



**Cambois Connection – Marine Scheme**  
**Volume 5 Appendix 5.1 Annex B**

**Outline Invasive Non-Native Species Management Plan**

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

<b>Revision Information</b>					
-----------------------------	--	--	--	--	--

Rev	Issue Status	Date	Originator	Checker	Approver
R01	Issued for review	06/06/2023	KMcK	KC	SE
A01	Approved for use	25/07/2023	KMcK	AS	SE

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final	Rev: A01	

# Contents

<b>1. INTRODUCTION.....</b>	<b>4</b>
1.1. PURPOSE AND SCOPE .....	4
1.2. LEGISLATION.....	4
1.3. GUIDANCE .....	5
1.4. DOCUMENT REVISION .....	6
1.5. OTHER CONSENT PLANS .....	6
1.6. CONSENT CONDITIONS .....	6
<b>2. ROLES AND RESPONSIBILITIES.....</b>	<b>7</b>
<b>3. INVASIVE NON-NATIVE SPECIES MANAGEMENT PLAN METHODOLOGY .....</b>	<b>7</b>
3.1. STEP 1 – UNDERSTANDING YOUR SITE .....	7
3.2. STEP 2 – UNDERSTANDING HOW INNS CAN BE INTRODUCED OR SPREAD TO YOUR SITE	8
3.3. STEP 3 – IDENTIFYING ACTIVITIES WHICH RISK INTRODUCTION OF NON-NATIVE SPECIES	9
3.3.1.SIMPLE APPROACH.....	9
3.3.2.IN-DEPTH APPROACH .....	9
3.4. STEP 4 – BIOSECURITY CONTROL MEASURES .....	10
3.5. STEP 5 – BIOSECURITY SURVEILLANCE, MONITORING AND REPORTING PROCEDURES.	10
3.6. CONTINGENCY PLAN .....	11
3.7. MONITORING AND REVIEW .....	11
<b>4. MARINE SCHEME INVASIVE NON-NATIVE SPECIES MANAGEMENT PLAN .....</b>	<b>11</b>
4.1. STEP 1 – UNDERSTANDING YOUR SITE .....	11
4.1.1.ENVIRONMENTAL CONDITIONS AFFECTING BIOSECURITY.....	11
4.1.2.INFORMATION RELATED TO ANY SLOW OR STATIONARY PERIODS OR CLIMATIC CONDITION WHICH MAY INCREASE BIOSECURITY RISK.....	12
4.1.3.INNS AT THE MARINE SCHEME .....	12
4.2. STEP 2 – UNDERSTANDING HOW INNS CAN BE INTRODUCED OR SPREAD TO YOUR SITE	12
4.2.1.VESSEL/EQUIPMENT TO BE USED IN THE MARINE SCHEME .....	12
4.3. STEP 3 – IDENTIFYING ACTIVITIES WHICH RISK INTRODUCING NON-ATIVE SPECIES.....	14
4.4. STEP 4 – BIOSECURITY CONTROL MEASURES .....	14
4.4.1.INSTALLATION/PRESENCE OF MAN-MADE STRUCTURES .....	14
4.4.2.USING VESSELS FROM OUTSIDE OF THE MARINE SCHEME .....	14
4.5. STEP 5 – BIOSECURITY SURVEILLANCE, MONITORING AND REPORTING PROCEDURES.	15
4.6. CONTINGENCY PLAN .....	15
4.7. MONITORING AND REVIEW .....	16
4.7.1.MONITORING AND IMPLEMENTATION OF THE PLAN .....	16

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

4.7.2.PLAN REVIEW ..... 16

**5. USEFUL SOURCES OF INFORMATION..... 16**

**6. REFERENCES..... 16**

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final	Rev: A01	

# 1. Introduction

## 1.1. Purpose and Scope

This outline Invasive Non-Native Species Management Plan (INNSMP) has been prepared by Berwick Bank Wind Farm Limited (BBWFL), a wholly owned subsidiary of SSE Renewables (SSER) Limited hereafter referred to as ‘the Applicant’, to support the Environmental Statement (ES) for the Marine Scheme of the Cambois Connection.

As the Marine Scheme extends over both Scottish and English waters, this outline INNSMP serves as an outline INNSMP for the Marine Scheme in Scottish waters and an outline INNSMP for the Marine Scheme in English waters.

