Port of Mostyn

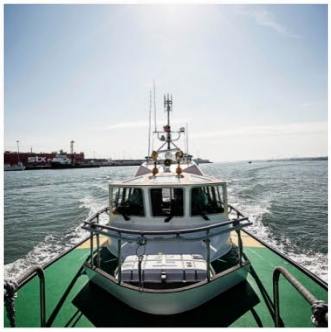
Mostyn Energy Park Extension Habitat Compensation

Construction Environmental Management Plan

May 2025







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		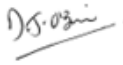

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Notice

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1 Introduction

ABPmer has been commissioned by the Port of Mostyn (PoM) to provide the required ongoing technical support to discharge Marine Licence CML2283 conditions for the Mostyn Energy Park Extension (MEPE) Project. This includes the preparation of a Construction Environmental Management Plan (CEMP) (this report) in order to discharge the following CML2283 condition:

3.18.1 *The Licence Holder must submit a CEMP to the Licensing Authority for written approval at least 6 weeks prior to commencement of the Licensed Activities. No Licensed Activities may be undertaken prior to written approval from the Licensing Authority. The plan must incorporate the proposed mitigation identified within the Environmental Statement and Further Clarification Report (ABPmer March 2024) and include;*

- *measures that will be implemented during piling activities to avoid/reduce impact on fish, birds and marine mammals*
- *measures to minimise visual and noise disturbance during construction activities*
- *pollution prevention measures.*

3.18.2 *The Licence Holder must ensure that any actions outlined in the documents detailed in condition 3.18.1 are implemented as approved in writing by the Licensing Authority. Any proposed changes to the actions outlined in the documents must be submitted to, and approved in writing by the Licensing Authority prior to any changes being enacted.*

This CEMP captures the **activities associated with the respective compensation sites only**, where work will be carried out in advance of the reclamation for the MEPE Project. A separate CEMP will be prepared and agreed with Natural Resources Wales (NRW) Marine Licensing Team (MLT) in advance of the main works associated with the MEPE. The relevant activities are described in Section 2. It is noted that there is no piling associated with the scope of works at the habitat compensation sites and therefore not all aspects of the condition of CML2283 are relevant to this CEMP.

An Archaeological Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD) has been prepared separately for the compensation works in relation to condition 3.20 of Marine Licence CML2283 (Wessex Archaeology, 2025).

1.1 Purpose of the CEMP

This CEMP provides a framework to manage the environmental issues associated with the proposed works, to ensure compliance with relevant environmental legislation, the environmental management measures identified in the MEPE Compensation Plan (ABPmer, 2025a) as set out in the specific sections of this CEMP, and contractual and legal obligations. It is a bespoke Plan to be used by the Port of Mostyn and any contracted parties, for the compensation works, designed to minimise the impact on the environment and ensure the high standards of practice are met during the works.

The main purpose of this CEMP is to provide detail on:

- The environmental roles and responsibilities during the compensation works;
- Specific environmental control measures and mitigation;
- The legislative compliance and consenting requirements;
- The environmental monitoring and reporting of commitments;
- The environmental training and communications; and
- Procedures if an environmental emergency occurs.

1.2 Consultation on the CEMP

As outlined in Condition 3.18.1, the PoM is required to submit a CEMP to NRW MLT for written approval at least 6 weeks prior to commencement of the Licensed Activities. No Licensed Activities will be undertaken prior to written approval from the Licensing Authority.

This CEMP is a live document and will be reviewed periodically once construction begins. The CEMP may be updated to reflect immaterial changes that may occur (for example, a change in the personnel identified in Table 1, the working environment at the site or as part of continual improvement). Such immaterial changes would not require review and approval by relevant stakeholders. In the event, however, that material changes need to be made to the CEMP once it has been approved, a revised CEMP will be issued to NRW MLT for review and approval.

1.3 Structure of the CEMP

This report is structured as follows:

- Section 1 - Introduction: Provides background context to the CEMP;
- Section 2 – Planned works: Contains details of the compensation sites, construction methods and an indicative programme;
- Section 3 – Roles and responsibilities: Identifies the key environmental personnel involved in delivering the requirements and mitigations outlined in this CEMP; and
- Section 4 – Construction management: Details the construction management activities associated with the project covering general management measures and receptor-specific measures.

2 Planned works

The compensatory measures comprise the scrape back and remedial works of two areas of foreshore. These sites are referred to as follows in this report:

- Mostyn scrape back; and
- Warwick (also known as Marsh Row) foreshore remedial.

The remedial scrape back works will take place between May and July 2025 to avoid the bird passage/overwintering periods. The maximum duration of the works will be 13 weeks over this period.

Further details of the proposed works at each of these sites is provided below.

2.1 Mostyn scrape back

The 'Mostyn scrape back' compensation site is located along the western section of the dock estate (Figure 1). This area comprises *circa* 1.5 ha of relatively barren rubble along the toe of the rock armour exhibiting limited colonisation by characteristic macroalgae and epifaunal species (Image 1 to Image 3).

The manmade material in this area will be scraped back to expose underlying natural mud. This will allow silt to settle in this area and support natural mudflat restoration on the upper sections of Mostyn Bank that are typically between mean high water neaps (MHWN) and mean high water springs (MHWS). It will also potentially provide an increased area available for feeding and loafing waterbirds. This will improve the quality and function of the Annex I Estuaries feature of the Dee Estuary Special Area of Conservation (SAC), as well as potentially provide additional supporting habitat for bird features of the Dee Estuary Special Protection Area (SPA).

The scrape back will involve the use of an excavator to dig out the debris and redistribute it higher up the shore onto the toe of the existing rock armour. These scrape back works will take place between May and July to avoid the bird passage/overwintering periods. An **Ecological Clerk of Works (ECoW)** will be appointed to ensure that there are no significant effects on any existing key ecological features during the remedial works (e.g. breakwater ledge roost).

