Document version number: (to be completed by marine licensing team)	
Approval date: (to be completed by marine licensing team)	

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

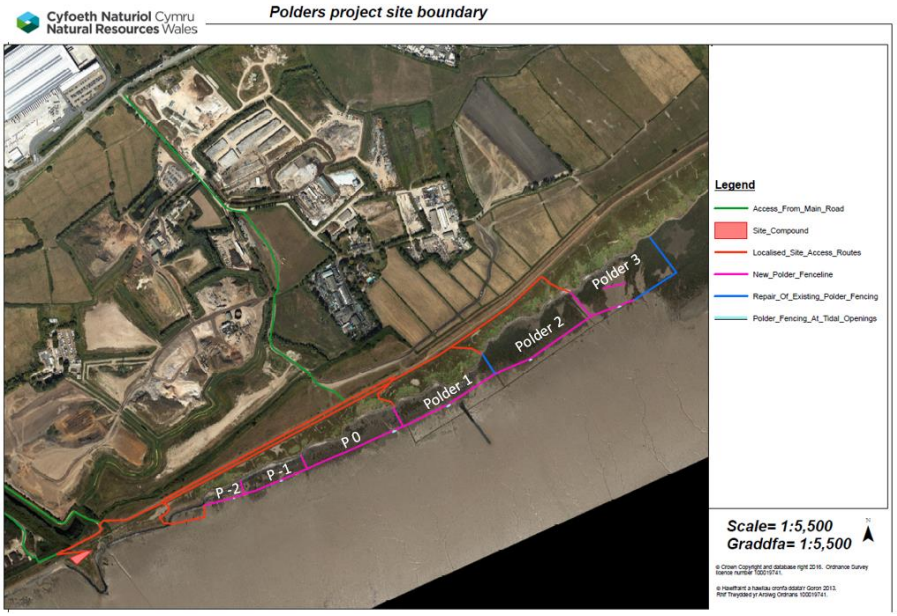
You should complete this section.

Section D: Recommendations

You should consider this section.

Section A: Activity overview

Please fill out the activity details below:

Applicant name:	Chloe James, Natural Resources Wales
Short description of activity: *(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)*	Construction of polders at Rhymney Great Wharf. This involves land based machinery to install wooden stakes and brushwood within intertidal mudflat and saltmarsh features of Severn Estuary SAC. Materials will be sourced from other sites in the UK. This document therefore addresses the principle sources of INNS introduction and spread for the project which are: - Machinery used to carry out the work - Source of construction materials - INNS establishment on new structures The map below describes the final design for the project and further detail can be found here 
Estimated timings of proposed licensed activities:	April – August 2024

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
N/A – all activities land based			

