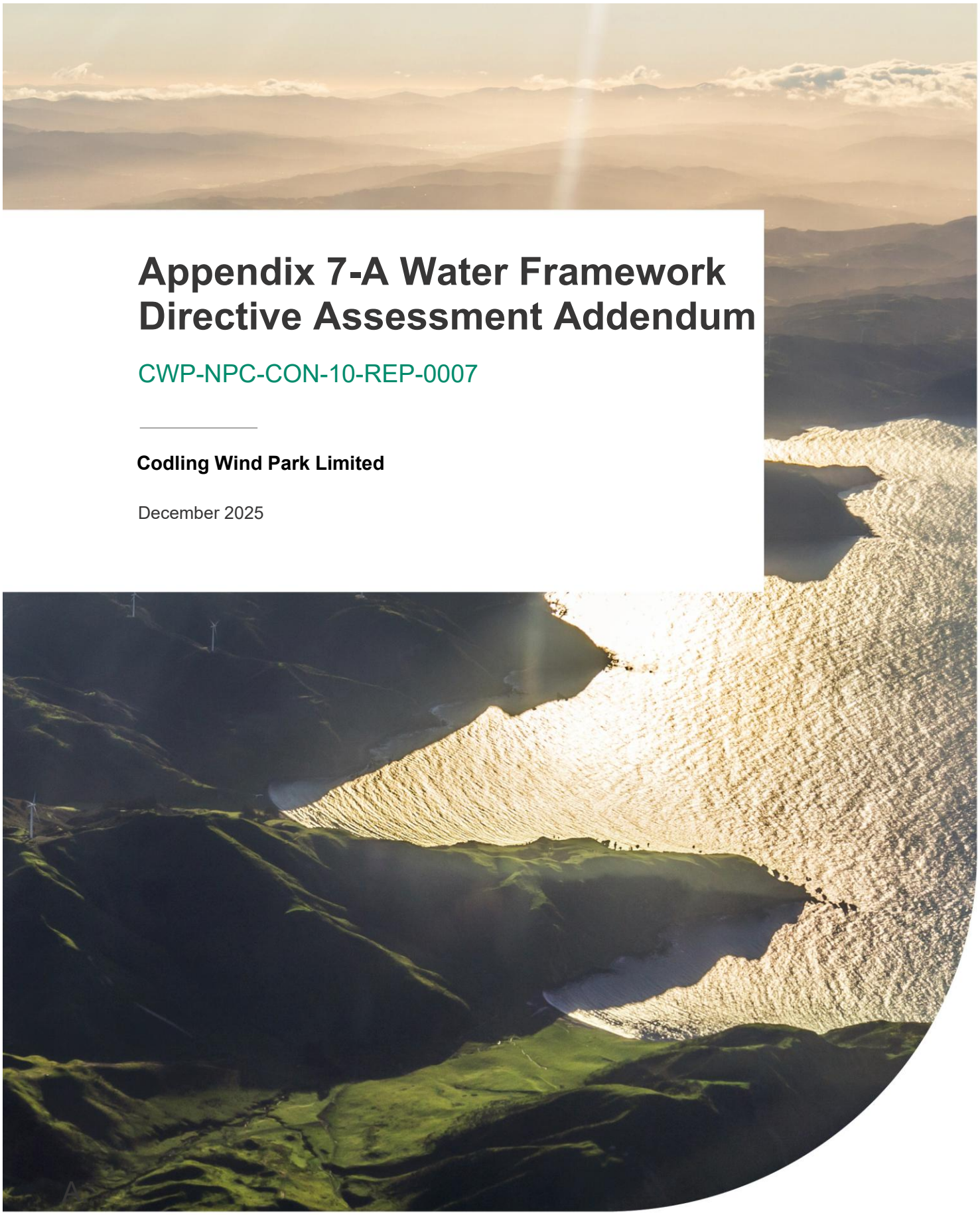
codling wind park

EIAR Addendum

Appendix 7-A Water Framework Directive Assessment Addendum



Appendix 7-A Water Framework Directive Assessment Addendum

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Codling Wind Park Limited

December 2025

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Document history

Author	Cormac MacDonagh	08/12/2025
Checked	Lesley Jamieson	12/01/2026
Approved	Stuart McCallum	27/02/2026

Client Details	
Contact	Sean Leake
Client Name	Codling Wind Park Limited
Address	Trintech Building, 2nd Floor, South County Business Park, Leopardstown, Dublin, D1

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Local Office:

First Floor
Suite 202, Q House,
76 Furze Road,
Sandyford
Dublin 18, D18 V1K5
Tel: +353 (0) 169 713 44

