



FIVE ESTUARIES OFFSHORE WIND FARM

VOLUME 9, REPORT 20: OUTLINE
NAVIGATION AND INSTALLATION PLAN
(TRACKED) – REVISION C

| | |
|-----------------------------|----------------------|
| Application Reference | EN010115 |
| Application Document Number | 9.20 |
| Revision | <u>C</u> |
| Pursuant to | Deadline <u>5</u> |
| Ecodoc Number | 005023937-0 <u>4</u> |
| Date | <u>January 2025</u> |



COPYRIGHT © Five Estuaries Wind Farm Ltd
All pre-existing rights reserved.

In preparation of this document Five Estuaries Wind Farm Ltd has made reasonable efforts to ensure that the content is accurate, up to date and complete for the purpose.

| Revision | Date | Status/Reason for Issue | Originator | Checked | Approved |
|----------|---------------|-------------------------|---------------|---------------|---------------|
| A | Mar-24 | ES | Anatec | VEOWFL | VEOWFL |
| B | Jun-24 | Deadline 1 | Anatec | VEOWFL | VEOWFL |
| <u>C</u> | <u>Jan-25</u> | <u>Deadline 5</u> | <u>Anatec</u> | <u>VEOWFL</u> | <u>VEOWFL</u> |



CONTENTS

| | | |
|-----|--|----|
| 1 | Purpose..... | 10 |
| 1.2 | Updates to the Navigation and Installation Plan | 10 |
| 2 | Scope of the Navigation and Installation Plan | 11 |
| 2.1 | Area of Interest | 11 |
| 2.2 | Activities and Associated Vessels | 13 |
| | Project Activities | 13 |
| 2.3 | Concurrent activities | 13 |
| | Definition of Applicable RAM Vessels | 13 |
| | Third-Party Vessels | 13 |
| | Classification of Concurrent..... | 14 |
| 2.4 | Temporal Extent | 14 |
| 2.5 | Interested Parties | 15 |
| 2.6 | Updates to and Dissemination of the Navigation and Installation Plan | 16 |
| | Initial Approval..... | 16 |
| | Subsequent Updates..... | 16 |
| 3 | Project Vessel Activities | 17 |
| 3.1 | Installation | 17 |
| | Surveys | 17 |
| | UXO Clearance | 17 |
| | Pre Lay Grapnel Run/ Boulder Clearance/ Mattress Installation | 18 |
| | Sandwave Clearance | 19 |
| | Freespan Clearance | 20 |
| | Cable Lay/ Burial | 20 |
| | Cable Protection and Crossings | 21 |
| 3.2 | Maintenance or Repair | 22 |
| | Cable Repairs/ Reburial | 22 |
| 3.3 | Third-Party Vessel Movements..... | 23 |
| 4 | Planned Protocols and Actions | 24 |
| 4.2 | Restricted Operations..... | 24 |
| | HAZOP Workshop Attendance..... | 24 |
| | Notification of Planned Activities | 24 |
| | Weather Constraints and Data | 25 |
| 4.3 | Contingency Plans..... | 25 |
| 4.4 | UXO Protocol..... | 25 |
| 4.5 | Additional Mitigation Measures..... | 26 |



| | | |
|-----|--|----|
| 4.6 | Stakeholder Resource Requirements..... | 26 |
| 5 | Timeline | 27 |



TABLES

| | |
|---|-------------|
| Table 2.1: Coordinates of area of interest for NIP. | <u>1140</u> |
| Table 2.2 In Combination Concurrent Activities | <u>1413</u> |
| Table 3.1: Indicative details for survey activities | <u>1715</u> |
| Table 3.2: Indicative details for UXO clearance activities | <u>1715</u> |
| Table 3.3: Indicative details for PLGR/ boulder clearance activities | <u>1846</u> |
| Table 3.4: Indicative details for sandwave clearance activities | <u>1947</u> |
| Table 3.5: Indicative details for freespan clearance activities | <u>2047</u> |
| Table 3.6: Indicative details for cable lay/ burial activities | <u>2149</u> |
| Table 3.7: Indicative details for cable protection/ crossing activities | <u>2220</u> |
| Table 3.8: Indicative details for cable repairs/ reburial activities | <u>2324</u> |
| Table 5.1 Timescales for VE and relevant NIP updates | <u>2724</u> |

FIGURES

| | |
|--|----|
| Figure 2.1: Overview of area of interest for NIP (including concurrent activity areas). | 12 |
| Figure 2.2: Indicative operations summary for offshore construction activities. | 15 |