This outline INNSMP sets out the management measures that will be followed during the construction, operation and maintenance, and decommissioning phases of the Marine Scheme to prevent and/or reduce the risk of introducing and/or spreading INNS into the waters of the Marine Scheme. It applies to any activities associated with the Marine Scheme up to mean high water springs (MHWS).

An INNSMP for the Marine Scheme in Scottish and an INSSMP for the Marine Scheme in English waters will be developed post-consent for submission prior to construction to the Marine Directorate Licensing Operations Team (MD-LOT) and the Marine Management Organisation (MMO) respectively. The INNSMPs for Scottish and English waters respectively will be closely coordinated by the Applicant. The INNSMP for the Marine Scheme in Scottish waters will be closely coordinated with the Berwick Bank Wind Farm (BBWF) INNSMP.

The outline EMP is a ‘live’ document and as such it will be further developed post-consent in consultation with regulatory bodies and stakeholders, once the consent has been granted.

This outline INNSMP has been developed with respect to feedback provided from consultees as part of the Marine Scheme Scoping Opinions (MD-LOT, 2022; MMO, 2022), where it was highlighted that management plans should be “adequate” to be used as mitigation measures where they are key to reducing impacts.

## 1.2. Legislation

The legislation and guidance relating to invasive non-native species (INNS) at a European Union (EU) and United Kingdom (UK) level include the following:

- EU Regulation 11/43/2014 on the prevention and management of the introduction and spread of invasive alien species<sup>1</sup>;
- The Wildlife and Countryside Act 1981 (Section 14);
- International Convention for the Control and Management of Ships’ Ballast Water and Sediments (adopted in 2004);;
- The Merchant Shipping (Anti-Fouling Systems) Regulations 2009;
- Resolution MEPC.207(62) 2011 Guidelines for the Control and Management of Ships Biofouling to Minimize the Transfer of Invasive Aquatic Species;

---

<sup>1</sup> Retained EU Law under the European Union (Withdrawal) Act 2018.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

- The Invasive Non-Native Species (Amendment etc.) (EU Exit) Regulations 2019; and
- The Animal Welfare and Invasive Non-Native Species (Amendment etc.) (EU Exit) Regulations 2020.

### 1.3. Guidance

Within English waters, this outline INNSMP adheres to the North East Inshore and North East Offshore Marine Plan (MMO, 2021). The Marine Plan outlines that proposals which aim to reduce the risk of introduction and/or spread of invasive non-native species would be supported. It states that proposals must put in place appropriate measures to avoid or minimise significant adverse impacts that would arise through the introduction and transport of invasive non-native species, particularly when:

- Moving equipment, boats or livestock (for example fish or shellfish) from one water body to another; and/or
- Introducing structures suitable for settlement of invasive non-native species, or the spread of invasive non-native species known to exist in the area.

Within Scottish waters these principals would be carried through for consistency. This outline INNSMP adheres to the Scottish Government Code of Practice on Non-Native Species (Scottish Government, 2012). The Code of Practice sets out a framework of responsibilities for bodies with powers relating to INNS and provides practical guidance on how Developers should act responsibly and within the law to ensure that INNS do not cause harm to the marine environment. This Code focuses on a three-tiered approach, including prevention, rapid response and control and containment.

This outline INNSMP considers the Scottish National Marine Plan (NMP), GEN10 - Invasive Non-Native Species (Scottish Government, 2015) which states that opportunities to reduce the introduction of invasive non-native species to a minimum or proactively improve the practice of existing activity should be taken when decisions are being made.

Additionally, the 2020 *Challenge for Scotland's Biodiversity* which aims to protect and restore biodiversity, supporting healthier ecosystems, recognises INNS as a "significant threat to our marine biodiversity and industries such as aquaculture". It also highlights the need to "implement a rapid-response framework to prevent colonisation of new invasive species in Scotland's seas and islands", as they represent a significant threat to marine biodiversity (Scottish Government, 2020).

To implement the INNSMP, the methodology described in Payne et al. (2014), will be followed as best practice guidance.

The Great Britain Invasive Non-Native Species Strategy (HM Government, 2015) describes the following tiered approach to managing INNS:

- prevention;
- early detections, surveillance, monitoring and rapid response; and
- long term management and control.

