

Port of Mostyn Biosecurity Plan

CONTENTS

1	Description of operations and activities that may affect Biosecurity	2
	1.1 Site Location	4
	1.2 Plan period	4
	1.3 Biosecurity Manager	4
2	Site features affecting biosecurity:	5
	2.1 Salinity	5
	2.2 Submerged Structures	5 & 6
	2.3 Invasive Non-native species (INNS) known to be present	7
	2.4 Invasive Non-native species (INNS) that pose a threat	7
3	Vessel types using the site/involved in the operation:	7 & 8
4	Site Activities which have a significant risk of introducing or spreading NNS:	8
5	Site surveillance and reporting procedure	8
6	Contingency Plan	9
7	Location of biosecurity logbook	9
8	Plan Review Date	9

INTRODUCTION

The Port of Mostyn has been maintaining its Harbour approaches and Pilotage channels with the use of dredging and ploughing techniques for many years; under licence (DML 1663). This Bio Security Plan is the first revise since the original licence issue and serves to refine and reinforce our commitment to reducing the likelihood and impact of any INNS. Continuing to Dredge and maintain our operational approaches within the Dee Estuary, is commensurate with our obligations as the Statutory Harbour Authority for the Dee Estuary and Conservancy. By ensuring our Bio Security regime is robust we endeavour to play our part in preventing or reducing the introduction, migration and spread of INNS.

1. DESCRIPTION OF OPERATIONS AND ACTIVITIES THAT MAY AFFECT BIOSECURITY

Regular vessel arrivals and departures at the Port of Mostyn:

Most of the marine vessel movement in the Port are UK waters vessels, which are employed in the Operations and Maintenance sectors of the Offshore wind industry, namely they are:

- **Crew Transfer Vessels(CTV's):** High speed passenger vessels going to and from the windfarms in the vicinity. They are well maintained and undergo regular cleaning / antifouling. All vessels are locally based but new arrivals may have come from international waters.
- **The Afon Dyfrdwy:** The Dee River Craft (DRC) is used to transport aeroplane wings from the place of manufacture to the Port, before onward transportation by a bespoke cargo vessel. The DRC berths at either the Load Out Facility (LOF) further up the Dee at Broughton or at its dedicated berth at the Port. When berthed the vessel sits on a grillage. During some of that time the vessel is out of the water and growth is air dried. The DRC is subject to a regular dry-docking schedule and class survey requirements.
- **Airbus Vessels:** The Airbus Vessel operates around Europe only, on a circular transportation route. The vessel is in constant use and subject to a regular dry-docking schedule.
- **Tug Boats:** Tugs used are either based at Holyhead or Liverpool. Occasionally the port will have tugs arriving from international waters. These Tugs are subject to a regular dry-docking schedule and class survey requirements.
- **Dredgers:** Dredgers visit the port to carry out maintenance dredging. They normally operating locally and in UK territorial waters prior to mobilisation to Mostyn. They are subject to a regular dry-docking schedule and class survey requirements.
- **Coasters:** These occasionally arrive from international waters, they're normally in constant use and are subject to a regular dry-docking schedule and class survey requirements.

Infrequent vessel arrival/departures

- **Work Barges/Pontoons:** These types of vessels occasionally visit the port for bespoke projects. Either arrival by sea or by Road from another UK location.
- **Jack Up Vessels:** Jack-ups arrive by sea and spend some time jacked-up where the hull is air dried. Subject to a regular dry-docking schedule and class survey requirements.

Small Vessel Hull, Pontoon and Navigational Buoy Cleaning:

To remove any growth, the pontoon/vessel or buoy will be lifted onto the paved quay apron by a crane. Whilst on the quay, the Port's own marine staff will remove any growth using high pressure

jet washing machines and manual long-handled scrapers and scrubbers. All personnel will be required to wear appropriate protective clothing and footwear.

From experience gained in the maintenance of navigational buoys in the Dee estuary, it is expected that the submerged parts of the pontoons will be colonised by marine growth. In the main this will be mussel growth. The density of growth will be monitored and when necessary will be removed on a periodic basis. Through experience, it is necessary to remove the growth every 3 to 4 years.

When all the growth has been removed it will be swept up and placed in suitable containers, for onward disposal to an approved site at Llandulas. Samples of the growth content will be carried out and sent for species analysis; a copy of the analysis report will be provided to Natural Resources Wales.

The pontoons/vessel/buoy will then be scrubbed and dried and repainted with an approved coating. When necessary, anodes and fendering will be replaced, and any structural repairs undertaken as required. Upon completion of the work the pontoon will then be returned to the water in a reverse lifting procedure.