DEFINITION OF ACRONYMS

| Term | Definition |
|---------------|--|
| COLREGs | Convention on the International Regulations for Preventing Collisions at Sea |
| <u>CSIP</u> | <u>Constructionable Specification and Installation Plan</u> |
| dML | Deemed Marine Licence |
| DCO | Development Consent Order |
| <u>DWR</u> | <u>Deep Water Route</u> |
| ECC | Export Cable Corridor |
| EIA | Environmental Impact Assessment |
| <u>ERCoP</u> | <u>Emergency Response Cooperation Plan</u> |
| ES | Environmental Statement |
| FSA | Formal Safety Assessment |
| HAZOP | Hazard and Operability |
| <u>HEO</u> | <u>Harbour Empowerment Order</u> |
| HHA | Harwich Haven Authority |
| m | Metre |
| MCA | Maritime and Coastguard Agency |
| MGN | Marine Guidance Note |
| <u>MMO</u> | <u>Marine Management Organisation</u> |
| nm | Nautical Mile |
| NIP | Navigation and Installation Plan |
| NRA | Navigational Risk Assessment |
| OREI | Offshore Renewable Energy Installation |
| PEIR | Preliminary Environmental Information Report |
| PLA | Port of London Authority |
| PLGR | Pre Lay Grapnel Run |
| RAM | Restricted Ability to Manoeuvre |
| <u>SIMOPS</u> | <u>Simultaneous Operations</u> |
| UK | United Kingdom |
| UXO | Unexploded Ordnance |
| <u>VE</u> | <u>Five Estuaries Offshore Wind Farm</u> |
| VE OWFL | Five Estuaries Offshore Wind Farm Limited |



| Term | Definition |
|------|------------------------|
| VTs | Vessel Traffic Service |



GLOSSARY OF TERMS

| Term | Definition |
|---|---|
| Collision | The act or process of colliding (crashing) between two moving objects. |
| Embedded mitigation | A commitment made by Five Estuaries Offshore Wind Farm Limited (VE OWFL) to reduce and/ or eliminate the potential for significant risks. |
| Environmental Statement (ES) | 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. |
| Formal Safety Assessment (FSA) | A structured and systematic process for assessing the risks and costs (if applicable) associated with shipping activity. |
| Impact | A potential threat to human life, health, property, or the environment. |
| Marine Guidance Note (MGN) | 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. |
| Navigational Risk Assessment (NRA) | A document which assesses the overall impact to shipping and navigation of a proposed Offshore Renewable Energy Installation (OREI) based upon Formal Risk Assessment (FSA). |
| Offshore Renewable Energy Installation (OREI) | 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. |
| Significance of effect | The combination of frequency of occurrence and severity of consequence of an impact. |
| Vessel Traffic Service (VTS) | A service implemented by a Competent Authority designed to improve the safety and efficiency of vessel traffic and to protect the environment. The |



| Term | Definition |
|------|--|
| | service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area. |



1 PURPOSE

1.1.1 During consultation relating to the Navigational Risk Assessment (NRA) (see Volume 9, Report 10: Navigational Risk Assessment [APP-240]), it was agreed with Interested Parties (as referenced in Section 2.5) that a mechanism is required for managing concurrent working involving VE project vessels within the Area of Interest~~interactions between project vessels associated with export cable installation/ maintenance/ repair and third-party vessels in navigationally sensitive areas.~~

1.1.2 This outline Navigation and Installation Plan (NIP) serves as ~~such a~~the mechanism and is considered an embedded mitigation for minimising the significance of effect associated with shipping and navigation impacts, ~~including vessel displacement and increased collision risk, third-party with project vessel collision risk, reduced access to local ports and harbours including pilotage operations, and reduction in under keel clearance.~~ The NIP is required to ensure that VE activities within the area of interest minimise impact on third-party vessels with particular emphasis on:

- > Deep draught vessels accessing local ports via the recommended Deep Water Routes (DWRs) within the Sunk Inner Precautionary Area;
- > Pilotage activities undertaken by the Harwich Haven Authority (HHA) including the boarding and landing of London and Medway pilots; and
- > Other port related third-party vessels/ activities including spot dredging.

~~4.4.21.1.3~~ 1.1.3 The NIP does not consider general vessel management associated with Five Estuaries Offshore Wind Farm (VE), e.g., entry and exit points for project vessels to/ from the array areas, since this will be managed by Five Estuaries Offshore Wind Farm Limited's (VE's OWFL) marine coordination which will be addressed post consent as per Volume 6, Part 2, Chapter 9: Shipping and Navigation [APP-078].

1.2 UPDATES TO THE NAVIGATION AND INSTALLATION PLAN

1.2.1 The NIP will be updated post consent as additional information relating to the design of VE 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.

1.2.2 ~~For the moment, w~~Where further information will be added 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 EXTENT SCOPE OF THE NAVIGATION AND INSTALLATION PLAN

2.1 SPATIAL EXTENT AREA OF INTEREST

2.1.1 This NIP relates ~~to to a portion of the offshore export cable corridor (EGC) and the sea area surrounding it. In particular,~~ 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-240] 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 routes (DWR),~~ and the Harwich Deep Water Channel.

