



NORTH FALLS

*Offshore Wind Farm*

## Outline Navigation and Installation Plan (Tracked)

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Offshore Wind Farm

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## Glossary of Acronyms

AOI	Area of Interest
<u>CD</u>	<u>Chart Datum</u>
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea
<u>CSIP</u>	<u>Cable Specification and Installation Plan</u>
DCO	Development Consent Order
<del>DML</del>	<del>Deemed Marine Licence</del>
DWC	Deep Water Channel
<u>DWR</u>	<u>Deep Water Route</u>
ERCoP	Emergency Response Cooperation Plan
ES	Environmental Statement
Five Estuaries	Five Estuaries Offshore Wind Farm
HAZOP	Hazard and Operability
HHA	Harwich Haven Authority
<u>IP</u>	<u>Interested Party</u>
m	metres
MCA	Maritime and Coastguard Agency
NIP	Navigation and Installation Plan
nm	Nautical Mile
NRA	Navigational Risk Assessment
PEIR	Preliminary Environmental Information Report
PLA	Port of London Authority
PLGR	Pre-Lay Grapnel Run
RAM	Restricted in Ability to Manoeuvre
<u>SAC</u>	<u>Special Area of Conservation</u>
UXO	Unexploded Ordnance
VTs	Vessel Traffic <del>Services</del> <u>Service</u>

## Glossary of Terminology

Array area	The offshore wind farm area, within which the wind turbine generators, array cables, platform interconnector cable, offshore substation platform(s) and/or offshore converter platform will be located.
Array cables	Cables which link the wind turbine generators with each other, the offshore substation platform(s) and/or the offshore converter platform.
<u>Collision</u>	<u>The act or process of colliding (crashing) between two moving objects.</u>
<u>Embedded mitigation</u>	<u>A commitment made by North Falls to reduce and/ or eliminate the potential for significant risks.</u>
<u>Environmental Statement (ES)</u>	<u>A document reporting the findings of the Environmental Impact Assessment (EIA) and produced in accordance with the EIA Directive as transposed into United Kingdom (UK) law by the EIA Regulations.</u>
<u>Formal Safety Assessment (FSA)</u>	<u>A structured and systematic process for assessing the risks and costs (if applicable) associated with shipping activity</u>
<u>Impact</u>	<u>A potential threat to human life, health, property, or the environment</u>
<u>Marine Guidance Note (MGN)</u>	<u>A system of guidance notes issued by the Maritime and Coastguard Agency (MCA) which provide significant advice relating to the improvement of the safety of shipping at sea, and to prevent or minimise pollution from shipping.</u>
<u>Navigational Risk Assessment (NRA)</u>	<u>A document which assesses the overall impact to shipping and navigation of a proposed Offshore Renewable Energy Installation (OREI) based upon Formal Safety Assessment (FSA).</u>
Offshore cable corridor	The corridor of seabed from the array area to the landfall within which the offshore export cables will be located.
Offshore export cables	The cables which bring electricity from the offshore substation platform(s) to the landfall, -as well as auxiliary cables. -
<u>Offshore Renewable Energy Installation (OREI)</u>	<u>As defined by Marine Guidance Note (MGN) 654 (Merchant and Fishing) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response (Maritime and Coastguard Agency (MCA), 2021). For the purposes of this report and in keeping with the consistency of the Environmental Impact Assessment, OREI can mean offshore wind turbines and the associated electrical infrastructure such as offshore substations.</u>
Offshore substation platform(s)	Fixed structure(s) located within the array area, containing HVAC electrical equipment to aggregate the power from the wind turbine generators and increase the voltage to a more suitable level for export to shore via offshore export cables.–
<u>Significance of effect</u>	<u>The combination of frequency of occurrence and severity of consequence of an impact.</u>
The Applicant	North Falls Offshore Wind Farm Limited (NFOW).
The Project Or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure.
<u>Vessel Traffic Service (VTS)</u>	<u>A service implemented by a competent authority such as a port which is designed to improve the safety and efficiency of vessel traffic and to protect the environment. The Page 8 of 26 Term Definition service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area.</u>



# 1 Purpose

1. During consultation relating to the Navigational Risk Assessment (NRA) for North Falls (~~ES~~Environmental Statement (ES) Appendix 15.1 NRA (Document Reference: 3.3.16), ~~[APP-106, APP-107, and APP-108]~~, it was agreed with Interested Parties (IP) (as referenced in Section 2.5) that a mechanism is required for managing interactions between concurrent working involving North Falls project vessels associated with offshore export cable installation/ maintenance/ repair and third-party vessels in navigationally sensitive areas within the Area of Interest (AOI).
2. This outline Navigation and Installation Plan (NIP) serves as ~~such a~~the mechanism and is considered an embedded mitigation ~~to reduce~~for minimising the significance of effect associated with shipping and navigation impacts, ~~including vessel displacement, increased.~~ The NIP is required to ensure that North Falls activities within the AOI minimise impact of third-party to third-party vessel collision risk, third-party vessels with project vessel collision risk, reduced access to particular emphasis on:
  - Deep draught vessels accessing local ports via the recommended Deep Water Routes (DWR) within the Sunk Inner Precautionary Area;
  - Pilotage activities undertaken by the Harwich Haven Authority (HHA) including the boarding and harbours landing of London and Medway pilots; and
  - 2. • Other port related third-party vessels/ activities including pilotage operations, and reduction in under keel clearance to non-significant levels spot dredging.
3. The NIP does not consider general vessel management associated with North Falls, e.g., entry and exit points for project vessels to/ from the array areas, since this will be managed by North Fall's marine coordination which will be addressed post consent as ~~detailed in the ES Appendix 15.1 NRA (Document Reference: 3.3.16) and set out in~~ ES Chapter 15 Shipping and Navigation (Document Reference 3.1.17). ~~The spatial extent covered by the NIP is presented and discussed in Section 2.1.~~

## 1.1 Updates to the Navigation and Installation Plan

4. The NIP ~~is a live document and~~ will be updated post consent as additional information relating to the design of North Falls is available and will continue to be updated as necessary until export cable installation is complete the end of the operation and maintenance phase. Further details relating to updates to the NIP are provided in Section 2.6.
5. ~~Extent~~Where further information will be provided to the tables in the pre-construction period, "TBC" has been added. This makes it clear that this information should be provided but will only be known closer to construction.