Registered Co Number 522742

Registered Office:

First Floor
Suite 202, Q House,
76 Furze Road,
Sandyford
Dublin 18, D18 V1K5

VAT No IE 319 4275 IH

Contents

Abbreviations

AA	Appropriate Assessment
AESI	Adverse effect on site integrity
AL	Action Level
CEMP	Construction Environmental Management Plan
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
DAS	Dumping at sea
DCC	Dublin City Council
DHLGH	Department of Housing, Local Government and Heritage
DWPA	Drinking Water Protected Area
EC	European Commission
EEZ	Exclusive Economic Zone
EIAR	Environmental; Impact Assessment Report
EPA	Environmental Protection Agency
EPA-SCMU	Environmental Protection Agency Catchment Science & Management Unit
EQSD	Environmental Quality Standards Directive
ESB	Electricity Supply Board
FRA	Flood risk assessment
GES	Good environmental status
GSI	Geological Survey of Ireland
HMWB	Heavily modified water body
HSE	Health Service Executive
IAC	Inter-array cabling
IGI	Institute of Geologists Ireland
INNS	Invasive non-native species
JASPERS	Joint Assistance to Support Projects in European Regions
LAWPRO	Local Authority Waters Programme
LSE	Likely significant effect
MAC	Maritime Area Consent
MHW	Mean high water
MLW	Mean low water
MSFD	Marine Strategy Framework Directive
NBDC	National Biodiversity Data Centre
NCMC	National Co-Ordination and Management Committee
NIS	Natura Impact Statement

NPWS	National Parks & Wildlife Service
NSAs	Nutrient sensitive areas
NTIG	National Technical Implementation Group
NTU	Nephelometric Turbidity Units
O & M	Operations and maintenance
OECC	Offshore export cable corridor
OOS	Out-of-service
OSPAR	Oslo and Paris Conventions
OSS	Offshore Sub Stations
OTI	Onshore transmission infrastructure
PINS	Planning Inspectorate
PLGR	Pre-lay grapnel run
PLONAR	Pose Little or No Risk to the Environment
PSA	Particle size analysis
PWBO	Protection of Water Bodies Office
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SFPA	Sea-Fisheries Protection Authority
SPA	Special Protected Area
SSC	Suspended sediment concentration
SUDS	Sustainable Drainage Systems
TJB	Transition joint bay
TOC	Total organic carbon
UWWT	Urban Waste Water Treatment
UXO	Unexploded Ordnance
WCS	Worst case scenario
WFD	Water Framework Directive
WPAC	Water Policy Advisory Committee
Zol	Zone of influence

Glossary

Heavily modified water body	waterbodies that have had their physical characteristics, or hydromorphological conditions, modified for the purposes of a specified use
Artificial water body	surface water bodies which have been created in a location where no water body existed before, and which have not been created by the physical alteration, movement or realignment of an existing water body
Water body	An individual unit of a water feature used for monitoring and planning purposes. For example in groundwater this is part of an aquifer. For surface water, this is a discrete and significant element of surface water, such as part of a stream, river or canal, a transitional water or a stretch of coastal water. There are various types including a body of surface water, a body of groundwater and artificial water bodies. Finally, there is a particular type of water body called 'heavily modified water body' which is a surface water which has been significantly altered by human activity and so must be considered in a different way to an 'unmodified' water body.
1 nautical mile (NM) limit	Marine jurisdiction of the Water Framework Directive (WFD)

1. Introduction

1.1. Water Framework Directive

Section 1.1 is unchanged.

1.1.1. Implementation of the WFD

Section 1.1.1 is unchanged.

1.1.2. The River Basin Management Plan

Section 1.1.2 is replaced entirely by the following text. This revision has been made to include the update to the River Basin Management Plan.

The WFD is administered in each EU state via the River Basin Management Plan (RBMP), which allows for assessment, planning, implementation, and review in 6 year cycles. The Water Action Plan 2024: RBMP for Ireland 2022-2027 (the Third Cycle RBMP) (DHLGH, 2021a) was subject to a 6-month public consultation from September 27th 2021 to March 31st 2022 (RPS, 2022). The final RBMP was published in September 2024.