Figure 1. Scrape back area at Mostyn

Image 1. View (east) of the southwest part of scrape back area

Image 2. View (northeast) of the central part of scrape back area

Image 3. View (northeast) of the northeast part of scrape back area

2.2 Warwick (Marsh Row) Foreshore Remedial

The 'Warwick (Marsh Row) foreshore remedial' compensation site is an area of foreshore directly upstream of the PoM, situated seaward of the previously disused Warwick Chemicals site and redundant breeze block manufacturing works which has recently been acquired by the PoM (Figure 2). This *circa* 1.8 ha area comprises discarded manmade debris, including rejected concrete breeze blocks, bricks and demolished building material, as well as coarse mixed sediment that appears to be of manmade origin (Image 4 to Image 7). This material is largely barren with limited colonisation of typical macroalgae and epifaunal species.

The manmade debris in this area will be scraped back to expose underlying natural (i.e., non-manmade) habitat. This will improve the quality of the Annex I Estuaries feature of the Dee Estuary SAC. A drawing showing a plan and cross-sections of the compensation works is included in Figure 3.

Figure 2. Foreshore remedial area at Warwick (Marsh Row)

Image 4. View (southeast) of the southeastern part of remedial area

Image 5. View (northwest) of the central part of remedial area

Image 6. View (southeast) of the northwestern part of remedial area

Image 7. View (northwest) of the northwestern part of remedial area

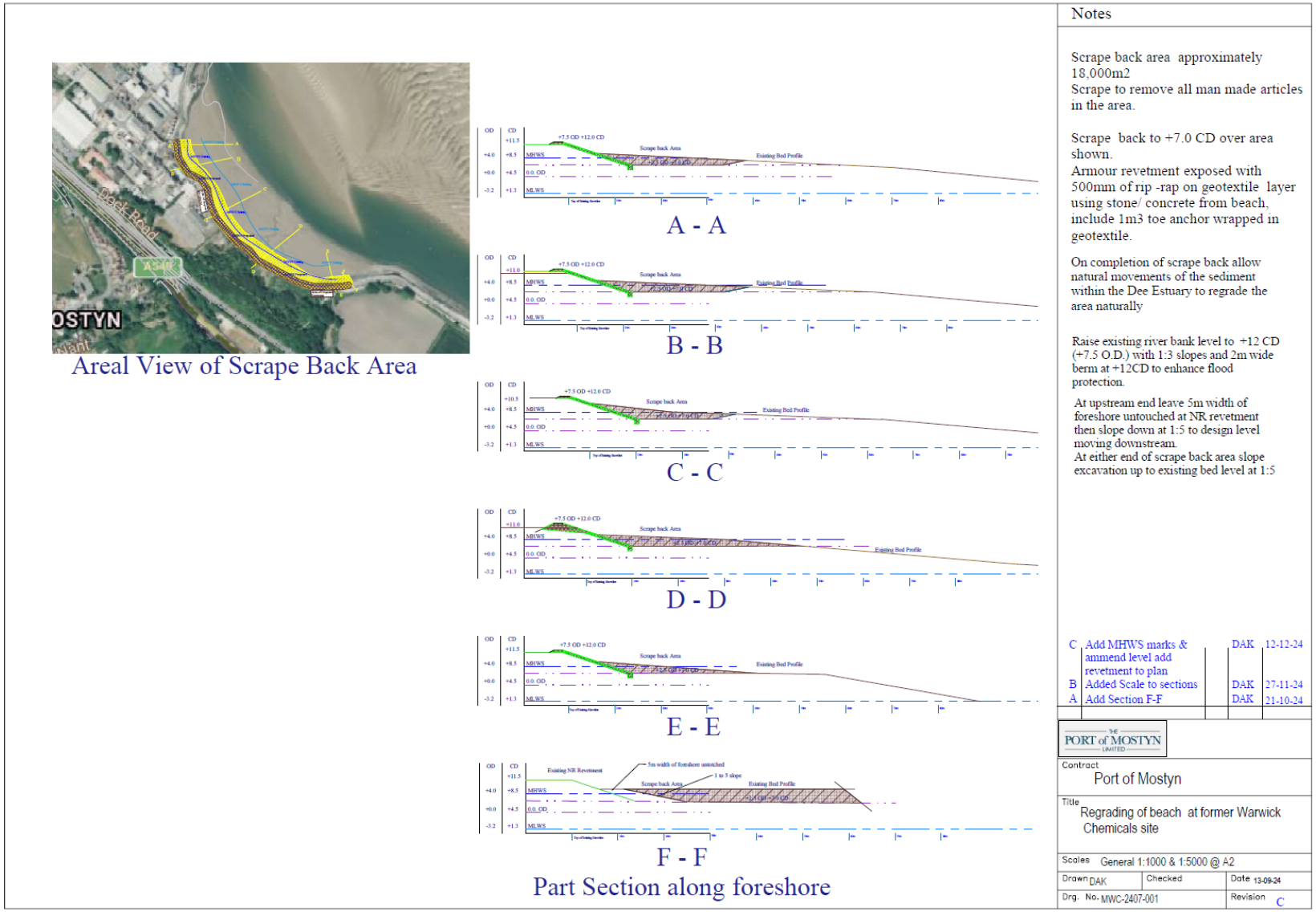


Figure 3. Plan and cross-sections of foreshore remedial works at Warwick site

A long reach excavator with a reach of some 18 m will be used over low tide periods to clear the site of debris (Image 8). This will involve the following steps:

