

APPLICATION FOR A MARINE LICENCE FOR MARINE WORKS

Marine Works include, but are not limited to, coast defences, beneficial uses of dredged materials, subsea cables, pontoons, jetties, land reclamation, grab samples and outfall pipes under the Marine and Coastal Access Act 2009

Please read the notes carefully before completing the form.

- The Marine Licensing Team (MLT) administers Part 4 of the Marine and Coastal Access Act 2009 on behalf of the Licensing Authority, the Welsh Ministers.
- The completed application form must be accompanied by a location plan and, where appropriate, descriptive drawing(s) and any supporting environmental assessments. One completed hard copy of the application and supporting documents will always be required. Additional copies are required for consultation purposes.
 - For application and supporting documents less than 10MB we can accept an additional copy via email.
 - For applications larger than 10MB **16** additional copies in CD/DVD format will be required
 - When applications and supporting documents are hard copy only **16** copies will be required.
- Please submit applications to the **Permit Receipt Centre** via the details at the top of this form
- Please submit marine licence applications, including this form and all supporting documents, **at least 4 months before the licence is required.**

Some projects may raise matters that require a significantly longer time for consideration. These are most likely to be:

- Projects that fall **within** The Marine Works (Environmental Impact Assessment) Regulations 2007 – as amended requiring an Environmental Statement
- Large scale projects with substantial volumes of material being deposited or excavated
- Works requiring an Appropriate Assessment to be conducted under The Conservation of Habitats and Species Regulations 2017.
- Information should be provided about the anticipated **duration of the entire project** in respect of works below/seaward of Mean High Water Spring (MHWS). Where appropriate, planned phasing of the work for which consent is sought must be detailed. For projects lasting more than one calendar year, planned phasing details must be given for each 12 month period.

A licence fee is payable in respect of an application. Details of fees can be found on our web pages.

Please note applications will not be processed without the correct relevant fee or invoicing details.

- Payments can be made via Cheque, BACS or credit/debit card.
 - Cheques should be crossed and made payable to **Natural Resources Wales.**
 - For BACS payments ensure you provide the reference number (not remittance number)

- For credit/debit card payments please complete the CC1 form and submit with the application. The CC1 form can be found on our web pages

Further information on payment methods can be found on our web pages

- **All activities need to comply with the Water Framework Directive (WFD). The framework and guidance can be found on the Natural Resources Wales website, <http://naturalresources.wales>. The results of your WFD assessment must be attached to your marine licence application.**
- Please answer all questions. If any information is not available at the time of application please indicate in the relevant section, giving reasoning in a covering letter. Outstanding details must be submitted as soon as possible. Any delay in forwarding details is likely to result in delays in determining your application.

Your application may not be considered complete and therefore not processed until key information has been submitted. Your application may be returned if you fail to submit outstanding information within given timescales.

- Please note any licence may have conditions that must be discharged before works can commence. This will take additional time.
- If you have any queries with regards to completing this application please contact the MLT: marinelicensing@naturalresourceswales.gov.uk

How your application will be processed by the MLT:

- Submit all application to the **Permit Receipt Centre** via the details at the top of this form.
- Checked and acknowledged by the MLT within 21 days of receipt of application and payment
- If the application is complete and no further information is needed at this time, your application will be placed in a work queue to be assigned a permitting officer
- If the application is not complete, further information will be request and need to be provided before the application can be considered as complete
- Our **4 months** service level for determining non-EIA applications will begin from the date the **completed** application is received (*Please note some projects may take significantly longer than 4 months to determine due to their nature*)
- EIA projects may take significantly longer due to their scale and complexity. Therefore we encourage early engagement with the MLT
- Your application and supporting documents will be sent to for an initial consultation period of 28 days (*42 days for EIA projects*)
- For the majority of projects, a public notice must be advertised. Public consultation will be 28 days (*49 days for EIA projects*).
For EIA projects a second public notice will be required. The MLT will advise on how this should be done.
- Responses to consultation will be considered and additional information requested at this time, if necessary.

- A decision on your Marine Licence Application will be made

All information submitted may be referred to within a licence, therefore all works must be in accordance with this information, unless otherwise agreed with NRW acting on behalf of the Licensing Authority during the determination process.

It is the responsibility of the applicant to obtain any other consents/authorisations that may be required.

Application Form Structure

1. Project Description and Cost
2. Applicant Details
3. Details of Agent, Contractor, Vehicles and/or Vessels used to carry out works
4. Environmental Impact Assessment (EIA)
5. Licensable Period
6. Project Description
7. Methods Statement
8. Materials of Project
9. Beach Replenishment, Land Reclamation or Salt Marsh Feeding
10. Temporary Works
11. Dredge and Disposal of Dredge Material
12. Protected Sites
13. Other Consents
14. Statutory Powers
15. Public Register
16. Application Fee
17. Declaration

Check List

Please ensure that you have included all the necessary information before you submit your application. **If any of the below are not completed in the application form, the application is likely to be considered incomplete and may be returned to you**

Item	Yes (✓)
The applicant is a legal entity?	✓
The declaration is signed by the applicant?	✓
Is the application fee correct?	✓
Are the grid references/coordinates correct?	✓
Do the coordinates match map locations?	✓
Have all the relevant supporting documents been submitted?	✓
Has a clear methodology been provided in the application form?	✓
Has Protected sites information been included?	✓
Has a Water Framework Directive (WFD) assessment been submitted?	✓
Are all the continuation sheets for application questions appended with correct corresponding numbers?	✓

Should you have any queries regarding your application please contact the MLT via marinelicensing@naturalresourceswales.gov.uk

1. Project Description and Cost

1 (a). Project Name

Seagrass Ocean Rescue

1(b). Please provide a brief description of the proposed project, including location

To improve the status and integrity of the Welsh marine environment, we propose to plant seagrass over an area of 10 hectare in the shallow coastal water areas of the Penllyn and Ynys Mon. The 10 hectares will be planted somewhere within a search area that covers 7 sites across North Wales; these are Abersoch, Warren (between Abersoch and Llanbedrog), Y Gamlas, Pwllheli, two sites at Pen-Y-Chain, and Traeth yr Ora. Whilst these are all biologically suitable for seagrass, we accept that some areas may not be suitable due to clashes with ongoing activities. We do not want to restrict any activities and the final site choice will reflect the views of local communities raised in this band 2 consultation period. This project will ultimately create 10 hectares of essential fish habitat and lead to an improved natural capital value of the sites. take of 350 kg of nitrogen from the water column per year. It will also help dissipate wave energy at these coastal sites, protecting the shoreline through reduced coastal erosion. This project will serve as a demonstration of the potential of seagrass restoration to act as a nature-based solution to climate change and the nature emergency, as declared by the Welsh Government in 2021.

£100,000

2. Applicant Details

To whom the licence will be issued. *This must be a legal entity such as an individual, registered company/ charity or public body.*

Title Full Name

Company or Trading Name

Company Registration Number (if applicable)

Name of Contact or individual (if different)

Position in Company

Address inc. postcode (provide registered Company address if applicable)

Telephone Number

Email Address

3. Details of Agent, Contractor, Vehicles and/or Vessels used to carry out works

3(a). Agent Details

This is who we will correspond with unless otherwise informed. If no agent we will contact the applicant.

Title		Full Name	
Company or Trading Name			
Company Registration Number (if applicable)			
Name of Contact or individual (if different)			
Position in Company			
Address (Inc. postcode)			
Telephone Number			
Email Address			

3(b). Does the Applicant wish to be included in all correspondence? Yes ☐ No ☐

3(c). Contractor Details

In order for contractors to benefit from the licence permission, details must be provided. Any details not provided with application must be confirmed before operations commence.

Contractor Company or Trading Name	Address

No ☐

Any details not provided with application must be confirmed before operations commence.

Operator	Name of Vessel	Type of Vessel	Vessel Registration Number	Country of Registration
Project Seagrass	RV Gwenhidw	8 m Aluminium Landing Craft	<i>Gwynedd County registration number:</i> PC-7968 <i>Boat launch permit in Gwynedd County and Anglesey:</i> EC 2206 6626	UK

No ☐

Any details not provided with application must be confirmed before operations commence.

Operator	Type/Description of Vehicle
Swansea University	Mitsubishi L200

These details will need to be confirmed prior to the licence and operations commencement

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Environmental Impact Assessment Directive (Directive 85/337/EEC – as amended). If a project qualifies under EIA, an Environmental Statement (ES) must be prepared and submitted with the application.

Projects that fall within Annex I of the Directive automatically require an EIA. Projects that fall within Annex II of the Directive are assessed on a case-by-case basis for the requirement for an EIA to be undertaken.

4(a). Do you consider the works to be under the Environmental Impact Assessment Directive (Directive 85/337/EEC – as amended)? Yes ☐ No ☒

4(a) (i) If Yes, which Annex does the proposal fall under? Annex I ☐ Annex II ☐

4(a) (ii) Which number(s) within the Annex does the proposal relate to?

4(b). Have you applied for a screening or scoping opinion from the MLT under the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)? Yes ☐ No ☒

4(b) (i). If Yes, please provide the reference number

4(c). Has an Environmental Impact Assessment been undertaken? Yes ☐ No ☒

4(c)(i). If Yes, has an Environmental Statement been submitted to support this Marine Licence application? Yes ☐ No ☐

4(d). If an Environmental Impact Assessment has been undertaken, but an ES has not been submitted, please provide an explanation

Please continue on a separate sheet if necessary. Please tick if you have done this ☐

5. Licensable Period

Determination of applications will be based on the works taking place during these dates. Please ensure you have included an adequate contingency period. If works are not completed by the Requested Licence Expiry Date you may be required to submit a new application. *Including a contingency period within your original application does not impact on Licence Fee*

Start Date

1st Dec 2022

Requested Licence Expiry Date

30th Nov 2027

*Please ensure you submit your application for a Marine Licence **at least 4 months** prior to the intended start date. Some projects, such as EIA projects, will take significantly longer to determine.*

6. Project Description

6(a). Please give a description of the proposed project.

This should include the purpose of the project, estimated timescales of construction and operation, and broken down by the phases of works, if applicable.

Details should include, but not be limited to, dimensions of project, quantity of material being deposited and removed.

- We aim to establish in total 10 hectares of restored seagrass meadows in North Wales, distributed over up to 7 sites that are agreed upon with stakeholders.
- The exact locations will be fitted inside *seagrass search areas*, detailed in section 6(b).
- It is estimated that these meadows will take at least 5 years to develop into maturity.
- Within the 10 hectare area, c. 5 million seagrass seeds (*Zostera marina*) and sand will be laid onto the seabed in rows of small biodegradable seed bags, held together by fine natural fibre hessian rope.
- In total, up to 2,000 lines (c. 25 m each) will be laid out. These are made up of hessian natural fibre twine (3 mm diameter) attached to seed bags, which are made of hessian or alternative biodegradable material of c. 13 cm x 7.5 cm in dimension, all of which biodegrade after 6-18 months.
- At each line, in total three sandbags (30 x 20 cm) will be placed: one sandbag at each end of the line, and one at the centerpoint of each line. These sandbags will be filled with marine-derived sand and will be attached to the lines to assist with anchoring the seagrass seed bags to the seabed.
- c. 100,000 seed bags will be deposited in total. Each seed bag will contain around 50 seagrass seeds and 100 g of marine-derived sand.

(continued on additional sheet).

Please continue on a separate sheet if necessary. Please tick if you have done this ☒

6(b). Please detail the location of the proposed construction project.

This should be either Ordnance Survey National Grid Reference (i.e. AB 12345 67890) or Latitude and Longitude in decimal degrees to 4 decimal places (i.e. Lat 52.1234 Long - 4.1234), defining the extent of the project. **Please specify which coordinate system has been used.**

The proposed 10 hectare of the seagrass planting is to be distributed across up to 7 sites in North Wales. The exact locations of seagrass planting will vary per site and will be decided in agreement with local stakeholders. 6 sites are located on Penllyn (*the Lleyen Peninsula*) and 1 site on Ynys Mon (*Anglesey*). These areas are within the Pen Llŷn a'r Sarnau (Lleyen Peninsula and the Sarnau) SAC, the Liverpool Bay SPA, and the Anglesey Terns SPA, for which we have produced a Habitats Regulations Assessment (see an overview of supporting documents in section 6(c)).

This marine licence application requests a licence to plant 10 hectare of seagrass within 7 *seagrass search areas* of in total 128.1 hectare (see DigiMaps attached to this application). This approach aids the identification of sites where suitable ecological conditions co-exist with the agreement and support of stakeholders to restore seagrass at specific locations.

(continued on additional sheet).

Please continue on a separate sheet if necessary. Please tick if you have done this ☒

6(c). The following must be provided with the completed application form:

- (i) a suitably scaled extract of an Ordnance Survey Map or Admiralty Chart with location of project, complete with **North Arrow** and **Scale**
- (ii) construction plans and sectional drawings showing those proposed works below/seaward of MHWS, which should give details of the materials to be used (for beach replenishment the quantity, particle size and source of material to be deposited and deposit location is also required).
- (iii) a descriptive schematic drawing and suitably scaled location plan which show the full extent of the project clearly in relation to the surrounding area and features.

Please list below **all supporting documents** that have been submitted with this application, including suitable documents/maps/drawing titles and reference numbers

1. Marine License Band 2 application: continuation of sections 6(a), 6(b), 7(a).
2. Digimaps (Ordnance Survey) of the 7 proposed seagrass search areas.
3. Habitats Regulations Assessment
4. Water Framework Directive Assessment
5. Biosecurity Assessment & Management 1
6. Biosecurity Assessment & Management 2
7. Policy context of seagrass restoration in Wales
8. Correspondence with NRW
9. Letters of support:
 - a. AONB officer – Bleddyn Jones
 - b. PLAS SAC officer – Alison Hargrove
 - c. NRW Planning Team Leader – Dr. Jasmine Sharp
 - d. Isle of Anglesey County Council AONB Team - Christian Branch
 - e. Pwllheli Town Council Member – Iwan Edgar

Please continue on a separate sheet if necessary. Please tick if you have done this ☐

The applicant should note that these drawings/plans may be copied to others as part of the MLT's consultation procedures. If they are subject to copyright, it is the **responsibility of the applicant to obtain the necessary approvals to reproduce the documents and to submit up to 16 copies with the application.**

7. Methods Statement

7(a). Please provide a detailed method statement for the works

This must include methods for all works including temporary structures or deposits such as jetties, cofferdams, moorings or landing stages to be constructed seaward of MHWS

- We aim to establish in total 10 hectares of restored seagrass meadows in North Wales, distributed over up to 7 sites that are to be agreed upon with stakeholders. We will not plant seagrass at any sites until we have addressed any concerns that stakeholders have brought forward.
- We anticipate that of these 7 sites they will be reduced to between 2 to 4, with the 10 hectares spread evenly across those sites. The 7 sites are spread across intertidal and subtidal areas. In order to have higher levels of community engagement around the project we hope to have a component of the 10 hectares on intertidal area with good access for the general public.
- The exact locations will be fitted inside *seagrass search areas*, detailed in section 6(b).

- It is estimated that these meadows will take at least 5 years to develop into maturity.
- Within the 10 hectare area, c. 5 million seagrass seeds (*Zostera marina*) and sand will be laid onto the seabed in rows of small biodegradable seed bags, held together by fine natural fibre hessian rope.
- In total, c. 2,000 lines (c. 25 m each) will be laid out. These are made up of hessian natural fibre twine (3 mm diameter) attached to seed bags, which are made of hessian or alternative biodegradable material of c. 13 cm x 7.5 cm in dimension, all of which biodegrade after 6-18 months. The gauge of these lines and their length has been refined to improve rapid degradation and prevent snagging, based on feedback from previous seagrass planting in Dale, South Wales.
- At each line, in total three sandbags (30 x 20 cm) will be placed: one sandbag at each end of the line, and one at the centerpoint of each line. These sand bags will be filled with marine-derived sand and will be attached to the lines to assist with anchoring the seagrass seed bags to the seabed.
- c. 100,000 seed bags will be deposited in total. Each seed bag will contain around 50 seagrass seeds and 100 g of marine-derived sand. At sites where sediment pore water nutrients are low we will add slow release fertilisers to assist initial seedling success.
- The abovementioned lines, with attached bags of seagrass seeds and marine-derived sand, will be deployed from the RV Gwenhidw (or alternative local vessel) by hand at very low speed onto the seabed during periods of low- to mid-tide. For intertidal sites, some deployments will be conducted on foot at low tide.
- The lines will be deployed from the RV Gwenhidw (or alternative local vessel).
- Lines will be laid parallel to each other at c. 0.5 m apart.

(Continued on additional sheet).

Please continue on a separate sheet if necessary. Please tick if you have done this ☒

7(b). Do you intend to undertake activities that could generate underwater noise?

This include piling, use of explosives, geophysical, acoustic deterrent devices and multibeam echosounders.

Yes ☐ No ☒

7(b) (i). If Yes, what type(s) of activities will be undertaken?

N/A

7(b) (ii). If Yes, approximately how many days will the activity be undertaken for?

N/A

If Yes, you will be required to complete an additional form that will be provided.

7(c). Please state the measures to be taken to:

- (i) Minimise risk to the marine environment

To minimise the risk of unintentionally importing invasive and non-native species, seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. As seeds are stored in a layer that is one seed thick, this allows for the effective identification and removal of any invasive and non-native species. Prior to planting, all seeds that are to be planted will be washed with sterilised seawater. Furthermore, transplants to be used will be local transplants and transplants grown in our lab which is free of non-native and invasive species. Furthermore, the sand utilised within the boundaries of this license will be marine-derived. For more details, see the attached Biosecurity Assessment & Management 1 and 2 documents, referred to in section 6(c).

