

Addendum to the
Environmental Impact
Assessment Report

NISA
North Irish Sea Array

Volume 3 - Offshore Chapters

Chapter 17

Shipping and Navigation



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17. Shipping and Navigation

North Irish Sea Array Windfarm Ltd (NISA, hereafter referred to as ‘the Developer’) has been considering the RFI issued by An Bord Pleanála (now An Coimisiún Pleanála) as well as the third-party submissions received following public consultation. At An Coimisiún Pleanála’s behest, the Developer has also continued to consult with stakeholders in respect of the 2024 planning application throughout 2024-2026. The Developer has refined elements of the design to respond to the third-party submissions, the continued public and stakeholder consultation and the RFI. Amendments are therefore required to Chapter 17: Shipping and Navigation of the 2024 EIAR. Full details of consultation undertaken can be found in Appendix A1.2: Consultation Report in the Addendum to the 2024 EIAR.

For the purposes of clarity, any cross reference to a chapter, section, table, image, figure or appendix within this document is to another location within the Addendum to the 2024 EIAR unless explicitly stated otherwise. Any cross reference to anything included in the 2024 EIAR will be clearly labelled as such.

Text in bold is only used throughout this document to indicate where changes are required, and why they are required. Text in italics illustrates section(s) of the 2024 EIAR which are deleted, or quotations from other documents (as explicitly stated). Replacement text is in normal font. Where text has been replaced in normal font, bold text shall be used to indicate no further changes to this section (where relevant).

Only tables which have been updated from the 2024 EIAR, or entirely new tables, have been included in the Addendum to the 2024 EIAR. These tables can be identified by the “A” prefix in the table caption. Any changes within the updated table, in comparison to tables within the 2024 EIAR, are indicated by grey shading in the relevant cell, column or row, as necessary. The exception to this is when a table has changed in its entirety.

The sections relevant to Chapter 17: Shipping and Navigation in the RFI are included below.

RFI Section	RFI	Relevance to Chapter
1 (b)	The scientific information provided as part of the planning application documentation should be based on up-to-date survey reports and data. Accordingly, the applicant is requested to confirm/provide justification/verification that the information submitted in support of the planning application remains relevant and appropriate at the point of submitting further information or to update same as required.	The timeframes associated with the RFI have necessitated a review of the datasets previously used in the 2024 EIAR to ensure any necessary updates to the baseline environment are captured. However, the Marine Survey Office (MSO) confirmed the vessel traffic survey data analysed in the 2024 EIAR was suitable for Appendix A17.1: Navigational Risk Assessment (NRA) and so no further vessel traffic data has been collected. Therefore, a review of the baseline resources for navigational features and maritime incidents has been undertaken to comply with RFI Section 1 (b).
1 (c)	The applicant is requested to confirm whether any on-going or additional surveying has been carried out since the application was lodged and, if so, the applicant is invited to submit any further survey data results and analysis and update the planning application documentation, as appropriate.	No further additional surveys are required for Shipping and Navigation as the MSO confirmed during a meeting in May 2025 the survey data analysed in the 2024 EIAR was suitable for Appendix A17.1.
2 (a)	The IRCG, through the DoT, has raised concerns in relation to the layout of the proposed development with respect to search-and-rescue (SAR) access. The applicant is requested to consult with the IRCG, in addressing these concerns, and provide further information and clarification on such matters.	Continued consultation has occurred with the IRCG since the submission of the 2024 EIAR and the layouts have been revised in liaison with the IRCG in response to RFI Section 2 (a).

RFI Section	RFI	Relevance to Chapter
		<p>These layouts include a single line of orientation (SLoO) with a linear configuration which is accompanied by a safety justification (Appendix A17.4: North Irish Sea Array Offshore Wind Farm - Safety Justification for Single Line of Orientation Layout) in line with the requirements of Marine Guidance Note (MGN) 654. IRCG have confirmed that with the linear alignment and consideration of SAR checklist matters that they are content that the safety justification meets the Irish guidance including SOP 07 2025 OREI Guidance and Operational Considerations for SAR and Emergency Response. Further details associated with the refined layouts are included in Appendix A5.1: Design Refinements.</p> <p>The Safety Justification prepared by the Developer demonstrates that in the case of the proposed development, hazards associated with a SLoO layout are as low as reasonably practicable (ALARP).</p>
2 (b)	<p>The EIAR under Chapter 17, Shipping and Navigation, states that as part of embedded mitigation, the fixed layouts for Project Option 1 and Project Option 2 comply with MGN 654 requirements (Marine Guidance Note (UK) guidance, Maritime and Coastguard Agency (MCA), 2021). The applicant is advised that the DoT MSO states that the proposed layout does not comply with guidance provided in MGN 654 and the MSO strongly disagrees with the summarisation of the risk to the safety of navigation posed to commercial shipping, fishing vessels, and recreational craft transiting in proximity to the southeastern corner and the Rockabill Gap. The applicant is requested to consult with the Department of Transport MSO in addressing these concerns and provide further information and clarification on such matters.</p>	<p>At that time of the 2024 EIAR, comprehensive Irish guidance was not in place and therefore use of the UK MGN 654 (MCA, 2021) was agreed for use by relevant stakeholders. Since then, the guidance has been published by Department of Transport (DoT) and in line with its requirements; the Navigational Risk Assessment (Appendix A17.1: NRA) is still informed by MGN 654. The refined layouts for Project Option 1 and Project Option 2 have a SLoO with a linear configuration which is accompanied by a safety justification (Appendix A17.4: North Irish Sea Array Offshore Wind Farm - Safety Justification for Single Line of Orientation Layout) in line with the requirements of MGN 654. The wind turbine (WTG) layouts for both Project Options 1 and 2 have also been set back from the south eastern corner which was central to the MSO's concerns.</p> <p>Continued consultation has occurred with the MSO since the submission of the 2024 EIAR in response to RFI Section 2 (b). The MSO has since confirmed (during a meeting in March 2026 as outlined in Section 4 of the NRA (Appendix A17.1)) their contentment and acceptance of the new proposed layouts noting that the PIANC guidance (PIANC, 2018) was also applied to the Rockabill Gap and resulted in an increased Structure Exclusion Zone to which the MSO have deemed suitable for safe navigation.</p>
4	<p>The documentation submitted does not provide specific detail, assessment, or review of the range of ecosystem functions and services which could be impacted by the proposed development. The National Marine Planning Framework (NMPF) states that proposals to protect, maintain, restore, and enhance coastal habitats for ecosystem functioning and provision of ecosystem services will be supported, subject to the outcome of statutory environmental assessment processes. Seafloor and Water Column Integrity Policy 3 of the NMPF also requires proposals to take account of the space required for coastal habitats, for ecosystem functioning and the provision of ecosystem services and to demonstrate that they will, in order of preference, avoid, minimise or mitigate for net loss of coastal habitats.</p>	<p>A synopsis report of ecosystem functions and services has been provided in Appendix A3.3 Ecosystem Functions and Services Assessment, which considers the full range of ecosystem services set out in the report 'Valuing Ireland's Blue Ecosystem Services' (SEMRU of NUI Galway, 2018). The outcome of individual receptor assessments concluded no material impact on ecosystem services, and no impediment to the ability of normal ecosystem functions and services to function, resulting from the proposed development.</p> <p>The Developer has not included a separate eco-system function assessment in the respective Chapters of the Addendum to the EIAR, as the conclusions of the EIAR are already directly linked to the assessment of ecosystem functions and services.</p>

RFI Section	RFI	Relevance to Chapter
	<p>The applicant is requested to update the EIAR to include an assessment of impacts (both positive and negative) on relevant ecosystem functions and services and include mitigation measures, as appropriate. The applicant is also requested to submit a synopsis report of the relevant impacts on ecosystem functions and services. In identifying the relevant ecosystem services for assessment, including those services classified as provisioning, regulation and maintenance, and cultural services, the applicant is advised to consider the full range of ecosystem services set out in the report ‘Valuing Ireland’s Blue Ecosystem Services’ (SEMRU of NUI Galway, 2018), as referenced in the NMPF. The report should also consider the need for an adaptive management framework for ongoing assessment and should include provision for appropriate monitoring of any mitigation measures and operational management strategies, as well as provision for decommissioning.</p>	<p>This includes assessment of decommissioning impacts, the need for adaptive management, ongoing monitoring and/or other mitigations.</p> <p>The Developer has updated the Seafloor and Water Column Integrity Policy 3 in the Addendum to the National Marine Planning Framework Compliance Report to provide more information to respond to RFI Section 4.</p>
5	<p>The Board notes that cumulative assessment was addressed under each topic specific chapter in the EIAR and addressed within Chapter 38 Cumulative and Interrelated Effects Assessment (CEA) (and associated Appendices 38.1 and 38.2).</p> <p>The Marine Institute in their observation raises concerns in relation to the methodology applied in the submitted cumulative effects assessment and the manner in which the information is presented, noting the lack of a standard Irish methodology in relation to CEA. The applicant is advised that guidance exists in the UK, namely Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK, September 2024 (NSIP, 2024).</p> <p>The applicant is requested to revise the submitted cumulative assessment in line with NSIP (2024) and submit a standalone document to clearly demonstrate the CEA conclusions. In the interests of consistency and transparency, the applicant is requested to complete the assessment in accordance with the templates provided in the NSIP (2024), namely “Appendix 1: Matrix 1 – Identification of ‘other development’ for CEA” and “Appendix 2: Matrix 1 – Assessment matrix” (see attached Appendix B). This assessment should include each of the Irish Sea Phase 1 ORE Projects, namely (Oriel WF (ABP-319799-24), Arklow WF (ABP-319864-24), Codling Wind Park (ABP-320768-24), and Dublin Array WF (ABP-321992-25), and all other relevant projects in the International Council for the Exploration of the Sea (ICES) Celtic Sea and Greater North Sea ecoregions, regardless of project type. It is further requested that the applicant confirm that the now published documentation pertaining to the Irish Sea Phase 1 ORE projects, which have all been submitted to the Board for planning consent since this application was submitted, have been fully incorporated into the cumulative effects assessment.</p> <p>In accordance with NSIP (2024) tiered approach, it is requested that the subject proposal and each of the Irish Sea Phase 1 ORE projects be classified under Tier 1 (“Other existing and, or approved development submitted applications under the Planning Acts or other regimes but not yet determined”).</p> <p>The applicant is requested to update the application documentation, where relevant.</p>	<p>The cumulative effects assessment has been revised in line with NSIP (2024) and relevant sections of this chapter have been updated.</p>

RFI Section	RFI	Relevance to Chapter
16	There is an existing gas interconnector pipeline located on the seabed between Ireland and Scotland, which is stated in the EIAR to be located c. 400-500 metre (m) northwest of the array area (Appendix 17.1 Navigational Risk Assessment and Chapter 20). Section 15 of Appendix 17.1 relating to cumulative impacts incorrectly states there are no subsea cables/pipeline within 2 nautical mile (nm). The applicant is requested to address the proximity of the existing gas interconnector pipeline to the north of the array area, having regard to NMPF Transmission Policy 5.	The gas interconnector (IC2) is considered in the baseline assessment as the pipeline is already in-situ and has taken into consideration throughout the risk assessment where necessary. The cumulative assessment assesses those developments which are not yet operational. This means the assessment does not include any developments which have already been considered as part of the baseline. As required by NMPF Transmission Policy 5, the Developer has also continued to engage with Gas Networks Ireland (GNI) in relation to IC2 including the undertaking of an independent risk assessment considering the proximity of the infrastructure. This was shared with GNI in January 2026 and proposes appropriate mitigation measures to conclude that the risk posed to both parties is tolerable and satisfies As Low As Reasonably Practical (ALARP) methodology.

17.1 Introduction

There are no changes to this section. Refer to Section 17.1 in Chapter 17 of the 2024 EIAR.

17.2 Methodology

17.2.1 Introduction

There are no changes to this section. Refer to Section 17.2.1 in Chapter 17 of the 2024 EIAR.

17.2.2 Study Area

There are no changes to this section. Refer to Section 17.2.2 in Chapter 17 of the 2024 EIAR.

17.2.3 Relevant Guidance and Policy

Since the submission of the 2024 EIAR, the final Irish guidance was published in June 2025 by the DoT following consultation on the draft guidance; Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI) (DoT, 2025a). Therefore, the following text from Section 17.2.3 of Chapter 17 of the 2024 EIAR shall be deleted:

“The draft Irish guidance was published by the Department of Transport (DoT) for consultation in January 2024 consisting of the main document – Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations (OREI) (DoT, 2024) – and annexes covering the NRA methodology and Search and Rescue (SAR). The draft Irish guidance is based on the principles of MGN 654, with the introduction stating that the MCA gave permission for MGN 654 to be used when compiling the draft Irish guidance. Therefore, it remains appropriate to apply the principles of MGN 654 in the assessment of shipping and navigation.”

And replaced by the following:

The draft guidance was published by the Department of Transport (DoT) for consultation in January 2024 consisting of the main document – Marine Navigational Safety & Emergency Response Risk of Offshore Renewable Energy Installations (OREI) – and annexes covering the NRA methodology and SAR. The draft Irish guidance was based on the principles of MGN 654, with the introduction stating that the MCA gave permission for MGN 654 to be used when compiling the draft Irish guidance. Since then, and following consultation on the draft guidance, the final guidance was published in June 2025 by the DoT; Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI) (DoT, 2025a). This guidance document states in Section 1.4:

“It is recognised that all OREI projects are at varying stages of planning and development, both pre-consent and post-consent, therefore proposals on meeting the principles of this guidance for undertaking marine works will be assessed on a ‘case by case’ basis. Albeit it is noted that OREI developments predating the publication of this guidance will have already been designed with reference to the UK MCA’s Marine Guidance Notice MGN 654 (M+F) (the successor to the UK’s Marine Guidance Notice MGN 275(M)), upon which this Department of Transport guidance is based.”