1. The excavator will initially form a working area on the foreshore, where it can stand using the existing concrete blocks on the foreshore. The excavator will be set at a level of about +9 m Chart Datum (CD) and positioned so that it can reach the furthest extent of the scrape back area;
2. Working from this berm the excavator will commence by scraping off the concrete material to seaward of the berm and using this to extend the berm. Work will commence at the upstream end of the site working downstream;
3. The initial berm will be situated such that the section towards the Network Rail (NR) revetment can be reached. This section will be graded such that a distance of 5 m from the NR revetment is not touched (i.e., not excavated). From this point on, a slope down to the desired scrape back level (currently +7.5 m CD) will be cut at a slope no steeper than 1:5 (in order to maintain the stability of the existing NR revetment). NRW Advisory has advised that the 5 m buffer from the NR embankment as shown in cross-section F-F is acceptable and should ensure that the integrity of the adjacent defence will not be compromised (Figure 3). The scrape back works along the downstream boundary of the site will be gradually tapered down and blended in with existing levels, avoiding any steep gradients;
4. Material excavated from the seaward side of the berm will be placed at the toe of the existing embankment by the excavator, this will then be lifted onto the existing ground over high water periods, where it will be further processed;
5. Once the material furthest from the revetment has been removed the berm will be repositioned to the toe of the revetment to allow the further excavation of the foreshore, this material can be placed directly on to the land;
6. The final excavation and armouring of the revetment will take place using the excavator sited at the top of the berm; and
7. Facing stone will be placed along the seaward edge of the boundary (fence line). The facing stone will be similar in nature to what is used in other parts of the PoM (Image 9).

All of the hard material that is not needed as revetment protection will be separated from the softer materials (i.e. coarse mixed sediments) using a sifting bucket on an excavator. The softer material will remain on site and the unwanted hard material will be crushed on site for use as hardstanding, either for the MEPE reclamation or other areas of the PoM estate.

The scrape back works will take place between May and July to avoid the bird passage/overwintering periods. An **ECoW** will also be appointed by the **PoM** or **Contractor** to ensure that there are no significant effects on any existing environmental receptors or their supporting habitat during the remedial works, including roosting birds using the coarse mixed sediments.

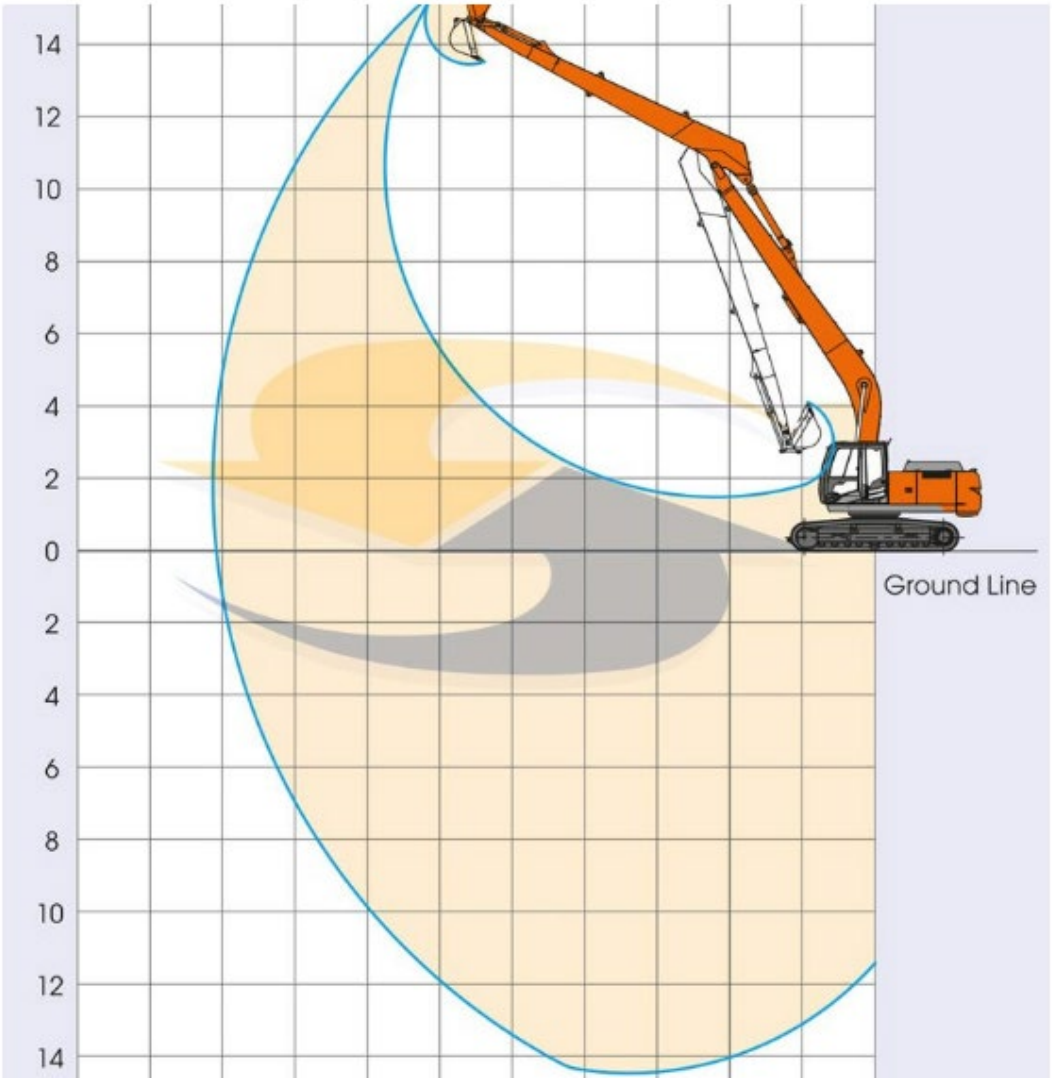


Image 8. Typical long reach excavator

Image 9. Example of facing stone to be used along seaward edge of boundary (fence line)

3 Roles and responsibilities

To ensure that environmental standards are maintained throughout the construction works, it is necessary that every person working on the site is aware of their responsibilities. Key roles and responsibilities have been set out in Table 1, including relevant contact details where known. Names and contact details will be updated as necessary prior to start of the construction phase of the compensation works.