(ii) Prevent undue interference to others

The key premise of this marine licence application is that it provides for extensive flexibility in where we can undertake seagrass restoration in order to incorporate the views of stakeholders into the restoration. This will prevent our activities having undue interference to others.

In addition to the statutory public period of comment on this marine licence application that includes a public advert and documents placed in a public library, our team at Project Seagrass in collaboration with Alison Hargrove who is the SAC Officer on the Lleyn Peninsula and Nia Jones of the North Wales Wildlife Trust for Anglesey will be undertaking a series of public events about the proposed project where individuals and groups can learn more about the project and provide extensive feedback.

The whole project aims to work with local communities and not against them so we will be welcoming discussion of any issues that the project may raise for interested stakeholders.

In addition to the public events, targeted discussions with key stakeholders are already ongoing and will continue.

The aim of the stakeholder discussions is that once opinions and feedback coalesce on an agreed series of seagrass restoration sites, we will invite groups and individuals to join seagrass stakeholder groups at each site as a means of reporting progress and creating a forum for ongoing discussion about the project at each site.

We have noted from early engagement with Natural Resources Wales that our initial search areas had potential clashes with existing operations; as a result, we altered our search areas so not to overlap with the boat launch area of the RNLI. We have also confirmed that the proposed seagrass search areas at Abersoch do not overlap with the powercraft launch area. Furthermore, the proposed seagrass search area called Warren is present in the non-propelled zone and sailing / safe paddle zone of Warren.

(iii) Maintain navigational safety, including marking and lighting of works

At each restoration site, up to 8 marker buoys will be placed at the edges of the seagrass planting area to help communicate to local stakeholders where the planting sites are. These markers will in no way prevent site access. These will be comprised of weighted rope attached to a 20 kg weight and clearly marked with a solid buoy labelled with the words "PROJECT SEAGRASS". No material placed on the seabed will protrude more than 5 cm above the sediment and hence this will not affect navigational safety. The deployment of all the bouys will be confirmed with local stakeholders (e.g. harbours, yacht clubs, fishers).

Please continue on a separate sheet if necessary. Please tick if you have done this ☐

8. Materials of Project

8(a). Description of materials to be deposited seaward of MHWS (Please tick all that apply)

Timber	☐	Iron/Steel	☐	Concrete	☐	Biocides/other chemicals	☐
Silt	☐	Stone/Rock	☐	Gravel	☐	Plastic/Synthetics	☐
Sand	☒	Other	☒				

If other, please provide a description of materials.

- c. 5 million seagrass seeds cleaned of any biosecurity risks
- c. 10,000 kg marine-derived sand, to use at 100 g per small seed bag
- c. 12,000 kg marine-derived sand, to use at 2 kg per large sand bag for anchoring
- c. 100,000 small 'seagrass seed' bags (c. 13 x 7.5 cm) (hessian natural fibre or alternative biodegradable material)
- c. 6,000 hessian sand bags for anchoring (c. 30 x 20 cm) (hessian natural fibre)
- c. 2,000 lines of hessian fibre twine (c. 25 m long)

8(b). Delivery method of materials to site

If sea delivery, please include details of vessels to be used with a chart of proposed route and transshipment area. If vehicle delivery, please provide the proposed access route.

We will use of small pickup truck or a van to launch a boat via the following access points:

Pwllheli, Pen Y Chain 1 & 2: Morfa'r Garreg, Pwllheli, Gwynedd, Wales, LL53 5BA, United Kingdom. Coordinates: 52.88292, -4.40272.

Alternative boat launch site: Hafan Pwllheli Marina, Glan Don, Pwllheli LL53 5YT, United Kingdom. Coordinates: 52.885920, -4.405450.

Abersoch: Bwlchtocyn, Llanengan, Abersoch, Gwynedd, Wales, LL53 7EU, United Kingdom. Coordinates: 52.81047, -4.49858.

Alternative boat launch site for Abersoch: Lôn Pont Morgan, Llanengan, Abersoch, Gwynedd, Wales, LL53 7AN, United Kingdom. Coordinates: 52.82737, -4.50383.

Warren, Y Gamlas: Warren Launch Area, The Warren, Llanengan, Gwynedd, Wales, LL53 7AA, United Kingdom, specified [here](#). Coordinates: 52.83868, -4.49452.

Traeth Yr Ora: Traeth Bychan, following regulations noted [here](#).

Coordinates: 53.33696, -4.22752.

Alternative boat launch site: Traeth Lligwy, only during high tide.

Coordinates: 53.35941, -4.26152.

8(c) (ii). Description of objects/materials to be removed seaward of MHWS

Including quantities to be removed.

N/A

9. Beach Replenishment, Land Reclamation or Salt Marsh Feeding

For works involving any of the above, please provide the following information

9(a). Is the material to be deposited like for like to existing material? Yes ☐ No ☒

9(a)(i) If No for Beach Replenishment please provide justification why?

9(b). Description of material to be deposited

Please provide the grading specification of materials to be used, if using a range of grain sizes please state the percentage by weight passing. *If unsure, please refer to the Wentworth Scale*

Fine sand in the range of 0.125 to 0.50 mm

Please continue on a separate sheet if necessary. Please tick if you have done this ☐

9(c). Source of the material to be deposited

Including dredged or land based stating the origin of material

Welsh marine-derived sand.

9(d). Has the material been chemically analysed?

Yes ☐ No ☒

If material has been analysed, we may request this information to determine the application

9(d) (i) If Yes, is the analysis data been included with the application? Yes ☐ No ☐

10. Temporary Works

10(a). Will there be any temporary deposits below MHWS?

Yes ☒ No ☐

This includes construction materials, removed objects/material, jetties or cofferdams

If **Yes**, please continue with section **10**

10(b). Please provide the location of temporary deposits

Please include a map/chart displaying the location of temporary deposits, if necessary.

Within each of the seagrass search areas described above, eight buoys – attached to 20 kg weights – will be placed at the edges of the seagrass planting areas to communicate the location of our activities to local stakeholders. The exact locations of these buoys and weights will be determined in conjunction with local stakeholders, as discussed in section 7(c).

10(c). Description of temporary deposits

Eight 20-kg chair weights attached to buoys, and temporary additional markers during seagrass planting period.

11. Dredge and Disposal of Dredge Material

If you are undertaking Dredge and Disposal activities please also complete the Dredge and Disposal application form and submit together.

11(a). Do you intend to apply for a marine licence to dispose of dredged material to sea as part of the works in this application? Yes ☐ No ☒

12. Protected Sites

Licensing Authorities have a duty to ensure that projects will **not have significant adverse environmental impact**, particularly on any designated **European Site of Conservation Importance - Special Areas of Conservation (SAC) and Special Protection Areas (SPA)**, listed under the **Habitats Directive (Council Directive 92/42/EEC on the conservation of natural habitats and of wild fauna and flora)**. In addition, it is Government Policy that Wetlands of International Importance (Ramsar sites) are also considered as European Sites. There is a duty to take reasonable steps to further the conservation and enhancement of nationally designated sites (Sites of Special Scientific Interest (SSSIs)).

12(a). Have you had pre-application correspondence with NRW, its legacy bodies or Natural England? Yes ☒ No ☐

12(a)(i). If Yes, please provide copies of correspondence with application and state which team(s) you have contacted?

Natasha Lough, Natural Resources Wales
Katherine Griffith, Natural Resources Wales

12(b). Are any part of the works located *within or likely to affect* a designated conservation site? (SAC, SPA, SSSI or Ramsar) Yes ☒ No ☐

12(b)(i). If Yes, which designated site(s) may be affected?

Please see attached *Habitats Regulations Assessment*, as specified in section 6(c).

12(c). Please provide a description of all mitigation measures proposed to avoid any impact on designated conservation sites.

Please see attached *Habitats Regulations Assessment*, as specified in section 6(c).

12(d). If the works are not located *within or likely to affect* a designated conservation site, please indicated the approximate distance to the nearest designated conservation site.

Traeth yr Ora: adjacent to SSSI Traeth Lligwy. **Pwllheli:** 600 m from SSSI Morfa Abererch. **Pen Y Chain 1 and 2:** adjacent to SSSI Glanllynau a Glannau Pen-ychain i Gricieth. **Y Gamlas:** adjacent to SSSI Mynydd Tir y Cwmwd a'r Glannau at Garreg yr Imbill. **Abersoch:** 400 m from SSSI Porth Ceiriad, Porth Neigwl ac Ynysoedd Sant Tudwal. **Warren:** 150 m from SSSI Mynydd Tir y Cwmwd a'r Glannau at Garreg yr Imbill.

Please note that if the proposed works are in or within 2km of a European Site of Conservation Importance you will have to provide suitable mitigation measure to avoid any impact on designated conservation sites.

13. Other Consents

Please detail all consents that you have applied for or received for these works

Type of Consent	Applied for	To be applied for	Reference Number	Date of Issue and Expiry
Planning Permission under Town and County Planning Act 1990 – From Local Planning Authority (LPA)				
Name and Address of LPA for location of works				
Land Owners Consent such as The Crown Estate Consent		X		
Port Authority or Local Harbour permissions				
Other NRW consents such as Flood Defence or SSSI assent				
Details of NRW consent				
Other consents such as Transport and Works Act Order, Section 36 Electricity Act, grant/loan sanction				
Details of other consents	Discussions required with maritime departments of Anglesey Council and Gwynedd Council.			

14. Statutory Powers

14(a). Does the applicant have statutory powers to consent any aspect of the project?
E.g. coast protection authority, dredging powers, statutory undertakers Yes ☐ No ☒

14(a)(i). If Yes, please give details and state the relevant legislation that gives these powers

Under The Marine Licensing (Register of Licensing Information)(Wales) Regulations 2011 and the Environmental Impact Assessment Directive (Directive 85/337/EEC – as amended) , all information contained within or provided in support of this application will be placed on the Public Register unless NRW approve of the applicant's reasons for withholding all or part.

15. Is there any information contained within or provided in support of this application that you consider should NOT be included on the Public Register on the grounds that its disclosure:

15(a). Would be contrary to the interest of National Security? Yes ☐ No ☒

15(b). Would prejudice to an unreasonable degree you, or some other person's commercial interest of those of a third party? Yes ☐ No ☒

If **Yes** to either (a) or (b), please provide full justification as to why all or part of the information you have provided should be withheld

Please continue on a separate sheet if necessary. Please tick if you have done this ☐

16. Application Fee

16(a). What are the corresponding fee band for this application? Band 2 ☒ Band 3 ☐

16(b) Band 2 Only

Projects are charged at a fixed fee of £1920. The application will not be processed until the correct fee has been provided.

Please provide the method of payment

Method	Yes (✓)	Reference Number
Cheque		
BACS (not remittance no.)		
World Pay (phone or CC1)	✓	

Please attach **CC1 Form** with application. Can be found on our web pages

16(c) Band 3 Application only

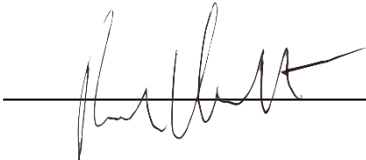
Band 3 applications are charged at on hourly rate of £120 and are invoiced in arrears. Please complete the details below which will be required for invoicing.

Customer Name	
FAO	
Purchase order number	
Address for invoice	
Telephone Number	
Email Address	

17. Declaration

I declare that to the best of my knowledge and belief that the information given in this application form and supporting documentation is true.

WARNING: It is an offence under the Marine and Coastal Access Act 2009, under which this application is made, to fail to disclose information or to provide false or misleading information and can invalidate any licence granted.

Signature  Date 29/07/22

Name (in capitals) RICHARD UNSWORTH

Position in Company Founding Director

*Applications cannot be processed unless signed by the **Applicant** (not agent), the applicant must have appropriate level of authority within the company.*

Applications will not be processed unless signed

Support documents for the Marine License application in North Wales – band 2

Marine License Band 2 application: continuation

6(a). Please give a description of the proposed project. (continued)

- The seagrass seeds form the foundation of our restoration activities. To enhance the success rate of seagrass seed planting, we will supplement our seed bag planting with the planting of *Zostera marina* shoots (hereafter referred to as “transplants”). The purpose of these transplants is to physically protect seedlings during their germination phase and to enhance the resilience of these meadows during their early establishment. Transplants will either come from nearby populations (subject to further licence applications) to prevent any biosecurity risks or be lab-grown at the Project Seagrass nursery facility in Pendine, Carmarthen. Measures will be taken to minimise the spread of invasive and non-native species (see Biosecurity Assessment and Management 1 and 2 documents, specified in section 6(c)).
- Seeds will be collected from a mixture of donor sources, therefore we will need to take precautions regards biosecurity to minimise the risk of introducing non-native and invasive species. Seeds will be cleaned and observed prior to planting (see Biosecurity Assessment and Management 1 and 2 documents, specified in section 6(c)).
- No material placed on the seabed will protrude more than 5 cm above the sediment and will not cause any interaction with navigation.

6(b). Please detail the location of the proposed construction project. (continued)

- See attached Digimaps of the 7 proposed seagrass search areas, using the Ordnance Survey: Abersoch, Warren, Y Gamlas, Pwllheli, Pen Y Chain 1, Pen Y Chain 2, and Traeth yr Ora.
- Table 1 shows an overview of the vertices of each of the seagrass search areas, using WGS 84 as the coordinate reference system.

Table 1. Vertices of the seagrass search areas. Coordinate reference system is WGS 84.

Location	Vertex index	Latitude	Longitude	Area (hectare)
Traeth yr Ora	0	53.3768283	-4.2664231	31.4
Traeth yr Ora	1	53.3750380	-4.2646399	
Traeth yr Ora	2	53.3740764	-4.2638546	
Traeth yr Ora	3	53.3702573	-4.2599619	
Traeth yr Ora	4	53.3687470	-4.2629675	
Traeth yr Ora	5	53.3685885	-4.2645130	
Traeth yr Ora	6	53.3680139	-4.2660189	
Traeth yr Ora	7	53.3688064	-4.2664945	
Traeth yr Ora	8	53.3691037	-4.2666926	
Traeth yr Ora	9	53.3697575	-4.2635025	
Traeth yr Ora	10	53.3707903	-4.2648628	
Traeth yr Ora	11	53.3730822	-4.2680696	

Traeth yr Ora	12	53.3717291	-4.2713292	
Traeth yr Ora	13	53.3731954	-4.2728351	
Traeth yr Ora	14	53.3748139	-4.2702678	

Abersoch	0	52.8108894	-4.4913721	3.0
Abersoch	1	52.8111984	-4.4910400	
Abersoch	2	52.8119108	-4.4901681	
Abersoch	3	52.8131085	-4.4889578	
Abersoch	4	52.8122002	-4.4880764	
Abersoch	5	52.8115410	-4.4886501	
Abersoch	6	52.8110807	-4.4889828	
Abersoch	7	52.8103381	-4.4901154	
Abersoch	8	52.8105310	-4.4907303	

Y Gamlas	0	52.8652664	-4.4630363	17.1
Y Gamlas	1	52.8660819	-4.4639704	
Y Gamlas	2	52.8671478	-4.4627873	
Y Gamlas	3	52.8679757	-4.4617071	
Y Gamlas	4	52.8694758	-4.4599771	
Y Gamlas	5	52.8705841	-4.4560726	
Y Gamlas	6	52.8698079	-4.4562376	
Y Gamlas	7	52.8690899	-4.4561066	
Y Gamlas	8	52.8688231	-4.4553692	
Y Gamlas	9	52.8645627	-4.4613598	

Pen Y Chain 1	0	52.9005615	-4.3220342	16.6
Pen Y Chain 1	1	52.9011349	-4.3231951	
Pen Y Chain 1	2	52.9018817	-4.3233874	
Pen Y Chain 1	3	52.9032757	-4.3222863	
Pen Y Chain 1	4	52.9052352	-4.3196685	
Pen Y Chain 1	5	52.9050909	-4.3188631	
Pen Y Chain 1	6	52.9038809	-4.3158697	
Pen Y Chain 1	7	52.9016997	-4.3181438	
Pen Y Chain 1	8	52.8997979	-4.3201019	

Pen Y Chain 2	0	52.9072183	-4.2941035	22.1
Pen Y Chain 2	1	52.9061763	-4.3068982	
Pen Y Chain 2	2	52.9083753	-4.3071075	
Pen Y Chain 2	3	52.9095004	-4.2932433	

Pwllheli	1	52.8918400	-4.3939986	26.2
Pwllheli	2	52.8930524	-4.3966232	
Pwllheli	3	52.8942389	-4.3937386	
Pwllheli	4	52.8953684	-4.3900954	
Pwllheli	5	52.8958632	-4.3842326	
Pwllheli	6	52.8938386	-4.3845532	