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**

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)**

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

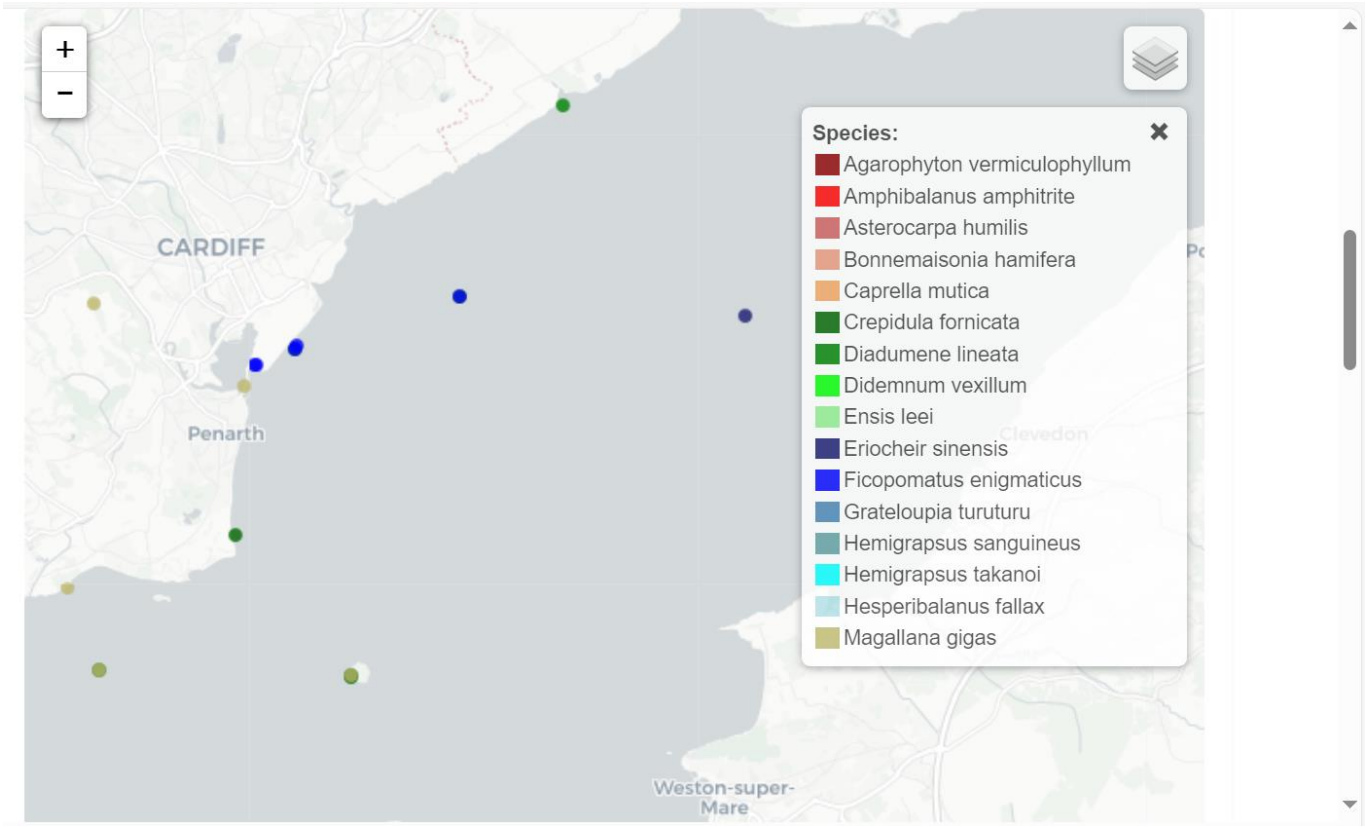
B.2.1: Please provide information about the source and receiving environments for non-biological materials and water transferred through the licensed activity from different pathways (for example hopper water, dredge material, construction material).

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**
INNS arriving on machinery (to drive fence posts into mud)	Source	Depot of contractor – Wales based but unknown until contract awarded	This project is unusual in that it is taking place in the intertidal, it is likely that machinery will have solely been working in terrestrial environments prior to this project, however this will be confirmed upon contract award. There is potential pathway to INNS introduction and spread between terrestrial environments (depot, access area, compound area)	Unknown – further info can be provided following contract award.	Low	Contractors will be asked to consider INNS introduction from machinery within their method statement and further information on this can be provided at a later date. There is very little risk of terrestrial based INNS being introduced to the intertidal due to the different environment of the project. There is however a potential pathway between two terrestrial locations – machinery depot and project area and the risk is still deemed low as contractors will be asked to ensure that

						terrestrial INNS areas are avoided. Access and compound will be on road and then on upper saltmarsh area and therefore risk of encountering local INNS is low. Please see EAP(Marine Licence application-Appendix G) which will inform the contractor's method statment once the contract is awarded. The document contains the finer detail on specific measures that the contractors will be asked to undertake.
	Receiving	Intertidal area of project – Great Rhymney Wharf 51.497567, -3.089200		Orange striped anemone *Diadumene lineata* Australian tubeworm *Ficopomatus enigmatus* Not in area of project but in vicinity are also records of Chinese Mitten Crab, *Eriocheir sinensis* and Pacific Oyster, *Magallana gigas* The terrestrial area, which will also likely be	Low	See above

				used for access for machinery and compound has the following INNS records: Japanese knotweed *Fallopia japonica* Water fern *Azolla filliculoides* See NBN map extract below.		