The **Licence Holder (PoM)** and appointed **Contractor** shall:

- Be responsible for safeguarding the environment and for mitigating the effects of the works by implementing the general environmental requirements outlined in the contract documentation and the specific requirements of the CEMP;
- Be responsible for managing the environmental impacts of all suppliers that provide services in relation to the works;
- Carry out the works in line with the Environmental Management System (EMS);
- Carry out all mitigation and enhancements as described in this CEMP and comply with all limits and thresholds where specified; and
- Subject themselves to on-going review of performance with regards to enforcement of the CEMP in meeting environmental objectives and targets and in achieving effective environmental management.

All **Site Personnel** will:

- Be briefed on and instructed to comply with the CEMP. The **PoM** and appointed **Contractor** is responsible for all sub−contracted staff operating on the site;
- Be appropriately trained to carry out their respective tasks;
- Be briefed on site issues at the start of the day and should know the location of environmental plans;
- Determine and implement good environmental methods of working as set out in the CEMP;
- Organise work to be carried out to the required standard with minimum risk to the environment. All site personnel will receive instructions on their responsibilities to ensure correct environmental practice in line with the CEMP;
- Ensure that all plant and equipment is adequate for the job in hand and that sufficient information is provided to prevent environmental damage;
- Raise any environmental concerns with the wider environment team and site staff; and
- Undertake site inductions and Toolbox Talks and will report any deviations from the CEMP.

Table 1. Key personnel roles and responsibilities

Role	Responsibilities	Staff Name and Company	Contact Details
Licence Holder	▪ Overall responsibility for ensuring the works are conducted in an environmentally responsible manner in accordance with Marine Licence CML2283.	Jim O'Toole (PoM)	01745 560335 Jim.OToole@portofmostyn.com
Project Manager	▪ Ensuring project responsibilities are defined and communicated across the project team. ▪ Ensuring the CEMP and associated documents are implemented appropriately. ▪ Reporting environmental incidents to relevant authorities as required. ▪ Managing the implementation, review and update of the CEMP in accordance with licence requirements and current legislation. ▪ Ensuring that all appropriate consents and licences are in place prior to work starting on site. ▪ Take overall responsibility for the Ecological Clerk of Works (EcoW) remit. ▪ Oversee training and Toolbox Talks for site staff where required. ▪ Investigating and reporting on environmental incidents.	Ellis Humphreys (PoM)	01745 562822 ellis.humphreys@portofmostyn.com
Site Supervisor	▪ Ensuring that all personnel have received and understood the site induction. ▪ Undertaking regular inspections at the site, including daily check of weather conditions. ▪ Reporting any public complaint matters or environmental incidents to the Project Manager. ▪ Supporting the investigations into environmental incidents or near misses to determine the root/direct cause and present the findings, recommendations and lessons learnt. ▪ Oversee all site works with a view to eliminating/reducing the environmental impact of the works and raising any environmental concerns with the Project Manager. ▪ Ensuring Toolbox Talks are carried out and recorded on relevant environmental topics. ▪ Carrying out environmental checks keeping records as appropriate. ▪ Testing of emergency procedures and reporting of results to the Project Manager.	Haydn Hughes (Hollingsworth Group)	07717836603 haydn@hollingsworthbros.com

Role	Responsibilities	Staff Name and Company	Contact Details
Ecological Clerk of Works (ECoW)	▪ Advising the contractor on implementation of environmental mitigation and on compliance with the requirements of the CEMP. ▪ Reviewing site Risk Assessment and Method Statement (RAMS) as necessary with respect to environmental impacts and controls. ▪ Provide environmental input to Toolbox Talks on site at key intervals during compensation works (start, mid and end). ▪ Oversee implementation of ecological mitigation measures (as specified in Section 4). ▪ Reporting any environmental incidents to the Site Supervisor. ▪ Confirming that environmental documentation is completed in line with the Marine Licence.	Michael Cooper (ABPmer)	02380 711840 michael.cooper@abpmer.co.uk

4 Construction management

4.1 General measures

This CEMP captures the activities associated with the respective compensation sites only. The following summarises the various mitigation measures and controls relevant to this phase of the works only. The measures to address potential environmental impacts were identified within the Environmental Statement (ES) (ABPmer, 2022) and Further Clarification Report (ABPmer, 2024).

This section is broken down according to the relevant impacts where mitigation measures were identified in relation to works at the compensation sites and therefore covers the following:

- Water quality and sediment quality including pollution prevention measures;
- Measures to minimise visual and noise disturbance during construction activities; and
- Measures around working in proximity to a flood defence.

4.1.1 Working hours

Construction works will be undertaken in daylight hours Monday to Saturday and will be constrained by appropriate tidal working windows, i.e. avoiding high tide.

4.1.2 Training and communication

Inductions and Toolbox Talks will include applicable environmental legislation that contractors need to comply with, as well as the additional environmental controls and mitigation measures referred to within this CEMP.

Site specific logistics, safety and environmental information will be provided at the induction, so that all personnel are aware of the potential environmental issues. The induction will include all elements of this CEMP and associated consent and permit requirements.

Information from the site induction will be available for staff to access at a suitable location, e.g., the welfare facilities at the PoM.