2.1.2 The area of interest for the NIP is presented in Figure 2.1 and corresponding coordinates are outlined in Table 2.1.

Table 2.1: Coordinates of area of interest for 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 |

2.1.3 Additionally further areas within the area of interest are also defined and relate to areas of concurrent activity, with concurrent activity fully defined from Paragraph 1.1.1. These areas are also shown in Figure 2.1.

2.1.4 The concurrent activity areas are split into three:

- > Pilotage Concurrent Activity Area;
- > Sunk ~~Deep Water Route (DWR)~~ Concurrent Activity Area; and
- > Trinity DWR Concurrent Activity Area.

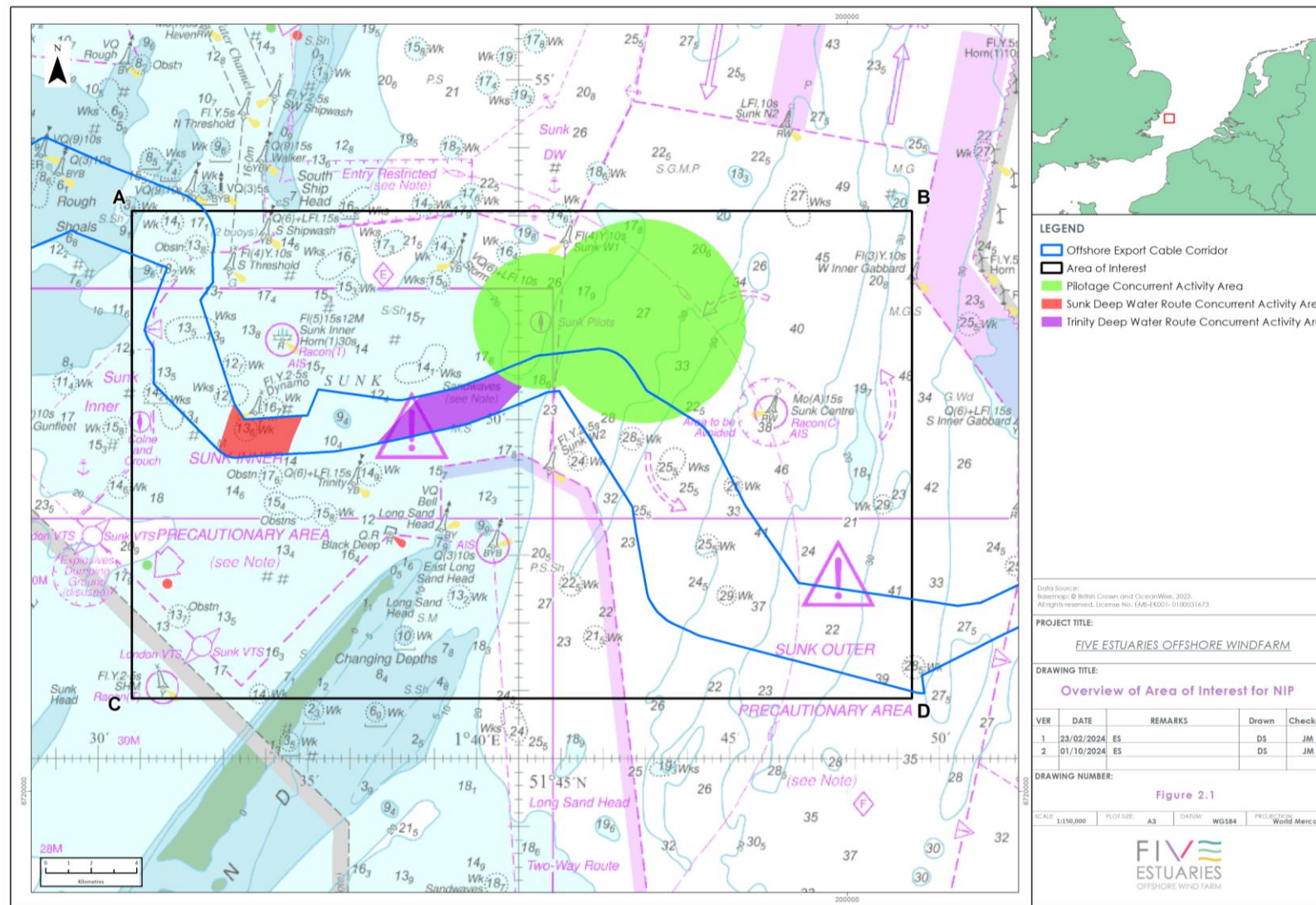


Figure 2.1: Overview of area of interest for NIP (including concurrent activity working areas).