Therefore, it still remains appropriate to apply the principles of MGN 654 in the assessment of shipping and navigation for this Chapter and the NRA (Appendix A17.1) in line with the DoT guidance (2025a). This approach is also considered reasonable as the principles of MGN 654 and the DoT guidance (2025a) are closely aligned.

In addition to those key guidance documents outlined in Chapter 17 of the 2024 EIAR, the following documents are now also of relevance to the specific shipping and navigation consideration due to the publication of the DoT guidance:

- Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI) (DoT, 2025a)
- Standard Operating Procedure 07-2025 Offshore Renewable Energy Installations (OREI): Guidance and Operational Considerations for SAR and Emergency Response (DoT, 2025b)

In response to RFI Section 16, the addition of the National Marine Planning Framework (NMPP) Transmission Policy 5 has is required under the key policies relevant to the assessment. Therefore, Table 17.1 of Chapter 17 of the 2024 EIAR will be replaced with Table A17.1.

Table A17.1 Key policies relevant to the assessment (replaces Table 17.1 in Chapter 17: Shipping and Navigation of the 2024 EIAR)

Policy Name	Policy Description	Where addressed
National Marine Planning Framework (2021)	<p>Ports, Harbours, and Shipping Policy 1:</p> <p>To provide for shipping activity and freedom of navigation the following factors will be taken into account when reaching decisions regarding development and use:</p> <ul style="list-style-type: none"> • The extent to which the locational decision interferes with existing or planned routes used by shipping, access to ports and harbours and navigational safety. This includes commercial anchorages and approaches to ports as well as key littoral and offshore routes; • A mandatory NRA; • Where interference is likely, whether reasonable alternatives can be identified. • Where there are no reasonable alternatives, whether mitigation through measures adopted in accordance with the principles and procedures established by the IMO can be achieved at no significant cost to the shipping or ports sector. 	<p>Impacts associated with deviation, ports and anchorages are assessed in Section 17.5.</p> <p>An NRA has been drafted in support of this chapter as required, this is provided in Appendix A17.1.</p> <p>The assessment of likely significant effects in Section 1.5 determined that the significance of effect for each impact is broadly acceptable or tolerable with mitigation which is not significant in EIA terms, i.e., no significant interference is anticipated, and so no additional mitigation and monitoring measures are identified in Section 1.6.</p>
	<p>Ports, Harbours, and Shipping Policy 2:</p> <p>Proposals that may have a significant impact upon current activity and future opportunity for expansion of port and harbour activities should demonstrate that they will, in order of preference: a) avoid, b) minimise, c) mitigate significant adverse impacts, d) if it is not possible to mitigate significant adverse impacts on current activity and future opportunity for expansion of port and harbour activities, proposals should set out the reasons for proceeding.</p>	<p>Impacts associated with safety of port operations and access are assessed in Section 17.5 with no significant effects identified.</p>
	<p>Ports, Harbours, and Shipping Policy 3:</p> <p>Proposals that may have a significant impact upon current activity and future opportunity for expansion of port and harbour activities must demonstrate consideration of the National Ports Policy, the National Planning Framework, and relevant provisions related to the TEN-T network.</p>	<p>Impacts associated with safety of port operations and access are assessed in Section 17.5 with no significant effects identified.</p>
	<p>Ports, Harbours, and Shipping Policy 4:</p> <p>Proposals within ports limits, beside or in the vicinity of ports and/or that impact upon the main routes of significance to a port must demonstrate within applications that they have:</p> <ul style="list-style-type: none"> • been informed by consultation at pre-application stage or earlier with the relevant port authority; • have carried out an NRA including an analysis of maritime traffic in the area; and • have consulted the Department of Transport, MSO and Irish Lights. <p>Applicants must continue to engage parties identified in pre-application processes as appropriate during the decision-making process.</p>	<p>As noted in Section 17.1, feedback from consultation with key stakeholders has been undertaken and is included within Section 4 of the NRA. This includes the MSO, Irish Lights, IRCG, Irish Chamber of Shipping, and Dublin Port Company and Drogheda Port Company as local ports.</p> <p>The NRA also includes analysis of vessel traffic in the area based on multiple data sources.</p>

Policy Name	Policy Description	Where addressed
	<p>Safety at Sea Policy 1:</p> <p>Proposals for installation, operation, and decommissioning of Offshore Wind Farms must demonstrate how they will:</p> <ul style="list-style-type: none"> • Minimise navigational risk between commercial vessels arising from an increase in the density of vessels in maritime space as a result of wind farm layout; and • Allow for recreational vessels within the Offshore Wind Farm (including consideration of turbine height) or redirect recreational vessels, minimising navigational risk arising between recreational and commercial vessels. 	<p>Impacts to commercial and recreational vessels are assessed in Section 17.5 including in relation to changes in navigable sea room and WTG blade air gap, with no significant effects identified.</p>
	<p>Safety at Sea Policy 2:</p> <p>Proposals for offshore renewable energy infrastructure that have the potential to significantly reduce under-keel clearance must demonstrate how they will, in order of preference (a) avoid, (b) minimise, (c) mitigate adverse impacts, or (d) if it is not possible to mitigate significant adverse impacts, proposals should set out the reasons for proceeding.</p>	<p>Impacts associated with under keel clearance are assessed in Section 17.5 with no significant effects identified.</p>
	<p>Safety at Sea Policy 3:</p> <p>All proposals for temporary or permanent fixed infrastructure in the maritime area must ensure navigational marking in accordance with appropriate international standards and ensure inclusion in relevant charts where applicable.</p>	<p>As per Section 17.6, lighting and marking as directed by Irish Lights and in compliance with the IALA G1162 (IALA, 2021a) has been assumed as a mitigation and monitoring measure.</p>
	<p>Safety at Sea Policy 4:</p> <p>Establishing, changing or disestablishing Aids to Navigation (AtoN) must be sanctioned, in advance of works, by Irish Lights.</p>	<p>As per Section 17.6, lighting and marking as directed by Irish Lights and in compliance with IALA G1162 (IALA, 2021a) has been committed to as a mitigation and monitoring measure, as has marking on relevant nautical charts.</p>
	<p>Safety at Sea Policy 5:</p> <p>Proposals must identify their potential impact, if any, on Maritime Emergency Response (SAR, Maritime Casualty and Pollution Response) operations. Where a proposal may have a significant impact on maritime SAR it must demonstrate how it will, in order of preference (a) avoid, (b) minimise, (c) mitigate adverse impacts, or (d) if it is not possible to mitigate significant adverse impacts, proposals should set out the reasons for proceeding, supported by parties responsible for maritime SAR.</p>	<p>Impacts associated with SAR operations are assessed in Section 17.5 with no significant effects identified.</p>

Policy Name	Policy Description	Where addressed
	<p>Transmission Policy 5:</p> <p>Proposals for construction or operation activities within one nautical mile of either of the two existing natural gas interconnector pipelines shall be avoided.</p> <p>If construction or operation activities are proposed to take place within one nautical mile of either of the two existing natural gas interconnector pipelines, the views of Gas Networks Ireland in relation to how such activities could impact the pipelines shall be taken into account and either appropriate mitigation measures put in place or the proposed activities altered.</p> <p>If construction or operation activities involve the crossing of either of the two existing natural gas interconnector pipelines by other pipelines or cables, the views of Gas Networks Ireland in relation to how such activities could impact the pipelines shall be taken into account and either appropriate mitigation measures be put in place or the proposed activities altered.</p>	<p>The Developer has continued to engage with Gas Networks Ireland (GNI) in relation to IC2 including the undertaking of an independent risk assessment considering the proximity of the infrastructure (Appendix A1.2: Consultation Report).</p>

There are no further changes required to this section. Refer to Section 17.2.3 of Chapter 17 of the 2024 EIAR.

17.2.4 Data Collection and Collation

17.2.4.1 Site-specific Surveys

During consultation in May 2025 as outlined in Appendix A17.1, the MSO confirmed that for the updated NRA, the survey data assessed in the 2024 EIAR remains valid and there was no requirement to undertake any further surveys or vessel traffic data collection which complies with RFI Section 1 (c). Therefore, there are no further changes required to this section. Refer to Section 17.2.4.1 of Chapter 17 of the 2024 EIAR.

17.2.4.2 Desk-based Review

Due to the review of the baseline environment in response to RFI Section 1 (b), the most up to date publicly available information has been used to update the baseline in Chapter 17 of the 2024 EIAR, where relevant. Therefore, Table 17.2 of Chapter 17 of the 2024 EIAR will be replaced with Table A17.2.

Table A17.2 Other available data and information sources (replaces Table 17.2 in Chapter 17 of the 2024 EIAR)

Data Set	Spatial Coverage	Year	Notes
12 Months AIS Data (Long-Term Dataset)	Shipping and navigation study area.	2022	Allowed for long term assessment including capture of seasonal or low use routing. Does not include non-AIS vessels.
Royal National Lifeboat Institution (RNLI) incident data	Shipping and navigation study area.	2015-2024	Captures any incidents responded to by the RNLI.
Marine Casualty Investigation Board (MCIB) database	Shipping and navigation study area.	2002-2024	Not all incident reports provide precise location details.
United Kingdom Hydrographic Office (UKHO) Admiralty Charts	International dataset providing coverage throughout the Irish Sea.	2025	Admiralty charts 44-0, 1121-0, 1411-0, 1415-0, and 1431-0. Analysis based on latest chart information available.
Admiralty Sailing Directions	International dataset providing coverage throughout the Irish Sea.	2019	Irish Coast Pilot NP40.
Anatec Ship Routes database	Shipping and navigation study area.	2026	Regularly updated based on vessel traffic data throughout the Irish Sea.
Weather data from Light Detection and Ranging (LiDAR) buoys deployed for NISA	Two buoys at locations in proximity to the proposed development covering the shipping and navigation study area.	2019-2022	Weather data used as an input to the collision and allision ¹ risk modelling. Further details of the modelling including scenarios considered, is provided in Section 17 of the NRA.
Visibility data provided in Admiralty Sailing Directions	International dataset providing coverage throughout the Irish Sea.	2019	Irish Coast Pilot NP40.
Tidal data provided by UKHO Admiralty Charts	International dataset providing coverage throughout the Irish Sea.	2025	Charts 44-0 and 1141-0.

There are no further changes required to this section. Refer to Section 17.2.4.2 of Chapter 17 of the 2024 EIAR.

¹ Collision refers to the act or process of one moving object striking another moving object; allision refers to the act or process of a moving object striking a stationary object.

17.2.4.3 Data Limitations

Since the submission of the 2024 EIAR, the Marine Casualty Investigation Board (MCIB) has been dissolved and replaced by the newly formed Marine Accident Investigation Unit (MAIU) as of 1 January 2026. The MAIU will carry out Ireland's statutory marine accident investigations but due to the date of implementation, there has been no newly published incidents that have undergone a complete investigation by the MAIU. Therefore, the assessment remains as per Chapter 17 of the 2024 EIAR and the reported incidents included in the analysis were carried out by the MCIB.

There are no further changes required to this section. Refer to Section 17.2.4.3 of Chapter 17 of the 2024 EIAR.

17.2.4.4 Methodology for Assessment of Effects

There are no changes to this section. Refer to Section 17.2.4.4 in Chapter 17 of the 2024 EIAR.

17.2.4.5 Definitions

There are no changes to this section. Refer to Section 17.2.4.5 in Chapter 17 of the 2024 EIAR.

17.2.4.6 Defining the significance of effect

There are no changes to this section. Refer to Section 17.2.4.6 in Chapter 17 of the 2024 EIAR.

17.3 Baseline Environment

17.3.1 Navigational features

Navigational features have been reviewed since the 2024 EIAR due to the update in published UKHO Admiralty Charts. This ensures that the baseline conditions for consideration in the risk assessment are reflective of the current environment and complies with RFI Section 1 (b). Figure 17.2 Chapter 17 of the 2024 EIAR detailing the navigational features has been updated and is replaced by Figure A17.1. Updates to navigational features include the addition of the following text to Section 17.3.1 of Chapter 17 of the 2024 EIAR:

A prohibited fishing activity area was introduced in May 2025 by Drogheda Port Company which is situated on the approaches to the River Boyne in an area of approximately 8.4 nm², all contained within the Limits of Drogheda Port Company, which notes “*Any activity by vessels engaged in fishing is strictly prohibited within the area*” (Drogheda Port Company, 2025).

Additionally, and effective from 1 January 2026, any vessel operating within the limits of Drogheda Port Company must be equipped with a fully operational AIS (Drogheda Port Company, 2025).

There are no further changes to this section. Refer to Section 17.3.1 in Chapter 17 of the 2024 EIAR.

17.3.2 Historical maritime incidents

Maritime incident data has been updated to the most recent publicly available data sets and complies with RFI Section 1 (b), the text and Figure 17.3 from Section 17.3.2 of Chapter 17 of the 2024 EIAR shall be deleted and replaced with Figure A17.2 and the text herein.

A plot of the locations of the incidents reported to the RNLI between 2015 and 2024 (inclusive) within the shipping and navigation study area, colour-coded by incident type, is presented in Figure A17.2.

Excluding hoaxes and false alarms, a total of 281 unique incidents were responded to by the RNLI within the study area between 2015 and 2024, corresponding to an average of 28 incidents per year, noting approximately 81% occurred within 2nm of the Irish east coast, including a large proportion clustered near Skerries Harbour. One incident was recorded within the array area; an equipment failure incident associated with a sailing vessel. Six unique incidents were recorded in the ECC.