Training will be provided by the **Site Supervisor, EcoW** or **Project Manager** to the relevant staff as appropriate. Training will include:

- Briefing staff on the CEMP and associated documents;
- Toolbox Talks on site specific issues;
- Pollution prevention training to include practical element for site-based staff (including the practical use of spill kits); and
- Emergency preparedness training for relevant staff.

4.1.3 Waste

No significant waste is anticipated to be generated by the compensation works and any unwanted hard material will be stored at the Port and reused within the MEPE reclamation or Port estate as appropriate (Section 2).

The **PoM** and appointed **Contractor** is responsible for management of site waste. Waste will be managed in accordance with the principles in the waste hierarchy (Defra, 2011) and cost restraints, using the following phased approach: reducing the amount of waste generated, encouraging re-use/recycling waste where possible, and finally removing remaining waste to an appropriate management facility. All the above phases will include the prevention of contamination.

Waste requiring disposal will be collected, transferred and disposed of at a permitted waste disposal site (see https://naturalresources.wales/evidence-and-data/maps/find-details-of-permitted-waste-sites/?lang=en) in accordance with the site requirements.

Prior to collection, waste must be labelled and suitably stored in line with best practice guidance for the material in question. Storage of waste material will be in a designated area on site located away from watercourses with appropriate pollution prevention measures in place.

The **PoM** and appointed **Contractor** will obtain any relevant consents or waste exemptions where necessary.

4.2 Receptor specific measures

4.2.1 Water and sediment quality

The works have the potential to affect water and sediment quality due to accidents and spillages/leaks. Given the limited working on the foreshore, there are not considered to be any specific measures required for the compensation site works in relation to disturbance of sediment.

The potential risk to water and sediment quality will be avoided or minimised by ensuring that the works follow environmental management best practice. The implementation of best practice measures will be the responsibility of the **PoM** and appointed **Contractor**. In particular, the following guidance will be adopted:

- Guidance for Pollution Prevention (GPP) in the UK (NetRegs, 2022);
- CIRIA's Environmental Good Practice on Site (CIRIA, 2023);
- Regulatory Guidance Series, No RGN 4 Setting standards for environmental protection (NRW, 2014); and
- The Oil Care Code (Oil Care Campaign, 2015).

Preventative actions will be undertaken including the following:

- Containers of contaminating substances, including fuel, will be leakproof and kept secure to prevent spills and vandalism. The containers and areas for transfer will be protected by temporary impermeable bunds with a capacity of 110% of maximum stored volume;
- All refuelling, oiling, and greasing will take place above drip trays or on an impermeable surface which provides protection to ground and away from drains. Vehicles will use area designated for refuelling and vehicles will not be left unattended during refuelling;
- Plant will be regularly maintained and only vehicles and construction equipment free of leaks will be permitted onsite. Drip trays will be places below static mechanical plant;
- All wash down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses and will comply with best guidance (i.e. GPP13: Vehicle washing and cleaning);

- Restricted use of List I and List II substances (Dangerous Substances Inventory) during construction. If required then measures will be taken to ensure that List I and List II substances are not released to the water environment during construction activities;
- Provision and maintenance of spill clean-up kits on site at all times and training staff in their use;
- Construction workforce will utilise existing welfare facilities to avoid the need for disposal of foul water and sewage effluents from a separate compound;
- No silty water shall be pumped directly into a river, stream or surface water drain but, where possible disposed of to the foul sewer with the prior agreement of the appropriate authority;
- Roads used by plant will be brushed or scraped and kept free from dust and mud deposits; and
- If required wheel washes and plant washing facilities will be provided and the effluent contained for proper treatment and disposal in accordance with regulatory body guidelines.

In recognition of the environmental risk posed by a spillage of fuel or oil a dedicated Emergency Response spill kit will be available on site. This kit will contain:

- Absorbents: Materials, like mats, pads, socks, or booms to absorb the spilled liquid, preventing it from spreading and contaminating the environment;
- PPE: Disposable gloves, goggles, overalls, face masks, and other protective gear to ensure the safety of responders during cleanup;
- Waste Bags: Heavy-duty plastic bags and cable ties to safely collect and dispose of used absorbents and contaminated materials;
- Containers/buckets: To contain any absorbents or contaminated soils in an event of a spillage (the spill kit is often stored in a wheeled bin or other container for easy transport and accessibility); and
- Other Equipment: This may include warning tape, floor-standing signs, disinfectants, and first aid kits, depending on the specific kit and the nature of the potential spill.

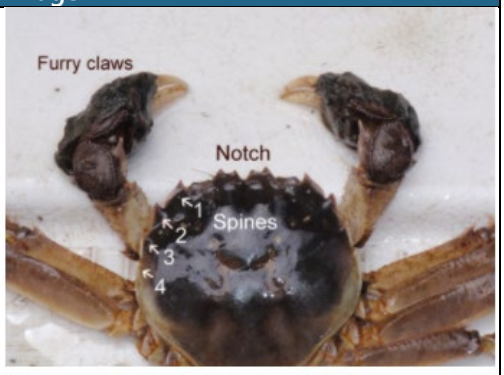
4.2.2 Marine ecology

The Mostyn scrape back and Warwick (Marsh Row) foreshore remedial sites are located within the Dee Estuary, an area of high conservation value which is designated as an SPA, SAC, Ramsar site and Site of Special Scientific Interest (SSSI). The sites are also in relative proximity to Liverpool Bay SPA.