HM Government (2015) places a strong emphasis on prevention, thus this outline INNSMP focuses on providing tools to aid prevention of introducing and/or spreading INNS.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

## 1.4. Document Revision

This outline INNSMP will be updated and finalised before the start of construction following development of the final project design and in consultation with regulatory bodies and stakeholders such as the MMO, Natural England, MD-LOT, Marine Scotland Science (MSS), NatureScot and the Environment Agency on specific requirements for Invasive Non-Native Species (INNS) management measures.

The outline INNSMP will be reviewed by the Applicant and, if necessary, further updated prior to the commencement of the operation and maintenance and decommissioning phases.

## 1.5. Other Consent Plans

The outline INNSMP informs and is informed by other relevant consent management plans prepared for the Marine Scheme, which are set out in Table 1.1.

**Table 1-1 Other Consents Management Plans**

Consent Management Plan	Relationship with the INNSMP
Environmental Management Plan (EMP)	The EMP provides the overarching framework for environmental management during the construction, operation and maintenance, and decommissioning phases of the Marine Scheme.
Marine Pollution Contingency and Control Plan (MPCCP)	The MPCCP provides a list of procedures to safeguard the marine environment and respond to any potential accidental pollution event during the construction, operation and maintenance, and decommissioning phases of the Marine Scheme.
Marine Mammal Mitigation Protocol (MMMP), if developed	A MMMP will be developed for the marine mammal species of particular relevance to the Marine Scheme, if and when required. Given the potential for injury arising from the installation of the Offshore Export Cable, including the use of pre-installation survey techniques which have the potential to generate underwater noise, the JNCC guidelines for minimising the risk of injury to marine mammals will be employed.
Fisheries Management and Mitigation Strategy (FMMS) / Fisheries Liaison and Co-existence Management Plan (FLCMP)	The FMMS provides the strategy for engaging, consulting, liaising, communicating, and undertaking mitigation actions with respect to the fishing industry during the full lifecycle of the Marine Scheme.

## 1.6. Consent Conditions

Table 1.1 lists the consent conditions included in the Marine Licence(s) in relation to the management of invasive non-native species. The information in this table will be populated once consents are received.

**Table 1-2 Consent Conditions to be Discharged by this INNSMP**

Consent Document	Consent Condition Reference	Consent Condition	Reference to Relevant Section of this INNSMP

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

## 2. Roles and Responsibilities

Table 2.1 provides a list of the roles and responsibilities in relation to this outline INNSMP.

**Table 2-1 Roles and Responsibilities in Relation to this INNSMP**

Role	Responsibility
The Applicant	Requiring the implementation of the INNSMP and monitoring and/or clearance/disposal of INNS at the Marine Scheme (via its Contractors and Subcontractors).
Biosecurity Manager	Delegated responsibility for the practical implementation of the INNSMP.
Contractor and Subcontractor	Implementation of and adherence to INNSMP and early notification of the presence of INNS to or via the Biosecurity Manager.

## 3. Invasive Non-native Species Management Plan Methodology

The following sections describe the process of creating the INNSMP following best practice guidance (Payne *et al.*, 2014) and information provided in the Code of Practice on Non-Native Species (Scottish Government, 2020). A stepwise approach has been taken as detailed below, to accurately assess the risk of INNS in relation to the Marine Scheme.

### 3.1. Step 1 – Understanding Your Site

The following parameters should be considered when understanding the Marine Scheme site as part of the INNSMP development:

- salinity of the site;
- presence of any man-made structures; and
- whether INNS are present within/on site.

The presence/absence of INNS is directly linked to the salinity of the area, as the majority of marine flora and fauna are unable to survive in freshwater due to osmoregulatory effects (Evans, 1980). The more freshwater enters the site, the lower the risk of INNS due to inhospitable conditions; conversely a greater risk is present for a full marine site.

The risk of INNS establishment is also increased by the presence of man-made structures. Information regarding any periods of slow or stationary works or climatic conditions that may increase biosecurity risk should be included within the detailed plan.

If INNS have been recorded onsite, the focus of the INNSMP should be reducing the risk of introducing new INNS and the prevention of spreading existing INNS to other sites. A precautionary approach should be followed, even if no INNS are present at the site.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

Based on this, a site can be categorised as either a low risk or significant risk site, depending on the risk of INNS introduction and spreading. Table 3.1 provides an example of this approach.