Ballast Water:

Due to the Dee Estuary being an important ecologically sensitive area and a highly protected nature conservation site, vessels should avoid discharging water ballast within the Dee Estuary which could have an impact on the native environment. Vessels operating in the Dee Estuary are required to comply with the guidance contained in the Maritime and Coastguard Agency – [Ballast Water Management FAQs](#). Where applicable, vessels are required to maintain a ballast water management plan and a ballast water record book for inspection by the harbour authority and flag state.

When a vessel is required to de-ballast for safety or operational reasons within the Dee Conservancy, this should be through an approved ballast water treatment system. Alternatively, a ballast water exchange should be completed. As and when a vessel's safe stability parameters allow, a ballast water exchange should equate to a 95% volumetric exchange and be completed at least 50 nautical miles from land or as far as possible from the nearest land within the vessels normal trading pattern. Where possible the exchange should be completed in waters of at least 200 metres deep.

More information can be found at: - <https://www.gov.uk/guidance/control-and-management-of-ballast-water>



1.1 Site Location:

Geographically, The Port of Mostyn is a medium-sized port that lies on the Welsh side of the Dee Estuary, Flintshire. It is within 3 nautical miles from the Irish Sea. The Port sits within a SAC and SSSI.

The Dee Estuary water is defined as Brackish water, with the Salinity at its lowest during the ebb over the low water period. Mostyn has a large Tidal range, resulting in the fixed structures being exposed twice daily. Mean Tidal heights are detailed below: -

MHWS = 8.50m
MHWN = 7.20m
MLWN = 3.10m
MLWS = 1.30m
MHW = 7.85m
MLW = 2.20m

1.2 Plan period:

Periodically as necessary to maintain channel approach depths in line with the Statutory Harbour Authorities duties & obligations.

1.3 Biosecurity Manager:

Robert Matthews

2. SITE FEATURES AFFECTING BIOSECURITY:

2.1 Salinity

The Dee Estuary is a brackish water with salinity varying dependent on the tide and volume of water discharging from the River Dee. When the river Dee discharge increases the saline water in the estuary is pushed seaward as the river flows out, with the Salinity being at the lower end at 26.4ppt.(parts per thousand).

Near surface salinity data collected from the outer parts of the River Dee (Mostyn Bank) vary between 26.4 and 32.5ppt. There is strong evidence that the Dee is a partially mixed system¹. Mixing will increase when the River Dee is in flood. Variations of mixing salt and fresh water at mid-estuarine areas are likely to be dependent on the migration of the halocline up and down the estuary both on a tidal and seasonal basis.

2.2 Submerged Structures:

Within the Port there are three berths for large commercial vessels.

a. Roro Berth.

This berth consists of 4 large mooring piles, on which there are fenders and bollards. In addition to this there is a large Linkspan (large floating pontoon with bridge section to the shore).



b. Berth 1.

A quay constructed from metal sheet piling with Yokohama floating fenders.

c. Berth 2.

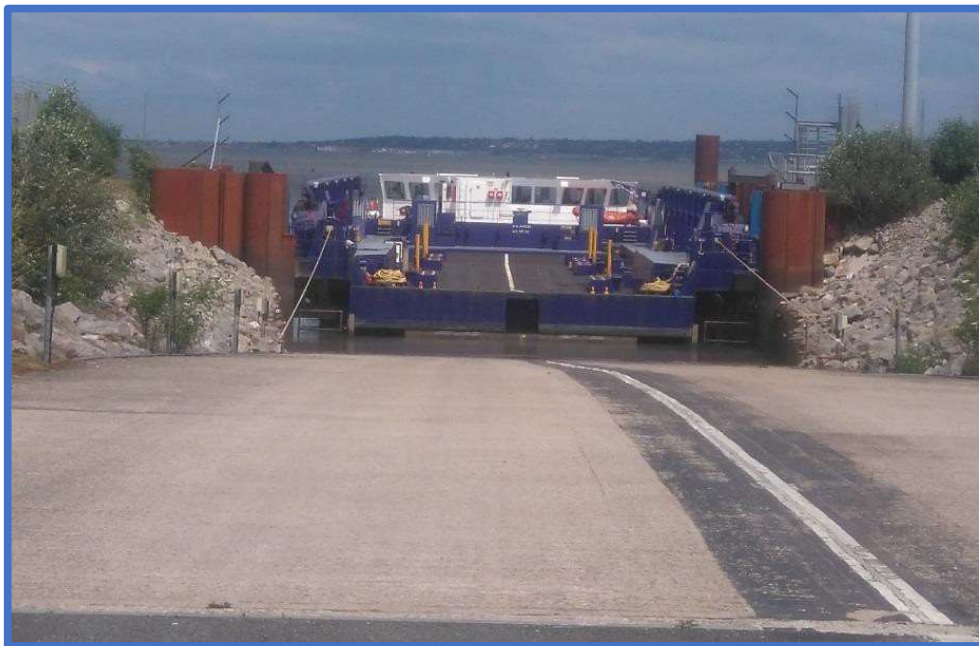
A quay constructed from metal sheet piling with Yokohama floating fenders.