# 2 Scope of the Navigation and Installation Plan

## 2.1 Spatial Extent

### 2.1 Area of Interest

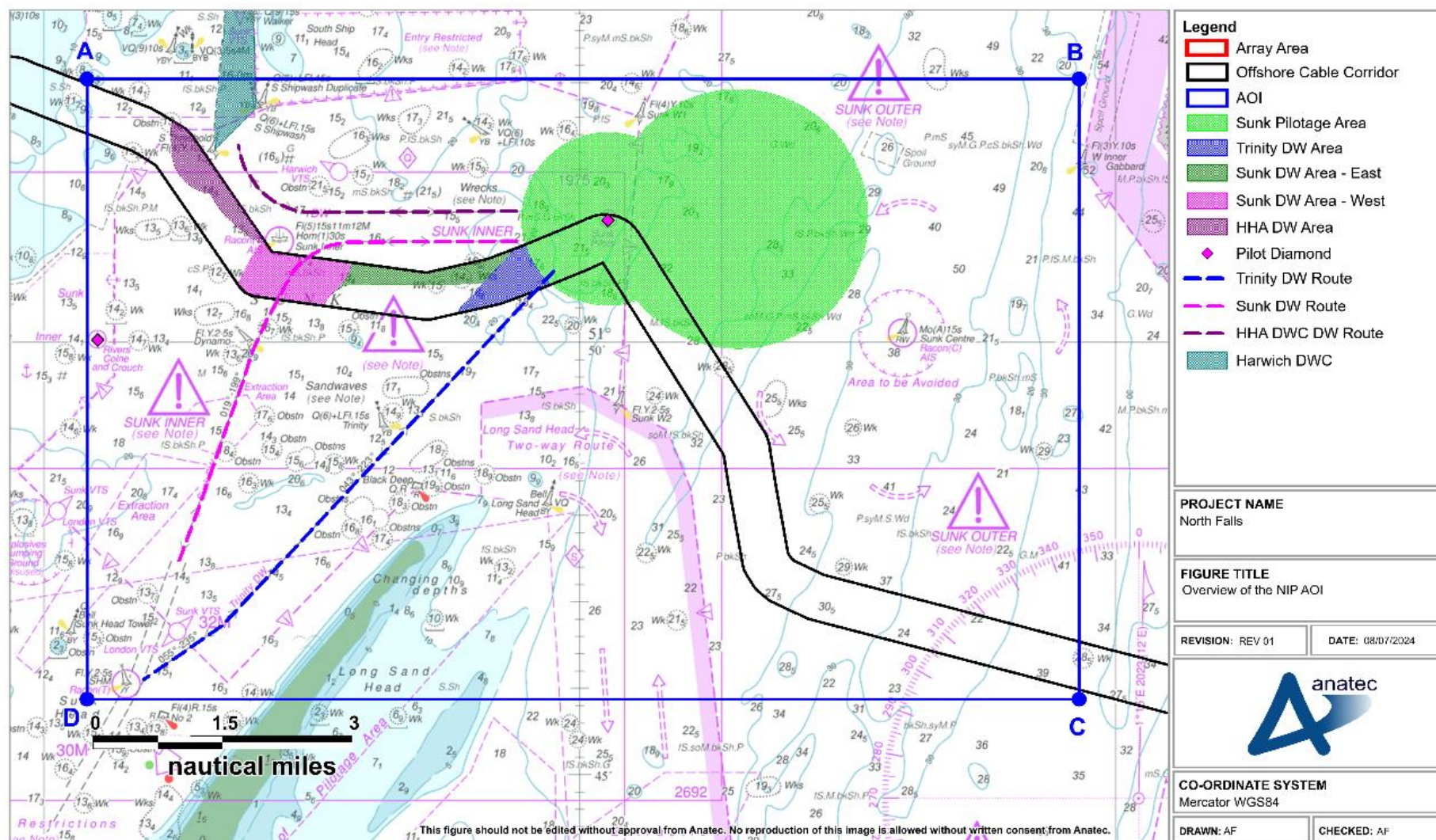
5.6. This NIP ~~relates to a portion of the offshore cable corridor and the sea area surrounding it. In particular, includes~~ the area covered by the Sunk Inner and Sunk Outer Precautionary Areas ~~is considered in this NIP.~~ This aligns with feedback received during consultation for the NRA ~~[APP-106, APP-107, and APP-108]~~ which indicated that concerns relating to the presence of project vessels and related activities were largely associated with navigation within the Sunk including use of the Sunk pilot boarding station, recommended ~~deep water (DW) routes DWR,~~ and the Harwich Deep Water Channel (DWC).

6.7. The ~~area of interest (AOI)~~ for ~~this~~the NIP is presented in ~~Figure 2.1~~Figure ~~2.1~~Figure ~~Figure~~ ~~Figure~~ ~~Figure~~ ~~Figure 2.1~~ and corresponding coordinates are outlined in ~~Table 2.1 Coordinates of AOI~~ ~~Table 2.1~~Table 2.1.