**Table 3-1 Example of Low and Significant Risk Sites (Payne *et al.*, 2014)**

Low Risk Site	Significant Risk Site
<ul style="list-style-type: none"> <li>• There is a freshwater supply from a local river to the site.</li> <li>• There is a breakwater or walls around most of the site.</li> <li>• Site has structures that have an anti-fouling coating or removed from the water and air dried on a regular basis (~ every six to 12 months).</li> </ul>	<ul style="list-style-type: none"> <li>• Site has fully saline water (i.e. minimal freshwater inflow).</li> <li>• Site has structures without anti-fouling coating and/or submerged for longer than six months at a time.</li> <li>• There are fixed structures that can only be cleaned <i>in situ</i>.</li> </ul>

### 3.2. Step 2 – Understanding How INNS Can Be Introduced or Spread to Your Site

In addition to understanding the site characteristics, the structures present on site and any INNS already present in the site, consideration must be given to how INNS can be introduced to the site.

This step should be revisited when the INNSMP is due for review (see section 1.4).

Table 3.2 provides an example of the type of questions to consider when creating an INNSMP.

**Table 3-2 Examples of Questions and Risk to Consider Whilst Creating an INNSMP (Payne *et al.*, 2014)**

Question	Category		
	High	Medium	Low
1. Has the vessel/equipment just arrived from the local area?			
2. Has the vessel/equipment had an anti-fouling coating applied to submerged structures within the last 12 months (or time recommended by manufacturer)?			
3. Are all the visible submerged surfaces free of biofouling (a green 'slime' is OK)?			
4. Do the visible submerged surfaces have more than a green 'slime' coating?			
5. Does the vessel/equipment have noticeable clumps of algae and/or animals clinging to the visible parts of the hull/rudder/propeller?			
6. Has the vessel/equipment just arrived from another country, region or water body with similar environmental conditions (e.g. seawater temperature)?			
7. Has the vessel/equipment just arrived from a water body known to have INNS present?			
8. Does the vessel/equipment spend long periods of time stationary at sites in between anti-fouling treatments?			
9. Is the vessel 'slow moving', such as a construction barge or drilling rig?			

The greatest risk of introducing INNS to the site is when a vessel (particularly slow moving vessels), equipment or stock arrives at the site from another country, region or water body, with similar environmental conditions (e.g. seawater temperature and salinity) while it is covered in biofouling (i.e. anything more than a thin, green 'slime' coating for vessel hulls) or contains additional algae or animals.

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

Another main risk is introducing INNS from the arrival of a vessel with biofouling on the hull, for example, which comes from a site known for the presence of INNS.

All vessels will adhere to the IMO guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species (Biofouling Guidelines) (resolution MEPC.207(62)).

Ballast water discharges from all vessels will be managed under International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention).

For the purposes of this assessment, any activity that falls within the 'Low' category in Table 3.2 is assessed as 'Low' Risk. Any activity that falls within the 'Medium' or 'High' categories is assessed as 'Significant' Risk, as 'Significant' is considered as any risk above low on a "low, medium, high" scale. A cumulative overall risk should be determined by multiplying the high, medium and/or low risks resulting from answering yes to the questions within Table 3-2. For example, medium overall risk would result from Q1 and Q8 being true. If Q9 was also true, this would mean there is a high risk. Additionally, if Q2 was true too, the overall risk would again become medium.

### 3.3. Step 3 – Identifying Activities Which Risk Introduction of Non-Native Species

The next step is to identify the main activities which take place at the site or as part of the operation/event, particularly those that could lead to the introduction and/or release of marine INNS at the site.

The activities which carry almost no risk at all, such as those taking place in areas which are never in contact with sea water, do not need to be covered by this plan. However, always err on the side of caution, considering all activities which take place in or around the water and include both vessels and structures.

A list of example activities which carry a risk of introduction and/or releasing INNS is provided in Payne *et al.* (2014). These are not directly related with offshore renewables, but applicable ones include:

- use of construction barge and slow moving vessels;
- using vessels from locations outside local water body;
- removal of old structures/equipment;
- cleaning of hull and associated structures; and
- maintenance of equipment and vessels.

When identifying activities, there are two possible approaches to follow, as described below. In general, the in-depth approach is recommended.

#### 3.3.1. Simple Approach

This approach aims to list all the activities which take place on the site, or which make up the operation/event that may carry a significant risk of introduction and/or releasing INNS. This list is then taken to Step 4 (described below) to develop control measures.

