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

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

Filling in this form:

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

Structure of this form:

You will need to fill in Sections A and C. Fill in sections B1 to B5 when relevant to your activity. For further information on what is included in each section see the accompanying guidance document.

Section A: Activity overview

You should complete this section.

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

If you are using a vessel (or vessels) as part of your licensed activity you should complete this section. Information on any equipment to be used which can be separated from the vessel should be provided in Section B.4.

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

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

B.3 Assessing the pathway risks associated with biological material

If your activity involves the use or transfer of biological material (including aquaculture) you should complete this section.

B.4 Assessing the pathway risks associated with equipment

If your activity involves use of equipment which can be separated from their vessel you should complete this section.

B.5 Assessing other pathway risks

This should be filled in if previous sections do not capture aspects of your activity.

Section C: Management Measures

You should complete this section.

Section D: Recommendations

You should consider this section.

Section A: Activity overview

Please fill out the activity details below:

Applicant name:	Tom Price – Swansea Council
Short description of activity: <i>(please provide enough detail for NRW to understand the location and the different elements of the project. Links to other documents which describe the project can be provided)</i>	The objective of the works is to remove accumulated silts and fine sands from the SYSAC Marina situated on the River Tawe in Swansea, South Wales using the method of Water Injection Dredging. This system is designed to remove silty material from the seabed, by injecting a large volume of water at low pressure into the sediment layer. This lowers the density of the sediment, until it becomes fluidized and can be transported, in the lower part of the water column away from the dredge area. This natural horizontal transport is driven by the hydrostatic pressure differences, the gradient of the seabed and the current. Dredging works are undertaken using a seagoing water injection dredger.
Estimated timings of proposed licensed activities:	Between Dec 2024 and March 2025; and Dec 2026 and March 2027 (every other year until March 2033)

Section B: Risk Assessment

B.1 Assessing the pathway risks associated with vessels

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

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

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

Vessel name	Port / location visited over last 12 months (listed chronologically with dates if known)	Which marine invasive non-native species known to be present at this port(s) / location(s)?	Has the vessel had antifouling? 12 months prior to activity for biocidal coatings, 24 months for biocide-free coatings
Borr	Liverpool, UK	Unknown Awaiting further information	Hull and anodes antifouled on an annual basis
	In Dry Dock		
	Liverpool, UK		
	Tilbury Docks, UK		
	Bembridge, UK		
	Grimsby, UK		
	Liverpool, UK		
	Maryport, UK		
	River Parrett, UK		
	Fawley, UK		
	Yarmouth, UK		
	Thames, UK		
	Liverpool, UK		
	Ramsgate, UK		
	Tilbury Docks, UK		
	Liverpool, UK		

Please add more rows if necessary

Please indicate the INNS risk level and justification of the risk below, separately for each vessel based on the locations visited in last 12 months. This should take into account the probability of biofouling and vessel antifouling regime. **Note:** Examples of risk levels are given in Table 2 of the accompanying guidance document and there is further information about this section in the accompanying guidance document.

Vessel name / type	Risk Level (High, Medium, Low)	Justification of risk level
Borr	Medium	As information about INNS at previous locations unknown there is potential to be high risk but as the vessel is removed from the water and thoroughly cleaned between campaigns and the hull and anodes are antifouled on an annual basis risk is lowered.

B.1.2 Please provide details of the vessels (identified in Table B.1.1), which have not had antifouling (within the 12 months prior to the licensed activity for biocidal coatings, or 24 months for biocide-free coatings) and if there is an alternative antifouling management regime.

If there are not additional measures or an alternative biofouling management regime, then please put **None**, and the risk level would not change.

Vessel	Alternative biofouling management regime (e.g. different timeframes for antifouling treatment, vessel storage on land etc.)	Risk Level (High, Medium, low)
	None	

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

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

Pathway	Location (including Coordinates, WGS84)		Relevant Environmental Conditions for INNS species (e.g. salinity and depth differences between source and receiving environments)	List of INNS known to be present	Risk Level (High, Medium or Low)	Justification of risk level
Ballast water	Source	See dredge area map	The area upstream of the barrage is at the interface between the saline marine environment and the fresh water river environment as such the salinity conditions can vary widely.	It is known that there are slipper limpets in the wider Swansea Bay marine environment but these have not been identified in the brackish conditions upstream of the Barrage	Low	Vessel has no ballast tanks
			Highly variable salinity levels within the area upstream of the barrage may not be optimal for successful colonisation of this species within the dredge area	It is reported that Australian tubeworm <i>Ficopomatus enigmaticus</i> are present in abundance in Swansea Marina, which is adjacent to it. It is not known if this tube worm is present in the dredge area of the SYSAC Marina but the probably is quite high.		

	Receiving	See dredge area map	(as above)	(as above)		
Deposition of material	Source	See dredge area map			Low	WID operations, so no dredge material is transferred through vessel during dredging operations.
	Receiving					

Please add more rows if necessary

B.3 Assessing the pathway risks associated with biological material

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

N/A

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

Pathway	Location (coordinates, WGS84) and / or name of culture facility		Relevant environmental conditions for INNS species (e.g. salinity and depth differences between source and receiving environments)	List of INNS known to be present in the location or culture facility	Risk Level (High, Medium or Low)	Justification of risk level
	Source					
	Receiving					
	Source					
	Receiving					

Please add more rows if necessary

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

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

Yes	No	Don't know	Not relevant

B.4 Assessing the pathway risks associated with immersible equipment

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

Dredger nozzle

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

	Yes	No
Immediately prior to departing the <u>port of origin</u> to undertake the licensed activity.	X	
Immediately prior to leaving the licensed activity area on completion of the licensed activity.	X	

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

Yes	No (please provide reason)
	X All the dredging locations are in the same area

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

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

Equipment	Location (Coordinates, WGS84)	Risk Level (High, Medium or Low)	Justification of risk level
Dredger nozzle	See B1.1 Not sure if used at all locations	Low	Drained of water and washed between dredging activities at different ports

B.5 Assessing other pathway risks

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

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

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Section C: Management Measures

C.1 Management Measures

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

All **high and medium risk** pathways identified in the previous risk assessment (sections B.1 to B.5) should have some degree of additional control or mitigation measures. Low risk pathways may also need additional control or mitigation measures. You may want to consider keeping a logbook to help demonstrate compliance if this is requested.

Pathway (identified in sections above)	Risk Level (High, Medium or Low)	Risk management measure/s	Risk level after management (High, Medium or Low)
Vessel	High	Antifouling of hull and anodes on annual basis Confirm if INNS present in locations visited prior to this one	Medium
Immersible equipment – dredger nozzle	Low	Drained of water and washed between dredging activities at different ports	Low

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Please add more rows if necessary

Section D. Recommendations

You may want to consider how compliance with the management measures will be recorded, for example in a log book or via photos.

We also recommend that;

- You identify an individual for monitoring and reporting on biosecurity management plan actions (a biosecurity manager)
- All staff involved in the licensed activity are made fully aware of the possibility that INNS may be encountered and understand what measures will be taken to ensure surveillance / monitoring of INNS during the activity
- All relevant staff are adequately trained in the identification and detection of INNS and to report any instances to the biosecurity manager