¹ Cefas report – Classification of Bivalve mollusk production areas in England and Wales 2009



In addition to the above:

d. DRC Berth. There is one dedicated berth for the Dee River Craft making voyages to and from Broughton. The DRC berth is a grillage on which the vessel rests on with a concrete slip way. The grillage is exposed during certain states of tide.



e. Transit Pontoons. Various Pontoons are located within the port area capable of accommodating CTV's operating to and from the local Windfarms. Pontoons are operated by the Port of Mostyn and RWE.

2.3 Invasive Non-native species (INNS) known to be present:

- **Chinese Mitten Crab:** Chinese Mitten Crab is 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. They can damage embankments, flood defences and increase erosion. In addition to this they are known to prey on freshwater invertebrates, fish eggs and fry. 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.

2.4 Invasive Non-native species (INNS) that pose a threat:

- Slipper Limpet:** Slipper Limpet *Crepidula fornicata* is a marine gastropod that was accidentally introduced to Europe at the end of the 19th Century via the oyster farming industry. It forms colonies/chains of individuals who settle on top of one another. As they age the individuals change from male to hermaphrodite and lastly to female, enabling them to successfully mate in these colonies. In dense populations this species can have severe impacts on the local environment by removing suspended solids and plankton from the food chain. They also have a large economic cost for the oyster farming industry, which often have to dredge areas to 'clean' them before setting new seed. In the Dee Estuary there isn't any oyster farming but there is favourable habitat. Possible records of this species have been submitted for the North Wales coast although no positive sightings of live individuals have been received.
- Didemnum vexillum:** *Didemnum vexillum* is a tunicate/sea squirt that has rapidly spread throughout the world since it was identified in 1988. This species can spread either sexually 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 to remove this species from Holyhead Harbour; although this programme is proving to be successful it has been very expensive to carry out. As this species is located within a reasonable proximity to Liverpool Bay and the Dee Estuary, it is prudent that we are alert for this species.

3. Vessel types using the site/involved in the operation:

VESSEL TYPE	RISK FACTORS (Pathway, speed, biofouling control)	RISK (High/Medium/Low)
Crew Transfer Vessel	Local, kept clean, fast moving, regular antifouling.	LOW
Airbus Vessel	International, regular dry dock and antifouling.	LOW
Dee River Craft	Local, regular dry docking and antifouling.	LOW
Jack Up Barges	International, slow moving, regular antifouling. Do spend some time air drying when jacked- up.	MEDIUM
Tugs	International and local, regular antifouling. Always moving at reasonable speed.	LOW
Workboats	International and local, regular antifouling. Always moving at reasonable speed.	LOW
Pontoons / Work barges	International, slow moving, antifouling might not be as regular as defined in the IMO Biofouling Guidance.	HIGH

4. Site Activities which have a significant risk of introducing or spreading NNS:

Activity Description	
1	Arrival of vessels (Pontoons / Work barges / Jack ups / Coasters)
2	Dredging Operations
3	
4	

5. Site surveillance and reporting procedure:

WHO	WHAT	WHERE	WHEN
Marine Staff	Visual check of Marine growth on vessels arriving.	Dee Buoy	On Pilot Boarding
Quay Staff	Visual check of Marine growth for vessels being lifted into the water from the quay.	On Quay	On arrival at Port
RWE	Visual check of new CTV's arriving operating from the RWE Pontoons.	At Pontoon	On arrival
Agency	Check with owners on Pontoon arrivals.	By Email	Pre-Arrival
Agency	As part of the Pre-Arrival information request the International Anti-Fouling system certificate.	By Email	Pre-Arrival

- Any Pontoon or vessel being lifted out of the water from the quay will be inspected, with any obvious marine growth or suspicious organism being reported to the Biosecurity officer.
- When buoys/fenders are removed for cleaning any unusual organism present should be reported to the Bio security officer prior to cleaning.
- Vessels in the Medium and High-risk categories should be inspected at the Pilot station prior to boarding.
- Regular updates from NRW & The Dee conservancy group.

6. Contingency Plan:

ACTION	RESPONSIBILITY	LOCATION OF EQUIPMENT
Upon discovery of any INNS refuse entry into the water of any vessel/marine equipment until such time the species has been isolated to prevent introduction / further population in the Dee.	Marine berthing staff & Bio Security Officer	N/A
Collect samples and send to GB NNS secretariat.	Marine staff & Bio Security Officer	Marine office

Liaison with NRW & the Dee Harbour conservancy for advice and guidance.	Bio Security Officer	N/A
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7. Location of biosecurity logbook:

The Port Manager's Office.

8. Plan Review Date:

Dec 2020.