#### 3.3.2. In-depth Approach

This technique helps the Applicant to better understand the risk of introducing and/or spreading INNS associated with each proposed activity. It also provides guidance on the development of biosecurity

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

control measures as well as where and when to apply them. This approach has been developed from the Hazard Analysis and Critical Control Point (HACCP) and is further described in Annex B of Payne *et al.* (2014).

This approach consists of the following steps:

- Step 1 – List Site Activities: a list of all activities which have a reasonable risk of leading to the introduction of INNS is compiled.
- Step 2 – Describe Activities: a brief description of activities is provided based on “who, what, when, where, why and how”.
- Step 3 – Split Activities into Task: activities are subdivided into tasks, which are then briefly described.
- Step 4 - Establish Critical Control Points and Control Measures: the following is included for each task identified:
  - risk;
  - justification;
  - critical control point;
  - control measure; and
  - who will carry out the control measure.
- Step 5 – Develop an Action Plan: Based on the control measures developed in Step 4, an action plan is completed, setting out who will carry out the control measure, what they will do and when.

### 3.4. Step 4 – Biosecurity Control Measures

As part of this step, biosecurity control measures are identified. It is important that these measures are effective, simple, realistic and can be easily translated into instructions to others.

These measures must also take into account how much control the Applicant has over the site and its activities. Control measures help the Applicant to meet their legal requirement described in section 1.2, to take ‘reasonable steps’ to prevent the introduction of INNS.

To make the control measures effective, it is worth thinking about:

- who will carry out the action;
- what they will be doing to reduce the risk of introducing INNS;
- where will the control measure be applied; and
- when will the control measure be applied (i.e. at what stage in a process).

A list of example control measures can be found within Payne *et al.* (2014), many of which are included in the INNSMP (see section 4.4). Where practicable, biosecurity measures should be included in the design stage of a new development and aim to ‘design out’ significant risk of introducing or spreading INNS.

### 3.5. Step 5 – Biosecurity Surveillance, Monitoring and Reporting Procedures

Early detection of INNS on the site is important as this increases the likelihood of successful containment and potential for full eradication. For this reason, all staff and other site users should be encouraged to report any unusual sightings to the biosecurity officer.

This step outlines those procedures to be followed in the event of discovering and positively identifying an INNS on site. As part of this process the following should be considered:

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

- setting out who is responsible for surveillance and monitoring of the site; and
- adding actions to encourage vessel owners who use the site to be vigilant and report any sightings of concern.

### 3.6. Contingency Plan

A contingency plan should be in place to deal with potential failure of the ‘prevention’ and ‘rapid response’ method identified in section 1.1. This document should be short and be accessible to all staff, ensuring it provides a step by step action list. This document will be included within the detailed INNSMP.

The contingency plan will review the activities identified in this INNSMP with potential to introduce and/or spread INNS and derive actions to deal with a potential failure of the proposed control measures.

### 3.7. Monitoring and Review

Following completion of the INNSMP, a clear recording system (i.e. a logbook) should be put in place to accurately record the results of any checks or actions taken, and formal steps are put in place to quickly inform the biosecurity manager of potential INNS introduction.

A review date of site and operation plans will be in place to refine and update the INNSMP if required.

## 4. Marine Scheme Invasive Non-native Species Management Plan

### 4.1. Step 1 – Understanding Your Site

#### 4.1.1. Environmental Conditions Affecting Biosecurity

The Marine Scheme is located in the North Sea, extending from within the BBWF array area which is located approximately 47.6km offshore of the East Lothian coastline and 37.8km from the Scottish Borders coastline at St Abbs to the Landfall location at Cambois Beach, Northumberland. The Marine Scheme partially overlaps with the Firth of Forth Banks Complex Nature Conservation Marine Protected Area (ncMPA), and Northumberland Marine Special Protection Area (SPA), Northumbria Coast SPA, Coquet to St Mary’s Marine Conservation Zone (MCZ) and Berwick to St Mary’s MCZ.

Water depths at the Marine Scheme, within the BBWF array area range between 39 m and 68 m below Lowest Astronomical Tide (LAT), with an average seabed depth of between 50 m and 60 m below LAT. In relation to water depths within English waters, the shallower depths were measured at approximately 50 m to 60 m LAT, while the deepest depth was recorded at approximately 80 m to 110 m LAT within the Marine Scheme.