2.2 ACTIVITIES AND ASSOCIATED VESSELS

~~2.1.3~~2.2.1 This section details the project activities and Restricted 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. ~~Concurrent a~~Activities will be managed through the protocols outlined in Section 4. ~~Movements and Activities Types~~

PROJECT ACTIVITIES VESSELS

~~2.1.4~~2.2.2 Installation and maintenance activities considered in this NIP include:

- > ~~Pre and post construction S~~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 / mattress installation;
- > Sandwave clearance;
- > Freespan clearance;
- > Cable lay, ~~/~~ burial and crossings; and
- > Cable repairs and/ reburial.

~~2.1.5~~2.2.3 This list ~~will~~may be refined once the installation method is confirmed in the Cable Specification and Installation Plan (CSIP) and have been considered as part of the EIA process.

2.3 CONCURRENT ACTIVITIES

DEFINITION OF APPLICABLE PROJECT-RAM VESSELS

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

2.3.1 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 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.

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

THIRD-PARTY VESSELS

~~North Falls Offshore Wind Farm~~

~~2.1.6—Vessels and activities associated with the The spatial and temporal extent of the North Falls Offshore Wind Farm ('North Falls') and 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 VE, and North Falls and Sea Link.~~

CLASSIFICATION OF CONCURRENT

~~2.3.2 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 2.3.1, vessels meeting these requirements (Rule 3(g) i and v) will be restricted from working concurrently (both in terms of VE construction vessels, and those engaged in the construction of North Falls and Sea Link as far as reasonably foreseeable) in concurrent activity areas defined in section 2.1, noting that VE can only control its own vessels.~~

~~2.3.3 The following table confirms if concurrent activities are allowed in combination across the concurrent activity areas as shown in 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> | <u>No</u> | <u>Yes</u> |
| <u>Trinity DWR Concurrent Working Area</u> | | <u>No</u> |

~~THE NIP IS RELEVANT TO ALL THIRD-PARTY VESSEL ACTIVITIES WITHIN THE AREA OF INTEREST, 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 HARWICH HAVEN AUTHORITY (HHA) INCLUDING THE BOARDING AND LANDING OF LONDON AND MEDWAY PILOTS; AND~~

~~OTHER PORT RELATED THIRD-PARTY VESSELS/ ACTIVITIES INCLUDING SPOT DREDGING.~~

~~Further details relating to the baseline activities will be added in a future version of the NIP.~~

2.2.4 TEMPORAL EXTENT

~~2.2.4.1~~ 2.4.1 The NIP will apply from the start of offshore construction activities and associated works for the export cables within the area of interest. The indicative programme of offshore construction activities is presented in Figure 2.2 and includes site preparation works as outlined in Section 2.2.

Indicative Operations Summary

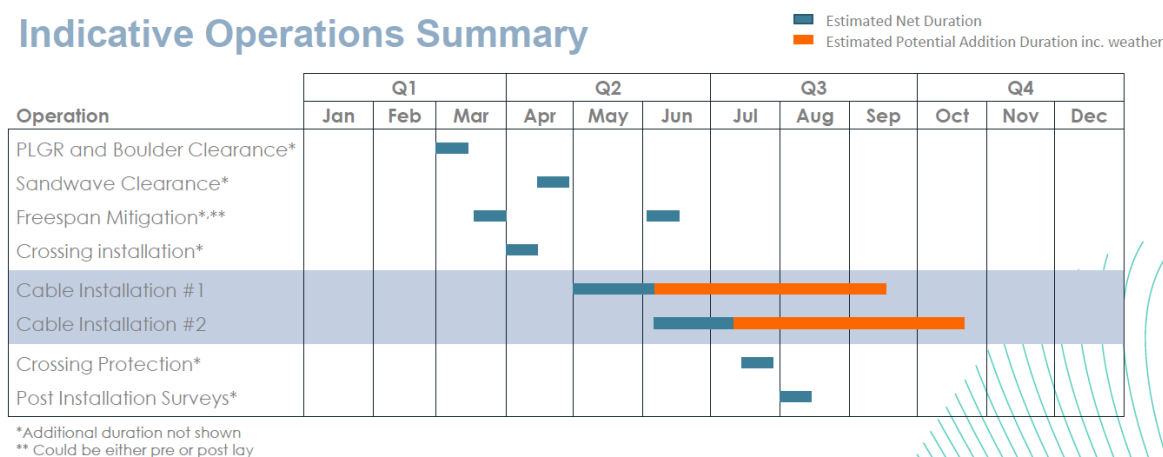


Figure 2.2: Indicative operations summary for offshore construction activities.

2.4.2 Within Figure 2.2, the shaded rows indicate those with restricted operations. Other operations (non-shaded) do have more flexibility and could be concurrent with other project activities depending upon vessel availability.

