

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

Fairbourne Sea Outfall Repair

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

The Fairbourne short sea outfall is generally located at National Grid Reference: SH 610 135, Post Code is: LL38 2DJ, GPS Coordinates are: 52.701869, -4.056659. The outfall is a 9ins cast iron pipe approximately 270m long from the sea wall. It is over 100 years old. The pipe has been badly damaged at the top of the beach at junction of the shingle/cobble bank and the sand. It is proposed to replace approximately 40m at this location. The pipe has been severed approximately 150m out from the sea wall and second repair is to replace the damage section and restore function.

1(c). Please provide an estimated gross cost of the project (Inc. materials and labour) for works that fall below/seaward of Mean High Water Springs (MHWS)

£60,000

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	Mr	Full Name	Russell Jones
Company or Trading Name	Dwr Cymru Cyfngedig		
Company Registration Number (if applicable)	2366777		
Name of Contact or individual (if different)			
Position in Company	Project Manager		
Address inc. postcode (provide registered Company address if applicable)	Kinmel Park Depot, Royal Welch Avenue, Denbighshire LL18 5TQ		
Telephone Number	07557 259695		
Email Address	russell.jones@dwrcymru.com		

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	Mr	Full Name	Keith J. Pickering
Company or Trading Name	Waterco Ltd		
Company Registration Number (if applicable)	3577754		
Name of Contact or individual (if different)			
Position in Company	Project Engineer		
Address (Inc. postcode)	Eden Court, Lon Parcwr Business Park, Ruthin, Denbighshire LL15 1NJ		
Telephone Number	01824 702220		
Email Address	keith.pickering@waterco.co.uk		

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
Lewis Civil Engineering	Mwyndy Cross Industries, Cardiff Road, Pontyclun, Rhondda Cynon Taff CF72 8PN

3(d). Will the works require the use of vessels?

Yes ☐ No ☒

3(d) (i). Vessel Details (if applicable and available)

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.

Operator	Name of Vessel	Type of Vessel	Vessel Registration Number	Country of Registration

3(e). Will the works require the use of vehicle?

Yes ☒

No ☐

3(e) (i). Vehicle Details (if applicable and available) to be used below MHWS

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.

Operator	Type/Description of Vehicle
Lewis Civil Engineering	2 x Tracked 360 degree excavator 1no 12tn and 1no 50tn
Lewis Civil Engineering	2no 10t tracked dumper
Lewis Civil Engineering	1no ATV

3(f). If the contractor or vessels or vehicles are not known at the application stage, when do you expect to provide these details?

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

N/A

4. Environmental Impact Assessment (EIA)

Certain projects, due to their scale, location and/or nature, may require an EIA under the 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 29/04/2019

Requested Licence Expiry Date 28/06/19

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.

The Fairbourne short sea outfall is a 9ins cast iron pipe approximately 270m long. This pipe has been severed at approximately 150m off the sea wall, which has caused the pipe to block. This blockage propagated a failure of a cracked/corroded section of pipe at the base of the shingle/cobble bank shortening the outfall to this point. A temporary discharge point has been installed at this upper location. The works are to undertake the identification and repair of the severed section at 150m off the sea wall - referenced as repair 2 on attached drawings. It has also been decided to replace the damaged and corroded section of the pipe below the shingle/cobble bank - referenced repair 1. The exact extent of both is not known until trial excavations can take place upon possession of the site. At upper replacement - repair 1- whilst length is not known it is expected to be not less than 40m from the existing valve chamber. The repair in both locations will utilise pre-cast concrete blocks with the pipe encased within; these will be made on the landward side of the sea wall and carried out to location. At repair 2 the blocks will be used to form a duct through which a new length of PE pipe will be installed. The blocks will be joined together with a small quantity of in-situ concrete with suitable anti-bleed additive. The shingle/cobble bank will be restored upon completion. The use of pre-cast elements has been selected for efficiency to minimise the exposure of this section of the sea wall. The contractor will ensure that a suitable tide and weather window is used so that the risk of storm damage is minimised. Repair 2 is a single block repair and exact length shall be determined by a trial hole. The information will then determine the size of the pre-cast block to be made to include the make up piece in ductile iron. There will not be any PE pipe inserted at this location. The unit will be installed within the repair length using stepped coupling and these will then be cast in using a high strength concrete with anti bleed additive and suitable protection to prevent wash out by incoming tide. This repair includes access point to cleanse the pipe. Beach to be restored upon completion. Divers will be used to clean and install new Tideflex flap on outfall structure at suitable tide and weather condition. Duration 8 weeks.

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.**

Repair location 1 SH 61041 13602 to SH 61001 13598
Repair location 2 SH 60876 13586 to SH 60872 13586

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

w2476-0001 Site location plan
w2476-2000 Site access and working area
w2476-2102 General arrangement plan
w2476-2202 Longitudinal section
w2476-2402 Pipe protection detail repair location one
w2476-2404 Connection details repair location one
w2476-2405 Connection details repair location two

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

A method statement for the works is attached.

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?

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

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

Construction method utilise pre- cast elements to reduce in situ concrete to a minimum. Any in-situ concrete will be rapid hardening high strength with anti- bleed. Working area has been defined and is reduced to a minimum to carry out the works. Contractor plant will be precleaned by pressure washer before delivery and washed down after. All fuelling activities or maintenance will take place on landward side sea wall with appropriate protection measure.