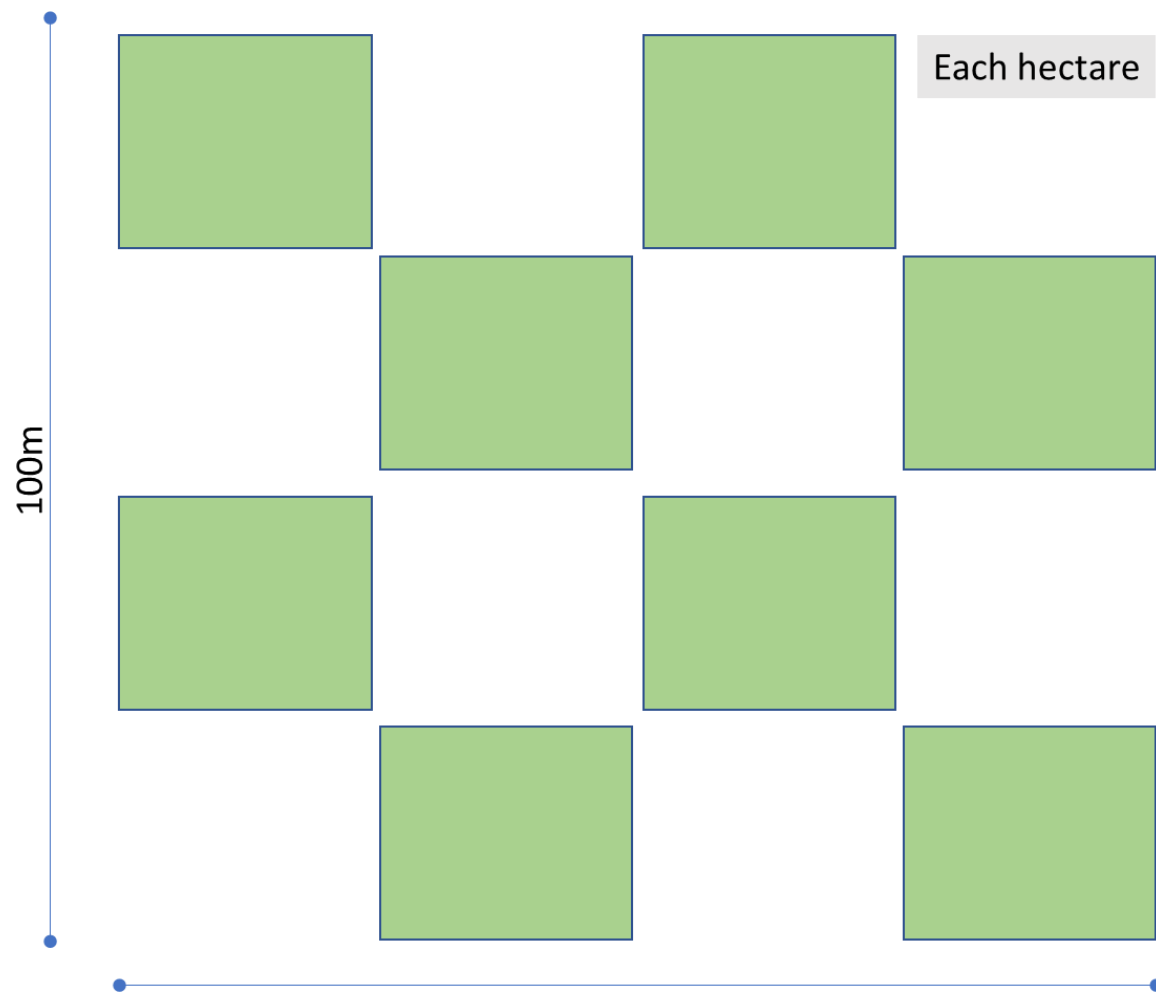
Pwllheli	7	52.8905703	-4.3911147	
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Warren	0	52.8407973	-4.4900819	11.7
Warren	1	52.8437241	-4.4820083	
Warren	2	52.8423340	-4.4805248	
Warren	3	52.8395124	-4.4879699	

7(a). Please provide a detailed method statement for the works. (continued)

- Rather than plant the bags evenly across each hectare plot, results from planting in Dale (South Wales) and international seagrass research results indicate that planting in higher density plots is more effective. Therefore, each hectare will be subdivided in a checkerboard, resulting in sixteen 25 m x 25 m plots, eight of which will be planted with lines and bags (see Figure 1; green plots indicate a seagrass planting plot).
- At each line, in total 3 sandbags (30 x 20 cm) will be placed: one sandbag at each end of the line and one at the line's centre point. These sandbags will be filled with marine-derived sand and will be attached to the lines to assist with anchoring the seagrass seed bags to the seabed.
- During the process of laying out hessian bags with seagrass seeds, hessian twine, and sandbags, a series of additional temporary marker buoys will be attached to each end to assist with guiding the lines into a parallel configuration. These will be removed immediately after completion and only be present whilst the RV Gwenhidw is working at the site.
- Once the bags have been laid, a series of 8 marker buoys will be placed at the edges of each of the seagrass planting areas to communicate to local stakeholders where the planting areas are; these are not intended to prohibit any level of access but to be informative. These flagged buoys will be comprised of weighted (sinking) rope attached to a 20 kg weight and clearly marked with a solid buoy labelled with the words "*PROJECT SEAGRASS*".
- Scientific Diving operations will be conducted at the site after the lines have been deployed to ensure the correct siting of the lines. These operations will be conducted in communication with the maritime departments of Gwynedd Council and Anglesey Council regarding our maritime activities, in addition to contacting the local RNLI and coast guard stations.

Figure 1. Seagrass checkerboard planting plan. Each green box has a dimension of 25 x 25 m.



Support documents for the Marine License application in North Wales – band 2

Policy context

Environment (Wales) Act 2016

This proposed seagrass restoration project contributes to the responsibilities of Natural Resources Wales under Section 7 of the Environment (Wales) Act 2016. Seagrass beds are listed under Section 7 of the Environment (Wales) Act 2016 and as a public authority NRW must seek to maintain **and enhance biodiversity** of those habitats listed under Section 7. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under Section 7, and encourage others to take such steps.

Well-being of Future Generations (Wales) Act 2015

Through the Well-being of Future Generations (Wales) Act 2015 the Welsh Government also has a responsibility and legal obligation to **improve** our social, cultural, environmental and economic wellbeing. Restoration of seagrass beds that have been defined as a social-ecological system provide an opportunity to assist with the improved environmental health of the natural environment and with it supporting economic and social well-being. Specifically, seagrass restoration contributes to supporting a resilient Wales with improved biodiversity and healthy functioning ecosystems. Seagrass Ocean Rescue (the proposed seagrass restoration project) intends to not only plant seagrass, but also ensure active community and user participation in the project, thereby presenting opportunities for future communal recreational activity and educational events.

Climate Change Act 2019

A 2019 amendment to the 2008 Climate Change Act commits the UK to net zero carbon emissions by 2050. The UK Government Committee on Climate Change has recommended that to achieve this the Welsh Government has a 95% reduction in carbon emissions by 2050, however the Welsh Government has committed to introducing further legislation in 2020 to target net zero emissions by 2050. To ensure these large reductions in emissions Wales will need to consider a range of different actions across society, some of which will target the enhanced ability of our natural environment to uptake carbon dioxide. These so-called 'Nature Based Solutions' include seagrass restoration. The ability to include such solutions requires the large-scale demonstration (such as that proposed in Dale) of the methods necessary for their widespread application in a range of localities.

Climate emergency, nature emergency, and the Welsh Government calls for seagrass restoration

In 2019, a [climate emergency](#) was declared by the Welsh government, followed by a [nature emergency](#) declaration in 2021, calling for the restoration of ecosystems and the use of nature-based solutions to reduce atmospheric greenhouse gas concentrations. Moreover, the restoration of seagrass meadows is an explicit component of the Welsh Government's [Net Zero Wales Carbon Budget 2](#) for 2021-2025 to capture CO₂ (see page 162). Additionally, the [Welsh National Marine Plan](#) includes the following policy objective named ENV-01 on Resilient Marine ecosystems: "Proposals that contribute to the protection, **restoration and/or enhancement of marine ecosystems are encouraged.**" These documents recognise that restoring our ocean's ability to store carbon is a major part of the available solutions. This proposed seagrass restoration project has the capacity to provide governments at local, regional, and national levels a pathway forward for such action and

stand as a beacon of hope. 10 hectares of seagrass could result in the long-term storage of up to 3,750 metric tonnes of stored carbon (Green et al. 2018) and if the project were to be scaled up in other locations, assist with making a major impact upon our zero carbon emissions targets.

Support documents for the Marine License application in North Wales – band 2

Water Framework Directive Assessment

The Water Framework Directive 2000/60/EC commits Wales to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore) by 2015. Due to its capacity to uptake nitrogen and phosphorus from the water column, the restoration of seagrass to the SPAs and SAC will help to improve the ecological and chemical status of the waterbodies in which our proposed seagrass search areas are situated. Estimates from restored seagrass meadows in the United States indicate that 1 hectare of seagrass can uptake approximately 35 kg nitrogen per year (Aoki et al. 2019). Seagrass beds are also an indicator of environmental quality within the Water Framework Directive and their presence and healthy status can indicate a health water body.

Please find below the WFD Assessment for the relevant waterbodies, i.e. Anglesey North and Tremadog Bay.

Water Framework Directive assessment: scoping template for activities in estuarine and coastal waters

Use this template to record the findings of the scoping stage of your Water Framework Directive (WFD) assessment for an activity in an estuary or coastal water.

If your activity will:

- take place in or affect more than one water body, complete a template for each water body
- include several different activities or stages as part of a larger project, complete a template for each activity as part of your overall WFD assessment

The [WFD assessment guidance for estuarine and coastal waters](#) will help you complete the table.

Your activity	Description, notes or more information		
Applicant name	Richard Unsworth		
Application reference number (where applicable)			
Name of activity	Seagrass restoration		
Brief description of activity	Planting seagrass (Zostera marina)		
Location of activity (central point XY coordinates or national grid reference)	Centroids of seagrass search areas		
	Site name	Latitude	Longitude
	Abersoch	52.81159155	-4.489611885
	Warren	52.84158408	-4.485197335
	Y Gamlas	52.86756318	-4.459700659
	Pwllheli	52.89345695	-4.389954436
	Pen Y Chain	52.90262179	-4.319900608
	Pen Y Chain 2	52.90783240	-4.300337871
	Traeth yr Ora	53.37265169	-4.266003876
Footprint of activity (ha)	In total 10 ha, distributed over 7 sites in North Wales.		

	<i>Exact footprint of activities in water body Anglesey North will be determined by further field surveys and the support of stakeholders.</i>
Timings of activity (including start and finish dates)	1 December 2022 - 30th Nov 2027
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	10 hectares
Use or release of chemicals (state which ones)	none

Water body¹	Description, notes or more information
WFD water body name	<i>Anglesey North</i>
Water body ID	<i>GB641010620000</i>
River basin district name	<i>Western Wales</i>
Water body type (estuarine or coastal)	<i>Coastal</i>
Water body total area (ha)	<i>12,600 ha</i>
Overall water body status (2015)	<i>Moderate (2015), Moderate (2021)</i>
Ecological status	<i>Good (2015), Good (2015)</i>
Chemical status	<i>Fail (2015), Moderate (2021)</i>
Target water body status and deadline	<i>Good by 2033</i>
Hydromorphology status of water body	<i>High</i>
Heavily modified water body and for what use	<i>NA</i>
Higher sensitivity habitats present	<i>Yes</i>
Lower sensitivity habitats present	<i>Yes</i>
Phytoplankton status	<i>NA</i>
History of harmful algae	<i>NA</i>

WFD protected areas within 2km	Yes, it is within the Liverpool Bay Special Protection Areas (SPA), and the Anglesey Terns Special Protection Areas.
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¹ Water body information can be found in the Environment Agency's catchment data explorer and the water body summary table. Magic maps provide additional information on habitats and protected areas. Links to these information sources can be found in the WFD assessment guidance for estuarine and coastal waters.

Specific risk information

Consider the potential risks of your activity to each of these receptors: hydromorphology, biology (habitats and fish), water quality and protected areas. Also consider invasive non-native species (INNS).

Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	Impact assessment not required	No.
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	No.
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	Impact assessment not required	No.

Record the findings for hydromorphology and go to section 2: biology.

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the water body summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats ²	Lower sensitivity habitats ³
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

² Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.

³ Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.

Consider if the footprint ⁴ of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km ² or larger	Yes to one or more – requires impact assessment	No to all – impact assessment not required	No.
1% or more of the water body's area			No.
Within 500m of any higher sensitivity habitat			No. Any impacts are seen to be positive in terms of habitat provision.
1% or more of any lower sensitivity habitat			No. Any impacts are seen to be positive in terms of habitat provision.

⁴ Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Continue with questions	Go to next section	No.
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	Impact assessment not required	No. Any impacts are seen to be positive in terms of habitat provision.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	No.

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the water body summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	Impact assessment not required	Positive effects only.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	No.
Is in a water body with a history of harmful algae	Requires impact assessment	Impact assessment not required	No.

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment	Impact assessment not required	No.
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	No.

If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Yes	No	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment ⁵	Impact assessment not required	No.

⁵ Carry out your impact assessment using the Environment Agency's surface water pollution risk assessment guidance, part of Environmental Permitting Regulations guidance.

Record the findings for water quality go on to section 4: WFD protected areas.

Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your water body (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area ⁶	Requires impact assessment	Impact assessment not required	No risk. See Habitats Regulations Assessments.

⁶ Note that a regulator can extend the 2km boundary if your activity has an especially high environmental risk.

Record the findings for WFD protected areas and go to section 5: invasive non-native species.

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS	Requires impact assessment	Impact assessment not required	Biosecurity plan has been produced – see attached Biosecurity Assessment and Management 1 and 2 documents.

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology		Benefits only. Seagrass helps to bind sediments together and creates slowing of current speeds potential assisting with coastal protection. The small area of this restoration will not significantly affect broader hydromorphology.
Biology: habitats		Positive impacts only.
Biology: fish		Positive impacts only.
Water quality		Positive impacts only.
Protected areas		Positive impacts only.
Invasive non-native species		Biosecurity plan has been produced to eliminate risk.

If you haven't identified any receptors at risk during scoping, you don't need to continue to the impact assessment stage and your WFD assessment is complete.

If you've identified one or more receptors at risk during scoping, you should continue to the impact assessment stage.

Include your scoping results in the WFD assessment document you send to your activity's regulator as part of your application for permission to carry out the activity.

Water Framework Directive assessment: scoping template for activities in estuarine and coastal waters

Use this template to record the findings of the scoping stage of your Water Framework Directive (WFD) assessment for an activity in an estuary or coastal water.

If your activity will:

- take place in or affect more than one water body, complete a template for each water body
- include several different activities or stages as part of a larger project, complete a template for each activity as part of your overall WFD assessment

The [WFD assessment guidance for estuarine and coastal waters](#) will help you complete the table.

Your activity	Description, notes or more information		
Applicant name	Richard Unsworth		
Application reference number (where applicable)			
Name of activity	Seagrass restoration		
Brief description of activity	Planting seagrass (Zostera marina)		
Location of activity (central point XY coordinates or national grid reference)	Centroids of seagrass search areas		
	Site name	Latitude	Longitude
	Abersoch	52.81159155	-4.489611885
	Warren	52.84158408	-4.485197335
	Y Gamlas	52.86756318	-4.459700659
	Pwllheli	52.89345695	-4.389954436
	Pen Y Chain	52.90262179	-4.319900608
	Pen Y Chain 2	52.90783240	-4.300337871
	Traeth yr Ora	53.37265169	-4.266003876
Footprint of activity (ha)	In total 10 ha, distributed over 7 sites in North Wales.		

	<i>Exact footprint of activities in water body Tremadog Bay will be determined by further field surveys and the support of stakeholders.</i>
Timings of activity (including start and finish dates)	1 December 2022 - 30th Nov 2027
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	10 hectares
Use or release of chemicals (state which ones)	none

Water body¹	Description, notes or more information
WFD water body name	<i>Tremadog Bay</i>
Water body ID	<i>GB651009350000</i>
River basin district name	<i>Western Wales</i>
Water body type (estuarine or coastal)	<i>Coastal</i>
Water body total area (ha)	<i>23,942 ha</i>
Overall water body status (2015)	<i>Good (2015), Good (2021)</i>
Ecological status	<i>Good (2015), Good (2021)</i>
Chemical status	<i>Good (2015), High (2021)</i>
Target water body status and deadline	<i>Good by 2027</i>
Hydromorphology status of water body	<i>High</i>
Heavily modified water body and for what use	<i>No</i>
Higher sensitivity habitats present	<i>Yes</i>
Lower sensitivity habitats present	<i>Yes</i>
Phytoplankton status	<i>NA</i>
History of harmful algae	<i>NA</i>

WFD protected areas within 2km	<i>Yes, within Pen Llŷn a'r Sarnau (Lleyn Peninsula and the Sarnau) Special Areas of Conservation (SAC)</i>
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¹ *Water body information can be found in the Environment Agency's catchment data explorer and the water body summary table. Magic maps provide additional information on habitats and protected areas. Links to these information sources can be found in the WFD assessment guidance for estuarine and coastal waters.*

Specific risk information

Consider the potential risks of your activity to each of these receptors: hydromorphology, biology (habitats and fish), water quality and protected areas. Also consider invasive non-native species (INNS).

Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	Impact assessment not required	No
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	No
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	Impact assessment not required	No

Record the findings for hydromorphology and go to section 2: biology.

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the water body summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats ²	Lower sensitivity habitats ³
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

² Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.

³ Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.

Consider if the footprint ⁴ of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km ² or larger	Yes to one or more – requires impact assessment	No to all – impact assessment not required	No.
1% or more of the water body's area			No.
Within 500m of any higher sensitivity habitat			No. Any impacts are seen to be positive in terms of habitat provision.
1% or more of any lower sensitivity habitat			No. Any impacts are seen to be positive in terms of habitat provision.

⁴ Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Continue with questions	Go to next section	No.
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	Impact assessment not required	No. Any impacts are seen to be positive in terms of habitat provision.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	No.