7. ~~Consultation input has indicated a number of key areas within the AOI of specific concern in terms of the potential for concurrent activities (see Section 4.2), which have also been shown in Figure 2.1. These areas are defined as follows:~~

- ~~• Sunk Pilotage Area: defined as a 1nm buffer of the charted Sunk pilot diamond, and a 1.5nm buffer of the point 1.5nm east of the Sunk pilot diamond.~~
- ~~• Trinity DW Area: defined as the area in the Offshore Cable Corridor within 0.5nm of the Trinity DW route (excluding the area covered by the Sunk Pilotage Area).~~
- ~~• Sunk DW Area – West: defined as the area in the Offshore Cable Corridor within 0.5nm of the section of the Sunk DW route that intersects the Offshore Cable Corridor.~~
- ~~• Sunk DW Area – East: defined as the area in the Offshore Cable Corridor within 0.5nm of the section of the Sunk DW route that does not intersect the Offshore Cable Corridor (excluding the area covered by the Sunk Pilotage Area, the Trinity DW Area, and the Sunk DW Area – West).~~
- ~~• Harwich Haven Authority (HHA) DW Area: defined as the area in the Offshore Cable Corridor within 0.5nm of the DW route approach to the Harwich DWC and the DWC itself (excluding the area covered by the Sunk DW Area – West).~~





**Figure 2.1 Overview of AOI (including Concurrent Working Areas)**

**Table 2.1 Coordinates of AOI for the NIP**

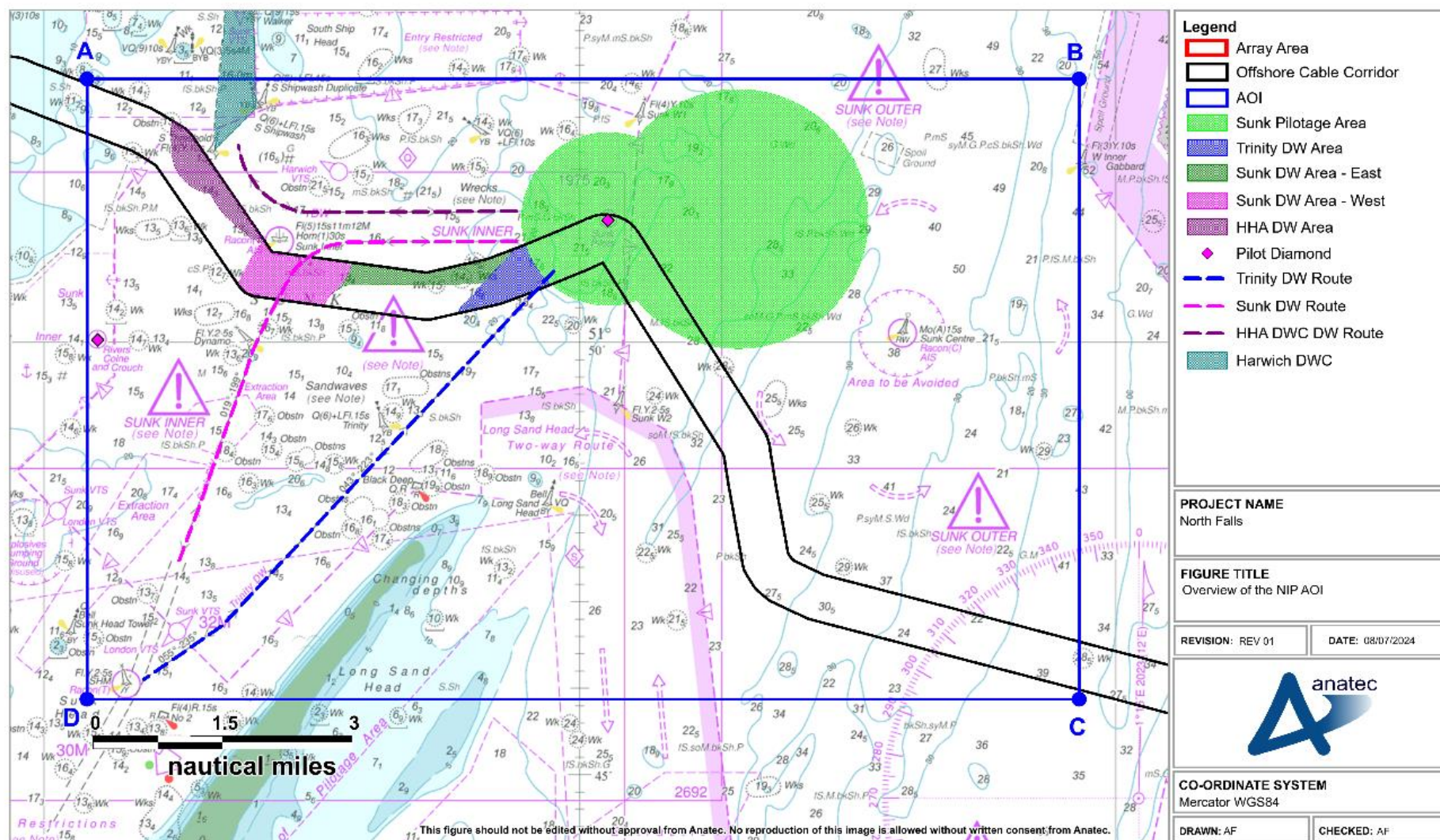
Point	Latitude	Longitude
A	51° 53' 03.03" N	001° 30' 47.85" E
B	51° 53' 03.03" N	001° 49' 19.81" E
C	51° 45' 52.56" N	001° 30' 47.85" E
D	51° 45' 52.56" N	001° 49' 19.81" E

8. Vessel Movements Further areas /of concurrent activity are included within the AOI, with concurrent activity fully defined from Paragraph 1. These areas are also shown in Figure 2.1 ~~Figure .Figure .Figure .Figure .Figure 2.1.~~

9. The concurrent activity areas are split into four:

- Sunk Pilotage Area;
- Sunk DWR Area East;
- Sunk DWR Area West; and
- Trinity DWR Area.





**Figure 2.1 Overview of AOI (including Concurrent Working Areas)**

## 2.2 Activities

### 2.2.12.2 ~~Project and Associated~~ Vessels

~~10. Installation~~ This section details the project activities and Restricted in Ability to Manoeuvre (RAM) vessels for which the NIP applies. Both the project activity and RAM status are required for the measures set out in the NIP to be implemented. Activities will be managed through the protocols outlined in Section 4.

