351] Bottlenose dolphin	Although located within shallow waters close to the coast, the infrastructure of the Project, most notably the ropes, do present an entanglement risk to these species. Additionally, the infrastructure may act as a Fish Attracting Device (FAD) thereby attracting these species into the Project area for	Yes	The site will be inspected weekly and any ghost fishing gear removed immediately. The Applicant has committed to monitoring and managing marine mammal entanglement risk including divers and underwater cameras to identify entanglement risks, extra inspections following storm events and further monitoring from the coast and surface cameras (on top of the weekly inspections) and training personnel as Marine Mammal Medics and as Marine Mammal Observers. An outline of an adaptive management plan has also been presented which addresses new practices should an entanglement occur. A marine mammal entanglement protocol is required to ensure the above mitigation measures are implemented and this protocol will need to be	Yes

(<i>Tursiops truncatus</i>) [1349]	feeding opportunities, which increases the risk of entanglement. There is also the issue of ghost fishing gear attaching itself to the ropes and generating a heightened entanglement risk for marine mammals.		approved by NRW before deployment of the Project. This will be captured within a Marine Licence condition.	
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4.3 Concluding the appropriate assessment of the project alone

(a) If the right hand column of Table 4.1 and Table 4.2 (if applicable) is 'YES' for all features	It has been ascertained that the proposal, when considered alone, will not adversely affect the integrity of any Natura 2000 sites.
(b) If there are any 'NO's in the right hand column of Table 4.1 that have not been resolved to 'YES' through mitigation measures identified in Table 4.2	It has not been ascertained that the proposal, when considered alone, will not adversely affect the integrity of one or more Natura 2000 sites.
(c) Are there any residual effects of the project (net of any mitigation measures identified) which, though insignificant on their own, could be significant if considered in combination with the effects of other plans or projects?	No

6. Conclusion

HRA is not required because the whole of the project is directly connected with or necessary to the management of one or more Natura 2000/Ramsar sites, for the purposes of conserving the habitats or species for which the site(s) is/are designated, <u>and</u> the project is not likely to have a significant effect on any other Natura 2000/Ramsar sites. (As documented in section 2.1 and 2.2 of this form)	
HRA is not required because there is no conceivable impact pathway to any Natura 2000/Ramsar site (As documented in section 2.3 of this form)	
This project is a renewal of a current permission which complies with NRW agreed criteria for ruling out significant effects of a renewal without conducting a project-specific LSE test. Therefore, it is considered not likely to have a significant effect on any Natura 2000/Ramsar sites, either alone or in-combination with other plans and projects. (As documented in section 3.1 of this form)	
The project has been screened for likelihood of significant effects and, taking account of the advice received from protected sites advisors, is considered not likely to have a significant effect on any Natura 2000/Ramsar site (As documented in section 3.2 of this form, or section 5 if applicable)	
In light of the conclusions of an appropriate assessment, and taking account of the advice received from protected sites advisors, it has been established that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans and projects. (As documented in section 4 of this form, and section 5 if applicable)	X
In light of the conclusions of the appropriate assessment, it has <u>not</u> been ascertained that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, as documented in section 4 of this form, and section 5 is applicable. Approval for the project <u>cannot</u> be given unless either:	

- | | |
|--|--|
| <ul style="list-style-type: none">• the project specification, and/or the terms under which it might be approved, are modified so as to remove the risk of adverse effects, and a revised HRA report is prepared, or• the project satisfies the requirements of Article 6(4) of the Habitats Directive, an Article 6(4) Statement of Case is prepared (OGN 200 Form 3) and submitted for consideration by the appropriate authority, normally Welsh Ministers | |
|--|--|

Signed:



Name: Seran Davies

Position: Senior Marine Licensing Officer

Date: 09/10/2023

7. Consultation with protected sites advisor(s) and how sections 2, 3, 4 and 5 of this HRA report (as applicable) take into account that advice.

Relevant section of the HRA report	Date(s) of correspondence* and any meeting(s) with protected sites advisor(s)	Description of how the comments from protected sites advisors have been taken into account
3.2.2 and 4.1	03/11/2023	Receipt of Form 2 from NRW Advisory with no further comments (refer below)

Protected sites advisor response to an internal consultation on the Habitats Regulations Assessment of a project

March 2016

OGN 200 Form 2

Document owner: Protected Sites Team, KSP

Version History:

Document Version	Date Published	Summary of Changes
1.0	March 2016	Document created

Review Date: February 2017

Protected sites advisor response to an internal consultation on the Habitats Regulations Assessment of a project

TO: Seran Davies, Marine Licensing Team

FROM: Katie Reynolds, Marine Area Advice and Management Team

SUBJECT: Habitats Regulation Assessment of *DEML2151v1 Câr-y-Môr*

Thank you for consulting *Marine Area Advice and Management Team* on the above project and sending us a copy of the draft Form 1 HRA report dated 09/10/2023. Our comments are as follows:

We agree with the conclusions of the HRA, that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans and projects.

Signed: *KReynolds*

Date: 03/11/2023