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the water body summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	Impact assessment not required	Positive effects only.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	No.
Is in a water body with a history of harmful algae	Requires impact assessment	Impact assessment not required	No.

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment	Impact assessment not required	No.
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	No.

If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Yes	No	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment ⁵	Impact assessment not required	No.

⁵ Carry out your impact assessment using the Environment Agency's surface water pollution risk assessment guidance, part of Environmental Permitting Regulations guidance.

Record the findings for water quality go on to section 4: WFD protected areas.

Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your water body (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area ⁶	Requires impact assessment	Impact assessment not required	No risk. See Habitats Regulations Assessments.

⁶ Note that a regulator can extend the 2km boundary if your activity has an especially high environmental risk.

Record the findings for WFD protected areas and go to section 5: invasive non-native species.

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS	Requires impact assessment	Impact assessment not required	Biosecurity plan has been produced – see attached Biosecurity Assessment and Management 1 and 2 documents.

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	Benefits only. Seagrass helps to bind sediments together and creates slowing of current speeds potential assisting with coastal protection. The small area of this restoration will not significantly affect broader hydromorphology.
Biology: habitats	No	Positive impacts only.
Biology: fish	No	Positive impacts only.
Water quality	No	Positive impacts only.
Protected areas	No	Positive impacts only.
Invasive non-native species	No	Biosecurity plan has been produced to eliminate risk.

If you haven't identified any receptors at risk during scoping, you don't need to continue to the impact assessment stage and your WFD assessment is complete.

If you've identified one or more receptors at risk during scoping, you should continue to the impact assessment stage.

Include your scoping results in the WFD assessment document you send to your activity's regulator as part of your application for permission to carry out the activity.

Support documents for the Marine License application in North Wales – band 2

Habitats Regulations Assessment

Scanning of the proposed Seagrass Ocean Rescue project on the Llyn Peninsula and Anglesey in the context of the Habitats Regulations Assessment indicates that **the aims of the project contribute directly to the improved conservation management of the Pen Llŷn a'r Sarnau (Llyn Peninsula and the Sarnau) Special Areas of Conservation (SAC), the Liverpool Bay Special Protection Areas (SPA), and the Anglesey Terns SPA.** This contribution is through the improvement of the sites' conditions towards a more favourable conservation status by increasing the extent of seagrass.

The Conservation of Habitats and Species Regulation 2017, which regulates the management of the SPAs and SACs, defines conservation as per the Council Directive 92/43/EEC: conservation is “a series of measures required to maintain or **restore** the natural habitats and the populations of species of wild fauna and flora at a favourable status”. Specifically, the Pen Llŷn a'r Sarnau SAC, the Liverpool Bay SPA, and the Anglesey Terns SPA contain the features “[Large Shallow Inlets and Bays](#)”, and “[Mudflats and Sandflats](#)” (as described in the Habitats Directive Article 17 reports on marine habitats), and intertidal and subtidal seagrass beds are components of these features.

In fact, by increasing the extent of seagrass, this restoration project works towards the conservation objectives for the intertidal “Mudflats and Sandflats” features and the “Large Shallow Inlets and Bays” features present within the Pen Llŷn a'r Sarnau SAC, the Liverpool Bay SPA, and the Anglesey Terns SPA. Not only would the presence of additional seagrass contribute to improving feature conditions, but seagrass also brings with it many conservation benefits including overall increase in the amount of biodiversity in the area, improvements to fisheries, water quality improvements due to the filtering of pollutants and the uptake of nitrogen. Other benefits include carbon capture and natural flood defence. The restoration of seagrass beds is therefore not considered to have a likely significant effect on the features of these sites, as described in Table 2.

As seagrasses are components of the abovementioned features, our proposed seagrass search areas overlap with these features at all sites, i.e. Abersoch, Warren, Y Gamlas, Pwllheli, Pen Y Chain 1 and 2, and Porth Y Mor.

In contrast, our seagrass search areas overlap with neither *definite* intertidal reefs nor *definite* subtidal reefs. It must be noted that the seagrass search areas do overlap with *potential* intertidal and subtidal reefs, as these areas are widespread throughout the coastal areas of the Llyn Peninsula and Anglesey. However, our field and imagery surveys have not produced any evidence that these *potential* intertidal and *potential* subtidal reefs are indeed existing reefs. If future field surveys would identify that subtidal or intertidal reefs exist within our seagrass search areas, we will avoid and exclude these areas from any activities as reef habitats are unsuitable for *Zostera marina* planting.

Lastly, based on data provided by Natural Resources Wales, our seagrass search areas do not overlap with any other [Marine Article 17 Habitats Features](#), including Estuaries, Estuaries Associated Sediment, Maerl Beds, Methane-derived authogenic carbonates, Saline Lagoons, Saltmarsh, Sand Banks, or Sea Caves.

Habitats Regulations Assessment – the benefits of seagrass for SPAs

Seagrass meadows are known to be rich in fauna, with complex food webs that provide trophic subsidy to species and habitats way beyond the extent of their distribution. Birds are an often-overlooked part of marine ecosystems; not only are they crucial to the health of marine ecosystems, but their populations are also supported by the productivity and biodiversity of marine ecosystems. The links of birds to specific habitat types such as seagrass meadows are largely not considered except in the context of direct herbivorous consumption. A 2021 review paper written by the applicants of this marine licence examined the linkages between seagrass and birds and proposed a conceptual framework for how seagrasses may support bird populations beyond their distribution in both direct and indirect pathways. Evidence was presented that seagrass meadows are globally foraged for fish and invertebrates by coastal birds. They are also targeted by herbivorous wildfowl and potentially benefit birds further afield indirectly as a result of their support for offshore marine fish species at critical times in their life cycle (e.g., Atlantic Cod and Whiting). Evidence from the literature indicates that seagrass does provide support for birds and studies conducted by the team at Project Seagrass has recently revealed the targeted feeding behaviour of species such as Curlew in seagrass. We propose that planting 10 hectares of seagrass will have a net positive impact on seabirds in the two SPAs.

For further information please see:

<https://www.mdpi.com/1424-2818/13/8/363>

Table 2. Assessment of likely significant effect on SACs and SPAs.

Designated Site	Site Features	Conservation Objectives	Impact Pathway	Potential to Affect	Assessment
Anglesey Terns SPA	Arctic tern <i>Sterna paradisaea</i> , common tern <i>Sterna hirundo</i> , roseate tern <i>Sterna dougallii</i> , Sandwich tern <i>Sterna sandvicensis</i>	- The number of breeding terns within the SPA is stable or increasing. - The number of chicks successfully fledged in the SPA and beyond is sufficient to help sustain the population. - The range and distribution of terns within the SPA and beyond is not constrained or hindered. - The extent of supporting habitats used by terns is stable or increasing. - Supporting habitats are of sufficient quality to support the requirements of terns. - There are appropriate and sufficient food sources for terns within access of the SPA. - Actions or events likely to impinge on the sustainability of the population are under control.	Performance Indicators for Factors Affecting the Feature: - Disturbance (human/predator) - Predation (foxes, stoats, rats, cats, weasels, gulls, peregrines, herons) - Supporting habitat (space for nesting, normal bird behaviour, foraging) - Food supply (sandeels, sprat, whiting) - Wintering territory (west coast of Africa)	Our seagrass search areas cover intertidal and subtidal areas within the Mudflats and Sandflats feature of the SPA at Porth y Môr and Traeth yr Ora. <u>Disturbance</u>: NRW specialist advice states that <i>the work would be unlikely to disturb foraging terns even if carried out in summer when the birds are present. Disturbance would only potentially be an issue if the works were very close and noisy next to the breeding grounds. Terns foraging from their colonies at Liverpool Docks and Shotton are unlikely to forage near the proposed locations.</i> All man-made materials deployed on the seabed will biodegrade within 6-18 months or will be removed. Therefore, there is no risk of disturbance through our presence at the site. <u>Predation</u>: No potential pathway to affect predator populations. <u>Supporting habitat</u>: NRW specialist advice states that <i>terns foraging from their colonies at Liverpool Docks and Shotton are unlikely to forage near the proposed locations. Terns are fish eating birds and therefore any habitat which may increase fish could help the population, although most fish eaten by terns are sandeels or clupeids.</i> No potential pathway to affect habitat for nesting/behaviour. No potential risk to foraging habitat, since the sediment and water column will not be altered. Seagrass is known to provide valuable habitat for fishes,	No likely significant effect

				including whiting and sandeels. All man-made materials deployed on the seabed will biodegrade within 6-18 months or will be removed. • <u>Food supply</u>: NRW specialist advice states that <i>terns are fish eating birds and therefore any habitat which may increase fish could help the population, although most fish eaten by terns are sandeels or clupeids</i>. No potential risk to foraging habitat, since the sediment and water column will not be altered. Seagrass is known to provide valuable habitat for fishes, including whiting and sandeels. • <u>Wintering territory</u>: No potential pathway to affect wintering territory.	
Liverpool Bay SPA	Non-breeding season: red-throated diver <i>Gavia stellata</i>, common scoter <i>Melanitta nigra</i>, waterbird assemblage (above plus red-breasted merganser <i>Mergus serrator</i> and great cormorant <i>Phalacrocorax carbo</i>), little	Subject to natural change, ensure the integrity of the site is maintained or restored as appropriate, and ensure the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent, distribution, structure, function and supporting processes of the habitats of the qualifying features • The population and distribution of each of the qualifying features within the site.	Pressure Categories of Operation: • Physical loss of supporting habitat (see below) • Physical damage to supporting habitat (see below) • Non-physical disturbance (noise/visual presence) • Toxic contamination (synthetic compounds) • Non-toxic contamination (nutrients, organic loading, temperature) • Biological disturbance (microbial pathogens, NNIS, prey extraction, human-induced mortality) Red-throated diver supporting habitat: "shallow (between 0–	Our seagrass search areas cover the intertidal and subtidal within the Mudflats and Sandflats feature of the SPA at Porth y Môr and Traeth yr Ora. • <u>Physical loss of/damage to supporting habitat</u>: NRW specialist advice states that <i>little gull foraging from their colonies at Liverpool Docks and Shotton are unlikely to forage near the proposed locations. Red-throated divers are fish eating birds and therefore any habitat which may increase fish could help the population, although we think the majority of fish eaten by red-throated divers is clupeids</i>. No potential risk to overwintering/foraging habitat, since the sediment and water column will not be altered. Overwintering populations mostly remain further offshore. Seagrass is known to provide valuable habitat for fishes, including gadoids, herring and sandeels. All materials deployed on	No likely significant effect

	gull <i>Hydrocoloeus minutus</i> (due to be added when site revised) Breeding season: little tern <i>Sternula albifrons</i>, common tern <i>Sterna hirundo</i>		20m deep and less frequently around 30m) inshore waters, often occurring within sandy bays, firths and sea lochs, although open coastline is also frequently used. ... Supporting habitats may have a functional role (nursery, spawning, feeding grounds, shelter) in supporting [prey] fish species (small fish such as gadoids, sprat, herring, sandeels)." Common scoter supporting habitat: "water depth range of 2–20m and a mean depth of 10–12m. The most important areas are Shell Flat to Formby, Colwyn Bay and Conwy Bay."	the seabed will biodegrade within 6-18 months or will be removed. • <u>Non-physical disturbance</u>: NRW specialist advice states that <i>the nearest individual features to the proposed locations are red-throated divers and common scoters. Little gull foraging from their colonies at Liverpool Docks and Shotton are unlikely to forage near the proposed locations.</i> Overwintering populations mostly remain further offshore. Therefore, there is no risk of disturbance through our presence at the site. • <u>Toxic contamination</u>: The only synthetic compound to be used is fuel for our boat, which is regularly serviced and inspected. Therefore, there is minimal risk of toxic contamination. • <u>Non-toxic contamination</u>: Seagrass is known to absorb suspended nutrients so there is no risk of increasing the water nutrient loading. No potential pathway to affect temperature regimes. • <u>Biological disturbance</u>: No potential pathway to affect prey extraction or human-induced mortality. All equipment will be cleaned and dried before being brought onto the sites to avoid the risk of introducing pathogens/non-native and invasive species. Seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. Prior to planting, all seeds planted will be washed with sterilised seawater. Furthermore, transplants to be used will be local transplants and transplants grown in our lab which is free of non-native and invasive species, and the water is filtered and UV-treated.	
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				Furthermore, the sand utilised within the boundaries of this license will be marine-derived. See the attached Biosecurity Assessment & Management document.	
Pen Llŷn a'r Sarnau SAC	Reefs, large shallow inlets and bays, sandbanks slightly covered by seawater all the time, estuaries, coastal lagoons, mudflats and sandflats, Atlantic salt-meadow, Salicornia and other annuals colonising mud and sand features, submerged or partially submerged sea caves, grey seal <i>Halichoerus grypus</i> , bottlenose dolphin <i>Tursiops truncatus</i> ,	- The overall distribution and extent of the habitat features within the site, and each of their main component parts is stable or increasing. - The physical, biological and chemical structure and functions necessary for long-term maintenance and quality of the habitat are not degraded: geology, sedimentology, geomorphology, hydrography, meteorology, water/sediment chemistry, biological interactions. - Nutrient and contaminant levels in the water column and sediments are at or below existing statutory guideline concentrations, within ranges not potentially detrimental to features species	Operations that may cause deterioration or disturbance (affecting factors): - Geophysical regime: modification of hydrodynamic regime, sediment transport processes, alteration/loss of substrate, physical structure, addition of persistent debris - Fundamental environmental parameters: elevation of turbidity, suspended sediments, reduced oxygen, altered temperature/salinity/light - Environmental quality: addition/remobilisation of toxic and non-toxic contaminants, increased suspended nutrients, organic enrichment - Physical disturbance: displacement, crushing, compactment, abrasion, entanglement, collision, smothering, visual, noise - Species removal	Our seagrass search areas cover the intertidal and subtidal within both the Large Shallow Inlets and Bays feature and the Mudflats and Sandflats feature at Abersoch, Warren, Y Gamlas, Pwllheli, Pen Y Chain 1 and 2. <u>Geophysical regime</u>: No potential to alter hydrodynamic/sediment transport regimes, since the sediment and water column will not be altered. All man-made materials deployed on the seabed will biodegrade within 6-18 months or will be removed. <u>Fundamental environmental parameters</u>: Seagrass is known to trap suspended sediments and improve water clarity and oxygen availability. No potential pathway to affect temperature, salinity or light. <u>Environmental quality</u>: The only synthetic compound to be used is fuel for our boat, which is regularly serviced and inspected. Therefore, there is minimal risk of toxic contamination. Seeds will be planted no deeper than 50 mm into the seabed, therefore very low risk of mobilising existing contaminants. Seagrass is known to absorb suspended nutrients so there is no risk of increasing the water nutrient loading. <u>Physical disturbance</u>: Boat drivers are RYA qualified and well-trained to ensure no collision with, or disturbance of, any abiotic or biotic features. All man-made materials deployed on	No likely significant effect

	otter <i>Lutra lutra</i>	populations, abundance and range. For special features (marine mammals): the population is maintained as a viable component of its natural habitat; natural range is not reduced; and presence, abundance, condition, and diversity of supporting habitats/species is such that the population dynamics are stable or increasing.	Introduction of non-native species	the seabed will biodegrade within 6-18 months or will be removed. <u>Species removal</u>: No removal of species. <u>Introduction of non-native species</u>: All equipment will be cleaned and dried before being brought onto the sites to avoid the risk of introducing pathogens/non-native and invasive species. Seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. Prior to planting, all seeds planted will be washed with sterilised seawater. Furthermore, transplants to be used will be local transplants and transplants grown in our lab which is free of non-native and invasive species and the water is filtered and UV-treated. Furthermore, the sand utilised within the boundaries of this license will be marine-derived. See the attached Biosecurity Assessment & Management document.	
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<i>Document version number: (to be completed by marine licencing team)</i>	
<i>Approval date: (to be completed by marine licencing team)</i>	

Marine Invasive Non-native Species Biosecurity Risk Assessment and Management Plan

A Marine Biosecurity Risk Assessment and Management Plan enables marine operators and contractors to understand and minimise the risk of introducing or spreading marine invasive non-native species (INNS). Management of marine INNS is extremely challenging once they are introduced to a new area. Effective biosecurity measures that minimise the risk of introduction or spread are therefore key to effective management.

Filling in this form:

To help you fill in this form, see accompanying document “Guidance for completing NRW’s Biosecurity Risk Assessment and Management Plan”. The accompanying document contains clarification of many key terms and also provides guidance on potential pathways of introduction for INNS (Table 1) and level of risk associated with each pathway (Table 2). A list of the priority species in Wales is given in Table 3.

Structure of this form:

All applicants will need to fill in Sections A and C. One or a number of Sections B1 to B5 should be filled in depending on the nature of the licenced activity. For further information on what is included in each section see the accompanying guidance document.

Section A: Activity overview

All applicants should complete this section.

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

Applicants who will be using a vessel (or vessels) as part of their licenced activity should complete this section. Information on any equipment to be used which can be separated from the vessel should be provided in Section B.4.

B.2 Assessing the pathway risks associated with non-biological materials and water

Applicants whose licenced activity involves the use or transfer of non-biological materials (e.g. water, sediment, construction material) should complete this section.

B.3 Assessing the pathway risks associated with biological material

Applicants whose licenced activity involves the use or transfer of biological material (including aquaculture) should complete this section.

B.4 Assessing the pathway risks associated with equipment

Applicants whose licenced activity involves use of equipment which can be separated from their vessel should complete this section.

B.5 Assessing other pathway risks

This should be filled in if the previous sections do not capture any aspects of the licenced activity.