#### 2.2.1 Project Activities

~~8.11.~~ The installation and maintenance activities considered in this NIP include:

- ~~• Pre and post surveys~~ survey work undertaken pre and post cable lay;
  - ~~• Surveys (where they are considered to involve RAM vessels as defined in Section 2.3);~~
  - ~~• Unexploded Ordnance (UXO) clearance following approval of separate marine licence;~~
  - ~~• Pre-Lay Grapnel Run (PLGR) ~~/~~/ boulder clearance~~ ~~— clearance of obstructions along the offshore export cable route/ mattress installation;~~
  - ~~• Sandwave clearance~~ ~~— levelling of sandwaves along the offshore export cable route;~~
  - ~~• Cable lay ~~/~~ burial~~ ~~— laying of the cables including burial and crossings;~~ and
  - ~~• Cable repairs ~~/~~ and reburial~~ ~~— maintenance.~~
- ~~• 12.~~ This list may be refined once the installation method is confirmed in the Cable Specification and Installation Plan (CSIP) and has been considered as part of the ~~cables including of burial~~ EIA process.
- ~~9.~~ The Development Consent Order (DCO) application for North Falls does not include consent for Unexploded Ordnance (UXO) clearance. The Applicant will apply for a separate marine licence for UXO clearance post DCO consent for any removal of UXO along the offshore export cable route. This licence will be subject to its own marine licence conditions. Where relevant, North Falls intends to adopt similar mitigations for that marine licensing process as described in this NIP noting the scenario where UXO is identified is considered in Section 4.5.

#### 2.2.2 RAM Status

~~10.~~ Some of the vessels involved in the activities listed in Section 2.2.1 may operate under Restricted in their Ability to Manoeuvre (RAM) status.

## 2.3 Concurrent Activities

### 2.3.1 Definition of Applicable RAM Vessels

~~11.13.~~ Concurrent activity restrictions detailed within the NIP relate to project vessels displaying RAM status and also meeting the requirements of the Convention on

the International Regulations for Preventing Collisions at Sea (COLREGs) Rule 3(g)i and 3(g)v as follows:

• 3(g) ~~The~~the term *"vessel restricted in her ability to manoeuvre"* means a vessel which from the nature of her work is restricted in her ability to manoeuvre as required by the Rules [COLREGs] and is therefore unable to keep out of the way of another vessel. The term *"vessels restricted in their ability to manoeuvre"* shall include but not be limited to:

- ⊖ (i) a vessel engaged in laying, servicing or picking up a navigation mark, submarine cable or pipeline; and
- ⊖ (v) a vessel engaged in mine clearance operations.

~~12. Concurrent activities will be managed through the protocols outlined in Section 4.~~

### ~~2.2.32.3.2~~ Third-Party Vessels

~~13. The NIP is relevant to all third-party vessel activities within the AOI, but with particular emphasis on:~~

- ~~• Deep draught vessels accessing local ports via the recommended deep water routes within the Sunk Inner Precautionary Area;~~
- ~~• Pilotage activities undertaken by the HHA, noting proximity of the Sunk pilotage Vessels and activities associated activity; with the Five Estuaries Offshore Wind Farm ('Five Estuaries') and~~
- ~~• Other port related third-party vessels / activities including spot dredging.~~

~~14. Further details relating to the baseline activities will be added Sea Link may be included in a future version of the NIP post consent, depending upon the respective timelines for the construction and operation of North Falls, Five Estuaries and Sea Link.~~

### 2.3.3 Classification of Concurrent

~~15. Navigational status of the project vessels involved in the activities may result in third-party vessels having operational priorities as per the requirements of COLREGs. As per paragraph 13, vessels meeting these requirements (Rule 3(g) i and v) and undertaking project activities as outlined in paragraph 11 will be restricted from working concurrently (both in terms of North Falls construction vessels, and those engaged in the construction of Five Estuaries and Sea Link as far as reasonably foreseeable) in concurrent activity areas defined in Section 15.1, noting that North Falls can only control its own vessels. For the avoidance of doubt non-RAM vessels will follow COLREGs and will follow advice issued by Sunk Vessel Traffic Service (Sunk VTS).~~

~~16. The following table confirms if concurrent activities are allowed in combination across the concurrent activity areas as shown in Figure 2.1Figure-Figure .Figure-Figure-Figure 2.1:~~



**Table 2.2 In Combination Concurrent Activities**

	<u>Trinity DWR Concurrent Working Area</u>	<u>Sunk DWR Concurrent Working Area</u>
<u>Pilotage Concurrent Working Area</u>	No	Yes
<u>Trinity DWR Concurrent Working Area</u>		No

## 2.32.4 Temporal Extent

~~15-17.~~ The NIP will apply from the start of offshore construction activities associated with the offshore export cables within the AOI. The indicative programme of offshore construction activities is presented in Table 2.3~~Table 2.3~~.

**Table 2.3 Indicative Construction Programme**

Year 1 -3		Year 4				Year 5			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Substation installation	N/A (onshore construction during years 1)								
Substation commissioning									
Export cable installation									
Foundation installation									
Array cable installation									
Wind turbine installation									
Commissioning									

~~18.~~ It should be noted that whilst any UXO activities would be subject to a separate Marine Licence application, those activities would also be considered a restricted operation, as set out in Section 2.3.

~~16-19.~~ The NIP will cease to apply following the end of the operation and maintenance phase. Decommissioning works are excluded from consideration and will instead be considered as part of the Decommissioning Programme, which will be required to be prepared pursuant to requirement 25 in Schedule 1 of the dDCO and section 105(4) of the Energy Act 2004.

## 2.4 Five Estuaries

~~17.~~ The cumulative impact of the Five Estuaries Offshore Wind Farm ('Five Estuaries') with North Falls has been raised as a key consideration by the Interested Parties. The spatial and temporal extent of the Five Estuaries may therefore be included in a future version of the NIP post consent, depending upon the respective timelines for the construction and operation of North Falls and Five Estuaries, and if requested by Interested Parties.

## 2.5 Interested Parties

~~18-20.~~ Consultation relating to shipping and navigation has been ongoing throughout the scoping, Preliminary Environmental Information Report (PEIR), and Environmental Statement (ES)~~ES~~ stages of North Falls as part of the NRA process. This has included preliminary discussions in relation to the NIP with HHA, Port of London Authority (PLA), Maritime and Coastguard Agency (MCA), and Trinity House.