The most common incident type is person in danger, accounting for 33% of the data. This is followed by machinery failure and unspecified incidents which accounted for 27% and 21%, respectively. The most frequent casualty type was person in danger (33%) , followed by fishing vessels (19%).

The closest RNLi station to the offshore development area is the Skerries RNLi Station at approximately 6nm from the array area which responded to 64% of all incidents within the study area over the 10-year period.

There were four documented MCIB incidents within the study area during the same period assessed (2015 to 2024). These incidents occurred close to the coast and are as follows:

- an incident in 2016 involving a fishing vessel which foundered
- an incident in 2017 involving a fishing vessel which capsized resulting in one fatality
- an incident in 2020 involving a fishing vessel which experienced an injury to a crew member
- an incident in 2022 involving a fishing vessel which experienced injury to multiple crew members

There are no further changes to this section. Refer to Section 17.3.2 in Chapter 17 of the 2024 EIAR.

17.3.3 Vessel traffic movements

There are no changes to this section. Refer to Section 17.3.3 in Chapter 17 of the 2024 EIAR.

17.4 Characteristics of the Proposed Development

The changes required to Section 17.4 in Chapter 17 of the 2024 EIAR relate to the foundations, water depths, and maximum vessel numbers and are outlined further in Appendix A5.1: Design Refinements. For the purposes of clarity, Table 17.8 of Chapter 17 of the 2024 EIAR will be replaced with Table A17.3.

Table A17.3 Key characteristics of Project Option 1 and Project Option 2 (replaces Table 17.8 of Chapter 17 of the 2024 EIAR)

Project Option 1	Project Option 2
<p>Array area during construction/ decommissioning:</p> <ul style="list-style-type: none"> • Construction/ decommissioning phase of approximately three years. • 49 Wind Turbine Generators (WTG) on suction bucket jacket foundations with sea surface dimensions of 25×25m. • One offshore substation platform (OSP) with topside dimensions of 45×45m located on the western periphery of the array area. • Buoyed construction/ decommissioning area encompassing the maximum extent of the array area. • Maximum peak of 50 construction/ decommissioning vessels on-site simultaneously. • Total number of 3,032 return trips to port. 	<p>Array area during construction/ decommissioning:</p> <ul style="list-style-type: none"> • Construction/ decommissioning phase of approximately three years. • 35 WTG on suction bucket jacket foundations with sea surface dimensions of 25×25m. • One offshore substation platform (OSP) with topside dimensions of 45×45m located on the western periphery of the array area. • Buoyed construction/ decommissioning area encompassing the maximum extent of the array area. • Maximum peak of 47 construction/ decommissioning vessels on-site simultaneously. • Total number of 2,504 return trips to port.
<p>ECC during construction/ decommissioning:</p> <ul style="list-style-type: none"> • Two offshore export cables each of 9.7nm length. • Separation of 50m – 200m between offshore export cables. • Maximum peak of 50 construction/ decommissioning vessels on-site simultaneously. • Total number of 3,032 return trips to port. 	<p>ECC during construction/ decommissioning:</p> <ul style="list-style-type: none"> • Two offshore export cables each of 9.7nm length. • Separation of 50m – 200m between offshore export cables. • Maximum peak of 47 construction/ decommissioning vessels on-site simultaneously. • Total number of 2,504 return trips to port.
<p>Array area during operation:</p> <ul style="list-style-type: none"> • Operational life of 35 years. • 49 WTG on suction bucket jacket foundations with sea surface dimensions of 25×25m. • One offshore substation platform (OSP) with topside dimensions of 45×45m located on the western periphery of the array area. • Single line of orientation (SLoO)² in array layout. • Minimum WTG air draft of 40m above Lowest Astronomical Tide (LAT) • 60nm of inter-array cables. • Trench depths for inter-array cables of 1m – 3m. • Proportion of inter-array cable protection requirement of 20%. • Five potential cable or pipeline crossings for inter-array cables. • Maximum peak of 12 operational vessels on-site simultaneously. • Total number of 1,261 annual round trips to port. 	<p>Array area during operation:</p> <ul style="list-style-type: none"> • Operational life of 35 years. • 35 WTG on suction bucket jacket foundations with sea surface dimensions of 25×25m. • One OSP with topside dimensions of 45×45m located on the western periphery of the array area. • SLoO in array layout. • Minimum WTG air draft of 40*/ 35**m above LAT. • 49nm of inter-array cables • Trench depth for inter-array cables of 1m - 3m. • Proportion of inter-array cable protection requirement of 20%. • Five potential cable or pipeline crossings for inter-array cables. • Maximum peak of 12 operational vessels on-site simultaneously. • Total number of 1,055 annual round trips to port.

² An array layout which includes one consistent bearing for which SAR lanes may be defined between rows of surface piercing structures in compliance with MGN 654

Project Option 1	Project Option 2
<p>ECC during operation:</p> <ul style="list-style-type: none"> Operational life of 35 years. Two offshore export cables each of 9.7nm length. Separation of 50m – 200m between offshore export cables. Trench depth for offshore export cables of 1m-3m. Proportion of export cable protection requirement of 20%. No anticipated cable or pipeline crossings for any offshore export cable. 	<p>ECC during operation:</p> <ul style="list-style-type: none"> Operational life of 35 years. Two offshore export cables each of 9.7nm length. Separation of 50m-200m between offshore export cables. Trench depth for offshore export cables of 1m–3m. Proportion of export cable protection requirement of 20%. No anticipated cable or pipeline crossings for any offshore export cable.

*When located outside the aviation restricted zone

**When located inside the aviation restricted zone

With regard to the Structure Exclusion Zone, the MSO raised concerns during consultation that this initial gap (3nm) was insufficient to maintain safety of navigation in the area (Appendix A17.1). Therefore, the PIANC Guidance (PIANC, 2018) was reviewed and concluded that the 3nm gap was sufficient for the average vessel length utilising the surrounding area but not the largest vessel recorded throughout the study area. In light of this, the Developer has committed to increasing this gap in order to ensure that both Drogheda feedback and the PIANC guidance are incorporated within the Structure Exclusion Zone. Subsequently, a gap of 3.06nm has been considered sufficient. The full breakdown of the PIANC guidance approach to the Rockabill Gap is included in Appendix A17.1: NRA and complies with RFI Section 2 (b).

Additionally, due to concerns raised by the IRCG on linear alignment of the layout raised in RFI Section 2 (a), both Project Option 1 and Project Option 2 WTG layouts have been refined within the array area in liaison with the IRCG to allow for linear alignment, inclusive of Limits of Deviation (LOD) and Micrositing.

Figure 17.8 of the 2024 EIAR detailing the Structure Exclusion Zone has been updated and is replaced by Figure A17.3. Figure 17.7 of the 2024 EIAR detailing the Layout for Shipping and Navigation (Project Option 1) has been updated and is replaced by Figure A17.4 (the Layout for Project Option 2 can be viewed in Chapter 6: Description of the Proposed Development – Offshore. Therefore, the following text from Section 17.4 of Chapter 17 of the 2024 EIAR shall be deleted:

In relation to the WTG layout, no surface infrastructure, inclusive of blade overfly, will be present within 3nm of Rockabill, with the portion of the array area within 3nm of Rockabill defined as the Structure Exclusion Zone. This is captured as an embedded mitigation measure in Section 1.4.5 and is illustrated in Figure 17.8.

The layout for Project Option 1 is displayed in Figure 17.7 of Volume 7A. In the interest of shipping and navigation, the WTG layout deemed to have the greatest severity of consequence is associated with Project Option 1. This is due to Project Option 1 including the maximum number of structures, thus maximising vessel exposure to allision risk. The minimum spacing between WTGs (measured centre-to-centre) is 910m subject to Limits of Deviation (LoD). Both Project Option 1 and Project Option 2 have a 500m LoD, with this parameter defined to allow flexibility with WTG siting following further detailed site investigations, detailed design and consultation with stakeholders. The WTG layout for Project Option 1 also includes a SLoO. This layout is considered to be compliant with the requirements of MGN 654 (MCA, 2021), noting that (as stated in Section 1.2.3) the draft DoT guidance is closely aligned. The proposed development (including the layout options) has been subject to a comprehensive NRA as required by the methodology agreed with shipping regulators, notably the MSO, prior to the NRA process commencing. No specific national guidance on NRA currently exists, but the assessment undertaken has taken account of international best practice and precedent in respect of offshore wind developments in the UK. The Developer is aware that draft specific national guidance is currently under review and that engagement with the IRCG, if required, upon publication of the final guidance documents (which is not expected to be published until later this year) may result in the requirement for a safety justification for the layout to be undertaken. This would be specifically for the IRCG's own access assessment and to ensure requirements within the guidance are complied with.

And replaced with the following:

In relation to the WTG layout, no surface infrastructure, inclusive of blade overfly, will be present within 3.06nm of Rockabill, with the portion of the array area within 3.06nm of Rockabill defined as the Structure Exclusion Zone. This is captured as an embedded mitigation measure in Section 17.4.5 and is illustrated in Figure A17.3.

The refined layout for Project Option 1 is displayed in Figure A17.4. In the interest of shipping and navigation, the WTG layout deemed to have the greatest severity of consequence is associated with Project Option 1. This is due to Project Option 1 including the maximum number of structures, thus maximising vessel exposure to allision risk.

Both Project Option 1 and Project Option 2 have been designed and refined in liaison with the IRCG to ensure that SAR access lanes are available in at least one line of orientation throughout the array area and have been defined using the methodology described in the SOP 07 2025 OREI Guidance and Operational Considerations for SAR and Emergency Response (DoT, 2025b), i.e., all are at least 500m width measured tip to tip. This is achievable due to an update to the WTG structure foundations to suction bucket jackets, which introduces greater flexibility for WTG placement with respect to seabed conditions, compared to monopiles and jackets with pin piles, and subsequently allows the structures to be positioned in straight rows.

Due to constraints such as WTG technology and available water depth for installation vessels as well as other limitations associated with ornithology, archaeology, commercial fisheries, wake loss/ energy production, and Seascape, Landscape and Visual Impact Assessment (SLVIA) considerations, a regular grid layout was not achievable for either layout option and so a SLoO is required to maintain project viability. In line with MGN 654 (MCA, 2021), a Safety Justification for a SLoO layout has been prepared by the Developer (Appendix A17.4: North Irish Sea Array Offshore Wind Farm - Safety Justification for Single Line of Orientation Layout) to demonstrate that in the case of the proposed development, hazards associated with a SLoO are As low as reasonably practicable (ALARP) and is specifically for the IRCG's own access assessment and to ensure requirements within the guidance are complied with.

Positions in these layouts could change by up to 500m through use of Limit of Deviation (LoD) i.e., a distance within which the Developer can move a structure from its consented position due to constraints identified from the pre-construction geotechnical surveys which then require a structure relocation. This would be applied pre-construction and relocation will only occur if linear alignment along the row of structures can be retained. This is to ensure that sufficient SAR access and probability of detection is maintained. As well as LoD, micrositing at a local extent at the time of installation may also be required up to 100m from the consented position. This could be due to smaller localised hard constraints not previously identified by geotechnical surveys. Again, relocation would only occur if linear alignment along the row of structures can be retained. However, the application of micrositing, as standard within the industry, will not be consulted upon at the time of installation but the final as built locations will be reported to IRCG and MSO. This is required given the on-site flexibility required during the installation activity when vessels will be active on-site. This was approach was discussed and agreed with the IRCG and MSO during consultation (Appendix A17.1: NRA).

There are no further changes to this section. Refer to Section 17.4 in Chapter 17 of the 2024 EIAR.

17.4.1 Parameters for Assessment

There are no changes to this section. Refer to Section 17.4.1 in Chapter 17 of the 2024 EIAR.

17.4.2 Construction Phase

There are no changes to this section. Refer to Section 17.4.2 in Chapter 17 of the 2024 EIAR.

17.4.3 Operational Phase

There are no changes to this section. Refer to Section 17.4.3 in Chapter 17 of the 2024 EIAR.

17.4.4 Decommissioning Phase

There are no changes to this section. Refer to Section 17.4.4 in Chapter 17 of the 2024 EIAR.

17.4.5 Embedded Mitigation Measures

With the publication of the DoT guidance and the increase in the Structure Exclusion Zone due to the amendment of the Rockabill Gap, the relevant embedded mitigation measures in Table 17.9 of Chapter 17 of the 2024 EIAR shall be deleted and is replaced by the those outlined in Table A17.4.

Table A17.4 Embedded mitigation measures relating to Shipping and Navigation (replaces Table 17.9 of Chapter 17 of the 2024 EIAR)

Measure	Mitigation detail
Construction	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a construction or maintenance vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Buoyed construction area	A buoyed construction area around the array will be implemented during the appropriate phases in agreement with Irish Lights and as outlined in Appendix A17.3: Lighting and Marking Plan (LMP).
Cable protection	Cable protection (burial or external protection) will be implemented and monitored, as determined by a cable burial risk assessment post consent.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the DoT Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI) published by DoT in 2025 is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.
Liaison with IRCG in relation to SAR resources	The Developer will liaise with the IRCG in relation to SAR resources to ensure the Emergency Response Cooperation Plan (ERCoP) is in place post consent.
Lighting and marking	Lighting and marking of the array in agreement with Irish Lights and in line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162. A separate LMP is provided in Appendix A17.3.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels. A separate Vessel Management Plan (VMP) is provided in Appendix A17.2.
Marking on nautical charts	There will be appropriate marking of all offshore infrastructure associated with the offshore development area on UKHO Admiralty charts.
Proposed development compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including International Regulations for Preventing Collisions at Sea (COLREGs) and International Convention for the Safety of Life at Sea (SOLAS). A separate VMP is provided in Appendix A17.2.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the project Fisheries Liaison Officer (FLO) and Marine Notices (where deemed appropriate).
Structure Exclusion Zone	An area within the array area within which no surface piercing structure will be located inclusive of blade overfly. This area will ensure that a minimum 3.06nm gap between the Rockabill islands and the surface infrastructure is maintained. In practice, given the fixed nature of the layouts, the gap will be greater even when considering LoD/ micrositing principles.
Operation	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a maintenance vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Cable protection	Cable protection (burial or external protection) will be implemented and monitored, as determined by a cable burial risk assessment post consent.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the Irish Guidance published by DoT is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.
Lighting and marking	Lighting and marking of the array in agreement with Irish Lights and in line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162. A separate LMP is provided in Appendix A17.3.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels during operation. A separate VMP is provided in Appendix A17.2.
Marking on nautical charts	There will be appropriate marking of all offshore infrastructure associated with the offshore development area on UKHO Admiralty charts.