Section C: Management Plan and Surveillance / Monitoring

All applicants should complete this section.

Section A: Activity overview

Please fill out the activity details below:

Applicant name:	Richard Unsworth
Marine licence reference number (if applicable):	
Short description of activity: <i>(please provide enough detail for NRW to understand the location and the different elements of the project. Links to other documents which describe the project can be provided)</i>	Seagrass restoration in North Wales. For a full description, see Marine License Band 2 application and associated supporting document.
Start and end date of licenced activity	1 December 2022 – 30 November 2027
Applicant's Biosecurity manager / officer:	Stijn den Haan

Please put an X in the box(es) that relate to your licensable activity

Activity	Place an X next to the corresponding activity
Capital dredging	
Maintenance dredging	
Aggregate dredging	
Construction of a new structure with vessel/s	
Construction of a new structure without vessel/s	
Maintenance of a structure with vessel/s	
Maintenance of a structure without vessel/s	
Expansion of an existing structure with vessel/s	
Expansion of an existing structure without vessel/s	
Beach replenishment/management with vessel/s	
Beach replenishment/management without vessel/s	
Finfish, shellfish or seaweed aquaculture / harvesting	
Depositing material intertidally by vehicle	
Pipelines and cabling	
Grab sampling / Ground investigations	
Drop down video	
Depositing buoys / markers	X
Research (please specify)	
Other (please specify): seagrass restoration	X

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

B.1.1. Please list all ports within the UK or overseas that all vessel(s) to be used (both during construction and maintenance) have visited over the 12 months prior to being used in this licenced activity, or since the last out of water period (whichever is most recent).

Please state **N/A** if vessels have not entered any port since the last out of water period.

If you do not yet have the information to complete this section, please state **Unknown**. NRW may ask for this section to be updated when these details are known. The risk should be set as High.

Vessel name	Port / location visited over last 12 months (listed chronologically with dates if known)	Which marine invasive non-native species known to be present at this port(s) / location(s)?	Has the vessel had antifouling? 12 months prior to activity for biocidal coatings, 24 months for biocide-free coatings
RV Gwenhidw	Porthdinllaen	<i>Sargassum muticum</i> , <i>Mya arenaria</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i>	Yes. June 2021.
RV Gwenhidw	Solent: off the coast of East Cowes	<i>Crepidula fornicata</i> , <i>Ammothea hilgendorfi</i>	Yes. June 2021

Please add more rows if necessary

Please indicate the INNS risk level and justification of the risk below, separately for each vessel based on the locations visited in last 12 months and vessel antifouling status.

Note: Examples of risk levels are given in Table 2 of the accompanying guidance document and there is more information in the accompanying guidance document.

Vessel name / type	Risk Level (High, Medium, Low)	Justification of risk level
RV Gwenhidw / 8 m Aluminium Landing Craft	Low	Although the boat has been deployed in water bodies where marine invasive and non-native species are present, the boat is thoroughly rinsed and cleaned with freshwater after every deployment, and fully dried before re-deployment in other water bodies. Moreover, the boat is stored on land, and has antifouling coating.

B.1.2 Please provide details of the vessels (identified in Table B.1.1), which have not had antifouling (within the 12 months prior to the licenced activity for biocidal coatings, or 24 months for biocide-free coatings). If there are not additional measures or alternative biofouling management regime then please put **None**.

Vessel	Alternative biofouling management regime (e.g. different timeframes for antifouling treatment, vessel storage on land etc.)	Risk Level (High, Medium, low)
NA	NA	NA

B.2 Assessing the pathway risks associated with non-biological materials and water

B.2.1: Please provide information about the source and receiving environments for non-biological materials and water transferred through the licenced activity from different pathways (for example hopper water, dredge material, construction material).

Pathway	Location (including Coordinates, WGS84)		Relevant Environmental Conditions for INNS species (e.g. salinity and depth differences between source and receiving environments)	List of INNS known to be present	Risk Level (High, Medium or Low)	Justification of risk level
<i>NA: no movement of non-biological materials and water in our activities</i>	Source					
	Receiving					
	Source					
	Receiving					
	Source					
	Receiving					

Please add more rows if necessary

B.3 Assessing the pathway risks associated with biological material

B.3.1 Please provide information about the species that will be used or transferred through the licenced activity and the potential for INNS to be contained in the biological material.

Zostera marina seeds, and *Zostera marina* shoots (“transplants”).

Seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. As seeds are stored in a layer that is one seed thick, this allows for the effective identification and removal of any invasive and non-native species. Prior to planting, all seeds will be washed with sterilised seawater.

Transplants will either come from nearby (within Tremadog bay) populations (subject to further marine licence applications) to prevent any biosecurity risks, or be lab-grown at the Project Seagrass nursery facility in Pendine, Carmarthen which is free of non-native and invasive species, the water is filtered and UV-treated, and regularly monitored for the presence of any non-native and invasive species.

B.3.2: Please provide information about the source and receiving environments for biological material used or transferred through the licenced activity. Pathways include, for example, transfer of seeded ropes with seaweed or shellfish.

Pathway	Location (coordinates, WGS84) and / or name of culture facility		Relevant environmental conditions for INNS species (e.g. salinity and depth differences between source and receiving environments)	List of INNS known to be present in the location or culture facility	Risk Level (High, Medium or Low)	Justification of risk level
<i>Planting out of Zostera marina seeds</i>	Source	Project Seagrass	Artificial seawater.	None.	Low	The source contains no invasive and non-native marine species, and is

<i>in hessian bags, and accidentally transferring invasive and non-native marine species that are present on seeds</i>		seed storage in Bridgend				rigorously checked for the presence of any of such species. Furthermore, when seeds are collected from donor populations, they are thoroughly rinsed and cleaned; prior to planting out, the seeds are rinsed with sterile seawater.
	Receiving	Seagrass search areas as specified in the Marine License Application.	NA	<u>Tremadog Bay:</u> <i>Sargassum muticum</i> , <i>Mya arenaria</i> , <i>Styela clava</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i> , <i>Melanothamnus harveyi</i> , <i>Colpomenia peregrina</i> <u>Treath yr Ora:</u> <i>Magallana gigas</i> , <i>Mya arenaria</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i>	NA	NA
<i>Planting out of Zostera marina transplants, and accidentally transferring invasive and</i>	Source	Project Seagrass nursery facility in Pendine, Carmarthen	Filtered and UV-treated water.	None.	Low	The source contains no invase and non-native marine species, and is rigorously checked for the presence of any of such species. Water is filtered and UV-treated. Prior to planting out, the transplants

<i>non-native marine species that are present on the transplants</i>						are rinsed with sterile seawater.
	Receiving	Seagrass search areas as specified in the Marine License Application.	NA	<u>Tremadog Bay:</u> <i>Sargassum muticum</i> , <i>Mya arenaria</i> , <i>Styela clava</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i> , <i>Melanothamnus harveyi</i> , <i>Colpomenia peregrina</i> <u>Treath yr Ora:</u> <i>Magallana gigas</i> , <i>Mya arenaria</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i>	NA	NA

Please add more rows if necessary

B.3.3. If a relevant pathway is identified in Table B.3.2, please outline any relevant biosecurity measures or protocols in place to prevent contamination of material by marine INNS, and introduction or spread of marine INNS.

Seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. As seeds are stored in a layer that is one seed thick, this allows for the effective identification and removal of any invasive and non-native species. Prior to planting, all seeds will be washed with sterilised seawater.

Transplants will either come from nearby populations (subject to further marine licence applications) to prevent any biosecurity risks as it is within the same community of marine species, or be lab-grown at the Project Seagrass nursery facility in Pendine, Carmarthen which is free of non-native and invasive species and regularly monitored for the presence of any non-native and invasive species.

B.3.4. Does the transfer have the relevant documentation from the Fish Health Inspectorate at CEFAS (Aquaculture Production Business Registration), or follow other relevant codes of conduct for prevention of the introduction or spread of marine INNS? Please place an X in the relevant box.

Yes	No	Don't know	Not relevant
			X

B.4 Assessing the pathway risks associated with immersible equipment

B.4.1. Please list the immersible equipment expected to be used in this licenced activity in the box below.

- Boat RV Gwenhidw
- SCUBA equipment
- Chair weights
- Buoys
- Hessian bags (will biodegrade)
- Hessian twine (will biodegrade)

B.4.2. Will all the immersible equipment used in this licenced activity undergo washing, rinsing and / or drying as part of routine maintenance at the times described below? Please place an X in the relevant box.

	Yes	No
Immediately prior to departing the <u>port of origin</u>	X	

to undertake the licenced activity.		
Immediately prior to leaving the licenced activity area on completion of the licenced activity.	X	

B.4.3. Will all the immersible equipment used in this licenced activity undergo washing, rinsing and / or drying between different deployments within the activity area of this licenced activity (e.g. different specific locations of dredging or sampling covered under this marine licence)? Please place an X in the relevant box.

Yes	No (please provide reason)
X	

If you answer No to any of the questions in B.4.2 or B.4.3, then please complete B.4.4 below.

B.4.4. Please provide information on the previous locations the equipment will have been used prior to the vessel being used for this licenced activity.

Equipment	Location (Coordinates, WGS84)	Risk Level (High, Medium or Low)	Justification of risk level
Boat RV Gwenhidw	Porthdinllaen, 52.9431, -4.5592	Low	The boat is thoroughly rinsed with freshwater, cleaned, and dried prior to re-deployment. The boat has an antifouling coating and is stored on land.

B.5 Assessing other pathway risks

B.5.1 Please provide any other information on the licenced activity that may produce a risk of the introduction or spread of marine INNS that is not covered in the sections above.

Pathway	Risk Level (High, Medium or Low)	Justification of risk level
NA	NA	NA

Section C: Management Plan, Surveillance and Monitoring

C.1 Management Measures

Enter the management measures for the pathways identified in the sections above.

All **high and medium risk** pathways identified in the previous risk assessment (sections B.1 to B.5) should have some degree of additional control or mitigation measures. Low risk pathways may also need additional control or mitigation measures. All management measures should be recorded in an appropriate logbook to demonstrate compliance when requested.

Pathway (identified above)	Risk Level (High, Medium or Low)	Risk management measure/s	Responsible person	Risk level after management (High, Medium or Low)
<i>Planting out of Zostera marina seeds in hessian bags, and accidentally transferring invasive and non-native marine species that are present on seeds</i>	Low	Seeds that are to be planted are first rinsed and stored in our lab facilities, and rigorously and regularly checked for the presence of any invasive and non-native species. As seeds are stored in a layer that is one seed thick, this allows for the effective identification and removal of any invasive and non-native species. Prior to planting, all seeds will be washed with sterilised seawater.	Seed technician	Low

<i>Planting out of Zostera marina transplants, and accidentally transferring invasive and non-native marine species that are present on the transplants</i>	Low	Transplants will be lab-grown at the Project Seagrass nursery facility in Pendine, Carmarthen which is free of non-native and invasive species and regularly monitored for the presence of any non-native and invasive species.	Nursery lead	Low
<i>Unintended transport of non-native and invasive species via equipment.</i>	Medium	All equipment will be rinsed with freshwater, cleaned, and dried prior to being deployed at a different site. Furthermore, our boat is stored on land and antifouling coating is applied as per the required regulations.	Skipper, scuba team coordinator	Low

Please add more rows if necessary

C.2 Surveillance and monitoring procedure

C.2.1 How will actions in the management plan be recorded for future evidence of compliance and where will these records be stored? E.g. photos, logbook.

A logbook will be kept of any non-native and invasive species recorded amongst the seeds and the lab-grown transplants.

A logbook will be kept to record the routine cleaning of equipment after activities.

C.2.2 Are all staff involved in the licenced activity fully aware of the possibility that INNS may be encountered and understand what measures will be taken to ensure surveillance / monitoring of INNS during the activity?

Yes.

C.2.3 Are all staff adequately trained in the identification and detection of INNS to report any instances to the biosecurity manager (named in C.2.4)?

Yes.

C.2.4 Who is the responsible person for monitoring and reporting on Biosecurity management plan actions?

Stijn den Haan



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales

Marine Biosecurity Risk Assessment and Management Plan

Operation type: Marine works (maintenance & construction activities)

Section A: Activity overview

Applicant Name: Richard Unsworth

Marine Licence reference number: Insert previous reference number if applicable

Description of Operation: Seagrass restoration

Activity period: 1 December 2022 – 30 November 2027

Biosecurity Manager/Officer: Stijn den Haan

Approval Date: To be completed by NRW Marine Licensing Team

Document version number: *Click or tap here to enter text.*

Section B: Risk Assessment

The information provided in this section will enable an assessment of the risk associated with each pathway.

1. Assessing pathway risks associated with vessels

1.1 Please list all ports that the vessels used in the operation have been stationary in over the last 12 months, or since the last out of water period (whichever is most recent).

Where exact ports/locations are unknown, provide a description of the area – e.g. The Wadden Sea. Please include all ports/locations that ALL potential vessels will have visited.

Port / Location	INNS present	Data source
NA. Boat has never been stationary at a port and is always removed from the water and cleaned immediately after boating activities have completed. Boat is used for day trips only.	NA	NA

Risk level	Description
Low	Boat has not been stationary at any port.

Vessel	Biofouling management regime	Which of ports listed above has the vessel been stationary in over the past 12 months?

Risk level	Description
Low	Boat has not been stationary at any port.

YES NO

1.3. Will the operation use jack up rigs, barges or similar slow-moving vessels in the course of operation?

☐ ☒

1.3.1 Please list the last two locations the vessels will have been deployed prior to arrival at the operation site

Port / Location	INNS known to be present	Data source
<i>Porthdinllaen</i>	<i>Sargassum muticum</i> , <i>Mya arenaria</i> , <i>Potamopyrgus antipodarum</i> , <i>Austrominius modestus</i> ,	<i>INNS of Interest to Wales August 2020</i> , source
<i>Solent: off the coast of East Cowes</i>	<i>Crepidula fornicata</i> , <i>Ammothea hilgendorfi</i>	<i>Conchological Society of Great Britain & Ireland</i> , source

Yes No

1.3.2 Will the vessel/s be transported over ground to the site of the operation?

☒ ☐

Risk level	Description
Medium	Marine non-native and invasive species transported via used, non-rinsed equipment. Note: our boat and SCUBA equipment will not be stationary in the water and only in the water when used.

2. Assessing pathway risks associated with the transfer of materials and water

2.1: Information about the source and receiving environments for materials transferred as part of planned operations.

If the material is either sourced from, or deposited to a terrestrial location, please just state "Land" in the appropriate location box

Pathway	Location (GPS)		Environmental conditions	INNS present	Risk level	Description
Hopper water	Source	NA			Choose an item.	
	Receiving	NA			Choose an item.	
Dredge material	Source	NA			Choose an item.	
	Receiving	NA			Choose an item.	
Construction material (please specify)	Source	NA			Choose an item.	
	Receiving	NA			Choose an item.	
	Source				Choose an item.	
	Receiving				Choose an item.	

Please add rows as needed for each unique pair of source and receiving environments. There may be more than one set for each material.

3: Assessing pathway risks associated with immersible equipment

3.1. Please list the immersible equipment expected to be used in this licensed activity

SCUBA equipment
Chair weights
Buoys
Hessian bags (will biodegrade)
Hessian twine (will biodegrade)

Add more rows if needed

3.2. Does all the immersible equipment used in this licensed activity undergo washing or rinsing as routine maintenance prior to departing the port of origin to undertake the licenced activity?

Yes

No

☒

☐

3.3. Will the equipment be allowed to fully dry out as standard between deployments?

Yes

No

☒

☐

If NO to both questions, please complete 3.4

3.4 Please list the previous location the equipment will have been used prior to deployment in the operation

Equipment	Location	Risk	Risk description
		Choose an item.	
		Choose an item.	
		Choose an item.	

Add more rows if needed

Section C: Management plan

1: Enter the management measures for the risks identified above.

All high and medium risk pathways identified in the risk assessment should have some degree of additional control or mitigation measures. Low risk pathways may also have additional control or mitigation measures. All management measures must be recorded and evidenced in an appropriate log book to demonstrate compliance if requested.

Risk description	Risk prior to mitigation	Risk management measure/s	Responsible individual	Risk after mitigation
Unintended transport of non-native and invasive species via equipment.	Medium	All equipment will be rinsed with freshwater, cleaned, and dried prior to being deployed at a different site. Furthermore, our boat is stored on land and antifouling coating is applied as per the required regulations.	Skipper, scuba team coordinator	Low

2: Surveillance and reporting procedure

2.1 How will actions in the management plan be recorded for future evidence of compliance?

The rinsing of used equipment including the boat will be recorded in a logbook.

2.1 Planned surveillance procedure for marine non-native species

Please provide a description of any planned surveillance or monitoring procedures for marine invasive non-native species that will be in place for the operations.

After rinsing, cleaning, and drying the equipment, it will be inspected by the responsible individuals (mentioned under section C) for the presence of any marine non-native and invasive species. Equipment will be re-rinsed, cleaned, dried, and re-inspected in case any marine non-native and invasive species is found, until all equipment is free of marine non-native and invasive species.

2.2 Reporting responsibilities

Who is responsible for reporting any records of marine non-native species detected to the appropriate operational manager?

The skipper and the scuba team coordinator.

4: Location of biosecurity logbook/s (record book/s used to document biosecurity actions and evidence)

Project Seagrass Dropbox.