2.2.22.4.3 It should be noted that whilst any UXO clearance 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.

2.2.32.4.4 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 Plan, noting that the Decommissioning Plan will be secured as a condition in the ~~Deemed Marine Licence (dMLDCO~~ (Requirement 21), as well as being a requirement under the Energy Act 2004.

2.3 — NORTH FALLS OFFSHORE WIND FARM

2.3.1 The spatial and temporal extent of the North Falls Offshore Wind Farm ('North Falls') may be included in a future version of the NIP post consent, depending upon the respective timelines for the construction and operation of VE and North Falls.

2.42.5 INTERESTED PARTIES

2.4.42.5.1 Consultation relating to shipping and navigation has been ongoing throughout the scoping, Preliminary Environmental Information Report (PEIR), and Environmental Statement (ES) stages of VE 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.

2.4.22.5.2 Through this consultation, several Interested Parties have been identified:

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

2.4.3 Details of how these Interested Parties will be involved in the creation of the NIP is provided in Section 2.62.6.

~~The content of the NIP will be discussed and agreed with the Interested Parties post-consent (and subsequently submitted to the Marine Management Organisation for approval) with subsequent agreements occurring as required as part of the Planned Protocols and Actions outlined in Section 4.~~

~~Where agreement is requested, Interested Parties will have up to 14 days to provide a response in writing, after which time agreement will be deemed to have been given.~~

~~Where agreement with any IP cannot be reached clear actions must be provided by the IP to allow VE to address outstanding matters. VE may submit the NIP for approval to the MMO, where this is not provided~~

2.52.6 UPDATES TO AND DISSEMINATION OF THE NAVIGATION AND INSTALLATION PLAN

INITIAL APPROVAL

~~2.6.1 As stated in Section 2.4, the NIP will apply throughout the construction and operation and maintenance phases. As VE evolves it may be necessary for the NIP to be updated and with changes disseminated to relevant third parties. The final content of the NIP will be discussed and agreed with the Interested Parties post-consent and subsequently submitted to the Marine Management Organisation for approval.~~

~~2.6.2 Where agreement is requested, Interested Parties will have up to 28 days to provide a response in writing, after which time agreement will be deemed to have been given.~~

~~2.6.3 Where agreement with any IP cannot be reached clear actions must be provided by the IP to allow VE to address outstanding matters. VE 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.~~

~~2.6.4 Additionally, the NIP will be provided to the MCA and Trinity House in advance of submission to the Marine Management Organisation (MMO).~~

SUBSEQUENT UPDATES

~~2.6.5 Noting that the NIP is a live document, As VE evolves it may be necessary for the NIP to be updated and with changes disseminated to the IPs. 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.~~

~~2.5.1~~

~~2.5.22.6.6 Where updates are required, the Interested PartiesIPs will be invited by the ApplicantVE OWFL to review and discussand agree any changes within 28 days in line with the process set out in Paragraph 2.6.2, and the updated NIP will then be promulgated to relevant third parties including the MCA and Trinity House which will include London Gateway and Medway in addition to the Interested Parties.~~

~~2.5.32.6.7 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.~~

~~2.5.4 Additionally, the NIP will be provided to the MCA and Trinity House in advance of examinationsubmission to the MMO.~~

3 PROJECT VESSEL ACTIVITIES

3.1 INSTALLATION

PRE AND POST SURVEYS

3.1.1 Details of ~~pre and post~~ survey activities ~~involving a RAM vessel are will be~~ provided in Table 3.1. ~~These activities do have flexibility and could be concurrent with other projects. Table 3.1 which~~ represents indicative values with the following list noting variables which may affect final values for the parameters:

- > TBC (dependent upon 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 | TBC |
| Spatial extent covered | TBC |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | TBC |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | TBC |
| Speed when undertaking activity | TBC |
| Continuous or discontinuous activity | TBC |
| Manoeuvrability | <u>RAM? For example can the vessel move during its operation or in an emergency?</u> |
| Traffic management | TBC |
| Additional parameters to be added as required | |

UXO CLEARANCE

3.1.13.1.2 Details of UXO clearance activities are provided in Table 3.2 which. ~~These activities do have flexibility and could be concurrent with other projects. Table 3.2~~ represents indicative values with the following list noting variables which may affect final values for the parameters:

- > TBC (dependent upon 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 | TBC |
| Spatial extent covered | TBC |

| Parameter | Indicative details |
|--|---|
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | TBC |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | TBC |
| Speed when undertaking activity | TBC |
| Continuous or discontinuous activity | TBC |
| Manoeuvrability | RAM?TBC For example can the vessel move during its operation or in an emergency? |
| Traffic management | TBC |
| <i>Additional parameters to be added as required</i> | |