The National Tidal and Sea Level Facility (NTSLF) provides monitoring of real time and historic tidal gauge information. The nearest national tidal gauge is located in North Shields, in north-east England. The tidal gauge is located south of the Landfall, approximately 14 km from the Marine Scheme. The spring range is shown to be approximately 4.5 m while the neap range is approximately 2 m., Tidal flows are relatively weak across the site. Spring current speeds at the Landfall location reach a maximum of 0.3 m/s on the spring tide and reach 0.2 m/s on a neap tide. Offshore, current speeds are predicted to also reach 0.36 m/s on a spring tide and 0.15 m/s on a neap tide.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final	Rev: A01	

The subtidal benthic ecology of the Marine Scheme was shown to range from hard and coarse substrates. Within Scottish waters slightly gravelly sands dominate with coarser gravel sediments in the west. To the southeast muddy sand sediment becomes dominant. Within English waters muddy sand sediments are dominant, however in the east of the Marine Scheme south of the England-Scotland border, sediment types are coarser and more varied comprising gravelly sand, sandy gravel, sand, gravelly muddy sand and (gravelly) muddy sand and muddy sandy gravel. The English inshore waters were dominated by muddy sand, comparable with English offshore waters before transitioning towards shore to (gravelly) sandy mud, and sandy mud sediments, to sand sediments.

Subtidal communities were dominated by annelids, molluscs and crustaceans in terms of abundance, and molluscs and echinoderms in terms of biomass.

In addition to this, there are no man-made structures within the Marine Scheme, however, there are neighbouring offshore wind farms under construction (in Scottish waters) and third-party cable routes which the Marine Scheme will have to cross (in English waters) which may increase the risk of INNS.

#### **4.1.2. Information Related to any Slow or Stationary Periods or Climatic Condition Which May Increase Biosecurity Risk**

Information regarding the environmental conditions at the Marine Scheme can be found in volume 2, Chapter 7 of the Environmental Statement.

As described in the section above, the Marine Scheme experiences relatively weak tidal currents, which may increase the biosecurity risk, as there is potential for fouling organisms to easily colonise introduced substrates.

#### **4.1.3. INNS at the Marine Scheme**

To date no INNS have been recorded during site-specific surveys of the Marine Scheme. There are no INNS predicted to be within the Marine Scheme boundary and therefore, there is no spread of INNS predicted to occur as a result of the installation disturbance to the seabed (Volume 2, Chapter 8: Benthic and Intertidal Ecology of the Environmental Statement).

Furthermore, the latest post-construction monitoring data from the Beatrice Offshore Wind Farm (APEM, 2021) found no evidence for the presence of INNS on wind turbine foundations following the presence of installation vessels from international ports, which is evidence to suggest that the introduction of structures such as offshore wind turbine foundations into the benthic environment doesn't necessarily lead to the spread of INNS in Scottish waters.

If any INNS would be recorded during future site-specific surveys of the Marine Scheme prior to finalising this plan, they would be included here, identifying the risk they pose to Scotland's and/or England's native species.

### **4.2. Step 2 – Understanding how INNS can be Introduced or Spread to Your Site**

#### **4.2.1. Vessel/Equipment to be Used in the Marine Scheme**

An example of the vessels and equipment to be used at the Marine Scheme is provided in Table 4.1. This table also includes a risk indicator of the potential for INNS to be introduced to the site and surrounding

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

areas as part of these activities. The risk indicator will be updated when preparing the detailed plan post-consent through professional judgment of the final project parameters, together with any INNS present in the area (section 4.1.3).

**Table 4-1 Example Vessel Types to be Used at the Marine Scheme and/or Involved in the Construction, Operation and Maintenance, and Decommissioning Phases**

Name	Type	Details and Risk Factors Assumptions	Risk: Low (green)/ Significant (red)
Vessels (construction and decommissioning)	Various	<ul style="list-style-type: none"> <li>vessel types and sizes to be confirmed prior to construction, although expected to include jack-up barges/dynamic positioning vessels, cable installation vessels, guard vessels, survey vessels, crew transfer vessels (CTVs), and cable protection installation vessels;</li> <li>the source location of the vessels for construction will be confirmed once this information becomes available;</li> <li>the source location of the vessels for decommissioning will be confirmed once this information becomes available;</li> <li>vessels will be required to have an anti-fouling coating and inspection history; and</li> <li>vessels are expected to move slowly when installing or removing structures; and</li> <li>up to 20 vessels may be operating on site at any one time.</li> </ul>	
Vessels (operation and maintenance)	Various	<ul style="list-style-type: none"> <li>vessel types and sizes to be confirmed prior to operation and maintenance phase, although expected to include jack-up barges/dynamic positioning vessels, Service Operations Vessels, cable repair/survey vessels, and CTVs;</li> <li>the source location of the vessels for operation and maintenance will be confirmed once this information becomes available;</li> <li>vessels will be required to have an anti-fouling coating and inspection history;</li> <li>vessels are expected to move slowly when undertaking maintenance activities; and</li> <li>up to two vessels may be operating on site at any one time.</li> </ul>	