Section C: Useful reference documents

IMO Guidelines for the control and management of ships biofouling to minimize the transfer of invasive aquatic species

http://www.imo.org/blast/blastDataHelper.asp?data_id=30766

Shetland Biosecurity Plan

<http://www.nafc.uhi.ac.uk/departments/marine-science-and-technology/BiosecurityPlan.pdf>

Marine Biosecurity Planning Guidance (England & Wales November 2015 – adapted from SNH, Payne, Cook Macleod February 2014)

<https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=1401>

GB non-natives species secretariat

[Marine biosecurity - key guidance documents and websites](#)

Non - native species records can be accessed via the local record centres

<http://www.lrcwales.org.uk/?AspxAutoDetectCookieSupport=1>

or the National Biodiversity Network

<http://www.nbn.org.uk/>

or the Marine Biological Association

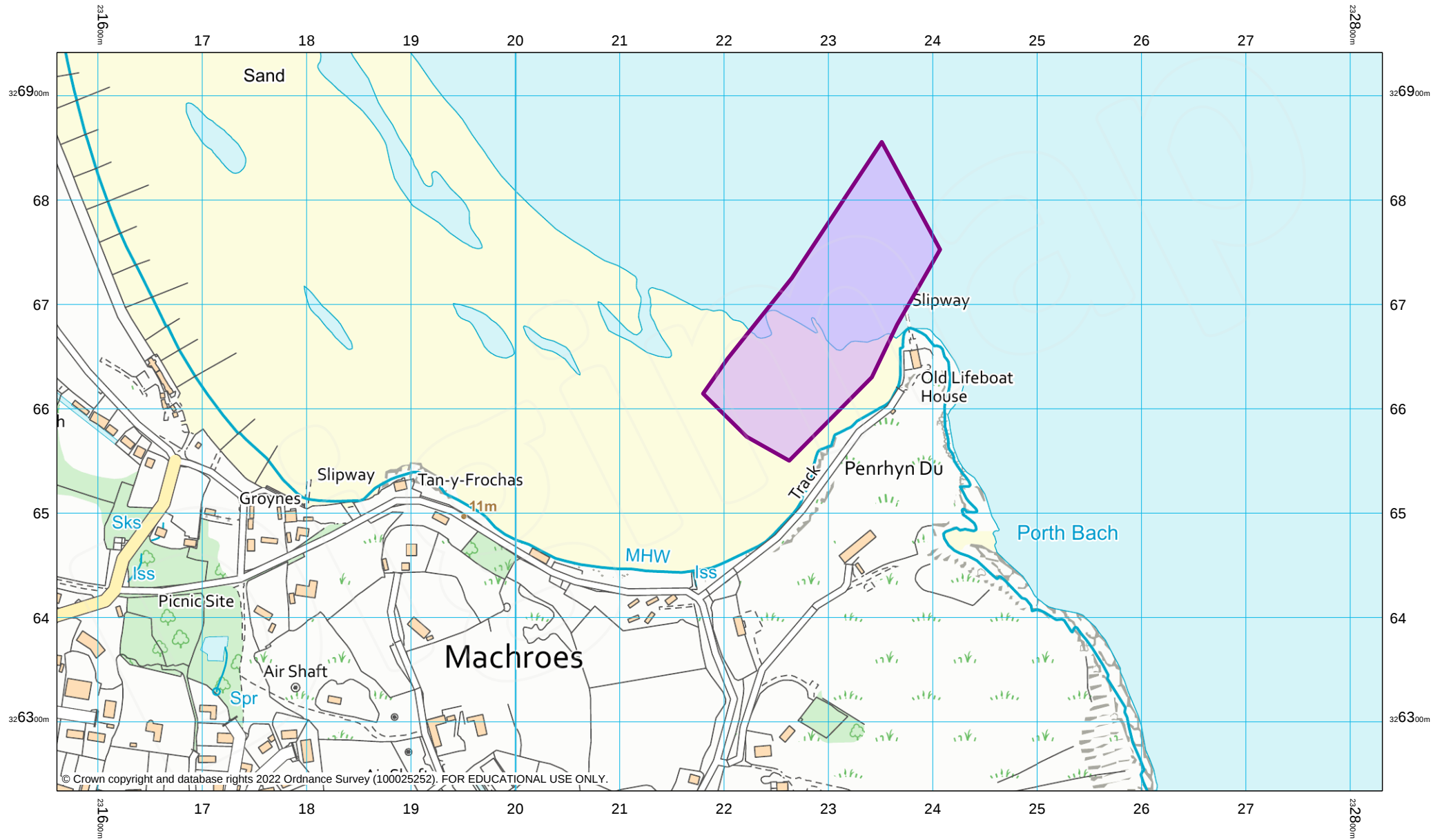
<http://www.mba.ac.uk/>

[Marine Invasive Non-native Species Priority Monitoring and Surveillance List for Wales](#)

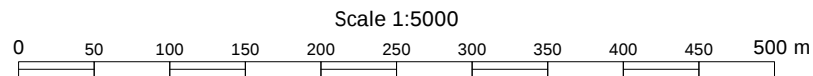
NRW marine experts can also give advice on Non-native species records.

Additional supporting material to be added here e.g. vessel/equipment photographs

20220729_Abersoch



Stijn den Haan
Swansea University

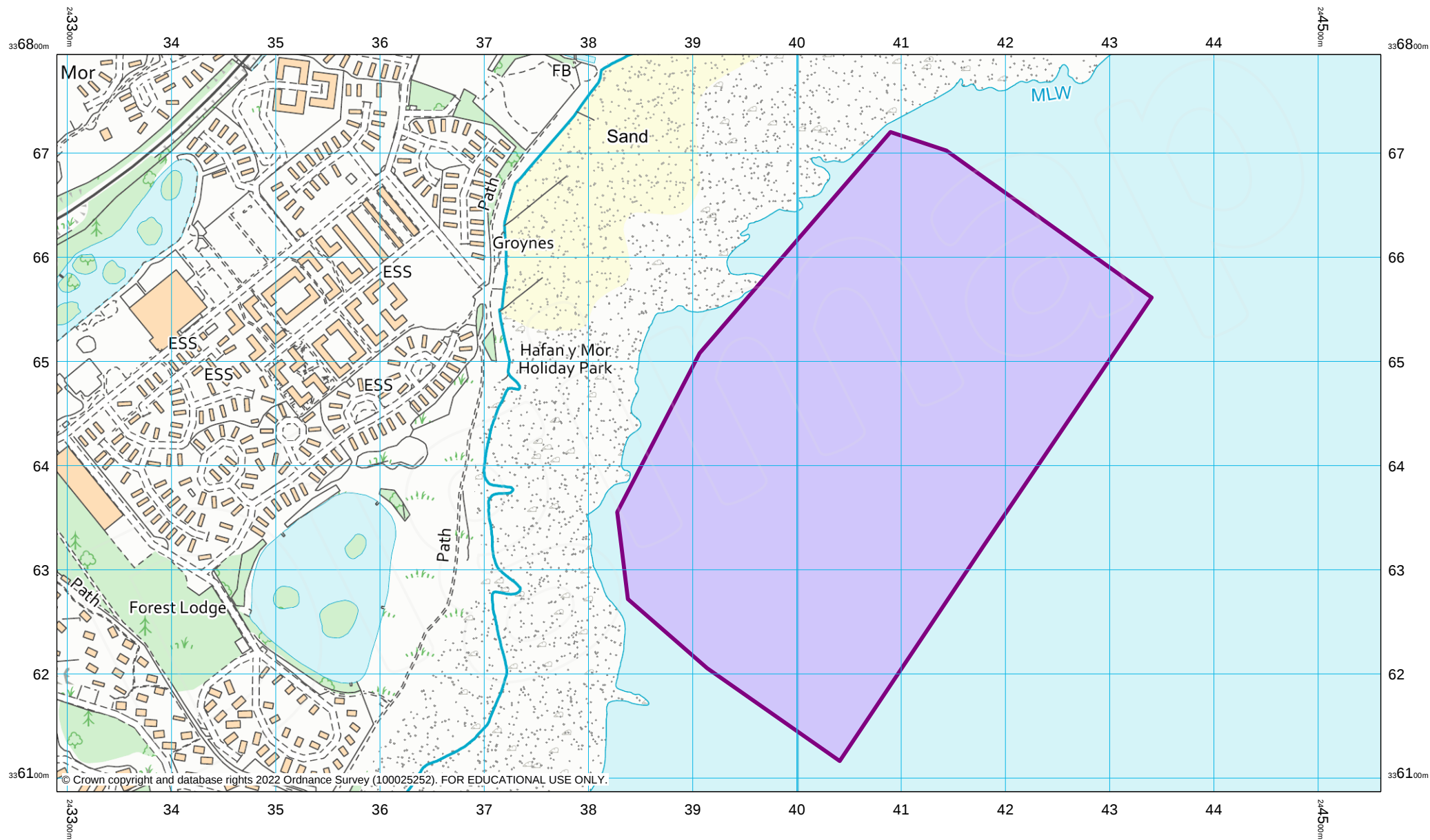


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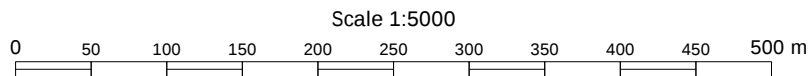
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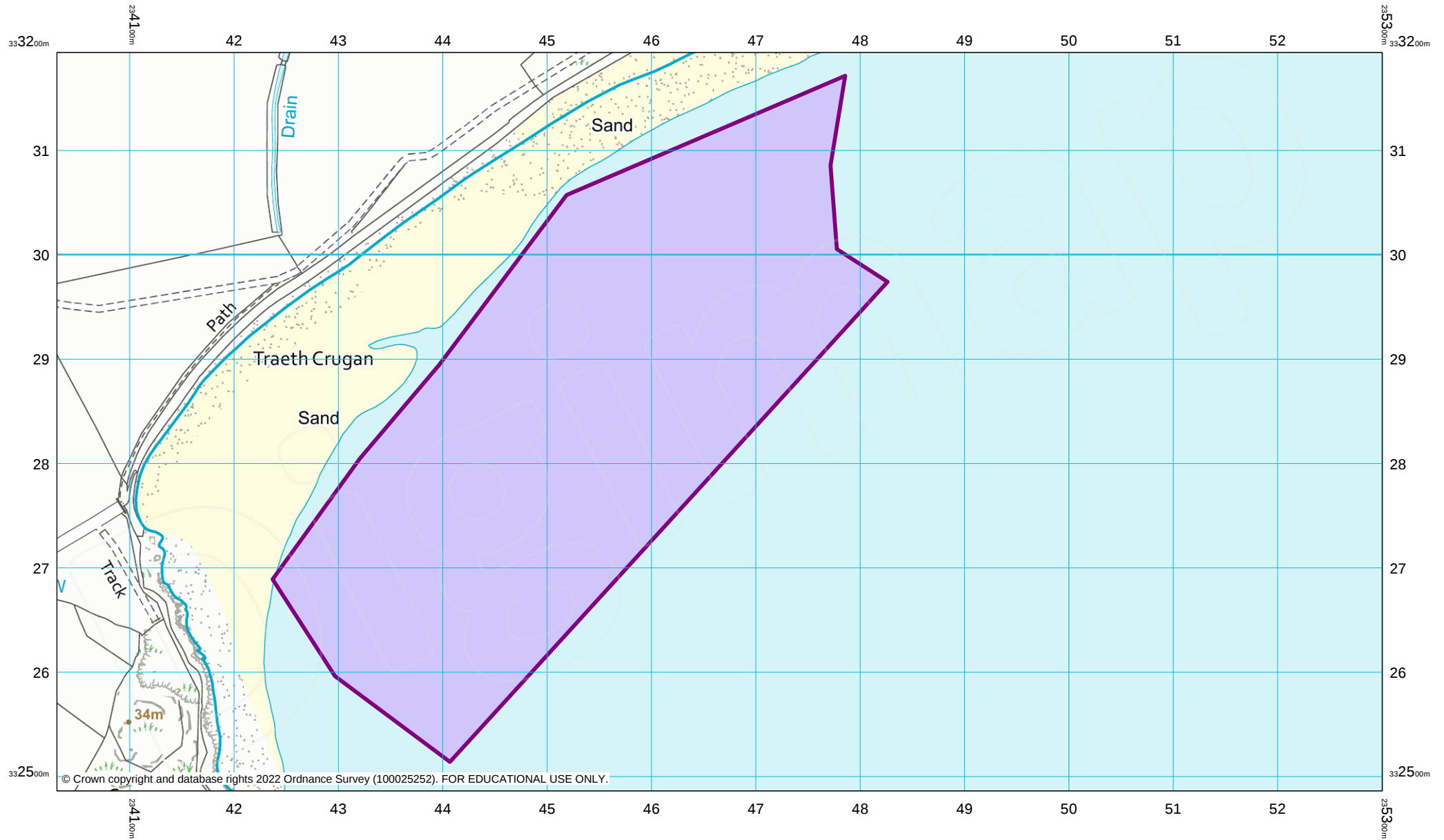
Stijn den Haan
Swansea University



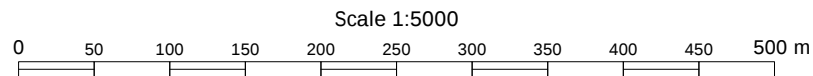
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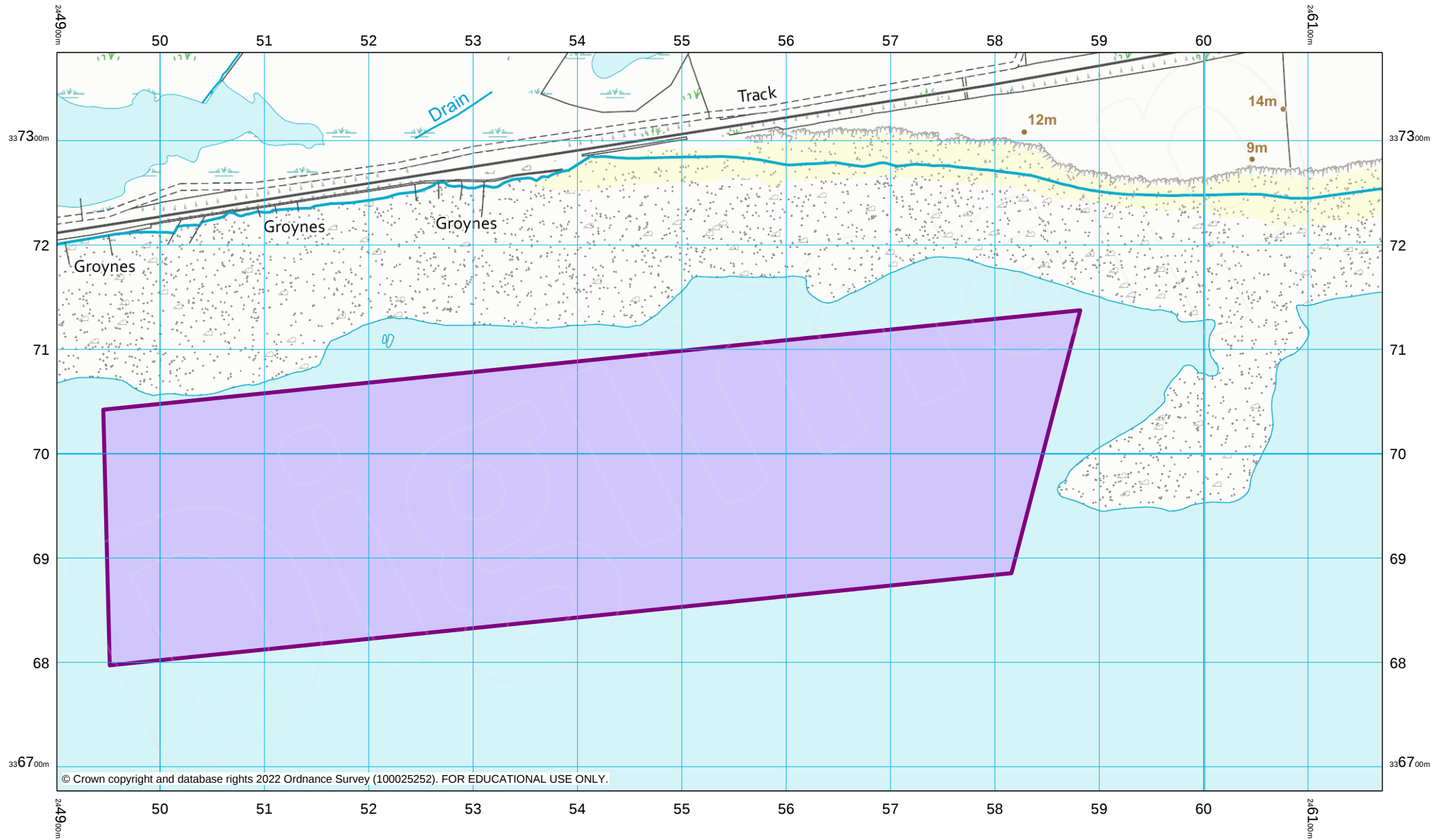
Stijn den Haan
Swansea University