(ii) Prevent undue interference to others

Area will be signed and fenced of using GS7 fencing above high tide mark. Below high tide in tidal zone marker posts with signs with barrier rope will be used to define the repair areas. Banksman will be used when travelling on the foreshore or beach. Areas of repair in sand will be locally barriered off with scaffold until sand has restored to a firm condition post excavation.

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

Local Harbour Master will be advised of the works and he shall either inform local fishery vessels or clubs or will provide contact details for Contractor/DCWW to advise. It is proposed to locate six number 600mm buoys around the site together with two hi- vis marker posts at the sea wall to provide visual aids. These may be lighted if agreed.

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.

Existing excavated beach material will be reinstated once repair works have been undertaken.

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.

Materials will be delivered to site using road vehicles see attached drawing w2476-2000 for details of route.

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

8(c). Will the works involve removals seaward of MHWS? Yes ☒ No ☐

8(c) (i). Description of materials to be removed seaward of MHWS (Please tick all that apply)

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

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

Existing damaged cast iron pipe will be removed and taken off site to licenced facility.
Existing concrete surround to pipe will be removed be removed and taken off site to licenced facility.

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*

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

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.

Whilst undertaking excavation the surcharged material above the pipe will be removed and set aside for reuse.

Shingle/Cobble repair 1 will be cast to side within working area and used to reshape after insertion of new pipework.

Sand from repair 2 will temporarily stockpile above high water, within working area, and brought back for backfill after repair

10(c). Description of temporary deposits

The deposits shall be material from the excavation on the beach

Repair 1 - sand - possibly gravel/shingle at depth

Repair 2 - vast majority will be cobble, shingle some sand

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

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?

Previously applied for a band 1 marine licence for this work

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?

Works are within Aber Mawddach SSSI and Pen Llyn a'r Sarnau SAC

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

A shadow HRA has been carried out of the works proposed at Fairbourne Outlet, Gwynedd. A copy is appended to this application. This went through the following stages:

- Stage 1 – the project was screened and a likely significant effect was identified for the proposed development;
- Stage 2 – a shadow Appropriate Assessment was carried out which assessed features of the SAC within and immediately adjacent to the working area. This showed that there the habitats potentially affected were not of significance that the conservation objectives of the SAC would not be met and so the works pass the appropriate assessment; **continued on separate sheet.....**

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

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.

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)	N/A	N/A		
Name and Address of LPA for location of works	Gwynedd County Council			
Land Owners Consent such as The Crown Estate Consent	x			
Port Authority or Local Harbour permissions	N/A			
Other NRW consents such as Flood Defence or SSSI assent		x		
Details of NRW consent	SSSI Assent			
Other consents such as Transport and Works Act Order, Section 36 Electricity Act, grant/loan sanction				
Details of other consents	Listed Monument Consent for Tank Trap blocks			
CADW				

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

Water Industry Act Section 159 (1991)

15. Public Register

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)	✓	Purchase order 2868

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

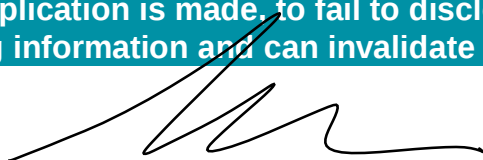
Email Address

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 11/03/19

Name (in capitals) RUSSELL JONES

Position in Company PROJECT MANAGER

*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

Continued from 12 c:

- Mitigation was outlined to protect and maintain habitats within the SAC.

As a result, the HRA has shown that work as identified in the Marine Licence Application, Band 2 can proceed without affecting the integrity of the Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC. Appropriate good working practices in marine environments are put in place to prevent pollution and minimise the disruption of typical species found within the SAC during construction.

The mitigation includes:

- The contractor will ensure that a suitable tide and weather window is used so that the risk of storm damage is minimised.
- Pre-construction assessment of the site to identify logistical routes, access to the beach and a suitable location for the site compound outside of the SAC. The site compound will contain the Site office, Operational Welfare, Storage Container, Vehicle and Plant Parking and the designated Plant refuelling station. Machinery will be stored in this compound when not in use. Fuel will be stored in double bunded containers and nappy liners will be used when refuelling.
- Excavated sand will be removed from the working area and stored on sheets in an area free from contamination and sufficiently far away from water sources.
- Each excavation will have a trench box constructed around it so that there is minimal disturbance to the working areas and therefore potential leaching of chemicals into the sea. These will be closed off at the ends. The lower one will be covered by the sea between cycles and it is anticipated that work will span over two tidal cycles. As this will be covered by the sea between shifts, sandbags full of clean 'concrete sand' will be placed over the coffer to minimise the void being filled by the surrounding sandflat during the high tide. Buoys will be installed to aid finding the coffer after each tide.
- The upper section will involve cobbles being moved to the side and it is not anticipated that these will need to be moved off site. The coffer will extend above the high tide mark so the water laps up to it.
- To minimise concrete used within the SAC the repair in both locations will utilise pre-cast concrete blocks with the pipe encased within; this reduces the amount of concrete that will be needed on site; these will be made on the landward side of the sea wall off the extent of the SAC and carried out to the location with appropriate pollution control measures in place within the site. The blocks will be joined together with a small quantity of in-situ rapid concrete with suitable anti-bleed additive so that it is well set and does not wash away before the following tide.
- If a leak occurs from any plant, if appropriate it will be immediately removed from the SAC and dealt with in the site compound. Spill kits will be immediately available should a leak occur and it will be recorded in an incident book.

- At the end of construction when all cofferdams have been removed, the sand that has been stored off site will be replaced. Cobbles will be replaced from the top of the beach.