A detailed update of Table 4.1 will be completed once the exact specifications and origins of vessels are known upon appointment of a preferred vessel Contractor during the pre-construction phase to inform the detailed plan.

The Marine Scheme ES has used a Maximum Design Scenario approach, based on the current available information, which includes the use of several vessels for the installation of up to four Offshore Export Cables within an Offshore Export Cable Corridor with a maximum length of 180km (Table 4.1). As this outline INSSMP is a 'live' document, once specific details of the vessels and ancillary equipment are known, this document will be updated accordingly, assigning risk categories for specific infrastructure types as per the methodology set out in section 3.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

### 4.3. Step 3 – Identifying Activities Which Risk Introducing Non-active Species

Table 4.2 provides an overview list of activities in relation to the Marine Scheme which may have a significant risk of introducing and/or spreading INNS. During further updates of the INNSMP, this table will be informed from the information in the final project design and from Step 2 (section 4.2).

**Table 4-2 Site Activities Which Have a Significant Risk of Introducing and/or Spreading INNS**

Phase	Activity Description
Installation	<ul style="list-style-type: none"> <li>Installation of Offshore Export Cables, cable protection (as required) and associated seabed preparation activities</li> </ul>
Operation and Maintenance	<ul style="list-style-type: none"> <li>Routine inspections</li> <li>Cable repair and reburial</li> </ul>
Decommissioning	<ul style="list-style-type: none"> <li>Decommissioning of Offshore Export Cables</li> </ul>

### 4.4. Step 4 – Biosecurity Control Measures

The following sections provide information on site-specific risks and control measures in relation to the Marine Scheme.

#### 4.4.1. Installation/Presence of Man-made Structures

##### Risk

This has been identified as one of the greatest risks of INNS introduction and/or spreading, as newly available surfaces at the Marine Scheme (e.g. cable protection) may be colonised by INNS in the first few weeks/months after installation.

##### Control measures

Any man-made structure to be used for the Marine Scheme should be of terrestrial origin (i.e. not coming from another marine environment where it has been submerged or exposed to the sea). If there is a requirement for the structure to come from another marine environment, it will be allowed to fully dry to kill off any organisms that have attached and will be inspected prior to placement in the marine environment. This measure will occur port-side or on transit vessels.

#### 4.4.2. Using Vessels from Outside of the Marine Scheme

##### Risk

Vessels arriving from outside the east coast of Scotland and north-east coast of England area pose a significant risk of introducing INNS to the area, particularly those arriving from similar marine environments. Once construction contractors have been appointed, further information on the origin of vessels to be used in the Marine Scheme will be included in this section.

	<b>Outline INNSMP</b>	
Classification: Final		
Status: Final		Rev: A01

### Control measures

All vessels to be used at the Marine Scheme during construction, operation and maintenance and decommissioning must follow International Management Organisation (IMO) (2012), and where applicable, to comply with IMO (2021), or any replacement standards, which includes the following standards:

- ballast water exchange to be carried out at least 200 nm from the nearest land and in water at least 200 m in depth;
- use of anti-fouling systems, which includes the use of coating systems, bio-fouling resistant materials and marine growth prevention systems; and
- in-water inspection of ships and in-water cleaning and maintenance.

Implementation of these measures will be a requirement for all contractors to comply with this INNSMP in conditions of contract with the Applicant.

## 4.5. Step 5 – Biosecurity Surveillance, Monitoring and Reporting Procedures

This section will contain information about who is responsible for carrying certain INNS checks, as well as where and when these checks are to be completed by the Biosecurity Manager.

## 4.6. Contingency Plan

Table 4.3 lists the actions or stages of the contingency plan and who is responsible for each of them.

