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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:	EirGrid
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 East West Interconnector is an existing 500 megawatt interconnector extending between Prestatyn in North Wales and Rush Bay in Ireland. Post installation surveys have identified the need to undertake remedial works at several locations along the cable route. The works would involved external cable protection in the form of deployment of concrete mattresses or rock bags. Further information on the scope and location of the works along the cable route are provided in the Environmental Supporting Information (P2226K_R6309_Rev0).
Estimated timings of proposed licensed activities:	A licence is being sought from 01/12/2023 to 01/08/2024, with an aim to complete the activities between December 2023 and February 2024 The works will take approximately 14 days.

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
NKT Victoria	Aberdeen, UK 03/11/22 – 05/11/22 Liverpool, UK 13/11/22 – 15/11/22 Landskrona, Sweden 03/12/22 – 18/01/23 Mandal, Norway 19/01/23 – 22/01/23 Fredrikstad, Norway 23/01/23 – 11/02/23 Landskrona, Sweden 20/02/23 – 26/02/23 Karlskrona, Sweden 27/02/23 – 02/03/23	Aberdeen – No known species, however there have been unverified reports of transient populations of red seaweed (possibly <i>Bonnemaisonia hamifera</i>) and Japanese skeleton shrimp (<i>Caprella mutica</i>) in the North East Scottish Marine Region (Marine Scotland, 2020). Liverpool – Species around the Port of Liverpool include Japanese skeleton shrimp and <i>Eriocheir sinensis</i>, although no instances have been recorded inside the cargo docks (NBN, 2023). Information for specific European ports was unavailable, so the	The vessel has an antifouling regime that follows recommendations from DNV, which certify compliance of EU flagged vessels and vessels intended for trade in the EU to the International Convention on the control of harmful Anti-Fouling Systems (AFS). The most recent inspection of the vessel for INNS was conducted in December 2022 and the last full bottom paint, including antifouling treatment, was completed during the vessel's most recent drydocking in February 2022.

02/03/23 – 13/03/23 Tananger, Norway	below presents an overview of species in the relevant regions.	
26/03/23 – 26/03/23 Landskrona, Sweden	Sweden – Data for specific regions of Sweden is not available, however the country as a whole has reported sightings of Japanese wireweed (<i>Sargassum muticum</i>), <i>Polysiphonia brodiei</i> , <i>Gracilaria vermiculophylla</i> , slipper limpet (<i>Crepidula fornicata</i>), dead man's fingers (<i>Codium fragile</i> ssp. <i>tomentosoides</i>) and <i>Alexandrium minutum</i> (ISSG, 2023). There are no recorded incidents of invasive species in the Swedish area of the Bornholm Basin (the location of the Swedish ports the vessel has been to) (HELCOM, 2022).	
28/03/23 – 31/03/23 Karlskrona, Sweden		
01/04/23 – 02/04/23		
02/04/23 – 12/04/23		
12/04/23 – 13/04/23		
Skagen, Denmark		
10/05/23 – 10/05/23		
Karlskrona, Sweden		
11/05/23 – 25/05/23		
12/06/23 – 13/06/23		
13/06/23 – 27/06/23		
27/06/23 – 27/06/23		
Tananger, Norway	Norway – only 42 recorded INNS are known in Norway due to the cold water temperature. Species currently monitored in southern Norwegian waters include Pacific oyster (<i>Crassostrea gigas</i>), <i>Didemnum vexillum</i> , comb jelly (<i>Mnemiopsis leidyi</i>) and Japanese skeleton shrimp (Usa <i>et al.</i> , 2022).	
29/06/23 – 29/06/23		
Eemshaven, The Netherlands		
24/07/23 – 31/07/23		
Karlskrona, Sweden		
03/08/23 – 04/08/23		
04/08/23 – 11/08/23		
Landskrona, Sweden		
12/08/23 – 17/08/23		
Skagen, Denmark	Denmark – Species recorded in the region of the Port of Skagen include the phytoplanktonic diatom <i>Pseudosolenia calcar-</i>	

	18/08/23 – 18/08/23 Bergen, Norway	<i>avis</i> , <i>Karenia mikimotoi</i> , comg jelly, slipper limpet and Japanese wireweed (Jensen <i>et al.</i> , 2023).	
	14/09/23 – 15/09/23		
	23/09/23 – 23/09/23		
	Landskrona, Sweden	Wadden Sea – Pacific oyster, Japanese skeleton shrimp, slipper limpet and Japanese wireweed are species of EU concern that have been identified in the wider region (van der Have <i>et al.</i> , 2015).	
	25/09/23 – 09/10/23		
	Karlskrona, Sweden		
	10/10/23 – 12/10/23		
	12/10/23 – 17/10/23		
	17/10/23 – 18/10/23		

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
NKT Victoria	Low	Whilst exact locations of the vessel prior to the Remedial Works is unknown, based on previous port calls the vessel may dock at a port which contains INNS that are on the Priority Monitoring and Surveillance List for Wales. However, based on the vessel's recent antifouling covering and the completion of regular inspections for INNS, the risk level has been assessed as low.

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)
NKT Victoria	None	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
<i>Deposition of cable protection – concrete mattress</i>	Source	New manufacture	Concrete mattresses will be new introductions to the marine environment, having been manufactured for this purpose.	N/A	Low	As the concrete mattresses have not been present in the marine environment prior to installation, there is no risk of INNS transfer.
	Receiving	EWIC cable, end of rock berm and surrounding seabed (expected to be sandy sediments) Please see attached coordinates	There are no relevant environmental conditions that could support INNS transfer based on the length of time the existing installations have been in place and the new entry of the cable protection measures to the marine environment.	Records of <i>Biddulphia sinensis</i> and <i>Coscinodiscus wailesii</i> have been identified in the region of the Remedial Works locations.	Low	The installation of EWIC and its existing cable protection measures started in 2010, and as such represent longstanding additions to the marine environment. As the cable protection measures will be new to the marine environment, there is no risk of introduction or spread of INNS.

		sheet for locations.				
<i>Deposition of cable protection – rock bags</i>	Source	New manufacture	Rock bags in their current form will be new introductions to the marine environment, having been manufactured for this purpose. The rock is quarried at the manufacturers location, the rock is then processed and placed in marine-grade netting. The manufacture process ensures no INNS will be present.	N/A	Low	As the rock has been processed after its extraction and the netting has not entered the marine environment prior to installation, there is no risk of INNS transfer.
	Receiving	EWIC cable, end of rock berm and surrounding seabed Please see attached coordinates sheet for locations.	There are no relevant environmental conditions that could support INNS transfer based on the length of time the existing installations have been in place and the new entry of the cable protection measures to the marine environment.	Records of <i>Biddulphia sinensis</i> and <i>Coscinodiscus wailesii</i> have been identified in the region of the Remedial Works locations.	Low	The installation of EWIC and its existing cable protection measures started in 2010, and as such represent longstanding additions to the marine environment. As the cable protection measures will be new to the marine environment, there is no risk of introduction or spread of INNS.

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.

No biological material will be transferred during the project.

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.

Vessel crane, ROV

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)
Both the ROV's and crane will be taken out of the water, flushed and dried between use for operational tasks.	

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

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)

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