~~19.21.~~ Through this consultation, several ~~Interested Parties~~IPs have been identified:

- HHA;
- PLA;
- London Gateway;
- Port of Tilbury;
- Port of Medway; and
- ~~Sunk Vessel Traffic Services (VTS).~~

~~20.~~ Details of how these Interested Parties will be involved in the creation of the NIP is provided in Section 2.6. The detailed NIP produced post-consent will be consulted on with the Interested Parties detailed above prior to submission to the MMO for approval pursuant to the Deemed Marine Licence (DML) condition.

~~21.~~ Any further Interested Parties identified will be added to the NIP.

## 2.6 Updates To and Dissemination of the Navigation and Installation Plan

### 2.6.1 Initial Approval

~~22.~~ As stated in Section ~~2.3~~2.4, the NIP will apply throughout the construction and operation and maintenance phases. ~~As~~The final content of the NIP will be discussed and agreed with the IPs post-consent and subsequently submitted to the Marine Management Organisation (MMO) for approval.

~~23.~~ Where agreement is requested, IP will have up to 28 days to provide a response in writing, after which time agreement will be deemed to have been given.

~~24.~~ Where agreement with any IP cannot be reached clear actions must be provided by the IP to allow North Falls to address outstanding matters. North Falls may submit the NIP for approval to the MMO; where agreement is not provided a copy of the IP's comments will be included to provide the MMO with an understanding of the matters not agreed.

~~25.~~ Additionally, the NIP will be provided to the MCA and Trinity House in advance of submission to the MMO.

### 2.6.2 Subsequent Updates

~~22.26.~~ Noting that the NIP is a live document, ~~as~~ North Falls evolves it may be necessary for the NIP to be updated and with changes disseminated to ~~relevant third parties, following approval of the MMO pursuant to the DML requirements~~the IPs. Specifically, the details associated with project vessel activities (Section 3) will be updated if the details change prior to them being implemented. A review of whether the NIP requires updating will be taken annually during construction or where a significant change to marine construction activities relating to the NIP occurs.

~~23.~~ Where updates to Section 3 are required, the ~~Interested Parties~~IPs will be invited by ~~the Applicant North Falls~~ to review and ~~discuss~~agree any changes prior to submission of within 28 days in line with the process set out in paragraph 24, and the updated NIP will then be promulgated to relevant parties including

the MCA and Trinity House. Should changes not be capable of being agreed, the Applicant would submit to the MMO for approval.

24-27. in line with paragraph 24. Where an update involves changes to a matter of principle other than details of project vessel activities (i.e., outside of Section 3), the revised NIP will be submitted for approval by the MMO, after following the process set out in paragraph 23. Depending upon the nature of any changes to the NIP, it may be necessary to undertake specific training to ensure that relevant ~~third-parties (at all levels)~~ contractors are fully informed.

### 3 Project Vessel Activities

#### 3.1 Installation

##### 3.1.1 ~~Pre and Post~~ Surveys

25-28. Details of ~~anticipated pre and post~~ survey activities involving a RAM vessel are provided in ~~Table 3.1~~ Table 3.4, which represents indicative values with the following list noting variables which may affect final values for the parameters:

- TBC (dependent upon the nature of activities required); and
- Additional duration may be required.

**Table 3.1 Indicative details for pre and post survey activities**

Parameter	Indicative Details
Vessel(s) required	<del>Geophysical survey vessel</del> <del>Geotechnical survey vessel with A frame.</del> <del>UXO surveys</del> <u>TBC</u>
Spatial extent covered	<del>Tow length typically 100 to 150m for geophysical surveys</del> <u>TBC</u>
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	<del>Depends on the type of survey and number of samples required.</del> <u>TBC</u>
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	<del>Depends on the type of survey and number of samples required.</del> <u>TBC</u>
Speed when undertaking activity	<del>Depends on types and depths of samples required.</del> <del>Vibrocores can take hours, boreholes dependent on the depth required.</del> <u>TBC</u>
Continuous or discontinuous activity	<del>Continuous whist survey ongoing.</del> <u>TBC</u>
Manoeuvrability	<del>Geophysical survey vessels can move out the way</del> <del>Geotech survey vessels will have restricted manoeuvrability due to being attached to seabed</del> <u>TBC</u>
<u>Traffic management</u>	<u>TBC</u>
<u>Additional parameters to be added as required</u>	

##### 3.1.2 UXO Clearance

26-29. Details of anticipated UXO clearance activities are provided in ~~Table 3.2~~ Table 3.2 (noting these will be subject to their own marine licensing process and mitigations and are provided here for information)-which represents indicative

values with the following list noting variables which may affect final values for the parameters:

- TBC (dependent upon the nature of activities required); and
- Additional duration may be required.

**Table 3.2 Indicative details for UXO clearance activities**

Parameter	Indicative Details
Vessel(s) required	<del>Dive Support Vessel / SOV / Anchor handler</del> <u>TBC</u>
Spatial extent covered	<del>Depends on the activity undertaken for the clearance of UXO</del> <u>TBC</u>
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	<del>Depends on number and size of UXO discovered. If controlled detonations, typically 24 hours per UXO If removal/repositioning, typically 2-4hrs per UXO See Section 4.5 for contingency plans</del> <u>TBC</u>
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	
Speed when undertaking activity	<del>Speed of activity depends on number and size of UXO discovered</del> <u>TBC</u>
Continuous or discontinuous activity	<del>Continuous whilst making a UXO safe</del> <u>TBC</u>
Manoeuvrability	<del>See Section 4.5</del> <u>TBC</u>
<u>Traffic management</u>	<u>TBC</u>
<u>Additional parameters to be added as required</u>	

### 3.1.3 PLGR/ Boulder Clearance

~~27-30.~~ Details of ~~anticipated~~ PLGR/ boulder clearance activities are provided in Table 3.3~~Table 3-3.~~ which represents indicative values with the following list noting variables which may affect final values for the parameters:

- Water depth;
- Equipment;
- Operational requirements; and
- Additional duration may be required.