The designated sites support a range of features including internationally and nationally important populations of water birds, wetland habitats, intertidal habitats, dunes, important plant assemblages, migratory fish, and Natterjack toads. However, the areas of scrape back have been identified as being of low ecological value (they are highly impoverished, characterised by very low numbers of species and low abundance levels) due to the presence of manmade material. The removal of manmade material in these areas will expose underlying natural habitat which will be of benefit to the ecology in this area. The following invasive non-native species (INNS) are known to be present in this location: Chinese mitten crab *Eriocheir sinensis,* slipper limpet *Crepidula fornicata,* tunicate/sea squirt *Didemnum vexillum* and Acorn barnacle *Austrominius modestus* (Table 2)[1].

[1] An ecological walk over survey of the compensation sites will be carried out prior to construction works and will include a search for INNS (ABPmer, 2025b). If any further species are noted then this CEMP and the Biosecurity Risk Assessment will be updated.

Table 2. INNS known to be present at the PoM (source: PoM Ltd., 2025)

Species	Description	Image
Chinese mitten crab *Eriocheir sinensis*	A freshwater crab, native to Eastern Asia. They inhabit coastal estuaries spending most of their adult life in freshwater, migrating to brackish water to reproduce. They are a burrowing species and are known to cause damage to riverbanks due to destabilisation. Chinese Mitten Crabs are known to be present in the main stem of the Dee, downstream of Farndon. There have been unconfirmed reports of this species higher up the Dee catchment.	 A Chinese Mitten Crab showing its key identifying features - furry claws, a central notch, and four spines located on the each side of the carapace.
Slipper limpet *Crepidula fornicata*	A marine gastropod which forms colonies/chains of individuals who settle on top of one another. In dense populations this species can have severe impacts on the local environment by removing suspended solids and plankton from the food chain. In the Dee Estuary there is favourable habitat. Positive sightings of live individuals have now been recorded in the North Wales coast (but not in the Dee Estuary).	
Tunicate/sea squirt *Didemnum vexillum*	A tunicate/sea squirt that can spread via free swimming larvae or through fragmentation. It rapidly colonises and smothers hard substrates including both manmade objects and marine wildlife. In North Wales, an eradication programme has been underway since 2011. As this species is located within a reasonable proximity to Liverpool Bay and the Dee Estuary, it is prudent to be alert to this species.	
Acorn barnacle *Austrominius modestus*	A small sessile barnacle, five -10 mm in diameter, which can dominate hard surfaces and outcompete native species. Inhabits almost the entire intertidal zone but is most common from mid-shore to shallow subtidal areas of estuarine and sheltered marine habitats. Recorded in 2022 during subtidal benthic sampling campaign for the MEPE Project.	

As the works to remediate the foreshore will be carried out by an excavator from land in the dry above the water line, there are no activities that would generate underwater noise. The aspects of the remedial works which could adversely affect marine ecology are:

- Potential for adverse effects arising from a reduction in water and sediment quality – this will be controlled in line with the measures outlined in Section 4.2.1.
- Introduction and spread of non-native species – this risk will be managed through adherence to the management measures detailed in the project-specific *Biosecurity Risk Assessment and Management Plan*.

Measures to avoid/minimise effects on marine ecology will include:

- Carrying out works when the foreshore is exposed (i.e. mid to low tide) to minimise direct entry of plant and equipment into the water. This will also reduce the disturbance of sediment into the water column.
- Preparation of a *Biosecurity Risk Assessment and Management Plan* in line with Condition 3.19 of Marine Licence CML2283 which states:

3.19.1 *The Licence Holder must submit a Biosecurity Plan to the Licensing Authority for written approval at least 6 weeks prior to commencement of the Licensed Activities. No Licensed Activities may be undertaken prior to written approval from the Licensing Authority.*

3.19.2 *The Licence Holder must ensure that any actions outlined in the documents detailed in condition 3.19.1 are implemented as approved in writing by the Licensing Authority. Any proposed changes to the actions outlined in the documents must be submitted to, and approved in writing by the Licensing Authority prior to any changes being enacted*

The biosecurity management measures include the following:

1. **To address the risk from movement of biological and non-biological material via long reach excavator**:
    - Follow the 'Check, Clean and Dry' method. The excavator will undergo inspection, washing, rinsing and / or drying prior to arrival on site, and when moving between habitat compensation sites and at the completion of works, to prevent the spread of any INNS.
    - The excavator will be stored within the PoM estate during the works when not in operation.
    - It is not anticipated that any other equipment would be required, e.g. manual tools, but if required then the same inspection, washing, rinsing and drying procedures would apply.

2. **To address the risk from Personal Protective Equipment (PPE)**:
    - All PPE including boots and clothing to be washed down after operatives have been present in the intertidal zone.

In line with the PoM Biosecurity Plan (PoM Ltd., 2025) regular communication will be maintained with NRW and The Dee Conservancy in relation to INNS, and any additional species encountered will be reported. If required then the contingency plan, as detailed in the PoM Biosecurity Plan will be implemented (Table 3). The **Project Manager** is responsible for informing the **Licence Holder**.

Table 3. INNS contingency plan (source: PoM Ltd., 2025)

Action	Responsibility (PoM staff)	Location of equipment
Upon discovery of an INNS refuse port entry to any vessel/marine plant until the species has been identified and isolated.	Marine berthing staff and Biosecurity Officer	N/A
Collect sample and send to INNS Secretariat.	Marine staff & Bio Security Officer	Marine Office
Liaise with NRW and Dee Conservancy management for advice, guidance and to agree actions.	Biosecurity Officer	N/A

The biosecurity logbook is located in the Port Manager's Office.