Measure	Mitigation detail
Minimum blade clearance	There will be a minimum blade clearance of more than 22 m above highest Astronomical Tide (HAT) in line with industry good practice and MGN 654. The lowest minimum blade clearance associated with the proposed development is 35m above LAT associated with selected WTGs for Project Option 2.
Proposed development vessel compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including COLREGs and SOLAS.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the FLO and Marine Notices (where deemed appropriate).
Structure Exclusion Zone	An area within the array area within which no surface piercing structure will be located inclusive of blade overfly. This area will ensure that a minimum 3.06nm gap between the Rockabill islands and the array is maintained. See Figure A17.3. In practice, given the fixed nature of the layouts and LoD/micrositing principles, the gap will be greater.
WTG design and layouts	Consideration will be given to navigational safety and SAR with respect to WTG and layout design (with respect to the 500m LoD), including acceptable levels of SCADA systems.
Decommissioning	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a decommissioning vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Buoyed decommissioning area	A buoyed construction decommissioning area around the array area will be implemented during the appropriate phases in agreement with Irish Lights as outlined in the LMP in Appendix 17.3.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the Irish Guidance published by DoT is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.
Liaison with IRCG in relation to SAR resources	The Developer will liaise with the IRCG in relation to SAR resources to ensure the ERCoP is in place post consent.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels. A separate VMP is provided in Appendix A17.2.
Proposed development vessel compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including COLREGs and SOLAS.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the project FLO and Marine Notices (where deemed appropriate).

There are no further changes to this section. Refer to Section 17.4.5 in Chapter 17 of the 2024 EIAR.

17.4.6 Potential Impacts

Due to updated proposed development characteristics which are outlined further in Appendix A5.1, a change in vessel numbers and associated round trips during the construction and decommissioning phases has occurred. Therefore, Table 17.10 in Chapter 17 of the 2024 EIAR shall be replaced with Table A17.5.

Table A17.5 Potential impact and severity of consequence per project option. The project option that has the greatest severity of consequence is identified in blue (replaces Table 17.10 of Chapter 17 of the 2024 EIAR)

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
Construction			
Impact 1: Vessel displacement and increased vessel to vessel collision risk (array area)	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 50 construction vessels simultaneously</p> <p>Total number of 3,032 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 47 construction vessels simultaneously</p> <p>Total number of 2,504 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk due to the offshore infrastructure within the array area results from activities associated with the installation of structures as well as the presence of surface structures within the array area.</p> <p>Project Option 1 has a greater number of simultaneous construction vessels and return trips and therefore presents the greatest severity of consequence.</p>
Impact 2: Vessel displacement and increased vessel to vessel collision risk (ECC)	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 50 construction vessels simultaneously (18 of which are associated with the export cable installation)</p> <p>Total number of 3032 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm offshore export cables.</p>	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 47 construction vessels simultaneously (18 of which are associated with the export cable installation)</p> <p>Total number of 2504 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm offshore export cables.</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk within the ECC results from activities associated with the installation of export cables within the ECC.</p> <p>Two 9.7nm export cables will be installed.</p> <p>Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels (18) associated with cable installation activities and therefore present equal severity of consequence.</p>
Impact 3: Third-party to proposed development vessel collision risk (array area)	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 50 construction vessels simultaneously</p> <p>Total number of 3,032 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 47 construction vessels simultaneously</p> <p>Total number of 2,504 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>The greatest likely significant effect for third-party to proposed development vessel collision risk within the array area results from the presence of proposed development vessels associated with construction activities.</p> <p>Project Option 1 has a greater number of simultaneous construction vessels and return trips and therefore presents the greatest severity of consequence.</p>
Impact 4: Third-party to proposed development vessel collision risk (ECC)	<p>Construction phase: Approximately three years</p>	<p>Construction phase: Approximately three years</p>	<p>The greatest likely significant effect for third-party to proposed development vessel collision risk within the ECC results from the presence of proposed development vessels associated with construction activities.</p>

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
	<p>Construction vessels: Maximum peak of 50 construction vessels simultaneously (18 of which are associated with export cable installation) Total number of 3032 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm export cables.</p>	<p>Construction vessels: Maximum peak of 47 construction vessels simultaneously (18 of which are associated with export cable installation) Total number of 2504 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm export cables.</p>	Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels (18) associated with cable installation activities and therefore present equal severity of consequence.
Impact 5: Reduced access to local ports (array area)	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 50 construction vessels simultaneously Total number of 3,032 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 47 construction vessels simultaneously Total number of 2,504 return trips to port</p> <p>Array area: Buoyed construction area encompassing full array area</p>	<p>The greatest likely significant effect for reduced access to local ports within the array area results from restriction in port access due to construction within the array area as well as the presence of proposed development vessels.</p> <p>Project Option 1 has a greater number of simultaneous construction vessels and return trips and therefore presents the greatest severity of consequence.</p>
Impact 6: Reduced access to local ports (ECC)	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 50 construction vessels simultaneously (18 of which are associated with cable installation) Total number of 3032 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm export cables.</p>	<p>Construction phase: Approximately three years</p> <p>Construction vessels: Maximum peak of 47 construction vessels simultaneously (18 of which are associated with cable installation) Total number of 2504 return trips to port</p> <p>Export cable installation: Installation of two 9.7nm export cables.</p>	<p>The greatest likely significant effect for reduced access to local ports within the ECC results from restriction in port access due to cable installation activities within the ECC.</p> <p>Installation activities within the ECC are the same for Project Option 1 and Project Option 2 and therefore both projects present equal severity of consequence.</p>
Operation			
Impact 7: Vessel displacement and increased vessel to vessel collision risk (array area)	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,261 annual round trips to port</p> <p>Array area: 49 WTGs, one OSP</p>	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of annual 1,055 round trips to port</p> <p>Array area: 35 WTGs, one OSP</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk due to the array area results from the necessary deviation around surface structures within the array area.</p> <p>Project Option 1 has a greater number of surface infrastructure (49 WTGs) therefore presents the greatest severity of consequence.</p>

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
Impact 8: Vessel displacement and increased vessel to vessel collision risk (ECC)	<p>Operational phase: 35 years</p> <p>Cable maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,261 annual round trips to port</p> <p>Export cables: Two 9.7nm export cables</p>	<p>Operational phase: 35 years</p> <p>Cable maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,055 annual round trips to port</p> <p>Export cables: Two 9.7nm export cables</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk within the ECC results from necessary deviation around activities associated with the maintenance of export cables within the ECC.</p> <p>Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels (18) associated with cable maintenance activities and therefore present equal severity of consequence.</p>
Impact 9: Third-party to proposed development vessel collision risk (array area)	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,261 annual round trips to port</p> <p>Array area: 49 WTGs, one OSP</p>	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,055 annual round trips to port</p> <p>Array area: 35 WTGs, one OSP</p>	<p>The greatest likely significant effect for third-party to proposed development vessel collision risk within the array area results from the presence of maintenance vessels within the array area.</p> <p>Project Option 1 has a greater number of vessel return trips and therefore presents the greatest severity of consequence.</p>
Impact 10: Third-party to proposed development vessel collision risk (ECC)	<p>Operational phase: 35 years</p> <p>Cable maintenance vessels: Maximum peak of 12 vessel simultaneously Total number of 1,261 annual round trips to port</p> <p>Export cables: Two 9.7nm export cables.</p>	<p>Operational phase: 35 years</p> <p>Cable maintenance vessels: Maximum peak of 12 vessel simultaneously Total number of 1,055 annual round trips to port</p> <p>Export cables: Two 9.7nm export cables.</p>	<p>The greatest likely significant effect for third-party to proposed development vessel collision risk within the ECC results from the presence of maintenance vessels within the ECC.</p> <p>Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels associated with maintenance activities and therefore present equal severity of consequence</p>
Impact 11: Reduced access to local ports (array area)	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,261 annual round trips to port</p> <p>Array area: 49 WTGs, one OSP</p>	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously Total number of 1,055 annual round trips to port</p> <p>Array area: 35 WTGs, one OSP</p>	<p>The greatest likely significant effect for reduced access to local ports within the array area results from the presence of surface structures and maintenance activities within the array area.</p> <p>Project Option 1 has a greater abundance of infrastructure (49 WTGs) and presents the greatest severity of consequence.</p>
Impact 12: Reduced access to local ports (ECC)	<p>Operational phase: 35 years</p>	<p>Operational phase: 35 years</p>	<p>The greatest likely significant effect for reduced access to local ports within the ECC results from maintenance activities associated with the ECC.</p>

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
	Cable maintenance vessels: Maximum peak of 12 vessel simultaneously Total number of 1,261 annual round trips to port Export cables: Two 9.7nm export cables.	Cable maintenance vessels: Maximum peak of 1 vessel simultaneously Total number of 1 annual round trips to port Export cables: Two 9.7nm export cables.	Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels (12) on-site associated with maintenance activities and therefore present equal severity of consequence.
Impact 13: Creation of vessel to structure allision risk (array area)	Operational phase: 35 years Array area: 49 WTGs, one OSP, SLoO layout	Operational phase: 35 years Array area: 35 WTGs, one OSP, SLoO layout	The greatest likely significant effect for creation of vessel to structure allision risk within the array area result from the presence of surface structures. Project Option 1 has a greater abundance of infrastructure (49 WTGs) and presents the greatest severity of consequence.
Impact 14: Reduction in under keel clearance (array area)	Operational phase: 35 years Inter-array cables: 60nm of inter-array cables, trench depths for inter-array cables of 1m - 3m, 20% of inter-array cables requiring protection	Operational phase: 35 years Inter-array cables: 49nm of inter-array cables, trench depths for inter-array cables of 1m - 3m, 20% of inter-array cables requiring protection	The greatest likely significant effect for reduction in under keel clearance within the array area results from the presence of cable protection. Project Option 1 has a greater length of inter-array cables and presents the greatest severity of consequence.
Impact 15: Reduction in under keel clearance (ECC)	Operational phase: 35 years Export cables: Two 9.7nm export cables, trench depths for inter-array cables of 1m - 3m, 20% of export cables requiring protection	Operational phase: 35 years Export cables: Two 9.7nm export cables, trench depths for inter-array cables of 1m - 3m, 20% of export cables requiring protection	The greatest likely significant effect for reduction in under keel clearance within the array area results from the presence of cable protection. ECC infrastructure is the same for Project Option 1 and Project Option 2, and therefore both projects present equal severity of consequence.
Impact 16: Anchor interaction with inter-array cables (array area)	Operational phase: 35 years Inter-array cables: 60nm of inter-array cables, trench depths for inter-array cables of 1m - 3m, 20% of inter-array cables requiring protection	Operational phase: 35 years Inter-array cables: 49nm of inter-array cables, trench depths for inter-array cables of 1m - 3m, 20% of inter-array cables requiring protection	The greatest likely significant effect for anchor interaction results from the presence of inter-array cables. Project Option 1 has a greater length of inter-array cables and presents the greatest severity of consequence.
Impact 17: Anchor interaction with export cables (ECC)	Operational phase: 35 years Export cables: Two 9.7nm export cables, trench depths for inter-array cables of 1m - 3m, 20% of export cables requiring protection	Operational phase: 35 years Export cables: Two 9.7nm export cables, trench depths for inter-array cables of 1m - 3m, 20% of export cables requiring protection	The greatest likely significant effect for anchor interaction with cables within the ECC results from the presence of cables. ECC infrastructure is the same for Project Option 1 and Project Option 2, and therefore both projects present equal severity of consequence.