**Table 3.3 Indicative details for PLGR/ boulder clearance activities**

Parameter	Indicative Details
Vessel(s) required	<del>Vessel suitable to pull the grapnel train</del> <u>TBC</u>
Spatial extent covered	<del>Tow length typically 150 metres (m)</del> <u>TBC</u>
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	<del>Circa 10-14 days</del> <u>TBC</u>
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	
Speed when undertaking activity	<del>Circa 1 knot</del> <u>TBC</u>
Continuous or discontinuous activity	<del>Continuous — with some scope to move</del> <u>TBC</u>
Manoeuvrability	<del>RAM — however, can move off with some warning to pull up gear/move faster through section.</del> <u>TBC</u>
<u>Traffic management</u>	<u>TBC</u>
<u>Additional parameters to be added as required</u>	

### 3.1.4 Sandwave Clearance

~~28-31.~~ Details of anticipated sandwave clearance activities are provided in Table 3.4~~Table 3.4~~, which represents indicative values with the following list noting variables which may affect final values for the parameters:

- Volume to be cleared; and
- Additional duration may be required.

**Table 3.4 Indicative details for sandwave clearance activities**

Parameter	Indicative Details
Vessel(s) required	<del>Mass flow excavator or suction hopper dredger depending on volume to be dredged</del> TBC
Spatial extent covered	<del>A few meters away from the boat</del> TBC
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	<del>Estimated at 14 days, dependent on final cable route alignment</del> TBC
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	
Speed when undertaking activity	<del>Depends on the sandwaves at the time</del> TBC
Continuous or discontinuous activity	<del>Discontinuous</del> TBC
Manoeuvrability	<del>RAM—Can move off with some warning.</del> TBC
<u>Traffic management</u>	<u>TBC</u>
<u>Additional parameters to be added as required</u>	

### 3.1.5 Cable Lay/ Burial

~~29-32.~~ Details of anticipated cable lay/ burial activities are provided in Table 3.5~~Table 3.5~~. These activities do not have flexibility and will not be concurrent with other projects. Table 3.5~~Table 3.5~~ represents indicative values for an S-lay cable methodology with the following list noting variables which may affect final values for the parameters:

- Water depth;
- Cable design (weight, load capacity, etc.);
- Soils;
- Lay and burial equipment on the seabed; and
- Additional duration may be required.

**Table 3.5 Indicative details for cable lay/ burial activities**

Parameter	Indicative Details
Vessel(s) required	<del>Cable Lay Vessel or Cable Lay Barge. Exact vessel subject to technical considerations of the cable route e.g. draught in nearshore areas, capacity of turntable, cable design and contractor experience.</del> Exact vessel TBC
Spatial extent covered	<del>Typical layback of 50 to 150m</del> TBC
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	<del>General Lay/burial: 1.5-4.5 days depending on soil conditions</del> <del>No joints planned in this area. If required could take around 1 week</del> TBC

Parameter	Indicative Details
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	<del>General Lay/burial: 1.5-6 days depending on soil conditions</del> <del>No joints planned in this area. If required could take around 1 week</del> <u>TBC</u>
Speed when undertaking activity	<del>150m — 450m per hour typically</del> <u>TBC</u>
Continuous or discontinuous activity	<del>Continuous</del> <u>TBC</u>
Manoeuvrability	<del>RAM</del> <u>TBC</u>
Cable Joints	<del>Exact requirement of cable joints to be determined depending on the capacity of the installation vessel. No joints planned in the vicinity of the Sunk Inner or Outer Precautionary Area.</del> <u>TBC</u>
<u>Traffic management</u>	<u>TBC</u>
<u>Additional parameters to be added as required</u>	

### 3.1.6 Cable Protection and Crossings

~~30-33.~~ It is intended that the export cables will be buried ~~where practicable~~wherever possible. However, it is acknowledged that there may be a need for cable protection to be applied for selected sections of the export cables. ~~In the vicinity of the defined deep water routes it will be ensured that any protection will not compromise maintaining a minimum 20m water depth, noting that this will not prevent dredging to 19 and 22m for the Sunk DWR and 22m for the Trinity DWR from Chart Datum (CD) within the areas specified in 9.57 Deep Water Route Cable Installation Areas (Future Dredging Depths) and in the CSIP.~~

~~31-34.~~ There is an expectation that cable crossings will be required, most notably with the export cables for Five Estuaries. ~~The location of such crossings cannot be defined in detail at present but will be provided in a later update to the NIP post submission.~~, Sealink and Neuconnect. The indicative zones for such crossings has been shown in the Export Cable Crossing Zone Plan [REP1-059], which shows they will be outside of the DWR areas. As with cable burial or protection, any cable crossings in proximity to the DWRs will be designed so as to again ensure dredging to 19 and 22m for the Sunk DWR and 22m for the Trinity DWR from CD within the DWR areas specified 9.57 Deep Water Route Cable Installation Areas (Future Dredging Depths) will not be impeded.

~~32-35.~~ Details of cable protection/ crossing activities are provided in ~~Table 3.6~~Table 3.6. These activities do have flexibility and could be concurrent with other projects. ~~Table 3.6~~Table 3.6 represents indicative values with the following list noting variables which may affect final values for the parameters:

- Location and nature of Five Estuaries export cables; ~~and~~
- Soil; and
- Additional duration may be required.

**Table 3.6 Indicative details for cable protection/ crossing activities**

Parameter	Indicative Details
Vessel(s) required	<del>Mass flow excavator or suction hopper dredger depending on volume to be dredged</del> <del>Cable installation will be as per Table 3.5.</del> <u>TBC</u>

Parameter	Indicative Details
Spatial extent covered	Maximum spatial extent will be for the cable lay vessel, which typically has a layback of 50 to 150m. The dredging equipment will have limited layback. <u>TBC</u>
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	For crossing the DW channels: Pre-dredging DW routes. Estimated at an additional 14 days, depending on soil conditions.
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	Cable lay and burial will be as per Table 3.5 For crossing other cables: Crossing preparation — circa 2 weeks undertaken prior to the cable installation Crossing protection — circa 2 weeks undertaken after cable installation <u>TBC</u>
Speed when undertaking activity	Dependent on activity.
Continuous or discontinuous activity	Continuous
Manoeuvrability	See Table 3.4 for dredging manoeuvrability, and Table 3.5 for cable lay/burial manoeuvrability

### ~~3.215.1~~ **Maintenance or Repair**

#### ~~3.2.1~~ Cable Repair/Reburial

~~33.~~ Details of cable repairs/ reburial activities are provided in Table 3.7.