4.2.3 Ornithology

The Mostyn scrape back and Warwick (Marsh Row) foreshore remedial sites are located within the Dee Estuary SPA which supports internationally important populations of waterbirds, including bird populations with more than 150,000 waterbirds recorded annually in the estuary. The importance of these areas for bird feeding and roosting has been established. The inner section of the Mostyn Bank supports important populations of wintering and passage waterbirds including Black-tailed Godwit, Godwit, Redshank and Oystercatcher which feed on mudflat in the area and roost on upper foreshore habitat including a rock ledge on the PoM breakwater. The Warwick foreshore is known to be an important roost for Oystercatcher and can support thousands of individuals in the non-breeding season. The roost is also considered important for other species including Redshank.

The habitat compensation works have the potential to result in visual and noise disturbance of birds from the operation of plant machinery such as the long reach excavator. Specific measures to avoid/minimise effects on birds will include:

- Scheduling of the remedial scrape back works at the habitat compensation sites to take place between May and July to avoid the bird passage/overwintering periods (i.e., August to April);
- Avoid the works overlapping any key important bird habitat, including the breakwater roost. It is noted that the existing habitat at Mostyn and Warwick habitat compensation sites consist of relatively barren rubble (brick, debris, slag deposits, concrete etc.) exhibiting very limited colonisation by epifauna species; and
- Presence of an **EcoW** at key intervals during compensation works (start, mid and end) to ensure that there are no significant effects on any existing environmental receptors or their supporting habitat during the remedial works.

In relation to noise and vibration the **PoM** and appointed **Contractor** will follow best practice advice contained within BS 5228:2009+A1:2014 'Code of practice for noise and vibration control on construction and open site' (BSI, 2009). The following measures will also be implemented on site to reduce as far as practicable the potential environmental impacts associated with airborne noise from construction activities:

- Where reasonably practicable, the appointed contractor will use quieter working methods, the most suitable plant and reasonable standard construction hours of working for noisy operations;

- Where possible, the items of plant will be located the furthest distance from the nearby Noise Sensitive Receptors (NSRs) and ecological receptors. Plant known to emit noise strongly in one direction will, when possible, be orientated so that the noise is directed away from noise-sensitive areas;
- Acoustic covers to engines, where these apply, will be kept closed when the engines are in use and idling;
- Machines in intermittent use will be shut down between work periods or should be throttled down to a minimum. Machines will not be left running unnecessarily;
- Materials will be lowered whenever practicable and should not be dropped;
- No employees, subcontractors and persons employed on the site will cause unnecessary noise from their activities e.g., excessive 'revving' of vehicle engines, shouting and general behaviour etc. No radios or other audio equipment will be allowed on site;
- All plant machinery permitted to site and used on-site will be maintained to the appropriate standards. Checks for adequate lubrication to reduce squeaks and the tightening of loose nuts and bolts to minimise rattles will form part of a routine maintenance cycle;
- All plant machinery will conform with relevant standards and directives on permitted noise emissions levels;
- Audible warning systems (including reversing alarms) will be switched to the minimum setting required for health and safety; and
- All communication devices will be used at a minimum audible level.

4.2.4 Flood defences

The works at the Warwick site take place in proximity to a NR revetment (Section 2.2). NRW Advisory has advised that the 5 m buffer from the NR embankment as shown in cross-section F-F is acceptable and should ensure that the integrity of the adjacent defence will not be compromised (Figure 3).

Although the works take place within 16 m of the sea defence, a Flood Risk Activity permit is not required given that the works will not:

- endanger the stability of, cause damage to, or reduce the effectiveness of that sea defence; nor
- interfere with NRWs' access to and along the sea defence.

The following measures will be implemented on site to minimise the potential for damage to the embankment and adhere with the conditions above:

- A distance of 5 m will be marked out from the NR revetment which will act as a line beyond which no earth will be touched (i.e., not excavated) in order to ensure that the integrity of the adjacent defence will not be compromised.
- Access to the embankment will be maintained so that the section towards the NR revetment can be reached at all times.
- If required NR will be informed of the works and any relevant permits or permissions will be obtained in relation to working in proximity to the rail embankment (see https://www.networkrail.co.uk/running-the-railway/looking-after-the-railway/asset-protection-and-optimisation/).

4.2.5 Summary

A summary of the mitigation and control measures is provided in Table 4.

Table 4. Summary of mitigation and control measures to be implemented

Aspect	Summary of control measures
Potential to affect water and sediment quality due to accidents and spillages/leaks	▪ Leakproof and secure containers for contaminating substances with protection by temporary impermeable bunds with a capacity of 110% of maximum stored volume; ▪ All refuelling, oiling, and greasing will take place above drip trays or on an impermeable surface. An area will be designated for refuelling and vehicles will not be left unattended during refuelling; ▪ Plant will be regularly maintained. Drip trays will be places below static mechanical plant; ▪ All wash down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses; ▪ Restricted use of List I and List II substances; ▪ Provision and maintenance of spill clean-up kits; ▪ Construction workforce will utilise existing welfare facilities to avoid the need for disposal of foul water and sewage effluents from a separate compound; ▪ No silty water shall be pumped directly into a river, stream or surface water drain. ; ▪ Roads used by plant will be brushed or scraped and kept free from dust and mud deposits; and ▪ If required wheel washes and plant washing facilities will be provided and the effluent contained for proper treatment and disposal.
Potential adverse effects on native marine species from effects on water/sediment quality and/or from INNS	▪ Carry out works when the foreshore is exposed to avoid plant/equipment entering water; ▪ Follow the 'Check, Clean and Dry' method for plant and equipment. The excavator will undergo inspection, washing, rinsing and / or drying prior to arrival on site, and when moving between habitat compensation sites and at the completion of works, to prevent the spread of any INNS; ▪ Storage of plant/machinery within the PoM estate when not in operation. ▪ All PPE including boots and clothing to be washed down after operatives have been present in the intertidal zone; and ▪ Follow contingency and reporting of INNS as stipulated in the PoM Biosecurity Plan.
Potential for visual and noise disturbance of birds	▪ Schedule remedial scrape back works between May and July; ▪ Avoid the works overlapping any key important bird habitat; ▪ Presence of an ECoW at key intervals during compensation works; ▪ Use quieter working methods where practicable; ▪ Locate plant where possible at the furthest distance from ecological receptors; ▪ Use acoustic covers to engines where these apply; ▪ Machines in intermittent use will be shut down between work periods; ▪ Materials will be lowered whenever practicable; ▪ Persons employed on the site will avoid unnecessary noise; ▪ All plant machinery will be maintained to the appropriate standards;