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
Impact 18: Reduction of emergency response capability	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously</p> <p>Array area: 49 WTGs, one OSP, SLoO layout</p> <p>Export cables: Two 9.7nm export cables.</p>	<p>Operational phase: 35 years</p> <p>Maintenance vessels: Maximum peak of 12 vessels simultaneously</p> <p>Array area: 35 WTGs, one OSP, SLoO layout</p> <p>Export cables: Two 9.7nm export cables.</p>	<p>The greatest likely significant effect for reducing emergency response capability within the array area results from the overall WTG layout, as well as the presence of surface structures and operational activities.</p> <p>Project Option 1 has a greater number of surface structures (49 WTGs) and presents the greatest severity of consequence, noting that parameters associated with the ECC are equal for both projects.</p>
Decommissioning			
Impact 19: Vessel displacement and increased vessel to vessel collision risk (array area)	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously</p> <p>Total number of 3,032 return trips to port</p> <p>Array area: Buoyed decommissioning area encompassing full array area</p>	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 47 decommissioning vessels</p> <p>Total number of 2,504 return trips to port</p> <p>Array area: Buoyed decommissioning area encompassing full array area</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk due to the array area results from the presence of decommissioning vessels as well as the total buoyage decommissioning area.</p> <p>Project Option 1 has a greater number of simultaneous decommissioning vessels and return trips and therefore presents the greatest severity of consequence.</p>
Impact 20: Vessel displacement and increased vessel to vessel collision risk (ECC)	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously</p> <p>Total number of 3,032 return trips to port (18 of which are associated with cable removal)</p> <p>Export cable removal: Removal of two 9.7nm offshore export cables</p>	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 47 decommissioning vessels</p> <p>Total number of 2,504 return trips to port (18 of which are associated with cable removal)</p> <p>Export cable removal: Removal of two 9.7nm offshore export cables</p>	<p>The greatest likely significant effect for vessel displacement and increased vessel to vessel collision risk within the ECC results from activities associated with the removal of export cables within the ECC.</p> <p>Two 9.7nm export cables will be removed.</p> <p>A maximum of 18 vessels associated with export cable removal for Project Option 1 and Project Option 2 and therefore present equal severity of consequence.</p>
Impact 21: Third-party to proposed development vessel collision risk (array area)	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously</p>	<p>Decommissioning phase: Approximately three years</p> <p>Decommissioning vessels: Maximum peak of 47 decommissioning vessels</p> <p>Total number of 2,504 return trips to port</p>	<p>The greatest likely significant effect for third-party to proposed development vessel collision risk within the array area results from proposed development vessels associated with decommissioning activities.</p> <p>Project Option 1 has a greater number of simultaneous decommissioning vessel return trips and therefore presents the greatest severity of consequence.</p>

Potential impact	Project Option 1 (49 WTG)	Project Option 2 (35 WTG)	Rationale for the project option with the greatest severity of consequence
	Total number of 3,032 return trips to port Array area: Buoyed decommissioning area encompassing full array area	Array area: Buoyed decommissioning area encompassing full array area	
Impact 22: Third-party to proposed development vessel collision risk (ECC)	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously (18 of which are associated with cable removal) Total number of 3,032 return trips to port Export cable removal: Removal of two 9.7nm offshore export cables	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 47 decommissioning vessels (18 of which are associated with cable removal) Total number of 2,504 return trips to port Export cable removal: Removal of two 9.7nm offshore export cables	The greatest likely significant effect for third-party to proposed development vessel collision risk within the ECC results from the presence of proposed development vessels associated with decommissioning activities. Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels associated with cable removal activities and therefore present equal severity of consequence.
Impact 23: Reduced access to local ports (array area)	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously Total number of 3,032 return trips to port Array area: Buoyed decommissioning area encompassing full array area	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 47 decommissioning vessels Total number of 2,504 return trips to port Array area: Buoyed decommissioning area encompassing full array area	The greatest likely significant effect for reduced access to local ports due to the array area results from restriction due to the presence of vessels associated with decommissioning activities and the buoyage decommissioning area. Project Option 1 has a greater number of simultaneous decommissioning vessel return trips and therefore presents the greatest severity of consequence.
Impact 24: Reduced access to local ports (ECC)	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 50 decommissioning vessels simultaneously (18 of which are associated with the export cable) Total number of 3,032 return trips to port Export cable removal: Removal of two 9.7nm offshore export cables	Decommissioning phase: Approximately three years Decommissioning vessels: Maximum peak of 47 decommissioning vessels simultaneously (18 of which are associated with the export cable) Total number of 2,504 return trips to port Export cable removal: Removal of two 9.7nm offshore export cables	The greatest likely significant effect for reduced access to local ports within the ECC results from restriction in port access due to cable removal activities within the ECC. Project Option 1 and Project Option 2 have the same maximum numbers of proposed development vessels (18) associated with cable decommissioning activities and therefore present equal severity of consequence.

17.5 Potential Effects

There are no changes to this section. Refer to Section 17.5 in Chapter 17 of the 2024 EIAR.

17.5.1 Do-Nothing Scenario

There are no changes to this section. Refer to Section 17.5.1 in Chapter 17 of the 2024 EIAR.

17.5.2 Construction Phase

There are no changes to this section. Refer to Section 17.5.2 in Chapter 17 of the 2024 EIAR.

17.5.2.1 *Impact 1 - Vessel displacement and increased vessel to vessel collision risk (array area)*

The refinement of the layout and relocation of structures from the south-east of the array area preserves more sea room to the east than that presented of the 2024 EIAR and addresses in RFI Section 2 (b). The refined layout also minimises the sharpness of the corners and edges of the WTG layouts for both Project Option 1 and Project Option 2 and reduces the level of obscuration which may occur, and even with LoD or micrositing the structures will still maintain linear alignment.

However, further concerns were raised by the DoT in regard to vessel displacement. Additionally, given the re-assessment of displacement of main commercial routes as a result of the refined layout, the following text in Section 17.5.2.1 in Chapter 17 of the 2024 EIAR for vessel displacement from main commercial routes shall be deleted:

A deviation will be required for four of the ten main routes identified within the shipping and navigation study area (shown in Figure 16.2 of the NRA) for the construction phase of the proposed development. The level of deviation ranging from 0.4nm increase for Route 6 (Belfast to Wicklow) to an 11nm increase for Route 3 (Drogheda to Off Smalls TSS), noting that vessel traffic levels on the deviated option for Route 3 (identified as Route 3A passing around the north and east of the array) are very low as only a small proportion of vessels on the route are anticipated to require this deviation. Route 3A sees the maximum percentage change in total route length at 8%, again noting this route has very low traffic levels and the route start/ end point is calculated for this assessment as the Off Smalls TSS. However, the destinations of vessels on this route will be located at a greater distance and therefore any displacement will be a smaller overall percentage change. Stakeholders agreed that in practical terms the route deviations taken by vessels would have fewer waypoints applied earlier in the approach to the array area resulting in shorter overall routes than what is conservatively identified within the assessment.

And be replaced with the following:

A deviation will be required for three of the ten main routes identified within the shipping and navigation study area (shown in Figure A16.2 of the NRA (Appendix A17.1: NRA)) for the construction phase of the proposed development. This is less than what was previously assumed in the 2024 EIAR. The level of deviation ranging from 1.2nm increase for Route 1 (Warrenpoint to Bristol Channel) to a 10nm increase for Route 3 (Drogheda to Off Smalls TSS), noting that vessel traffic levels on the deviated option for Route 3 (identified as Route 3A passing around the north and east of the array) are very low as only a small proportion of vessels on the route are anticipated to require this deviation. Route 3A sees the maximum percentage change in total route length at 7%, again noting this route has very low traffic levels and the route start/ end point is calculated for this assessment as the Off Smalls TSS. However, the destinations of vessels on this route will be located at a greater distance and therefore any displacement will be a smaller overall percentage change. Stakeholders agreed that in practical terms the route deviations taken by vessels would have fewer waypoints applied earlier in the approach to the array area resulting in shorter overall routes than what is conservatively identified within the assessment. It is noted that Route 6 was previously deviated with the presence of the Project Option 1 layout in the 2024 EIAR submission and now as a result of the layout refinement no deviation is required for the refined Project Option 1.

Additional text will be added to the assessment of vessel displacement in regard to the Rockabill Gap since the gap has now been increased as a result of concerns raised during submission response by the MSO (RFI Section 2 (b)). Text to be added to Section 17.5.2.1 in Chapter 17 of the 2024 EIAR for vessel displacement from main commercial routes is as follows:

The safety and viability of deviated routes have been further enhanced by increasing the Rockabill Gap Structure Exclusion Zone based on PIANC guidance as a response to the MSO concerns raised in regard to insufficient space to maintain the safety of navigation. In line with the PIANC guidance, the gap is now considered safe for two of the largest vessels recorded in the region to transit in opposite directions uncompromised (see Appendix E in the NRA (Appendix A17.1)).

Large vessels routing to Skerries for anchoring, especially when requiring shelter, will need to circumnavigate the array. However, this will only be of concern for vessels transiting from the north-east and with the reduction in the layout at the south-east, navigation will be less affected. Anchoring in this region was also minimal when assessed in both the survey data in Section 10.2.6 as well as the long-term data in Appendix F (Appendix A17.1: NRA). Although small craft, may have not been reported in the long-term data due to AIS carriage requirements, will be able to navigate within the operational array and so navigation will be even less affected for these vessels.

Collision risk has also been re-modelled since the 2024 EIAR to account for the refined layout and associated assumed route deviations. Therefore, the following text in Section 17.5.2.1 in Chapter 17 of the 2024 EIAR for increased third-party to third-part vessel collision risk shall be deleted:

Post wind farm modelling of collision risk (with the presence of the array) for Project Option 1 using the main commercial route deviations as input gives an estimated collision return period³ of one in 2,814 years for base case traffic levels, rising to one in 1,910 years for the higher tier of future case traffic levels (20%). The higher level of collision risk is due to the high volume of vessel traffic in concentrated areas, particularly to the east and south-east of the array area. The base case collision result represents a 39% increase compared to the pre wind farm base case result indicating that the influence of the array area on the overall collision risk for commercial traffic is moderate. However, the collision risk return period of one in 2,814 years post wind farm (and one in 1,910 years for the future case) is still considered to be very low, especially in comparison to the available results of other NRAs for many UK offshore wind farms. This result reflects the low traffic levels within the study area.

And be replaced with the following:

Since the refinement of the layout, the collision risk post wind farm modelling (with the presence of the surface infrastructure) for Project Option 1 using the main commercial route deviations as input gives an estimated collision return period⁴ of one in 2,935 years for base case traffic levels, rising to one in 1,992 years for the higher tier of future case traffic levels (20%). This has decreased since the 2024 EIAR submission. The higher level of collision risk is due to the high volume of vessel traffic in concentrated areas, particularly to the east and south-east of the array area. The base case collision result represents a 34% increase compared to the pre wind farm base case result indicating that the influence of the array area on the overall collision risk for commercial traffic is moderate. However, the collision risk return period of one in 2,935 years post wind farm (and one in 1,992 years for the future case) is still considered to be very low, especially in comparison to the available results of other NRAs for many UK offshore wind farms. This result reflects the low traffic levels within the study area.

The collision risk in the south-east of the array area was raised by the MSO during their submission response. Since then, due to the refinement of the layouts with Project Option 1 and Project Option 2 which removed the structures from the south-east of the array, collision risk in this area has decreased. Route 6 was previously deviated with the layout in the 2024 EIAR submission and now no deviation is required. At a minimum, this route passes at least 1.4nm from the array and there is still sufficient navigable sea room to the east of the array in the instance that any such deviation or collision avoidance measures are required.

³ Where return periods are reported, these relate to the expected number of years between occurrences.

⁴ Where return periods are reported, these relate to the expected number of years between occurrences.

Due to the increase in the Structure Exclusion Zone and further consultation outlined in Appendix A17.1, the following text in Section 17.5.2.1 in Chapter 17 of the 2024 EIAR for increased third-party to third-party vessel collision risk shall be deleted:

Following assessment and in response to this, the Developer has committed to a Structure Exclusion Zone within the array area which increases sea room to 3nm between the array and Rockabill Island, and this forms part of the proposed development design.

And be replaced with the following:

Following a review and in response to this, the Developer has committed to an increase in the Structure Exclusion Zone within the array area which increases sea room to 3.06nm between the array and Rockabill Island, and this forms part of the proposed development design. This is in line with PIANC guidance and also incorporates the largest vessel lengths recorded in the region. This assessment is therefore very conservative as these largest vessels may not require to navigate within the Rockabill Gap but does acknowledge the future development of Bremore Port which may result in increased vessel sizes.

Since the 2024 EIAR, consultation has occurred with the MSO regarding the Rockabill Gap and the changes which have occurred (Appendix A17.1). The MSO has expressed their satisfaction that the Rockabill Gap is suitable for safe navigation, noting the lack of concern raised in response to the 2024 EIAR submission from Drogheda Port Company.

Adverse weather routeing concerns were raised during the statutory public consultation on the planning application and so the following text can be appended to Section 17.5.2.1 of Chapter 17 of the 2024 EIR for adverse weather routeing:

Sailing in fog or adverse weather conditions will create significant dangers with the presence of the proposed development during their submission response. The IRCG has been consulted during the layout refinement process during 2025 and 2026 and is content with the Project Option 1 and Project Option 2 layouts submitted. The Lighting and Marking Plan (LMP) provided in Appendix A17.3: Lighting and Marking Plan which will be produced in accordance with the IRCG will account for all weather conditions including the use of sound signals when visibility is below certain thresholds.

Small craft displacement concerns were also raised during the statutory public consultation on the planning application and so the following text can be appended to Section 17.5.2.1 of Chapter 17 of the 2024 EIR for small craft displacement and collision:

The impact of the proposed development on small craft displacement and collision was raised in the submission responses to the previously submitted NRA (Appendix 17.1: NRA of the 2024 EIAR) by the MSO. Due to the refinement of the layout, the relocation of structures at the south-east opens the sea room to the east further than before and with the ample sea room already present, the risk of small craft displacement is further reduced.

There are no further changes required to this section. Refer to Section 17.5.2.1 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.2.2 Impact 2 - Vessel displacement and increased vessel to vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.2.2 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.2.3 Impact 3 – Third-party to proposed development vessel collision risk (array area)

There has been a change in the anticipated maximum peak on site simultaneously vessel numbers and associated round trips since the 2024 EIAR. Therefore, the following text in Section 17.5.2.3 in Chapter 17 of the 2024 EIAR shall be deleted:

The construction phase may last for approximately three years and a maximum of 49 construction vessels may be located on site simultaneously, in turn making a maximum of 3,008 return trips to port.