~~Table 3.7 Indicative details for cable repairs / reburial activities~~

Parameter	Indicative Details
Vessel(s) required	This depends on the type of work required. If cable repair, could be cable lay vessel/jack-up, if cable burial could be rock dumper or vessel capable of providing cable lowering.
Spatial extent covered	Layback will be slightly longer than the cable installation. This is to allow the jointing activity to take place on deck.
Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)	Cable jointing — as per Table 3.5 Cable reburial — as per Table 3.5 (assumed to be the same duration as cable installation) Rock dumping — depends on the length and height of berm required. Crossing preparation — circa 2 weeks undertaken prior to the cable installation Crossing protection — circa 2 weeks undertaken after cable installation
Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)	
Speed when undertaking activity	N/A — undertaken at crossing locations <u>TBC</u>
Continuous or discontinuous activity	Continuous <u>TBC</u>
Manoeuvrability	Depends on the activity. Cable burial may be RAM, if using a tool as per installation. <u>TBC</u>
Traffic management	<u>TBC</u>
<i>Additional parameters to be added as required</i>	

## 3.2 Maintenance or Repair

### 3.2.1 Cable Repair/ Reburial

36. Details of cable repairs/ reburial activities are provided in Table 3.7 ~~Table .Table .Table .Table .Table 3.7~~ which represents indicative values with the following list noting variables which may affect final values for the parameters:

- *TBC (dependent on nature of activities required).*

**Table 3.7 Indicative details for cable repairs/ reburial activities**

Parameter	Indicative Details
<u>Vessel(s) required</u>	<u>TBC</u>
<u>Spatial extent covered</u>	<u>TBC</u>
<u>Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays)</u>	<u>TBC</u>
<u>Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays)</u>	
<u>Speed when undertaking activity</u>	<u>TBC</u>
<u>Continuous or discontinuous activity</u>	<u>TBC</u>
<u>Manoeuvrability</u>	<u>TBC</u>
<u>Cable joints</u>	<u>TBC</u>
<u>Traffic management</u>	<u>TBC</u>
<i>Additional parameters to be added as required</i>	

## 3.3 Third Party Vessel Movements

34.37. Movements by third-party vessels have been characterised and analysed in detail in the NRA (~~ES Appendix 15.1 NRA (Document Reference: 3.3.16).~~ [APP-106, APP-107, and APP-108]). Additionally, consideration has been given to the evolution of the baseline during the lifetime of North Falls.

35.38. However, it is recognised that at the time of installation activities commencing that vessel movements and routines may change and the evolution of the baseline may not mirror that estimated in the NRA: [APP-106, APP-107, and APP-108]. Therefore, it is necessary to review third-party vessel movements post consent.

36.39. Such a review may include an analysis of vessel traffic data and consultation with relevant organisations prior to installation activities commencing. ~~The~~ This will be agreed and the outputs ~~will be~~ shared with the ~~Interested Parties~~ IP to inform discussions surrounding the NIP.

## 4 Planned Protocols and Actions

37.40. This section provides details of planned protocols and actions which will be implemented for project vessel activities outlined in Section 3.



## 4.1 Restricted Operations

~~41.~~ For restricted operations<sup>1</sup> a Hazard and Operability (HAZOP) workshop will be undertaken to discuss priorities, actions, and any pertinent information which either project vessels or third-party vessels should be aware of.

~~42.~~ The HAZAP workshop will consider the following elements will be items:

- Hazard attendance including the need for inclusion of Trinity House;
- Notification and communication protocols;
- Whether vessels are considered prior to the commencement of any of the RAM and therefore restricted from concurrent activities listed and how that may affect operations;
- Any weather constraints and data sources to be used;
- Anything specific to the area of operation i.e., deep water vessel movements or pilotage operations; and
- Any ongoing maintenance dredging being undertaken under the London Gateway Port Harbour Empowerment Order (HEO) 2008.

### 4.1.1 HAZOP Workshop Attendance

~~38-43.~~ Details of who should be involved in a HAZOP workshop and the format (in-person/ virtual) will be defined at the time, with the IPs as outlined in Section 2.5 invited as standard.

### ~~4.14.1.2~~ Notifications of Planned Activities

~~39.~~ A critical element is considered to be the timelines and procedures by which key local Interested Parties are informed of any planned activities being undertaken by North Falls within the AOI.

~~40-44.~~ A process flow chart will be added in consultation agreement with the Interested Parties (Section 2.5) IPs which will detail how activities within the AOI will be managed, notifications required, etc. in advance of project vessel activities.

~~45.~~ An optional requirement is to carry a pilot (or other designated person approved by the IPs) to provide local information and communicate directly with Sunk VTS and pilotage launches during RAM vessel activities (those meeting the requirements of paragraph 13). This will also include communication with any guard vessels working with the project vessel. This process will be included in any communication plans drawn up for specific activities and will be agreed with and shared amongst any IPs. Who would provide this assistance at the time would be determined based on availability and location.

~~41-46.~~ Notification will also include liaison with Trinity House to identify any aids to navigation and/ or associated works which may be impacted by project vessel activities, noting that will apply throughout the DCO limits.