Aspect	Summary of control measures
	▪ Audible warning systems will be switched to the minimum setting required for health and safety; and ▪ All communication devices will be used at a minimum audible level.
Potential damage to flood defence	▪ A line at 5 m distance will be marked out from the NR revetment beyond which no earth will be touched (i.e., not excavated); ▪ Access to the embankment will be maintained so that the section towards the NR revetment can be reached at all times; and ▪ If required NR will be informed of the works and any relevant permits or permissions.

4.3 Checking and monitoring

Environmental policies and environmental objectives will be communicated to all site personnel through site induction procedures. Relevant policy documents will be available to view on site notice boards.

All activities that may have an impact on the environment will be controlled by the implementation of procedures and method statements. Each procedure and method statement will be reviewed by the **Project Manager** to ensure that they are in line with this CEMP as well as other applicable environmental requirements.

Compliance with the environmental management system requirements, policy, and objectives as well as compliance with the project environmental plan will be evaluated through periodic internal audits. The main monitoring tools are:

- Site visits and inspections;
- Report on environmental performance; and
- Record of waste transfers, where applicable.

Daily inspections of the site shall occur to ensure compliance with the CEMP, and to minimise the risk of damage to the environment. All environmental incidents shall be reported to the **Project Manager**.

The **Project Manager** will produce a report detailing environmental performance and non-compliances. Environmental key performance indicators applicable to the works will be measured and included in the progress reports to the PoM as required.

Document control shall be in accordance with the PoM's Quality Management System (QMS) and copies of all environmental audit reports, consents and licences shall be maintained by the **Project Manager** and held on site for review at any time.

Environmental auditing and inspections shall be conducted. The **Contractor** shall be responsible for investigating and addressing any non-conformance raised by the audit within an agreed time frame and ensuring that corrective and preventative actions have been fully closed out. Audits will be carried out by the **Project Manager**.

A copy of all audit reports and associated documents shall be kept in a site file.

4.4 Emergency response procedures

Information regarding spill containment materials, methods and spill response equipment shall be clearly defined and submitted to the PoM. A procedure for a general response shall be included in the Health and Safety Plan detailed by the **Contractor**; stating the chain of command and standby operatives and clearly advised to all staff. A **Site Supervisor** will be appointed by the **Contractor**.

The emergency contact details for the works shall be clearly displayed at the site where all staff can see them. A list of any and all nearby residential properties and other sensitive receptors that could be affected by an environmental incident shall be reviewed, compiled and maintained by the **Contractor**.

The **Site Supervisor** will report environmental incidents to the **Project Manager** who will in turn report them to relevant authorities as required and will action an appropriate response to incidents.

Environmental incidents shall be recorded by the **Contractor** including:

- Nature of spill / leak / incident;
- Time / date;
- Exact location;
- Type of material released;
- Approximate volume released;
- Actions taken to prevent contamination;
- Individuals reported to; and
- Lessons learnt.

Lessons learnt shall be fed back to site staff through safety and environment briefings and used by the **Project Manager** to amend procedures and update the CEMP accordingly.

Emergency procedures shall be tested by the **Site Supervisor** and the results reported to the **Project Manager**. Examples of procedures would include:

- The names, 24-hour contact details of and the quickest transport route to all emergency response personnel and emergency services;
- The procedures for reporting and documenting an emergency incident;
- Personnel responsibilities during an emergency incident; and
- The location of onsite information on hazardous materials and spill containment materials.

4.5 Communication

All correspondence between members of the project team relating to environmental issues shall be written/emailed.

The environmental responsibilities of the **Contractor** shall be managed, monitored and reported through the application of Method Statements.

The **Project Manager** shall advise the **Site Supervisor** on external communication with regulatory bodies, the public, and any other external stakeholders on environmental matters.

Communication with the PoM regarding environmental impacts will take place during regular progress meetings and be recorded via minutes and progress reports which can include results of monitoring,

incidents, complaints, progress, etc. Performance against the environmental objectives and targets can be reviewed at these meetings.

A full contact list containing names, job titles and contact numbers shall be produced and maintained. On site communication will be provided by use of radios and/or mobile telephone where use is permitted.

The **Site Supervisor** will be responsible for receiving, recording and responding to external complaints. A Complaints Log shall be maintained and reviewed regularly to identify any changes to management procedures or operational controls to mitigate causes of complaints wherever possible.

4.6 Security

The long reach excavator will be stored within the Port of Mostyn estate during the works when not in operation. It is not anticipated that any other equipment would be required. On site security will be arranged and maintained by the **PoM**.

5 References

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6 Abbreviations/Acronyms

ABP	Associated British Ports
CEMP	Construction Environmental Management Plan
ECoW	Ecological Clerk of Works
EMS	Environmental Management System
MEPE	Mostyn Energy Park Extension
NR	National Rail
NRW	Natural Resources Wales
PAD	Protocol for Archaeological Discoveries
PoM	Port of Mostyn
QMS	Quality Management System
SAC	Special Area Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WSI	Written Scheme of Investigation

Cardinal points/directions are used unless otherwise stated.

SI units are used unless otherwise stated.

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