The Second Cycle River Basin Management Plan (RBMP) included environmental objectives, such as to protect, enhance and restore the status of surface and ground waters, control of abstraction and reduction and reversing pollution; to comply with the objectives and standards under which protected areas (as relevant to the WFD) have been established and ensure full compliance with EU legislation. Measures included in the Second Cycle RBMP were outlined in 14 categories according to the nature of the pressure. Measures included:

- Address pressures from rural diffuse & point sources;
- Address pressures from urban waste-water & urban runoff;
- Address pressures from forestry;
- Address pressures from harvesting of peat;
- Protect water bodies from invasive species;
- Improve physical condition of water environment;
- Address abstraction pressures;
- Water and Land-Use Planning;
- Assessment and Management of Flood Risks;
- Climate-Change Adaptation;
- National Lead Strategy for Drinking Water; and
- Hazardous Chemicals in the Aquatic Environment.

The Third Cycle RBMP is also required to include a programme of measures to enable the achievement of objectives of the RBMP which are set out in Appendix 2 (DHLGH, 2021b), and a list of proposed areas for action which are set out in Appendix 3 (DHLGH, 2021b) which are intended to deliver an “increased level of ambition encompassing all waterbodies with clear strategies to protect those that are still at good status or above and to improve water bodies that are at less than good status”.

As such, both the second cycle RBMP (2018 to 2021) and third RBMP (2022 to 2027) are considered within this assessment, in respect of water body status and targets.

1.2. Marine Strategy Framework Directive Assessment

Section 1.2 is unchanged.

1.3. Approach to WFD Assessment

Section 1.3 is unchanged.

1.4. Assessment Methodology

Section 1.4 is unchanged.

1.4.1. Stage 1 Screening

1.4.2. Stage 2 Scoping

1.4.3. Stage 3 Identification of mitigation

1.4.4. Stage 4 Impact Assessment

1.4.5. Stage 5 Article 4.7 Derogation

1.5. Water body Classifications

Section 1.5 is unchanged.

1.5.1. WFD Water body classification elements

1.5.1.1. Biology – Habitats

1.5.1.2. Biology – Fish

1.5.1.3. Hydromorphology

1.5.1.4. Water Quality

1.5.1.5. WFD Protected Areas

1.5.1.5.1. Drinking Water

1.5.1.5.2. Natura 2000 Designated Sites

1.5.1.5.3. Bathing waters

1.5.1.5.4. Shellfish waters

1.5.1.5.5. Nutrient sensitive areas

1.5.1.6. Invasive non-native species (INNS)

1.5.1.7. Groundwaters

2. Project summary

Section 2 is unchanged except for Section 2.1.3.

2.1.1. Pre-installation activities

2.1.2. Assessment parameters

2.1.3. Suspended Sediment Plume Modelling

Section 2.1.3 is replaced entirely by the following text. This revision has been made to include the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

The detailed modelling scenarios are provided in **Appendix 6-A Modelling Report Addendum** of the **EIAR Addendum**, however the results of the scenarios are summarised as follows:

Activities associated with seabed preparation such as the deposit of dredged material within the array site and OECC and cable installation activities in the OECC have the potential to lead to local increases in SSC.

Whilst construction activities in the intertidal and landfall areas such open cut trenching will disturb the sediment, the works will be conducted at low tide and as such have no potential to lead to increases in SSC.

The two activities that will result in the largest levels of SSC and associated deposition are dredging and trenching, as described in **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** of the EIAR.

During dredge disposal and trenching activities, SSC's local to the release locations are predicted to be enhanced to up to c. 400 mg \ L.

Enhanced SSCs are transient, and concentrations are predicted to reduce to baseline levels no more than 12 days after the release activity.

Dredging and dredge disposal

Suspended sediment plumes created during dredge disposal operations are predicted to enhance SSC levels in the near field (i.e. to the point of release) and far field (i.e. up to circa 7 km) from the point of release).

The predicted transport of sediment plumes and subsequent deposition during dredge disposal activities within the CWP Project can be summarised as follows:

Modelled representative scenarios of dredge disposal activities within the array site indicated the predominant direction of travel for SSC plumes is north – south / slight east (away from shore). In one scenario, assessed in **Appendix 6-A** of the **EIAR Addendum**, a maximum transient increase in SSC of 250 mg/L was predicted to travel a maximum of up to 7 km over c.11 days resulting in a cumulative sediment deposition thickness of c. 0.03 m, near the disposal location. Modelled representative scenarios of dredge disposal activities within the OECC predicted: a maximum transient increase in SSC of 400 mg / L, travelling up to 6 km north – south / slight east resulting in a cumulative sediment deposition thickness of c. 0.04 m, near the disposal location. In a final scenario, a maximum increase in SSC of 125 mg / L, travelling a maximum of 4 km north – south resulting in a cumulative sediment deposition thickness of c. 0.03 m, near the disposal location.