PRE LAY GRAPNEL RUN/ BOULDER CLEARANCE/ MATTRESS INSTALLATION

3.4.23.1.3 Details of PLGR/ boulder clearance/ mattress installation activities are provided in Table 3.3 ~~which. These activities do have flexibility and could be concurrent with other projects. Table 3.3~~ 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 | Typical technical considerations: bollard pull, crane or A-frame and contractor experience |
| Spatial extent covered | Tow length 150 metres (m) |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | Estimated 14 days total |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | |
| Speed when undertaking activity | Circa 1 knot during operations |
| Continuous or discontinuous activity | TBC |

| Parameter | Indicative details |
|--|--|
| Manoeuvrability | For example can the vessel move during its operation or in an emergency? <u>RAM?TBC</u> |
| Traffic management | <u>TBC</u> |
| <i>Additional parameters to be added as required</i> | |

SANDWAVE CLEARANCE

~~3.1.33.1.4~~ Details of sandwave clearance activities are provided in Table 3.4. ~~These activities do have flexibility and could be concurrent with other projects. 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 | Smaller localised areas will use a mass flow excavator system. Larger areas will use a trailing suction hopper dredger. |
| Spatial extent covered | <u>TBC</u> |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | Estimated 14 days total |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | |
| Speed when undertaking activity | <u>TBC</u> |
| Continuous or discontinuous activity | <u>TBC</u> |
| Manoeuvrability | For example can the vessel move during its operation or in an emergency? <u>RAM?TBC</u> |
| Traffic management | <u>TBC</u> |
| <i>Additional parameters to be added as required</i> | |

FREESPAN CLEARANCE

3.1.43.1.5 Details of freespan clearance activities are provided in Table 3.5. Where localised changes in seabed level result in unintended freespans of cables levelling of seabed (freespan clearance) may be required. ~~These activities do have flexibility and could be concurrent with other projects.~~ Table 3.5 represents indicative values with the following list noting variables which may affect final values for the parameters:

- > May be required pre and post lay; and
- > Additional duration may be required.

Table 3.5: Indicative details for freespan clearance activities

| Parameter | Indicative details |
|--|---|
| Vessel(s) required | <i>TBC</i> |
| Spatial extent covered | <i>TBC</i> |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | Estimated 28 days total |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | |
| Speed when undertaking activity | <i>TBC</i> |
| Continuous or discontinuous activity | Likely discontinuous |
| Manoeuvrability | For example can the vessel move during its operation or in an emergency? <u>RAM? TBC</u> |
| Traffic management | <i>TBC</i> |
| <i>Additional parameters to be added as required</i> | |

CABLE LAY/ BURIAL

3.1.53.1.6 Details of cable lay/ burial activities are provided in Table 3.6. These activities do not have flexibility and will not be concurrent with other projects. Table 3.6 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; ~~and~~
- > Lay and burial equipment on the seabed; and
- > Additional duration may be required. -

Table 3.6: Indicative details for cable lay/ burial activities

| Parameter | Indicative details |
|--|--|
| Vessel(s) required | Typical technical considerations: higher capacity to avoid <u>planned</u> offshore <u>field</u> jointing of cables <u>within the Deep Water Routes</u> , larger vessel means deeper draught, cable design requirements, contractor experience. |
| Spatial extent covered | Example layback distance 50 to 150m. |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | General lay/ burial: 1.5 to 4.5 days Cable jointing: circa 72 hours |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | General lay/ burial: <i>TBC</i> Cable jointing: circa 72 hours |
| Speed when undertaking activity | 150 to 450m per hour |
| Continuous or discontinuous activity | <u><i>TBC</i></u> |
| Manoeuvrability | <i>For example can the vessel move during its operation or in an emergency? RAM?</i> |
| Cable joints | Will be required when installation vessel has insufficient capacity to lay the whole cable. Design will depend on the cable and capacity requirements. |
| Traffic management | <i>TBC</i> |
| <i>Additional parameters to be added as required</i> | |

CABLE PROTECTION AND CROSSINGS

3.1.63.1.7 It is intended that the export cables will be buried 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, noting that this will not prevent ensuring a 19m or 22m under keel clearance from Chart Datum (CD) within the DWR areas specified in the CSIP. 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 an updated outline version of the CSIP including these details was included in the application submission (APP-242) submitted at Deadline 4 [REP4-019]. These under keel clearance values will be maintained following any cable repairs/ reburial.

3.1.73.1.8 There is an expectation that cable crossings will be required, most notably with the export cables for North Falls and Sealink. The location of such crossings cannot be defined in detail at present but should they be required, will occur to the east of the Margate and Long Sands SAC and outside of the DWR areas. Details of all cable crossings will but will be provided in a later update to the NIP detailed set out in the final CSIP, post-submission once the respective Development Consent Order (DCO) limits for the offshore export cable corridor (ECC) for North Falls and the corridor for the Sealink interconnector are confirmed. As with cable burial or protection, any cable crossings in proximity to the DWRs will be designed so as to again ensure that a 22m under keel clearance from CD will be maintained.