Please add more rows if necessary


+
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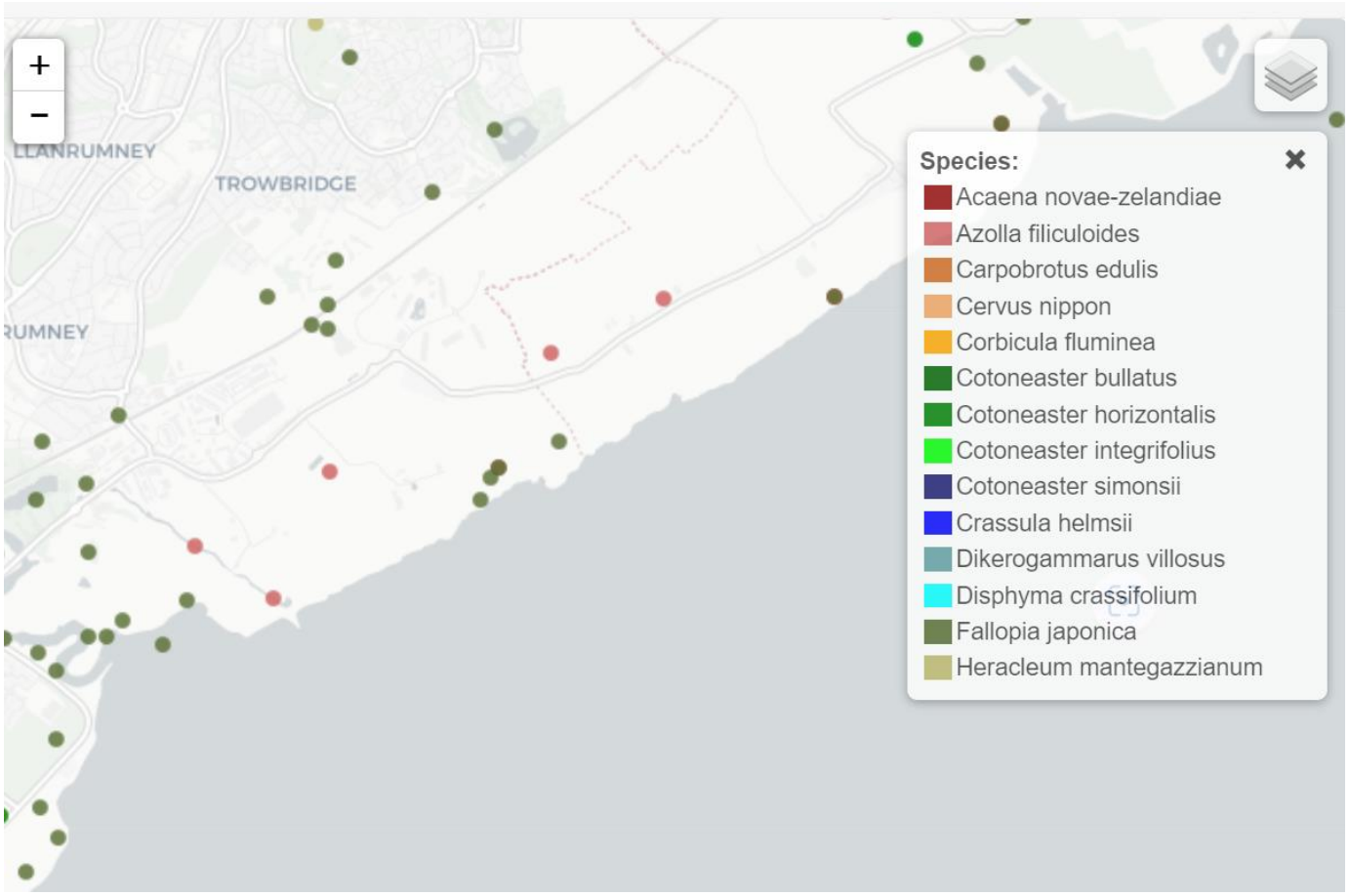
CARDIFF
Penarth
Clevedon
Weston-super-Mare
Species:
Agarophyton vermiculophyllum
Amphibalanus amphitrite
Asterocarpa humilis
Bonnemaisonia hamifera
Caprella mutica
Crepidula fornicata
Diadumene lineata
Didemnum vexillum
Ensis leei
Eriocheir sinensis
Ficopomatus enigmaticus
Grateloupia turuturu
Hemigrapsus sanguineus
Hemigrapsus takanoi
Hesperibalanus fallax
Magallana gigas