And be replaced by the following:

The construction phase may last for approximately three years and a maximum peak of 50 construction vessels may be located on site simultaneously, in turn making a total number of 3,032 return trips to port.

There are no further changes required to this section. Refer to Section 17.5.2.3 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.2.4 Impact 4 - Third-party to proposed development vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.2.4 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.2.5 Impact 5 - Reduced access to local ports (array area)

The relocation of structures in Project Option 1 and Project Option 2 at the south-east preserves more sea room to the east in regard to navigation, in addition to the ample sea room already present. This is greater than was presented in the 2024 EIAR. Concerns were also raised in the submission responses in regard to potential impact on vessels routing in the area in order to obtain shelter for anchoring. Therefore, the following text shall be added to Section 17.5.2.5 in Chapter 17 of the 2024 EIAR:

The Drogheda Port Company raised concerns regarding the displacement of east-west routing to/from Drogheda Port which may result in missed tidal windows. However, when accounting for the levels of increased time and distance associated with the required deviation, the effect on routing was noted to be diminished. The inclusion of the Structure Exclusion Zone also mitigates the effect in the case of east-west routing displaced south of the array area. This is further reduced by the refinement of the WTG layouts for Project Option 1 and Project Option 2 which has removed structures from the south-east corner. Therefore, no routes were required to deviate in the area and there is ample sea room for transits if vessels require to route south of the array.

Concerns were also raised that large vessels routing to Skerries (for anchoring purposes) will need to circumnavigate the WTG array. Again, this will only be of concern for vessels transiting from the north-east and with the relocation of WTGs from the south-east, navigation will be less materially affected.

There are no further changes required to this section. Refer to Section 17.5.2.5 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.2.6 Impact 6 - Reduced access to local ports (ECC)

There are no changes required to this section. Refer to Section 17.5.2.6 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3 Operational Phase

17.5.3.1 Impact 7 – Vessel displacement and increased vessel to vessel collision risk (array area)

Further consultation occurred with the MSO since the submission on the 2024 EIAR as outlined in Appendix A17.1. In regard to this consultation, the following text in Section 17.5.3.1 of Chapter 17 of the 2024 EIAR:

In poor visibility, third-party vessels may experience limitations regarding visual identification of other third-party vessels due to the presence of surface infrastructure. During consultation the MSO noted the potential for the array to obscure the view of vessels approaching each other from differing sides of the array area, giving rise to additional collision risk.

Can be followed by the text:

This point was raised by the MSO during consultation in 2025, but concerns were alleviated when to-scale figures showing the structures relative to example vessel outlines were shared. Even with any LoD or micrositing requirements, the alignment of structures being maintained for Project Options 1 and Project Option 2 results in large areas of open sea room which minimise visual obstructions and reduces the sharpness of the corners and edges of the layout. This in turn reduces the level of obscurity which may occur.

Following the refinement from monopile or jacket foundation types for WTGs to jacket substructures with suction bucket foundations, the following text in Section 17.3.5.1 of Chapter 17: Shipping and Navigation of the 2024 EIAR can be deleted:

As part of the scenario deemed to have the greatest likely significant effect, consideration is given to the WTG dimensions at the sea surface (12.5m diameter associated with monopile foundations) and OSP topside dimensions (45×45m) alongside the minimum vessel dimensions based on vessel traffic survey data (around 8×2m). Should the WTG surface dimensions be reduced, or the size of vessel involved in such a scenario be greater, it is expected that the potential for visual interference would be reduced. This will also be mitigated by the application of the COLREGs (reduced speeds) in adverse weather conditions.

Situations where the passing vessels may be visually obscured from each other by a structure are limited given the considerable spacing between WTGs (910m subject to LoD) which maintains large open areas of sea room where there are no visual obtrusions.

And be replaced by the following:

As part of the scenario deemed to have the greatest likely significant effect, consideration is given to the WTG dimensions at the sea surface (25×25m associated with jacket foundations) and OSP topside dimensions (45×45m) alongside the minimum vessel dimensions based on vessel traffic survey data (around 8×2m). Should the WTG surface dimensions be reduced, or the size of vessel involved in such a scenario be greater, it is expected that the potential for visual interference would be reduced. This will also be mitigated by the application of the COLREGs (reduced speeds) in adverse weather conditions.

Situations where the passing vessels may be visually obscured from each other by a structure are limited given the considerable spacing between WTGs which maintains large open areas of sea room where there are no visual obtrusions.

There are no further changes required to this section. Refer to Section 17.5.3.1 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.5.3.2 Impact 8 - Vessel displacement and increased vessel to vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.3.2 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.3 Impact 9 - Third-party to proposed development vessel collision risk (array area)

There are no changes required to this section. Refer to Section 17.5.3.3 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.4 Impact 10 - Third-party to proposed development vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.3.4 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.5 Impact 11 - Reduced access to local ports (array area)

There are no changes required to this section. Refer to Section 17.5.3.5 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.6 Impact 12 – Reduced access to local ports (ECC)

There are no changes required to this section. Refer to Section 17.5.3.6 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.7 Impact 13 - Creation of vessel to structure allision risk (array area)

Due to the updated Project Option 1 and Project Option 2 layouts and the re-assessment of main commercial route displacement, the allision risk was also re-modelled to include the refined layout of Project Option 1 and anticipated mean route positions. Therefore, the following text in Section 17.5.3.7 in Chapter 17 of the 2024 EIAR for powered allision risk shall be deleted:

Post wind farm modelling of powered allision risk using the main commercial route deviations as input with Project Option 1 gives an estimated powered allision return period of one in 1,049 years for base case traffic levels, rising to one in 862 for future case traffic levels (20%). The extent of the array area avoids busier routes to/from Dublin to the south; surrounding routes carry relatively low traffic volumes. The greatest allision risk has been associated with structures on the east, particularly the south-eastern extent of the array, where a higher volume of traffic from multiple main commercial routes including those associated with vessel deviations pass in the closest proximity to the array (minimum mean distance of 1nm from the array) when compared to other routes.

And be replaced by the following:

Post wind farm modelling of powered allision risk using the main commercial route deviations as input with Project Option 1 gives an estimated powered allision return period of one in 1,115 years for base case traffic levels, rising to one in 920 for future case traffic levels (20%). This has decreased since the 2024 EIAR submission. The extent of the array area avoids busier routes to/from Dublin to the south; surrounding routes carry relatively low traffic volumes. The 2024 EIAR submission noted the greatest allision risk to be the south-east of the array area which was raised as a concern by the MSO in their submission response. Since the layout has been refined, although the greatest allision risk is still associated with structures on the east of the array area, the greatest allision risk was identified at the north-eastern extent of the array, where a higher volume of traffic from multiple main commercial routes including those associated with vessel deviations pass in the closest proximity to the array (minimum mean distance of 1nm from the array) when compared to other routes. The greatest allision risk for a structure has decreased from one in 2,533 years to one in 3,925 years due to the relocation of structure in the south-east of the array.

As outlined in Appendix A17.1: NRA, further consultation occurred with Irish Lights and the following text in Section 17.5.3.7 in Chapter 17 of the 2024 EIAR for powered allision risk shall be deleted:

During consultation, Irish Lights indicated that an additional cardinal mark may be necessary to the east of the array area to mitigate effects and keep vessel traffic passing at a safe distance on the eastern boundary; this is conservatively not included in the LMP provided in Appendix 17.3 but will be further discussed with Irish Lights when finalising the lighting and marking plans, noting that precise buoyage locations will be directed by Irish Lights.

It is not anticipated that the presence of a cardinal mark would substantially affect the likelihood of an allision incident given that, based on the main commercial route deviations, vessels passing at the east of the array would primarily be doing so in a north-south direction and thus unlikely to navigate within the sea space formed by the concave shape of the eastern boundary.

And be replaced by the following:

During consultation for the 2024 EIAR (Appendix A17.1: NRA), Irish Lights indicated that an additional cardinal mark may be necessary to the east of the array area to mitigate effects and keep vessel traffic passing at a safe distance on the eastern boundary.

Following the relocation of structures at the south-east of the array area, Irish Lights have confirmed that this is no longer an issue, although the use of an operational buoy at the south-west corner associated with the Rockabill Gap was raised and will be considered when the lighting and marking scheme for the operational phase is finalised. Subsequently, this is conservatively not included in the LMP in Appendix A17.3: LMP but will be further discussed with Irish Lights when finalising the lighting and marking plans post consent, noting that precise buoyage locations will be directed by Irish Lights.

With updated allision modelling results and baseline maritime incident data, the following text in Section 17.5.3.7 in Chapter 17 of the 2024 EIAR for drifting allision risk shall be deleted:

With the main commercial route deviations associated with the presence of the array area in place for Project Option 1, an estimated powered allision return period of one in 16,835 years for base case traffic levels, rising to one in 13,877 for future case traffic levels (20%). This is a very low return period and is reflective of the low volume of vessel traffic in the area. The greatest allision risk has been, again, associated with structures on the east, particularly the south-eastern extent of the array. The return period is lower than that for powered allision risk, reflecting the need for a vessel to become adrift in the first instance before an allision situation can develop.

From historical incident data, there have been no instances of a third-party vessel alliding with an operational wind farm structure whilst Not Under Command (NUC). However, there is some potential for a vessel to be adrift; this is reflected in the number of machinery failure incidents reported by the RNLI in proximity to the offshore development area which indicates that machinery failure is the most common incident type (approximately 36%). Although it is noted that an incident reported as a 'machinery failure' may not be so severe as to result in the vessel losing power and becoming NUC. No incidents, and so no machinery failure incidents, occurred within the array area. Two machinery failure incidents occurred within the ECC but the majority of incidents recorded within the study area occurred within 2nm of the coast (82% of all incidents) and were not in proximity to the array area.

And be replaced by the following:

With the main commercial route deviations associated with the presence of the array area in place for Project Option 1, an estimated powered allision return period of one in 18,650 years for base case traffic levels, rising to one in 15,397 for future case traffic levels (20%). This has decreased since the 2024 EIAR submission and is a very low return period which is reflective of the low volume of vessel traffic in the area. The greatest allision risk has been, again, associated with structures on the east, particularly the south-eastern extent of the array area. The return period is lower than that for powered allision risk, reflecting the need for a vessel to become adrift in the first instance before an allision situation can develop.

From historical incident data, there have been no instances of a third-party vessel alliding with an operational wind farm structure whilst Not Under Command (NUC). However, there is some potential for a vessel to be adrift; this is reflected in the number of machinery failure incidents reported by the RNLI in proximity to the offshore development area which indicates that machinery failure is one of the most common incident types (approximately 27%). Although it is noted that an incident reported as a 'machinery failure' may not be so severe as to result in the vessel losing power and becoming NUC. Only one incident occurred within the array area during the 10-year data analysed, which was an equipment failure of a sailing vessel. Three machinery failure incidents occurred within the ECC but the majority of incidents recorded within the study area occurred within 2nm of the coast (81% of all incidents) and were not in proximity to the array area.

With updated allision modelling results and baseline maritime incident data as well as the publication of Irish Guidance, the following text in Section 17.5.3.7 in Chapter 17 of the 2024 EIAR for internal allision risk shall be deleted:

Post wind farm modelling of fishing allision risk using the vessel traffic survey data as input gives an estimated commercial fishing allision return period of one in 3.00 years for base case traffic levels with Project Option 1, rising to one in 2.50 years for future case traffic levels (20%). This is a high return period and is reflective of the high volume of commercial fishing vessel activity within the region and within the array area during the summer months, noting that this is largely characteristic of fishing vessels engaged in fishing rather than in transit. Also, these return periods are very conservative since the model cannot account in detail for how fishing vessels will adapt to the presence of the array.

The minimum spacing between WTGs (910m subject to LoD) is sufficient for safe internal navigation by smaller vessels and is greater than that associated with many UK offshore wind farms, some of which are navigated by commercial fishing vessels in favourable conditions. The layout is compliant with the requirements of MGN 654 (MCA, 2021). The proposed development (including the layout options) has been subject to a comprehensive NRA as required by the methodology agreed with shipping regulators, notably the MSO, prior to the NRA process commencing. No specific national guidance on NRA currently exists, but the assessment undertaken has taken account of international best practice and precedent in respect of offshore wind developments in the UK. The Developer is aware that draft specific national guidance is currently under review and that engagement with the IRCG, if required, upon publication of the final guidance documents (which is not expected to be published until later this year) may result in the requirement for a safety justification to be undertaken for the layout. This would be specifically for the IRCG's own access assessment and to ensure requirements within the guidance are complied with.

And be replaced by the following:

Post wind farm modelling of fishing allision risk using the vessel traffic survey data as input gives an estimated commercial fishing allision return period of one in 2.47 years for base case traffic levels with Project Option 1, rising to one in 2.06 years for future case traffic levels (20%). This is a slight increase from the 2024 EIAR submission, due to the relocation of WTGs into areas of higher fishing density, and is a high return period and is reflective of the high volume of commercial fishing vessel activity within the region and within the array area during the summer months, noting that this is largely characteristic of fishing vessels engaged in fishing rather than in transit. Also, these return periods are very conservative since the model cannot account in detail for how fishing vessels will adapt to the presence of the array.

The spacing between WTGs will be sufficient for safe internal navigation by smaller vessels and is greater than that associated with many UK offshore wind farms, some of which are navigated by commercial fishing vessels in favourable conditions. The layout is compliant with the requirements of MGN 654 (MCA, 2021) and has since been refined in agreement with the IRCG after taking concerns raised by stakeholders during the submission responses on board. The proposed development (including the layout options) has been subject to a comprehensive NRA (Appendix A17.1: NRA) as required by the methodology agreed with shipping regulators, notably the MSO, prior to the NRA process commencing and the assessment undertaken has taken account of international best practice and precedent in respect of offshore wind developments in the UK.