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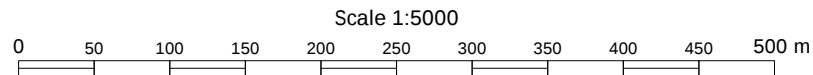
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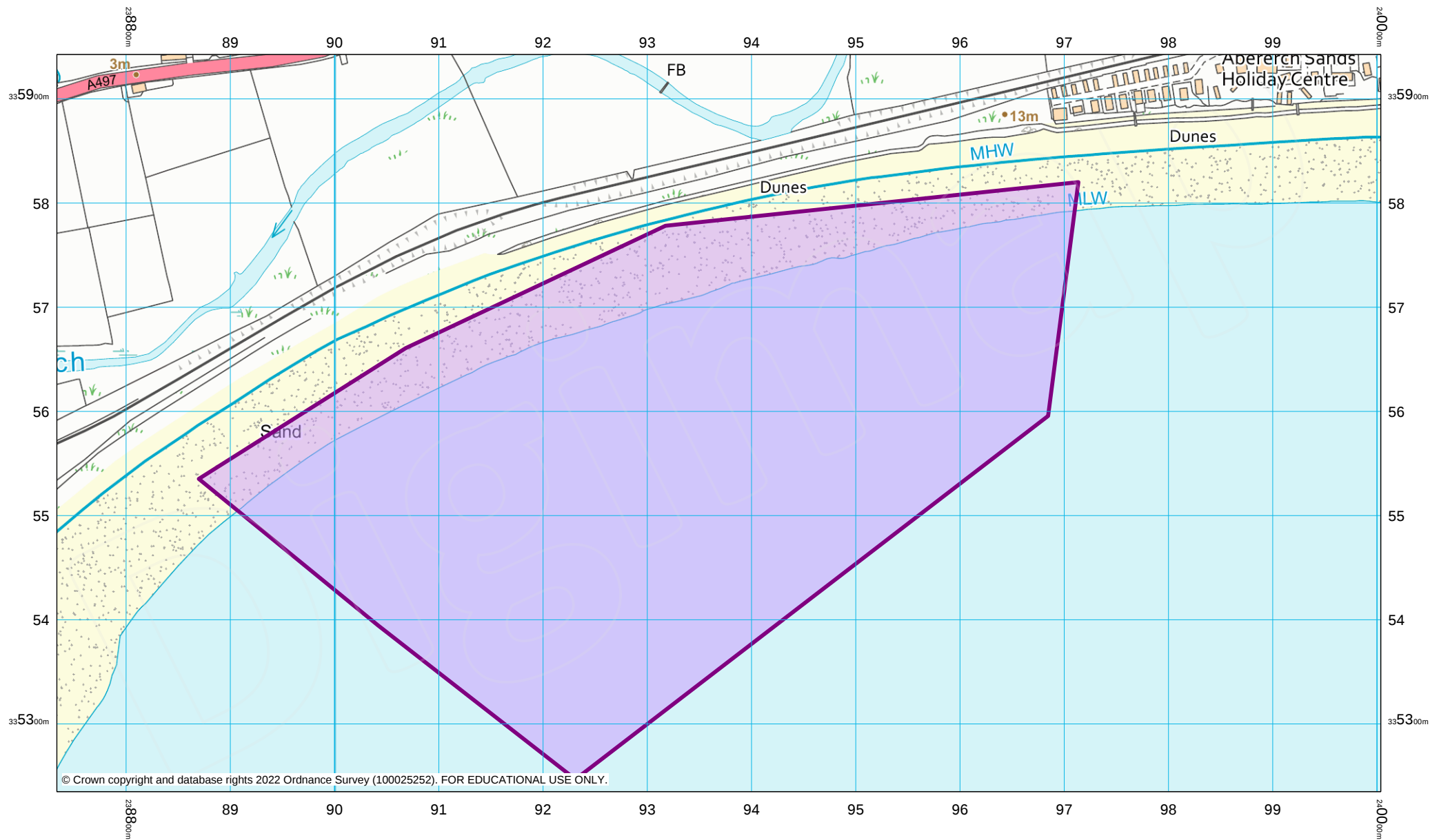


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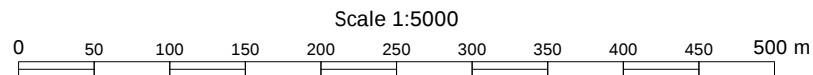
20220729_Pwllheli



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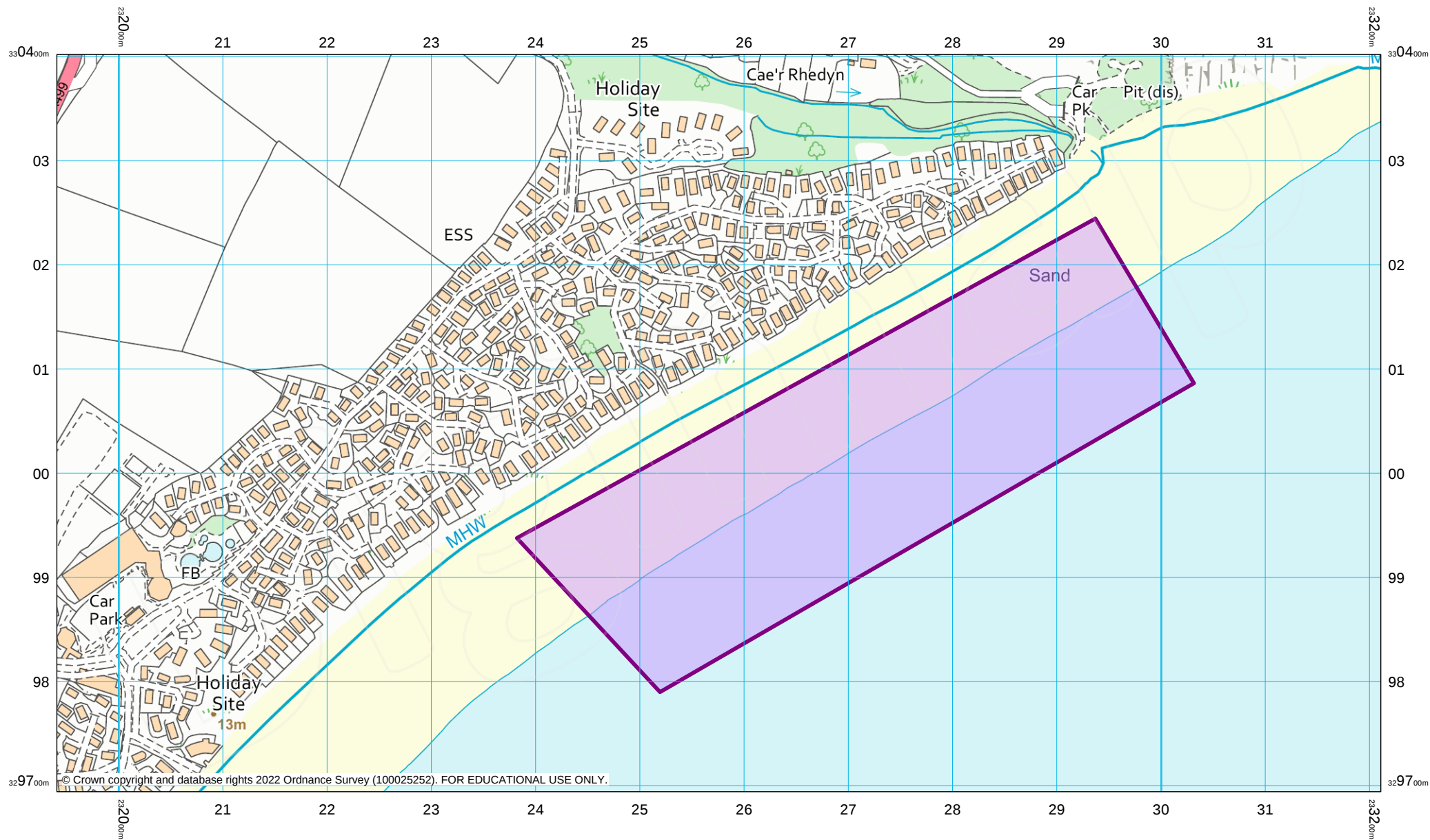
Stijn den Haan
Swansea University



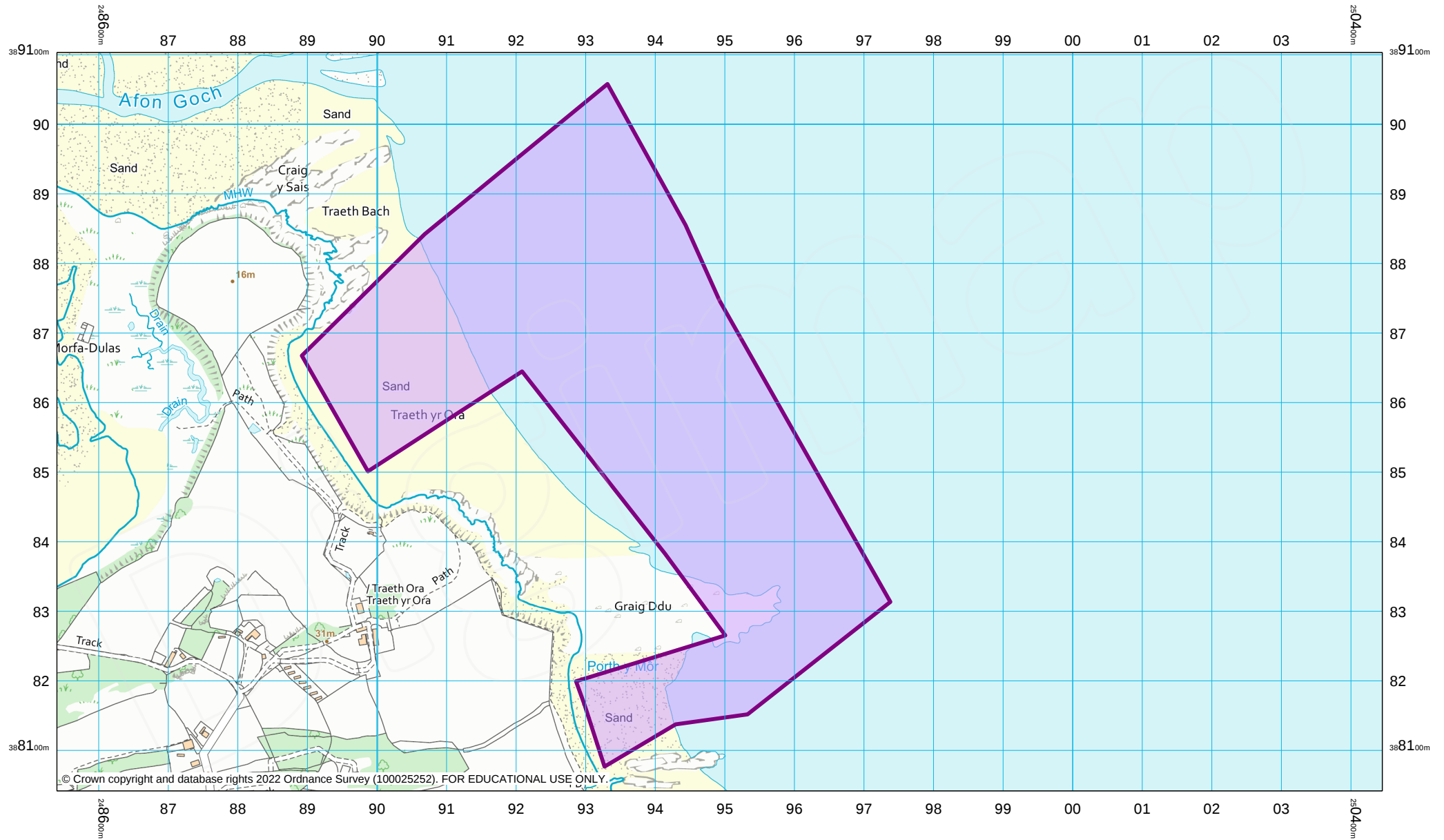
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29 July 2022 11:54



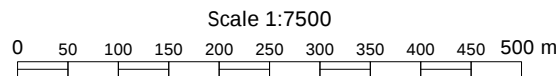
20220729_Warren



20220729_Traeth-yr-Ora



Stijn den Haan
Swansea University



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**Gwasanaeth Cefn Gwlad a Mynediad
Countryside and Access Service**

Gofynnwch am/Ask for: Bleddyn Jones ☎(01758) 704155
✉ BleddynPrysJones@gwynedd.llyw.cymru

Ein Cyf / Our Ref:AC/BJ/22

22/7/2022

Annwyl Gyfaill/ Dear Friend,

Prosiect Achub Cefnfor

Ysgrifennaf atoch ar ran Uned AHNE Llŷn ynglŷn a'r prosiect uchod. Mae'r Uned AHNE yn arwain gwaith Cyngor Gwynedd mewn perthynas â'r Ardal o Harddwch Naturiol Eithriadol (AHNE)

Mae'r morwellt ym Mhorthdinllaen yn nodwedd bwysig ac unigryw o fioamrywiaeth morol ardal Llŷn. Mae hefyd yn chwarae rhan bwysig mewn ymsugno carbon o'r aer. Yn y gorffennol mae'r Uned AHNE wedi cefnogi prosiectau i warchod ac adfer y morwellt ym Mhorthdinllaen. Rydym felly yn gefnogol iawn i brosiect newydd Achub Cefnfor sydd yn anelu i ehangu'r gwaith da sydd wedi ei wneud ym Mhorthdinllaen i rannau eraill o arfordir Llŷn ac Ynys Môn.

Mae'r Uned AHNE yn dymuno pob llwyddiant i'r prosiect ac yn awyddus i gydweithio eto os oes cyfleon yn codi.

Ocean Rescue Project

I write on behalf of the Llŷn AONB Unit regarding the above project. The AONB Unit leads the work of Gwynedd Council in relation to the Area of Outstanding Natural Beauty (AONB).

The seagrass at Porthdinllaen is an important and unique feature of the marine biodiversity of the Llŷn area. It also plays an important role in carbon sequestration. In the past the AONB Unit has supported projects to safeguard and regenerate the seagrass at Porthdinllaen. We are therefore very supportive of the new Ocean Rescue project which aims to build on the good work done at Porthdinllaen and expand to other coastal areas of Llŷn and Anglesey.

The AONB Unit wishes the project success and is keen to work in partnership again if the opportunity arises.

Yn gywir/ Yours sincerely,

Bleddyn Jones
Swyddog AHNE/ AONB Officer

www.ahne-llyn-aonb.cymru



Gwasanaeth AHNE Llŷn,
Swyddfa'r Cyngor
Pwllheli,
Gwynedd. LL53 5AA

Dr Leanne Cullen-Unworth
Project Seagrass,
PO Box 412,
Bridgend,
CF31 9RL
26 July 2022

Dear Dr Cullen-Unsworth

Letter of support for NLHF Seagrass restoration bid from Project Seagrass and WWF

Thank you for your request for a letter of support for the next stage of your NLHF project.

The restoration of seagrass beds is of interest to NRW as it follows our general resilience aspirations that form part of our Marine Area Statement and has become more focussed due to the inclusion of seagrass and saltmarsh restoration within WG programme of government.

NRW are the lead partner in the Natur am Byth! species recovery NLHF programme. The 'Welsh Marine Treasures' project also covers seagrass restoration. However, the aims and objectives of the Natur am Byth! bid were developed so that they complemented the active restoration elements that are covered in the WWF bid. Joint engagement plans are being developed with Project Seagrass and Welsh Marine Treasures to ensure that synergies can be made.

NRW have been reassured by the engagement from Project Seagrass in the development phase of the project, where we have been able to provide advice on suitable locations and the information we require to be able to progress with consents and licensing procedures. Good working relationships have developed and we feel confident that they will continue.

NRW welcome the opportunities for local community engagement, vital in a project like this, that will help with encouraging a shared responsibility for the marine environment and raising awareness.

Yours sincerely



Dr. Jasmine Sharp

Arweinydd Tîm Polisi a Chynllunio Morol ac Arfordirol / Marine and Coastal Policy and Planning Team Leader

Cyfoeth Naturiol Cymru / Natural Resources Wales

Croesewir gohebiaeth yn y Gymraeg a'r Saesneg
Correspondence welcomed in Welsh and English



Dr Leanne C. Cullen-Unsworth
Project Seagrass
PO Box 412
Bridgend
CF31 9RL

CHRISTIAN BRANCH B.Sc., P.G. Dip
Pennaeth Gwasanaeth / Head of Service
Rheoleiddio a Datblygu Economaidd
Regulation and Economic Development

CYNGOR SIR YNYS MÔN
ISLE OF ANGLESEY COUNTY COUNCIL
Canolfan Fusnes Môn • Anglesey Business Centre
Parc Busnes Bryn Cefni • Bryn Cefni Business Park
LLANGEFNI
Ynys Môn • Isle of Anglesey
LL77 7XA

Gofynnwch am / Please ask for: Wiliam Llŷr Stockwell
E-bost / Email: wlspl@ynysmon.llyw.cymru
Ffôn / Tel: 01248752472

Ein Cyf / Our Ref: Seagrass LoS
Eich Cyf / Your Ref:

Dyddiad / Date: 28/7/22

Annwyl / Dear Dr Leanne C. Cullen-Unsworth,

Mae Tîm Ardal o Harddwch Naturiol
Eithriadol (AHNE) Cyngor Sir Ynys Môn
(CSYM) yn ysgrifennu er mwyn cefnogi
Prosiect Morwellt.

The Isle of Anglesey County Council's
(IACC) Countryside and Area of
Outstanding Natural Beauty (AONB)
Team are writing in support of Project
Seagrass.

Prif bwrpas AHNE yw gwarchod ac
ehangu harddwch naturiol. Nodwyd hyn
yn Neddf Parciau Cenedlaethol a
Mynediad i Gefn Gwlad 1949 ac fe'i
gadarnhawyd yn Neddf Cefn Gwlad a
Hawliau Tramwy 2000.

The primary purpose of an AONB is to
conserve and enhance natural beauty.
This was laid out in the National Parks
and Access to the Countryside Act
1949, and confirmed in the Countryside
and Rights of Way (CROW) Act 2000.