**Table 4-3 Contingency Plan (Payne *et al.*, 2014)**

Action	Responsibility
<b>Stage One – Suspected Arrival of High Alert Species</b>	
Collect samples, place in plastic bag and contact Natural England (invasive-alien-species-licence@naturalengland.org.uk / 020 8026 1089) for advice on where to send the sample.	To include one or more of the following: Harbour Master, marina berthing manager, Biosecurity Manager
Check and report to Invasive non-native species   Scotland's environment web ( <a href="#">Invasive non-native species   Scotland's environment web</a> )	
Inform harbour users and place marker buoys around area.	Harbour Master/staff.
<b>Stage Two – Presence of High Alert Species Confirmed</b>	
Initiate immediate containment measures, including restricted vessel movements.	Marina berthing manager.
Carry out wider survey of vessels and structures using underwater camera.	Harbour staff, Marine Scotland/MMO inspectors.
<b>Stage Three – Eradication/Employ Long Term Control Measures</b>	

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

Seek advice from SEPA or Natural England, as appropriate, on appropriate measures and actions for long term control.

Biosecurity Manager, Applicant Environmental Manager and Contractor Environmental Manager.

## 4.7. Monitoring and Review

### 4.7.1. Monitoring and Implementation of the Plan

A logbook will be developed to keep a clear record of any checks or actions taken and list the formal steps to ensure the biosecurity manager is quickly informed of any potential introduction of INNS.

Payne *et al.* (2014) provides examples of information to be recorded in the logbook. All records entered should be given a date and signed by the biosecurity manager.

### 4.7.2. Plan Review

This INNSMP will be reviewed regularly to make sure it stays up to date and relevant..

This INNSMP will be updated following completion of the construction phase and at the beginning of the operation and maintenance phase to ensure the plan is appropriate for the next phase of the development and the risks/activities associated with that next phase.

Prior to the decommissioning phase the INNSMP will be reviewed and updated to ensure all measures are appropriate and that any changes in the environment and risk of INNS (e.g. records of INNS on site) are reflected in the INNSMP.

## 5. Useful Sources of Information

The following is a list of useful information sources to inform this INNSMP:

- IMO Guidelines for the control and management of ships biofouling to minimize the transfer of invasive aquatic species;
- Scottish Invasive Species Initiative: [Law on non-native species](#) | [Scottish Invasive Species Initiative](#);
- Scotland's Environment: Invasive non-native species | Scotland's environment web, and;
- HM Government Guidance: Invasive non-native (alien) animal species: rules in England and Wales | Guidance.

## 6. References

Evans, D.H. (1980). *Osmotic and ionic regulation by freshwater and marine fishes*. In Environmental physiology of fishes (pp. 93-122). Springer, Boston, MA.

HM Government (2020). Invasive non-native (alien) animal species: rules in England and Wales - What you need to do if you find, own or look after a listed invasive non-native (alien) animal in England and Wales. Accessed on: 15 June 2023

HM Government (2015). *The Great Britain Invasive Non-native Species Strategy*. Available at: The Great Britain Invasive Non-native Species Strategy ([publishing.service.gov.uk](http://publishing.service.gov.uk)). Accessed on: 15 June 2023.

	<b>Outline INNSMP</b>	
Classification: Final		Rev: A01
Status: Final		

IMO (2012). *Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species* 2012 Edition.

IMO (2021). *International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)*. Available at: International Convention - CP 557 (publishing.service.gov.uk). Accessed on: 15 June 2023.

Marine Management Organisation (MMO) (2021). The North East Marine Plans Documents. Available online at: <https://www.gov.uk/government/publications/the-north-east-marine-plans-documents>. Accessed: May 2023.

Ocean Ecology (2023). Berwick Bank Alternative Connection Intertidal Habitat Assessment 2022. REF: OEL\_XODBER0622\_HA.

Payne, R.D., Cook, E.J. and Macleod, A. (2014). *Marine Biosecurity Planning. Guidance for Producing Site and Operation-based Plans for Preventing the Introduction of Non-Native Species*. Available at: [Guidance-Biosecurity-Planning.pdf](#) (clydemarineplan.scot). Accessed on: 15 June 2023.

Scottish Government (2012). *Code of Practice on Non-Native Species*. Available at: *Non-native species: code of practice - gov.scot* (www.gov.scot). Accessed on: 15 June 2023.

Scottish Government (2020). *2020 Challenge for Scotland's Biodiversity*. Available at: *Supporting documents - 2020 Challenge for Scotland's Biodiversity - gov.scot* (www.gov.scot). Accessed on: 15 June 2023.