+
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LLANRUMNEY
TROWBRIDGE
RUMNEY
Species:
Acaena novae-zelandiae
Azolla filiculoides
Carpobrotus edulis
Cervus nippon
Corbicula fluminea
Cotoneaster bullatus
Cotoneaster horizontalis
Cotoneaster integrifolius
Cotoneaster simonsii
Crassula helmsii
Dikerogammarus villosus
Disphyma crassifolium
Fallopia japonica
Heracleum mantegazzianum

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.

Wood stakes (likely chestnut) and willow brushwood. Potential for INNS low within material itself but INNS in locality of material gathering unknown – tbc following contractor award. Some market research has taken place to understand material availability and through discussions with suppliers, it appears that most stakes are already gathered and sitting in depot ready to be shipped. The brushwood element may be gathered wild depending on amount needed.

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**
Construction materials	Source	Sources of stakes and willow brushwood – unknown until contract award	Unknown – tbc This project is taking place in the intertidal, materials will have come from depot/wild gathered and will have solely been sourced and	Unknown - tbc	Low	Contractors will source stakes and willow brushwood from depot/wild gathered and these will be placed in the intertidal. Any INNS present will not establish due to the marine nature of the project

			transported in terrestrial environments prior to this project, however this will be confirmed upon contract award. There is potential pathway to INNS introduction and spread between terrestrial environments (depot, access area, compound area)			environment. There is however a risk of terrestrial INNS arriving on the stakes and brushwood and spread through compound and terrestrial pathways. This risk will be considered by the contractors and further information will be supplied upon contract award. The risk is however low as materials will be left in one area upon reception and only moved to intertidal area for construction when needed. Please see EAP (Marine Licence application- Appendix G) which will inform the contractor's method statment once the contract is awarded. The document contains the finer detail on specific measures that the contractors will be asked to undertake.
	Receiving	Intertidal area of project		As above	Low	As above
	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.

Contractor method statement. Please see EAP in Appendix which will inform the contractor's method statment once the contract is awarded. The document contains the finer detail on specific measures that the contractors will be asked to undertake. Materials brought in by vehicles along access road and left in compound – no movement of materials elsewhere until construction on the intertidal.

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

Yes	No	Don't know	Not relevant
			x

B.4 Assessing the pathway risks associated with immersible equipment

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

None – work will only be carried out at low water on the intertidal area

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 port of origin to undertake the licensed activity.		

Immediately prior to leaving the licensed activity area on completion of the licensed activity.		

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)

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

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
Polders – post construction	Low	Once established, there is potential for new area for INNS to arrive and spread through existing water movements, climate change etc. onto the saltmarsh. However there are no saltmarsh specific INNS of

		concern recorded in the area and therefore this risk is low. Stakes and brushwood could provided a substrate for colonisation by INNS. However, none have been recorded on existing structures from previous polder work in the area and therefore this risk is also classed as low

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)**
Machinery	Low	Contractor method statement to be provided following contract award. Please see EAP (Marine Licence application- Appendix G) which will inform the contractor's method statment once the contract is awarded. The document contains the finer detail on specific measures that the contractors will be asked to undertake. Machinery only working on access road, compound and	Low

		intertidal project area. Will not be accessing other terrestrial environments in area.	
Materials	Low	Contractor method statement to be provided following contract award. Please see EAP (Marine Licence application- Appendix G) which will inform the contractor's method statment once the contract is awarded. The document contains the finer detail on specific measures that the contractors will be asked to undertake. No material movement once at compound other than to be placed in intertidal project area.	Low
Polders – post construction	Low	The polders will have a period of maintenance and survey following construction. Any presence of INNS will be noted during this period and Marine Licensing will be informed of new records, but there is no plan for targeted INNS surveys as the risk is low in the area.	Low

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