With the update to the project design parameters the following text in Section 17.5.3.7 in Chapter 17 of the 2024 EIAR for drifting allision risk shall be deleted:

An additional allision risk associated with the WTG blades applies for recreational vessels with a mast when navigating internally within the array area. However, the minimum air gap will be 35m above LAT which is greater than the minimum clearance the RYA recommend for minimising allision risk (RYA, 2019) and which is also noted in MGN 654.

And be replaced by the following:

An additional allision risk associated with the WTG blades applies for recreational vessels with a mast when navigating internally within the array area. However, the minimum air gap will be 40m above LAT which is greater than the minimum clearance the RYA recommend for minimising allision risk (RYA, 2019) and which is also noted in MGN 654.

There are no further changes required to this section. Refer to Section 17.5.3.7 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.5.3.8 Impact 14 – Reduction in under keel clearance (array area)

Additional geophysical surveys have informed an update to the array area water depths. Following a review of design refinements and the update of parameters, the following reference included in Section 17.5.3.8 shall be deleted:

Charted water depths within the array area are between 30m and 60m and with the anticipated water depth reduction along with deep draught vessels not anticipated to transit within the array area, as indicated during consultation, this limits the risk of an underwater allision occurring.

And be replaced with the following:

Water depths within the array area are between 30m and 63m and with the anticipated water depth reduction along with deep draught vessels not anticipated to transit within the array area, as indicated during consultation (Appendix A17.1: NRA), this limits the risk of an underwater allision occurring.

There are no further changes required to this section. Refer to Section 17.5.3.8 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.9 Impact 15 - Reduction in under keel clearance (ECC)

There are no changes required to this section. Refer to Section 17.5.3.9 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.10 Impact 16 - Anchor interaction with inter-array cables (array area)

There are no changes to this section. Refer to Section 17.5.3.10 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.11 Impact 17 - Anchor interaction with export cables (ECC)

There are no changes required to this section. Refer to Section 17.5.3.11 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.3.12 Impact 18 - Reduction of emergency response capability

With updated baseline maritime incident data and the publication of Irish Guidance, the following text in Section 17.5.3.12 in Chapter 17 of the 2024 EIAR for drifting allision risk shall be deleted:

From historical incident data, there is a moderate rate of incidents in the region, although over a ten year period (2012 to 2021) 82% of incidents recorded by the RNLi occurred within 2nm of the coast with no incidents occurring within the array area. Six incidents occurred within the ECC with the closest of these incidents approximately 4nm from the array area and all relatively close to the coast. Incidents were recorded further offshore, but these were less common, and the majority were instances of machinery failure and the likelihood of an incident related to the proposed development occurring at the same time is low. Additionally, based on the number of collision and allision incidents⁵ associated with UK offshore wind farms reported to date, there is an average of one incident per 1,751 operational WTG years (as of February 2024). Therefore, the proposed development itself is not expected to result in a marked increase in the frequency of incidents requiring an emergency response.

With proposed development vessels to be managed through marine coordination and compliance with Flag State regulations, the likelihood of an incident is minimised. Additionally, should an incident occur, proposed development vessels will be well equipped to assist, either through self-help capability or – for an incident involving a nearby third-party vessel – through SOLAS obligations (IMO, 1974), all in liaison with the IRCG. This is reflected in past UK experience, with 12 known instances of a vessel (or persons on a vessel) being assisted by an industry vessel for a nearby UK offshore wind farm.

⁵ Although other types of incident are acknowledged, collision and allision incidents have the potential to be among the most serious and give a reasonable indication of the rate of incidents requiring an emergency response.

And be replaced by the following:

From historical incident data, there is a moderate rate of incidents in the region, although over a ten year period (2015 to 2024) 81% of incidents recorded by the RNLi occurred within 2nm of the coast with one incident recorded within the array area; an equipment failure incident associated with a sailing vessel in 2024. Six incidents occurred within the ECC however the majority were all relatively close to the coast. Incidents were recorded further offshore, but these were less common, and the majority were instances of machinery failure and the likelihood of an incident related to the proposed development occurring at the same time is low. Additionally, based on the number of collision and allision incidents⁶ associated with UK offshore wind farms reported to date, there is an average of one incident per 1,142 operational WTG years (as of March 2026). Therefore, the proposed development itself is not expected to result in a marked increase in the frequency of incidents requiring an emergency response.

With proposed development vessels to be managed through marine coordination and compliance with Flag State regulations, the likelihood of an incident is minimised. This will also be supported by the Developer's compliance with the SAR Checklist as required by IRCG in compliance with MGN 654 (and reflected in the DoT guidance). Additionally, should an incident occur, proposed development vessels will be well equipped to assist, either through self-help capability or – for an incident involving a nearby third-party vessel – through SOLAS obligations (IMO, 1974), all in liaison with the IRCG. This is reflected in past UK experience, with 12 known instances of a vessel (or persons on a vessel) being assisted by an industry vessel for a nearby UK offshore wind farm. To ensure the response in the event of an incident is as effective as possible, the Developer will liaise with the IRCG including the use of an agreed ERCoP which will be produced post consent.

The IRCG noted in the 2024 EIAR, the proposed Project Option 1 and Project Option2 layouts would significantly reduce the overall probability of detection of search. Therefore, in conjunction with the IRCG, the layouts have since been refined. Although the layouts contain a SLoO and a Safety Justification is still required, with the specifications of the LoD and micrositing capabilities (Section 17.4) alongside the refined layouts, the Developer has agreed to maintain linear alignment of the structures within the array which mitigate the concerns raised by the IRCG. IRCG have confirmed that they are content with the provisions and mitigations outlined in the Safety Justification assuming the maintaining of linear alignment of structures, consideration of direct data feeds for SAR related systems, and suitable clearance from IC2. Therefore, due to an update in design parameters associated with the layout refinement (Appendix A5.1: Design Refinements) as well as further consultation since the 2024 EIAR (outlined in Appendix A17.1: NRA), the following text in Section 17.5.3.12 can be deleted:

The Developer is committed to working within the parameters of MGN 654, including ID marking as well as lighting and marking in liaison with the IRCG, to minimise impacts.

The total area covered by the array area is 26nm² which is moderate in comparison to UK offshore wind farms. The minimum spacing between structures is 910m (subject to 500m LoD), which is greater than most existing UK offshore wind farms. The layout is compliant with the requirements of MGN 654 (MCA, 2021). The proposed development (including the layout options) has been subject to a comprehensive NRA as required by the methodology agreed with shipping regulators, notably the MSO, prior to the NRA process commencing. No specific national guidance on NRA currently exists, but the assessment undertaken has taken account of international best practice and precedent in respect of offshore wind developments in the UK.

The Developer is aware that draft specific national guidance is currently under review and that engagement with the IRCG, if required, upon publication of the final guidance documents (which is not expected to be published until later this year) may result in the requirement for a safety justification to be undertaken for the layout. This would be specifically for the IRCG's own access assessment and to ensure requirements within the guidance are complied with.

⁶ Although other types of incident are acknowledged, collision and allision incidents have the potential to be among the most serious and give a reasonable indication of the rate of incidents requiring an emergency response.

And be replaced by the following:

The Developer is committed to working within the parameters of MGN 654, including ID marking as well as lighting and marking in liaison with the IRCG and Irish Lights, to minimise impacts.

The total area covered by the array area is 26nm² which is moderate in comparison to UK offshore wind farms. The proposed development (including the layout options) has been subject to a comprehensive NRA as required by the methodology agreed with shipping regulators, notably the MSO and IRCG, the assessment undertaken has taken account of international best practice and precedent in respect of offshore wind developments in the UK. including the requirement for a Safety Justification to be undertaken for the layout in agreement with the IRCG, which is also covered in the DoT guidance. The Safety Justification is specifically for the IRCG's own access assessment and to ensure requirements within the guidance are complied with. Therefore, in conjunction with the IRCG, the layouts have since been refined. Although the layouts contain a SLoO and a Safety Justification is still required, with the specifications of the LoD and micro-siting capabilities (Section 17.4) alongside the refined layouts, the Developer has agreed to maintain linear alignment of the structures within the array which mitigate the concerns raised by the IRCG.

There are no further changes required to this section. Refer to Section 17.5.3.12 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.5.4 Decommissioning

There are no changes required to this section. Refer to Section 17.5.4 of Chapter 17 of the 2024 EIAR.

17.5.4.1 Impact 19 - Vessel displacement and increased vessel to vessel collision risk (array area)

There are no changes required to this section. Refer to Section 17.5.4.1 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.4.2 Impact 20 - Vessel displacement and increased vessel to vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.4.2 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.4.3 Impact 21 - Third-party to proposed development vessel collision risk (array area)

There has been a change in the anticipated maximum peak of on site simultaneously vessel numbers and associated round trips since the 2024 EIAR. Therefore, the following text in Section 17.5.2.3 in Chapter 17 of the 2024 EIAR shall be deleted:

The decommissioning phase may last approximately three years and a maximum of 49 decommissioning vessels may be located on site simultaneously, in turn making 3,008 return trips to port.

And be replaced by the following:

The decommissioning phase may last approximately three years, and a maximum peak of 50 decommissioning vessels may be located on site simultaneously, in turn making 3,032 return trips to port.

There are no further changes required to this section. Refer to Section 17.5.4.3 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.4.4 Impact 22 - Third-party to proposed development vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.5.4.4 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.4.5 Impact 23 - Reduced access to local ports (array area)

There are no changes required to this section. Refer to Section 17.5.4.5 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.5.4.6 Impact 24 - Reduced access to local ports (ECC)

There are no changes required to this section. Refer to Section 17.5.4.6 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.6 Mitigation and Monitoring Measures

There are no changes to this section. Refer to Section 17.6 in Chapter 17 of the 2024 EIAR.

17.7 Residual Effects

Due to no changes in the significance of effects within the assessment of potential effects, there are no changes required to this section. Refer to Section 17.7 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is either broadly acceptable or tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.8 Transboundary Effects

There are no changes to this section. Refer to Section 17.8 in Chapter 17 of the 2024 EIAR.

17.9 Cumulative Effects

The key changes to this section are the updating of text to reflect the minor change in cumulative assessment methodology to follow the Nationally Significant Infrastructure projects (NSIP) (2024) guidance, following the request by An Bord Pleanála in RFI Section 5.

Therefore, the following text in Section 17.9 in Chapter 17: Shipping and Navigation of the 2024 EIAR shall be deleted:

The Cumulative and Inter-Related Effects Chapter contains the outcome of Stage 1 Establishing the list of 'Other Existing and/or Approved Projects'; and Stage 2 'Screening of 'Other Existing and/or Approved Projects'. This section presents Stage 3, an assessment of whether the proposed development in combination with other projects, grouped in tiers, would be likely to have significant cumulative effects.

And be replaced by the following:

The Cumulative and Inter-Related Effects Chapter contains the outcome of Stage 1 Establishing the list of 'Other Existing and/or Approved Projects'; Stage 2 'Screening of 'Other Existing and/or Approved Projects'; and provides the CEA conclusions in the NSIP Appendix 2: Matrix 1 – Assessment matrix. This section presents the full Stage 3 and Stage 4 assessment, which steps through whether the proposed development in combination with other projects, grouped in tiers, would be likely to have significant cumulative effects.

In addition, the following text in Section 17.9 in Chapter 17 of the 2024 EIAR shall also be deleted:

Given the location and nature of the proposed development, a tiered approach to establishing the list of other existing and/or approved projects has been undertaken in Stage 1 of the cumulative effects assessment. The tiering of projects is based on project relevance to the proposed development and it is not a hierarchical approach nor based on weighting. Further information on the tiers is provided in Section 11.10 and in the Cumulative and Inter-Related Effects Chapter.

And be replaced by the following:

Given the location and nature of the proposed development, a tiered approach to establishing the list of other existing and/or approved projects has been undertaken in Stage 1 of the cumulative effects assessment. The

tiering of projects is based on the NSIP 2024 guidance. Further information on the tiers is provided in Section 17.9.2 and in the Chapter 38: Cumulative and Inter-Related Effects Chapter.

The tiering structure is intended to provide an understanding of the potential for likely significant effects of the proposed development with the construction of all existing and submitted projects (tier one); followed by a cumulative assessment of the likely significant effect of that scenario combined with all projects that have a scoping report or Maritime Area Consent (MAC) (tier two); and lastly the combination of tier one and tier two with all other existing and/or projects that have been screened in (tier three).

There are no further changes required to this section. Refer to Section 17.9 of Chapter 17 of the 2024 EIAR.

17.9.1 Shipping and Navigation Cumulative Screening Exercise

There are no other changes required to this section. Refer to Section 17.9.1 of Chapter 17 of the 2024 EIAR.

17.9.2 Projects Considered within the Cumulative Effects Assessment

Since the submission of the 2024 EIAR, a review of the cumulative screening process has occurred and any updates to the status and data confidence of those screened in developments have been taken into consideration in the cumulative assessment where necessary for shipping and navigation.

The second major project of the Dublin Masterplan 2040 (the MP2 project) has begun construction, but this is fully contained within the port limits (Dublin Port, 2025) and so the assessment for Dublin Port Masterplan will remain the same. As no further information has become available since the submission of the 2024 EIAR for Bremore Port the assessment will also remain the same.

It is noted that no future wave or tidal, subsea cable, or pipeline developments have been identified since the submission of the 2024 EIAR.