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<sup>1</sup> Any project vessel meeting the requirements of Rule 3(g) of COLREGS.  
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~~42. Initial consultation has indicated that a port representative (e.g., a pilot, or other appropriate person designated by the Interested Parties) may be required on Project vessels undertaking key activities in the AOI, for the purpose of direct communication with Sunk VTS, any guard vessels associated with the works being undertaken by the Project vessel, and any other persons as directed by the Interested Parties. If this is required by the Interested Parties, the associated processes will be included in the communication plans for specific activities.~~

#### ~~4.215.1.1~~ Classification of Concurrent

~~43. Navigational status of the Project vessels involved in the activities may result in third party vessels having operational priorities as per the requirements of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs), in particular vessels that are Restricted in Ability to Manoeuvre (RAM). A key concern of Interested Parties is the potential for concurrent RAM activities in the key areas defined in Section 2.1 (namely the Sunk Pilotage Area, the Trinity DW Area, the Sunk DW Area – West, the Sunk DW Area – East, and the HHA DW Area).~~

~~44. Under this NIP, concurrent RAM project vessel activities can only occur simultaneously within the Sunk Pilotage Area and the Sunk DW Area – West, or within the Sunk DW Area and the HHA DW Area. Concurrent activities within other combinations of the defined areas in Section 2.1 will not occur.~~

~~45. North Falls will seek to engage with developers of other proposed developments (e.g. Five Estuaries and SeaLink) in relation to developing concurrent working area principles, where appropriate.~~

#### ~~4.315.1~~ Restricted Operations

~~46. For restricted operations<sup>2</sup> a Hazard and Operability (HAZOP) workshop will be undertaken to discuss priorities, actions, and any pertinent information which either project vessels or third party vessels should be aware of. As a minimum Interested Parties (Section 2.5) will be invited to participate however additional participants may be identified dependent on the operation. The format of the HAZOPS (e.g., in person / virtual) will be agreed with Interested Parties.~~

#### ~~4.44.1.3~~ Weather Constraints and Data

~~47. Weather Agreement on weather forecasting data sources will be agreed with Interested Parties (Section 2.5) and to be implemented. Further will be discussed at the HAZOP.~~

~~47.48. The HAZOP discussion is required on defined will also define weather limits and associated risks to project vessel and/ or third-party vessel operations, including visibility thresholds (2 nautical miles (nm)).~~

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<sup>2</sup> Any project vessel meeting the requirements of Rule 3(g) of COLREGS.  
[NorthFallsOffshore.com](http://NorthFallsOffshore.com)

## 4.5 UXO

- ~~48. For operations identifying and/or removing UXO within the Area of Interest additional protocols will be required.~~
- ~~49. Initial surveys undertaken will identify potential UXO which will then be further investigated if they cannot be avoided. As part of the application process discussion will be had with relevant authorities as to the potential use of exclusion zones to maintain safety but ensure minimum disruption. This discussion will include an MCA representative given their authority for implementing exclusions.~~
- ~~50. A separate Marine Licence for UXO clearance will be sought pre-construction. A procedure for a scenario where UXO is identified within the AOI will be discussed with the MCA through the Marine Licensing process and as part of the Emergency Response Cooperation Plan (ERCoP) process. This will also be included within the NIP or other appropriate mitigation associated with that licence.~~

### 4.64.2 Contingency Plans

- ~~51. Further discussion will be undertaken on:~~
- ~~•49. Determination of the actions to be taken in an emergency situation including a change in weather or visibility conditions; and.~~
  - ~~•50. Thresholds for which activities (including where the Projectproject vessel has restricted status) may need to be abandoned.~~
- ~~51. Again, these will be discussed at the HAZOP.~~

## 4.3 UXO Protocol

52. For operations identifying and/ or removing UXO within the AOI additional protocols will be required.
53. Initial surveys undertaken will identify potential UXO which will then be further investigated if they cannot be avoided by cable routeing. The identification of UXO will be done remotely and does not require physical intervention.
54. The MCA preference is typically not to remove the UXO unless essential for safety. Therefore, North Falls may identify and leave UXO in situ where there is no danger to shipping. If identified UXO does need removal for construction reasons, North Falls will be required to follow the marine licensing process which will include discussion with the relevant authorities to plan removal and discuss any necessary mitigations. The marine licensing process requires consideration of shipping and navigation activities in the area.
55. The relevant authorities are the MMO, MCA (and Sunk VTS) and Trinity House who will consult with local users as required.
56. In the extremely unlikely event that identified UXO presents an immediate danger to shipping the MCA will aim for removal within a short space of time to minimise risks, noting that this process is outwith North Falls's control.
57. Outside of UXO investigations and the defined MMO licensing process, procedures for unexpected UXO identification are also outlined in the project

Emergency Response Cooperation Plan (ERCoP) secured as part of Marine Guidance Note (MGN) 654 requirements. The ERCoP will be agreed with the MCA pre-construction and will include references to the NIP AOI.

#### **4.4 Additional Mitigation Measures**

58. During the HAZOP, it will be determined whether any additional mitigation measures are required such as guard vessels, specific notifications to mariners and application of specific advisory safe passing distances.

#### **4.74.5 Stakeholder Resource Requirements**

~~52-59. It~~During the HAZOP, it will be determined whether any elements of the planned protocol require stakeholder resources above and beyond current manning levels and/ or additional VTS functionality. ~~Further discussion with Interested Parties (Section 2.5) is required.~~

#### **4.815.1 Additional Mitigation Measures**

~~53. This section will be updated on a live basis to reflect any specific additional mitigation measures identified including as part of the HAZOPs (Section 4.3) deemed of relevance will be included here.~~

## **5 Timeline**

~~54-60.~~ The proposed timeline for updates to this ~~Outline~~ NIP is outlined in Table 5.1~~Table 5.1~~. Once the NIP is implemented this section will be removed with future updates applied as required, as noted in Section 2.6.

**Table 5.1 Timescales for relevant NIP updates**

Milestone	Indicative Date	NIP Updates
Pre meeting(s) with <del>Interested Parties</del> <u>IP</u>	Mid April 2024	Initial version
Follow-up meeting with <del>Interested Parties</del> <u>IP</u>	May 2024	Reviewed version.
Pre Application	June 2024	Final outline version.
DCO Application	July 2024	Final outline version.
Examination	TBC	TBC
Post consent	TBC	TBC
Offshore installation (export cables)	2030	TBC
Operation and maintenance	2030/ 2031	TBC
Offshore decommissioning (export cables)	2060 – subject to end of life considerations	Superseded by Decommissioning Plan.



**NORTH FALLS**

*Offshore Wind Farm*



## **HARNESSING THE POWER OF NORTH SEA WIND**

*North Falls Offshore Wind Farm Limited*

*A joint venture company owned equally by SSE Renewables and RWE.*

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