3.1.83.1.9 Details of cable protection/ crossing activities are provided in Table 3.7 which- These activities do have flexibility and could be concurrent with other projects. Table 3.7- represents indicative values with the following list noting variables which may affect final values for the parameters:

- > Location and nature of North Falls export cables; ~~and~~
- > Soil; and-
- > Additional duration may be required.

Table 3.7: —Indicative details for cable protection/ crossing activities

| Parameter | Indicative details |
|--|--|
| Vessel(s) required | <i>TBC</i> |
| Spatial extent covered | <i>TBC</i> |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | Crossing installation: circa 14 days Crossing protection: circa 14 days |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | Crossing installation: circa 14 days Crossing protection: circa 14 days |
| Speed when undertaking activity | <i>TBC</i> |
| Continuous or discontinuous activity | <i>TBC</i> |
| Manoeuvrability | <i>TBC</i> |
| Traffic management | <i>TBC</i> |
| <i>Additional parameters to be added as required</i> | |

3.2 MAINTENANCE OR REPAIR

CABLE REPAIRS/ REBURIAL

3.2.1 Details of cable repairs/ reburial activities are provided in Table 3.8. These activities do not have flexibility and will not be concurrent with other projects. Table 3.8 which represents indicative values with the following list noting variables which may affect final values for the parameters:

- > *TBC (Dependent upon nature of activities required)* ~~*TBC*~~

Table 3.8:—Indicative details for cable repairs/ reburial activities

| Parameter | Indicative details |
|--|--|
| Vessel(s) required | <i>TBC</i> |
| Spatial extent covered | <i>TBC</i> |
| Duration of activity within Sunk Inner Precautionary Area (excluding adverse weather delays) | <i>TBC</i> |
| Duration of activity within Sunk Outer Precautionary Area (excluding adverse weather delays) | <i>TBC</i> |
| Speed when undertaking activity | <i>TBC</i> |
| Continuous or discontinuous activity | <i>TBC</i> |
| Manoeuvrability | <i>For example can the vessel move during its operation or in an emergency? <u>TBC</u></i> |
| Cable joints | Will be required when the cable is damaged and requires a repair. Design will depend on the cable and capacity requirements <u>but a minimum under keel clearance of 19m or 22m below CD will be maintained as per Section 3.1.7.</u> <u>The CSIP will also manage maintenance activities should any cable joints be required in proximity to the DWRs.</u> |
| Traffic management | <i>TBC</i> |
| <i>Additional parameters to be added as required</i> | |

3.3 THIRD-PARTY VESSEL MOVEMENTS

- 3.3.1 Movements by third-party vessels have been characterised and analysed in detail in the NRA [APP-240]. Additionally, consideration has been given to the evolution of the baseline during the lifetime of VE.
- 3.3.2 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 Volume 6, Part 2, Chapter 9: Shipping and Navigation [APP-078] and Volume 9, Report 10: NRA [APP-240]. Therefore, it is necessary to review third-party vessel movements post consent.
- 3.3.3 Such a review may will include an analysis of vessel traffic data and consultation with relevant organisations prior to installation activities commencing. This will be agreed and the outputs shared with the Interested Parties to inform discussions surrounding the NIP.

4 PLANNED PROTOCOLS AND ACTIONS

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

~~4.1.2 The following elements will be considered prior to the commencement of any of the activities:~~

4.2 RESTRICTED OPERATIONS

4.2.1 For restricted operations¹ 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.

4.2.2 The HAZOP workshop will consider the following items:

- > Hazard attendance including need for inclusion of Trinity House;
- > Notification and communication protocols;
- > Whether vessels are considered RAM and therefore restricted from concurrent activities and how that may affect operations;
- > Any weather constraints and data sources to be used; and
- > 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.

HAZOP WORKSHOP ATTENDANCE

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

4.2.3

NOTIFICATION OF PLANNED ACTIVITIES

4.2.4 Process flow chart to be added in ~~consultation agreement~~ with the Interested Parties which will detail how activities within the area of interest will be managed, notifications required, etc. in advance of project vessel activities.

~~4.1.34.2.5~~ An optional requirement is for the project vessel (those meeting the requirements of paragraph 2.3.1) to carry a pilot (or other designated person approved by the interested parties) to provide local information and communicate directly with Sunk VTS and pilotage launches.- 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 interested parties. Who would provide this assistance at the time would be determined based on availability and location.

~~4.1.44.2.6~~ 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.

¹ Any project vessel meeting the requirements of Rule 3(g) of COLREGS.