With the update in status of screened in developments and the application of the new tiering system for cumulative developments, as detailed earlier in Section 17.9, Table 17.12 in Chapter 17 of the 2024 EIAR can be replaced with Table A17.6. The following text in Section 17.9.2 in Chapter 17 of the 2024 EIAR shall be deleted:

The planned, existing and/or approved projects selected through the screening exercise as potentially relevant to the assessment of impacts to shipping and navigation are presented in Table 17.12.

The tiers for the assessment are:

- *Tier 1 is limited to the Operation and Maintenance Facility (OMF) for the proposed development. The OMF option being considered involves the adaption and leasing part of an existing port facility at Greenore. Further detail is provided in the Offshore Description Chapter.*
- *Tier 2 is the east coast Phase One Offshore Wind Farms.*
- *Tier 3 is all other projects include existing and/or approved developments that have been identified in the relevant Development Plans and other plans and programmes as appropriate.*

The tiering structure is intended to provide an understanding of the potential for likely significant effects of the proposed development with the construction of its OMF (tier one); followed by a cumulative assessment of the likely significant effect of that scenario combined with the east coast Phase One Offshore Wind Farms (tier two); and lastly the combination of tier one and tier two with all other projects include existing and/or approved developments that have been identified in the relevant Development Plans and other plans and programmes as appropriate (tier three).

And be replaced by the following:

The planned, existing and/or approved projects selected through the screening exercise as potentially relevant to the assessment of impacts to shipping and navigation are presented in Table A17.6.

The tiers for the assessment are:

- Tier 1 is all existing submitted and approved projects (not yet in operation/part of baseline), including the OMF option being considered which involves the adaption and leasing part of an existing port facility at Greenore (further detail is provided in Chapter 6: Description of the Proposed Development Offshore) and the East Coast Phase One Projects.
- Tier 2 is all projects that have scoping reports or have a MAC.
- Tier 3 is all other projects include existing and/or approved developments that have been identified in the relevant Development Plans and other plans and programmes as appropriate.

There are no further changes required to this section. Refer to Section 17.9.2 of Chapter 17 of the 2024 EIAR.

Table A17.6 Projects and plans considered within the cumulative effects assessment (replaces Table 17.12 of Chapter 17 of the 2024 EIAR)

Development type	Project	Status	Data confidence	Distance to the proposed development		Justification for screening into the cumulative effects assessment
				Array area	ECC	
Tier 1						
Port development	OMF	Pre-consent	Low – no documentation available	18nm	21nm	May introduce new commercial routing
Phase One Offshore wind farm	Oriel Wind Park	Consent applicant submitted	High – Phase One projects have shared data and design information. EIA has now been submitted.	9.1nm	12nm	Overlap in construction period, Oriel Wind Park due to construct during 2026-2028
	Dublin Array	Consent applicant submitted	High – Phase One projects have shared data and design information. EIA has now been submitted.	18nm	20nm	Overlap in construction period, Dublin Array due to construct during 2028-2032
	Codling Wind Park	Consent applicant submitted	High – Phase One projects have shared data and design information. EIA has now been submitted.	27nm	31nm	Overlap in construction period, with Colding Wind Park due to construct during 2027-2028
	Arklow Bank Phase 2	Consent application submitted	High – Phase One projects have shared data and design information. EIA has now been submitted.	41nm	43nm	Overlap in construction period with Arklow Bank Phase 2 due to construct during 2026-2030
Tier 2						
In Stage 2: Screening, there were no projects identified with the potential for interaction between effects with the proposed development.						
Tier 3						
Port development	Bremore Port	Early development	Medium – information has been gathered through consultation with the Drogheda Port Company but publicly available detailed design information relevant to shipping and navigation is limited.	8.8nm	0.1nm	May influence commercial routing already affected by the offshore development area and introduce new routing

17.9.3 Project Impacts Included in the Assessment

Due to the review of cumulative tiering, Table 17.13 of the 2024 EIAR will be replaced with Table A17.7.

Table A17.7 Potential cumulative impacts and tiers for assessment (replaces Table 17.13 in Chapter 17: Shipping and Navigation of the 2024 EIAR)

Potential cumulative impact	Phase	Tiers and projects	Justification for inclusion in cumulative effects assessment
1. Vessel displacement and increased vessel to vessel collision risk (array area)	Construction/ Operation/ Decommissioning	Tier 1 – Phase One Projects, Dublin Port Masterplan 2040 Tier 3 – Bremore Port,	While additional cumulative deviations to affected commercial routes are not expected as per NRA (Appendix A17.1: NRA), overall displacement in terms of potential interactions between all vessel types is still considered as requiring to be assessed on a cumulative basis.
2. Vessel displacement and increased vessel to vessel collision risk (ECC)	Construction/ Operation/ Decommissioning	Tier 3 – Bremore Port	While additional cumulative deviations to affected commercial routes are not expected as per NRA (Appendix A17.1: NRA), overall displacement in terms of potential interactions between all vessel types is still considered as requiring to be assessed on a cumulative basis.
3. Third-party to proposed development vessel collision risk (array area)	Construction/ Operation/ Decommissioning	Tier 1 – Phase One Projects, Dublin Port Masterplan 2040 Tier 3 – Bremore Port,	Additional cumulative projects may raise wind farm vessel levels on a cumulative basis.
4. Third-party to proposed development vessel collision risk (ECC)	Construction/ Operation/ Decommissioning	Tier 1 – Phase One Projects, Dublin Port Masterplan 2040 Tier 3 – Bremore Port,	Additional cumulative projects may raise wind farm vessel levels on a cumulative basis.
5. Reduced access to local ports (array area)	Construction/ Operation/ Decommissioning	Tier 1 – Oriel Wind Park and Dublin Array Tier 3 – Bremore Port	Additional cumulative projects, infrastructure, vessels or operations may increase cumulative effects on port access.
6. Reduced access to local ports (ECC)	Construction/ Operation/ Decommissioning	Tier 1 – Oriel Wind Park Tier 3 – Bremore Port	Additional cumulative projects, infrastructure, vessels or operations may increase cumulative effects on port access.
7. Creation of vessel to structure collision risk (array area)	Operation	Tier 3 – Bremore Port	Additional cumulative projects may raise collision risk in the area on a cumulative basis
8. Reduction in under keel clearance (ECC)	Operation	Tier 1 – Oriel Wind Park Tier 3 – Bremore Port	Additional cumulative projects may increase areas where navigable depths are affected on a cumulative basis.
9. Anchor interaction with cables (ECC)	Operation	Tier 3 – Bremore Port	Additional cumulative projects may increase cable locally or increase volumes of traffic exposed to cables which may increase interaction risk on a cumulative basis.
10. Reduction in emergency response capabilities	Operation	Tier 1 – OMF and Phase One Projects, Dublin Port Masterplan 2040 Tier 3 – Bremore Port	Additional cumulative project may increase baseline incident rates on a cumulative basis.

There are no further changes to this section. Refer to Section 17.9.3 in Chapter 17 of the 2024 EIAR.

17.9.3.1 Cumulative Impact 1 - Vessel displacement and increased vessel to vessel collision risk (array area)

The cumulative route deviations were re-assessed as a result of the refined layout, the following text in Section 17.9.3.1 in Chapter 17 of the 2024 EIAR shall be deleted:

Two of the main commercial routes identified from the in isolation impact may potentially interact with Dublin Array with slight deviations required (Route 4 and Route 6). Route 4 is not displaced by the array area in isolation while Route 6 is already displaced by the in isolation impact. However, in both instances the increase in route length is low (0.4nm for Route 4 and 0.8nm for Route 6) and corresponds to a maximum 0.8% increase in total route length. Therefore, disruption to journey times and distances and effects on collision risk are anticipated to be negligible.

One of the main commercial routes identified from the in isolation impact may potentially interact with Arklow Bank Wind Park 2 with a slight deviation required (Route 4). The increase in route length for the cumulative impact is very small relative to the in isolation impact (a further increase of 0.3nm), and so further increases in journey times and distances and effects on collision risk are anticipated to be negligible.

And be replaced by the following:

Two of the main commercial routes identified from the in isolation impact may potentially interact with Dublin Array with slight deviations required (Route 4 and Route 6). Neither of these routes are displaced by the array area in isolation. In both instances the increase in route length is low (0.2nm for Route 4 and 0.3nm for Route 6) and corresponds to a maximum of 0.25% increase in total route length. Therefore, disruption to journey times and distances and effects on collision risk are anticipated to be negligible.

One of the main commercial routes identified from the in isolation impact which is not displaced by the array area may potentially interact with Arklow Bank Wind Park 2 with a slight deviation required (Route 4). The increase in route length for the cumulative impact is very small relative to the in isolation impact (a further increase of 0.2nm), and so further increases in journey times and distances and effects on collision risk are anticipated to be negligible.

There are no further changes required to this section. Refer to Section 17.9.3.1 of Chapter 17 of the 2024 EIAR. For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.9.3.2 Cumulative Impact 2 - Vessel displacement and increased vessel to vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.9.3.2 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.3 Cumulative Impact 3 - Third-party to proposed development vessel collision risk (array area)

The 2024 EIAR did not break down the significance of effect by phase and although the significance of effect remains unchanged for this impact across each phase from the 2024 EIAR the text is updated for clarity to outline the difference (this breakdown was already included in the 2024 EIAR in Appendix 17.1 the NRA). Therefore, the text within 17.9.3.3 of Chapter 17 of the 2024 EIAR shall be deleted:

The frequency of occurrence is anticipated to be remote. The severity of consequence is deemed to be moderate. These rankings have been determined on the basis that the consequences should a collision occur as per the in isolation impact, while the likelihood of a collision is slightly greater given the reduction in navigable sea room and potential for increased vessel movements.

Therefore (as per the matrix in Table 17.6), with the frequency of occurrence and the severity of consequence, the cumulative significance of effect for third-party to proposed development vessel collision

risk for the array area for both Project Option 1 and Project Option 2 during all phases with Tier 2 and Tier 3 projects is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

And be replaced by the following:

For the construction and decommissioning phase, the frequency of occurrence is anticipated to be remote. The severity of consequence is deemed to be moderate. These rankings have been determined on the basis that the consequences should a collision occur as per the in isolation impact, while the likelihood of a collision is slightly greater given the reduction in navigable sea room and potential for increased vessel movements.

Therefore (as per the matrix in Table A17.6), with the frequency of occurrence and the severity of consequence, the cumulative significance of effect for third-party to proposed development vessel collision risk for the array area for both Project Option 1 and Project Option 2 during the construction and decommissioning phases with Tier 1 and Tier 3 projects is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

For the operational phase, the frequency of occurrence is anticipated to be extremely unlikely. The severity of consequence is deemed to be moderate. These rankings have been determined on the basis that the consequences should a collision occur as per the in isolation impact, while the likelihood of a collision is slightly greater given the reduction in navigable sea room and potential for increased vessel movements.

Therefore (as per the matrix in Table A17.6), with the frequency of occurrence and the severity of consequence, the cumulative significance of effect for third-party to proposed development vessel collision risk for the array area for both Project Option 1 and Project Option 2 during the operational phase with Tier 1 and Tier 3 projects is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

There are no further changes required to this section. Refer to Section 17.9.3.3 of Chapter 17 of the 2024 EIAR.

17.9.3.4 Cumulative Impact 4 - Third-party to proposed development vessel collision risk (ECC)

There are no changes required to this section. Refer to Section 17.9.3.4 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.5 Cumulative Impact 5 - Reduced access to local ports (array area)

There are no changes required to this section. Refer to Section 17.9.3.5 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.6 Cumulative Impact 6 - Reduced access to local ports (ECC)

There are no changes required to this section. Refer to Section 17.9.3.6 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.7 Cumulative Impact 7 - Creation of vessel to structure collision risk (array area)

There are no changes required to this section. Refer to Section 17.9.3.7 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.9.3.8 Cumulative Impact 8 - Reduction in under keel clearance (ECC)

There are no changes required to this section. Refer to Section 17.9.3.8 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.9 Cumulative Impact 9 - Anchor interaction with cables (ECC)

There are no changes required to this section. Refer to Section 17.9.3.9 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be broadly acceptable and ALARP, which is not significant in EIA terms.

17.9.3.10 Cumulative Impact 10 - Reduction in emergency response capabilities

There are no changes required to this section. Refer to Section 17.9.3.10 of Chapter 17 of the 2024 EIAR.

For clarity, the significance of effect remains unchanged and is determined to be tolerable with mitigation and ALARP, which is not significant in EIA terms.

17.10 References

Following a review of updated guidance documents, the following references shall be included in Section 17.10 of Chapter 17 of the 2024 EIAR:

- [1] DoT (2025a). DoT Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI). Dublin, Ireland: DoT.
- [2] DoT (2025b). Standard Operating Procedure 07-2025 Offshore Renewable Energy Installations (OREI): Guidance and Operational Considerations for SAR and Emergency Response. Dublin, Ireland: DoT.
- [3] Drogheda Port Company (2025). *Notice to Mariners: 14 of 2025: Restricted area for vessels engaged in fishing. River Boyne seaward approaches, river entrance.* <https://www.droghedaport.ie/assets/uploads/documents/notice%20to%20mariners%20notices/DPC-NtM14of2025-AMENDED-RestrictedAreaForVesselsEngagedInFishing.pdf> (Accessed March 2026)
- [4] Dublin Port (2025). Significant progress made at Ireland's largest Marine Construction Project – MP2 Update. <https://www.dublinport.ie/significant-progress-made-at-irelands-largest-marine-construction-project-mp2-update/> (Accessed March 2026)
- [5] PIANC (2018). PIANC Report WG 161: Interaction between Offshore Wind Farms and Maritime Navigation. Brussels, Belgium: PIANC.

There are no further changes required to this section. Refer to Section 17.10 in Chapter 17 of the 2024 EIAR.