Byddai Tîm Cefn Gwlad ac AHNE
Cyngor Sir Ynys Môn yn cynorthwyo ac
yn cefnogi lle bo hynny'n ymarferol â
phrosiectau sy'n adfer, gwarchod ac yn
ehangu morwellt mewn lleoliadau
addas. Mae'r Tîm Cefn Gwlad ac AHNE
hefyd yn awyddus i weithio â'r Prosiect
Morwellt ar agweddau cymunedol y
prosiect gan gynnwys ymgysylltu â
grwpiau o wirfoddolwyr lleol, ysgolion a
Chynghorau Tref a Chymuned.

IACC Countryside and AONB Team on
behalf of Isle of Anglesey County
Council would support and assist where
practicable, projects that restore,
conserve and enhance Seagrass at
suitable locations. The Countryside and
AONB Team is also eager to work with
Project Seagrass on community aspects
of the project, including engagement
with local volunteer groups, schools,
Town and Community Councils.

Hyderwn y bydd ein sylwadau o
gymorth. Mae croeso i chi gysylltu â'r
tîm drwy anfon neges

We trust that our comments will be
helpful. If you have any queries, please

at AONB@ynysmon.llyw.cymru os oes do not hesitate to contact the Team at:
gennych unrhyw ymholiadau. AONB@ynysmon.llyw.cymru

Yn gywir / Yours sincerely

Christian Branch

Pennaeth Gwasanaeth – Gwasanaeth Rheoleiddio a Datblygu Economaidd
Head of Service - Regulation and Economic Development Service

AILGYFLWYNO MORWELLT

Yr wyf yn falch iawn o allu cefnogi project uchelgeisiol o ailgyflwyno morwellt i rannau o'r môr o gwmpas Llŷn a Môn. Hyd yr wyf yn ei ddyall byddai hyn yn creu cynefin werthfawr i gynifer o rywogaethau amrywiol.

Rwyf hefyd yn sylweddoli mai adfer cynefin sy'n digwydd drwy fod colliant difrifol wedi bod o'r gynefin werthfawr hon. Mae canolbwyntio ar rywogaeth allweddol fel y morwellt yn sylfaen i waith cadwraeth ystyrlon.

Fel aelod o Gyngor Tref Pwllheli, byddwn yn falch gweld adfer cynefinoedd yn fy ardal fy hun, ac rwy'n siŵr bod gweddill y cyngor yn cytuno. Yn wir (ar raddfa fechan) y mae'r Cyngor wedi ymhél a chreu gwarchodfa natur leol yn Lôn Cob Bach, sy'n cynnal a chynyddu diddordeb lleol yn y byd naturiol. Byddai adfer cynefin forwellt yn rhywbeth fyddai'n ysbrydoli a chynyddu diddordeb cyhoeddus pellach.

Yr wyf yn mawr obeithio y bydd y project hwn yn llwyddiannus i ennill yr arian angenrheidiol, a byddai rhannau o'r môr sydd o'n cwmpas yn cynyddu'r potensial i wella yr ardal warchodaeth sydd yma.

Iwan Edgar

REINTRODUCING SEAGRASS

I am very proud to be able to support an ambitious project to reintroduce seagrass to parts of the sea around Llŷn and Anglesey. As far as I understand this would create a valuable habitat for so many different species.

I also realize that habitat restoration is happening because there has been a serious loss of this valuable feature. Focusing on a key species such as the seagrass is the foundation of meaningful conservation work.

As a member of Pwllheli Town Council, I would be pleased to see habitat restoration in my own area, and I'm sure the rest of the council agrees. Indeed (on a small scale) the

Council has endeavored to create a local nature reserve in Lôn Cob Bach, which maintains and increases local interest in the natural world. Restoring seagrass habitat would be something that would inspire and increase further public interest.

I really hope that this project will be successful in gaining the necessary money, and parts of the sea that surround us would increase the potential and value of this protected area.

Gwasanaeth Cefn Gwlad a Mynediad
Countryside and Access Service

Gofynnwch am/Ask for: Alison Palmer Hargrave
alisonpalmerhargrave@gwynedd.llyw.cymru

☎(01286) 679495

26/7/2022

Annwyl Gyfaill/ Dear Friend,

Morwellt Achub Cefnfor

Ysgrifennaf atoch ar ran Ardal Cadwraeth Arbennig (ACA) Pen Llŷn a'r Sarnau (PLAS) ynglŷn â'r prosiect uchod. Mae Tîm PLAS yn cydlynu rheolaeth ACA PLAS ar ran y Grŵp Awdurdodau Perthnasol (GAP). Mae GAP PLAS yn cynnwys Cyngor Gwynedd, Cyngor Ceredigion, Cyngor Powys, Cyfoeth Naturiol Cymru, Dŵr Cymru, Dŵr Hafren, Awdurdod Parc Cenedlaethol Eryri a Tŷ'r Drindod.

Mae morwellt yn rhan o nodwedd gwastadeddau llaid a gwastadeddau tywod rhynglanwol ar gyfer ACA PLAS. Mae Tîm PLAS wedi gweithio gydag ystod eang o bartneriaid dros nifer o flynyddoedd i helpu i warchod ac adfer y morwellt ym Mhorthdillaen. Mae morwellt yn bwysig am nifer o resymau gan gynnwys dal a storio carbon, mae'n meithrinfa ar gyfer pysgod ifanc, mae'n cynhyrchu ocsigen, ei rôl yn amddiffyn yr arfordir ayyb. Rydym yn hapus iawn yn cael bod rhan o prosiect Morwellt Adfer Cefnfor sydd yn gweithio i adfer 10ha o forwellt ar hyd Pen Llŷn ac Ynys Môn. Rydym yn gefnogol iawn o'r dull yma o adfer yn enwedig gan ystyried bod ymgysylltu â rhanddeiliaid a'u cynnwys yn elfen cryf iawn o'r prosiect.

Seagrass Ocean Rescue

I write on behalf of the Pen Llŷn a'r Sarnau (PLAS) Special Area of Conservation (SAC) regarding the above project. The PLAS Team co-ordinates the management of the PLAS SAC on behalf of the Relevant Authorities Group (RAG). The PLAS RAG includes Gwynedd Council, Ceredigion Council, Powys Council, Natural Resources Wales, Welsh Water, Severn Trent, Snowdonia National Park Authority and Trinity House.

Seagrass is a component of the intertidal mudflats and sandflats feature for the PLAS SAC. The PLAS Team have worked with a wide range of partners over many years to help protect and restore the seagrass at Porthdillaen. Seagrass is important for a number of reasons including carbon sequestration, it's a nursery ground for juvenile fish, it produces oxygen, its role in seashore defence etc. We were therefore very excited to part of the Seagrass Ocean Rescue project working to restore 10ha of seagrass across Pen Llŷn and Ynys Môn. We are very supportive of this approach to restoration especially given that stakeholder engagement and involvement is a strong element of the project.

Yn gywir/ Yours sincerely,



Alison Palmer Hargrave
Swyddog ACA / PLAS SAC Officer

www.penllynarsarnau.co.uk



Tîm ACA PLAS,
Swyddfeydd Cyngor
Gwynedd
Caernarfon,
Gwynedd. LL55 1SH

Richard Unsworth

From: Leanne Cullen-Unsworth <leanne@projectseagrass.org>
Sent: 31 July 2022 23:12
To: Sophia Mirchandani
Cc: Richard Unsworth; Stijn den Haan; Ricardo Zanre
Subject: FW: Letter of support

Hi all

Please see below email letter of support from the secretary of the Llyn Pot fishers Association

Dr LEANNE C. CULLEN-UNSWORTH
Director of Research



t. +44 (0) 75 8455 1762

Project Seagrass, PO Box 412, Bridgend, CF31 9RL

[website](#) | [blog](#) | [facebook](#) | [twitter](#) | [instagram](#)

Supporting partner to:



From: Sion Williams <llywelyn@hotmail.co.uk>
Date: Sunday, 31 July 2022 at 22:27
To: Leanne Cullen-Unsworth <leanne@projectseagrass.org>
Subject: Letter of support

Dear Leanne,

I am writing this letter to express my support for the Seagrass Project. As a commercial fisherman living and working on The Llyn Peninsular.

I am fully supportive of this project as stabilizing existing Seagrass beds and expanding into other areas that historically had seagrass beds, plus the possibility of populating other suitable areas with seagrass, will enhance the marine environment, through the known benefits of seagrass habitats.

Yours sincerely

Sion Williams

Secretary of the Llyn Pot fishermen Association

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Stijn den Haan

From: Richard Unsworth
Sent: 26 July 2022 09:10
To: Lough, Natasha
Cc: Stijn den Haan; Sharp, Rowland; Griffith, Katherine
Subject: RE: Updates

Categories: Meetings, Marine license, NRW

No worries, I'll join

From: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>
Sent: 26 July 2022 09:08
To: Richard Unsworth <R.K.F.Unsworth@Swansea.ac.uk>
Cc: Stijn den Haan <Stijn.Denhaan@Swansea.ac.uk>; Sharp, Rowland <Rowland.Sharp@cyfoethnaturiolcymru.gov.uk>; Griffith, Katherine <Katherine.Griffith@cyfoethnaturiolcymru.gov.uk>
Subject: RE: Updates

Hi Rich – sorry I wasn't in yesterday. That's the only time I can get the others to come along.

From: Richard Unsworth <r.k.f.unsworth@swansea.ac.uk>
Sent: 25 July 2022 00:51
To: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>
Cc: Stijn den Haan <stijn.denhaan@swansea.ac.uk>; Sharp, Rowland <Rowland.Sharp@cyfoethnaturiolcymru.gov.uk>; Griffith, Katherine <Katherine.Griffith@cyfoethnaturiolcymru.gov.uk>
Subject: RE: Updates

H Tash, any chace we could put the meeting on tuesday back until 3pm?

Thanks

Rich

From: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>
Sent: 21 July 2022 18:02
To: Richard Unsworth <R.K.F.Unsworth@Swansea.ac.uk>
Cc: Stijn den Haan <Stijn.Denhaan@Swansea.ac.uk>; Sharp, Rowland <Rowland.Sharp@cyfoethnaturiolcymru.gov.uk>; Griffith, Katherine <Katherine.Griffith@cyfoethnaturiolcymru.gov.uk>
Subject: RE: Updates

Thanks Rich. I have sent you a meeting request, I hope that this is OK?
We can chat then?

From: Richard Unsworth <r.k.f.unsworth@swansea.ac.uk>
Sent: 21 July 2022 17:21
To: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>
Cc: Stijn den Haan <stijn.denhaan@swansea.ac.uk>; Sharp, Rowland <Rowland.Sharp@cyfoethnaturiolcymru.gov.uk>; Griffith, Katherine

<Katherine.Griffith@cyfoethnaturiolcymru.gov.uk>

Subject: RE: Updates

Thanks for the response. Yes, a catch up on Tuesday would be good. What time is convenient?

To answer your questions, the site in aber would be as close to the headland as possible and slightly deeper, further away from the trial plot. The bigger box gives more potential for accommodating stakeholders. It grew well initially there so if we can find a magic area where boat launching is minimal then it remains a possibility.

Gamlas we've just mapped with the drone, no results back yet but would be good to know where the gravel is as that's not something we've found to date. Is there a biotope map? Maybe its at the far end. The currents seem to race around the entrance to the Gamlas but seem better within the lagoon area. Would be good to know if you have any data on that? The sites would be subtidal in the lagoon area, so out of the SSSI, all the sites in our list are just outside the SSSI's as it makes life easier.

Based on your feedback on the transplants we're proposing putting that into the licence (as a mix with mostly seeds) application but on the basis of only local transplants or lab grown ones to prevent invasive species issues. This would also necessitate, as you referred to in the email, further consents, but I'd assume that would be a separate process once the ML was finalised.

Thanks

Rich

From: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>

Sent: 21 July 2022 16:50

To: Richard Unsworth <R.K.F.Unsworth@Swansea.ac.uk>

Cc: Stijn den Haan <Stijn.Denhaan@Swansea.ac.uk>; Sharp, Rowland

<Rowland.Sharp@cyfoethnaturiolcymru.gov.uk>; Griffith, Katherine

<Katherine.Griffith@cyfoethnaturiolcymru.gov.uk>

Subject: RE: Updates

Hi Rich

Thanks very much for the update. What was the upshot of the shoot collection in the end?

It is encouraging that you did have some success, but a bit disappointing that the plants were damaged at Abersoch. Given the amount of activity in that area it is probably unsurprising. I am a bit confused as to the exact location you carried out the trial as I have pretty much the same point for the initial trial as has been suggested as an alternative in your email below. Square is the initial location and the circle is the location you sent below. Is this correct?



The foreshore at Carreg y Defaid/y Gamlas is in a SSSI, so depending on where you actually do the trial it may be in the SSSI Mynydd Tir y Cwmwd a'r Glannau at Garreg yr Imbill. Rowland has expressed concerns that the current might be a bit too strong at this location, but then that does depend on exactly where you are going to be the trail. There is an extensive area of a sheltered muddy gravel community at Y Gamlas which we would request you avoid. I can't imagine that it would be the best area for you to plant seagrass in anyway.

Happy to discuss further. I am in next week tues,weds,thurs and then I am away for 3 weeks. Rowland has now taken over from Kate's role, so it would be best to cc him in to future emails

Thanks
Tash

From: Richard Unsworth <r.k.f.unsworth@swansea.ac.uk>
Sent: 20 July 2022 18:47
To: Lough, Natasha <Natasha.Lough@cyfoethnaturiolcymru.gov.uk>
Cc: Stijn den Haan <stijn.denhaan@swansea.ac.uk>
Subject: Updates

Hi Tash, hope you're well. I'm forever chasing my tail so apologies for not coming back on various emails around transplants but I think your direction was very helpful in our thinking here. Certainly highlights your concerns but also makes me think it may have some use in other local repopulations scenarios.

So our seagrass restoration trials in North Wales have thrown up some interesting results. Some expected, some not quite scenario we thought.

Of 7 sites we've only had successful seedlings in 2, Abersoch and Pen-Y-Chain. Unsurprisingly the seeds in Llanbedrog and Lligwy were subject to way too much sediment movement and are definatly no go sites, at least in the more exposed open bay locations. This was also the same with Traeth Bychan.

Pwllheli and Porth Y Mor weren't successful but we're not fully sure why this is. We're awaiting metal results from Porth Y Mor but these two sites have been much lower light. We've certainly not given up with either and I still remain convinced of the value of east Anglesey for seagrass. There could be an important microbial impact but

that's speculative. We didn't give our seeds any germination triggers, which we're learning has a big effect on seedling emergence, and the light may have been the necessary trigger in both the successful sites as Abersoch is standing out as being far higher light in the winter period. The environmental data is really showing that Abersoch, Porth Y Mor and Pwllheli would be good sites going forward but we'll proceed with caution still. Unfortunately our successful seedlings in Abersoch have not fared well with boats, we've now harvested the remaining ones for an assessment on the seagrass microbiome.

Going forward we're fairly optimistic that we can get our work to be effective on the southern side of Penllyn but where exactly remains the key decision, especially regards stakeholders. We've been doing some assessment work at Y Gamlas (next to Carreg Y Defaid) too as an additional site near to Pwllheli but potentially a little less controversial.

[Carreg y Defaid, Gwynedd \(LL53 7NL\) - area information, map, walks and more \(ordnancesurvey.co.uk\)](#)

Moving forward for our HLF project we need to get a licence application put through sooner the better. Abersoch remains key to our interest as do Pwllheli and Y Gamlas on Penllyn. Abersoch could only realistically work if we use the more westerly corner (see below) but will require some intense discussions with stakeholders to ensure there's little overlap or conflict.

We'll again take the approach that we used last time for our ML application and propose a much bigger area than required and hone in based on stakeholder discussions and approval.

The broad plan in the HLF project is to plant seagrass in an area of 10 ha over a 4 year period and the lessons we're learning here and in south Wales point to being able to do this.

Regards the Y Gamlas do you have any thoughts on that? What we've found is just a sand sheltered lagoon environment.

Should be good to hear your thoughts.

All the best

Rich

Dual Camera Imaging System - M x

North Wales Daily Plan - Google x

Unsw

← → ↺

google.com/maps/place/Abersoch/@52.8105867,-4.4926199,544m

☰ Abersoch 🔍 ✕

🍴 Restaurants



Abersoch

Partly cloudy · 18°C
18:39

Directions

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Nearby

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Quick facts

Abersoch is a village in the community of Llanengan in Gwynedd, Wales. It is a popular coastal seaside resort, with around 800 residents, on the east-facing south coast of the Llŷn Peninsula at the southern terminus of the A499. [Wikipedia](#)



Swansea University | Singleton Park | Swansea | SA2 8PP
Prifysgol Abertawe | Parc Singleton | Abertawe | SA2 8PP

✉ r.k.f.unsworth@swansea.ac.uk

Tel: 01792513406 Mob: 07795311166

Twitter: @zosterar

Director of External charity | Elusen allanol: www.projectseagrass.org

NOTE: I work flexible hours – often outside 9-5 Mon-Fri – just because I email outside normal working hours doesn't mean you have to respond – and it doesn't mean I will always respond outside normal hours

Stijn den Haan

Subject: Seagrass Marine licence areas discussion
Location: Microsoft Teams Meeting

Start: Tue 26/07/2022 10:30
End: Tue 26/07/2022 11:30

Recurrence: (none)

Meeting Status: Accepted

Organizer: Lough, Natasha

Categories: Marine license, Meetings

Microsoft Teams meeting

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