NAVIGATIONAL STATUSCLASSIFICATION OF CONCURRENT

~~Navigation 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). As per paragraph 2.2.42.2.4, s to 2.2.4 vessels meeting these requirements (Rule 3(g) i and v) will be restricted from working concurrently Le in concurrent activity areas defined in section 2.12.1. The following table confirms if concurrent activities are allowed in combination across the concurrent activity areas as shown in Figure 2.1~~Figure 2.1:

Table 4.1 In Combination Concurrent Activities

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

WEATHER CONSTRAINTS AND DATA

4.2.7 Agreement on weather forecasting data sources to be implemented will be discussed at the HAZOP.

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

4.2.8

4.3 CONTINGENCY PLANS

4.3.1 Determination of the actions to be taken in an emergency situation including a change in weather or visibility conditions.

4.3.2 Thresholds for which activities (including where the project vessel has restricted status) may need to be abandoned.

4.3.3 Again, these will be discussed at the HAZOP.

4.4 UXO PROTOCOL

4.4.1 For operations identifying and/or removing UXO within the Area of Interest additional protocols willmay be required.

4.4.2 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. No exclusion zone can or will be put in place by VE for in-situ UXO.

4.4.3 The MCA preference is typically not to remove the UXO unless essentially for safety. Therefore, the VE OWFL may identify and leave UXO in situ where there is no danger to shipping. If identified UXO does need removal for safetyconstruction reasons, VE OWFL 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.

4.4.4 The relevant authorities are the MMO, MCA (and Sunk VTS) and Trinity House who will consult with local users as required.

4.4.5 In the extremely unlikely event that identified UXO presents an immediate danger to shipping ~~due to 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~~ VE's control. ~~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.~~

4.1.54.4.6 Outside of UXO investigations and the defined MMO licensing process, procedures for unexpected UXO identification are also ~~A process for UXO identification will be defined~~ outlined as part in the project Emergency Response and 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 reference to the ~~and any additional protocols required as part of the NIP~~ aArea of interest will be in line with the process already identified.

4.2 RESTRICTED OPERATIONS

4.2.1 ~~For restricted operations 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.~~

4.3 HAZOP WORKSHOP

4.3.1 ~~Details of parties which should be involved in a HAZOP workshop and the format (in-person/ virtual).~~

4.4.5 ADDITIONAL MITIGATION MEASURES

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

4.5 WEATHER CONSTRAINTS AND DATA

4.5.1 ~~Agreement on weather forecasting data sources to be implemented.~~

4.5.2 ~~Discussion required on defined weather limits and associated risks to project vessel and/ or third-party vessel operations, including visibility thresholds (2 nautical miles (nm)).~~

4.6 CONTINGENCY PLANS

4.6.1 ~~Determination of the actions to be taken in an emergency situation including a change in weather or visibility conditions.~~

4.6.2 ~~Thresholds for which activities (including where the project vessel has restricted status) may need to be abandoned.~~

4.7.4.6 STAKEHOLDER RESOURCE REQUIREMENTS

4.7.14.6.1 ~~During the HAZOP, it will be determined~~ ~~Determination of~~ whether any elements of the planned protocol require stakeholder resources above and beyond current manning levels and/or additional VTS functionality.

5 TIMELINE

5.1.1 The proposed timeline for updates to this NIP is outlined in 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 VE and relevant NIP updates

| Milestone | Indicative date | NIP updates |
|--|---|---|
| Pre meeting with Interested Parties | End January 2024 | Initial version. |
| Follow-up meeting with Interested Parties | Late February / early March 2024 | Reviewed version (post submission to address comments). |
| Pre application | Mid-March 2024 | Final outline version. |
| Follow-up meeting with Interested Parties | End March 2024 | Proximity to Sunk pilot boarding station to be discussed. |
| DCO application | TBC <u>March 2024</u> | TBC <u>Included Version A of the NIP</u> |
| <u>Follow-up meeting with Interested Parties</u> | <u>Mid June 2024</u> | <u>Review of application version of the NIP and consideration of concurrent activities.</u> |
| Examination | TBC <u>September January 20245</u> | SIMOPS and resource management to be discussed and consideration given to potential cable crossings. <u>TBC Further updates based on feedback from consultation submitted at Deadline XX5.</u> |
| Post consent | <i>TBC</i> | <i>TBC</i> |
| Offshore installation (export cables) | <i>TBC</i> | <i>TBC</i> |
| Operation and maintenance | <i>TBC</i> | <i>TBC</i> |
| Offshore decommissioning (export cables) | <i>TBC</i> | Superseded by Decommissioning Plan. |



PHONE
EMAIL
WEBSITE
ADDRESS

COMPANY NO

0333 880 5306

fiveestuaries@rwe.com

www.fiveestuaries.co.uk

Five Estuaries Offshore Wind Farm Ltd
Windmill Hill Business Park
Whitehill Way, Swindon, SN5 6PB
Registered in England and Wales
company number 12292474