Trenching

A consequence of cable installation will be the liberation of sediment into suspension within the water column, just above the seabed. Jetting results in greater sediment suspension, introducing the potential for distribution of greater volumes of material over a larger spatial area than other cable laying techniques which may be employed during construction and thus is assessed as the representative scenario. This method involves fluidising the material to form a narrow trench into which the cable is laid.

Based upon the representative scenario, the predicted transport of sediment plumes generated during cable installation activities across the array site indicates the finest sediments will potentially be transported north – south / slight east to 5 km at an increase of 140 mg / L, resulting in a cumulative sediment deposition thickness of 0.01 m, near the release location. However, this plume is transient, rapidly decreasing as sand sized sediments deposit to the bed and finer sediments are dispersed.

The predicted transport of sediment plumes generated during cable installation activities across the OECC were for a maximum increase in SSC of 80 mg / L being transported for up to 6 km north – south / slight east resulting in a cumulative sediment deposition thickness of c. 0.01 m, near the release location.

Therefore, the maximum thickness of the deposit on the seabed away from the trenching activities were predicted to be c. 0.01 m; deposited sediments would be reworked and rapidly integrated into the prevailing sediment transport regime, and thus would have negligible impact on the prevailing environment. Consequently, enhanced SSC and the predicted deposition thickness would not discernible above natural variation observed during storm events, with SSC's predicted, in the representative scenario, to reduce to baseline levels within c. 12 days following trenching operations.

Background levels of SSC are considered to be between 5 - 15 mg / L within the offshore development area.

Based on the maximum travelling distance of sediment from dredge disposal activities outlined, a ZoI of 7 km has been adopted for the entire offshore development area for the purposes of screening and scoping.

3. Stage 1 Screening

Section 3 is unchanged except for Section 3.2 and Section 3.3.5.

3.1. Screening of Activities

3.2. Screening of water bodies

Section 3.2 is replaced entirely by the following text. This revision has been made to include the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

The Environment Agency (2017) guidance recommends that water bodies and relevant protected areas within 2 km of the activities should be screened for WFD assessment, however, to adopt a precautionary approach, screening was undertaken based on the results presented in **Appendix 6-A** of the **EIAR Addendum**, and summarised in **Section 2.1.6** and **2.1.7**. As a result, all water bodies 10 km from the offshore development area are included.

Where applicable, two measurements are provided, firstly the minimum distance in a straight line, secondly the practical distance (i.e. including for obstacles between the two areas) reflecting the true connectivity between the offshore development area and the water body. There are three coastal and four transitional water bodies within the ZoI of the CWP Project. These are summarised in **Table 6** and shown in **Figures 1, 2** and **3**.

An onshore ZoI of 2 km radius from the red line boundary of the onshore infrastructure has been established in line within the Institute of Geologists Ireland (IGI) (2013) Guidelines. There are 2 surface waters (1 river and 1 canal) and 1 groundwater within the ZoI. These are included in **Table 7**; however both surface waters are upstream of the works and are therefore screened out as they have no connectivity to the works.

Terrestrial water bodies and groundwaters are not anticipated to be impacted by marine activities as there is no route to impact. Flood risk is addressed in **Volume 3**, **Chapter 20 Hydrology and Hydrogeology** and **Volume 4, Appendix 20.2 Site Specific Flood Risk Assessment**.

3.3. WFD Protected areas

3.3.1. Drinking water

3.3.2. Natura 2000 Sites and Designated Salmonid Waters

3.3.3. Bathing Areas

3.3.4. Shellfish Areas

3.3.5. Nutrient Sensitive Areas

Table 8 is replaced entirely by Table A below. This revision has been made to include the updated boundary to The Murrough SPA.

Table A List of protected areas with water-dependent features within the ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
Designated Areas (Habitats Directive and Birds Directive)							
Rockabill to Dalkey Island SAC (Site code: 003000)	Qualifying Interests Reefs [1170] *Phocoena phocoena* (Harbour Porpoise) [1351]	Designated	Dublin Bay Irish Sea Dublin (HA 09) Southwestern Irish Sea – Killiney Bay (HA10) Northwestern Irish Sea (HA 08)	0		Yes	Overlaps
South Dublin Bay SAC (Site code: 000210)	Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110]	Designated	Dublin Bay	0		Yes	Overlaps
South Dublin Bay and River Tolka Estuary SPA (Site code: 004024)	Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149]	Designated	Dublin Bay Liffey Estuary Lower	0		Yes	Overlaps

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
	Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*10aritimtotanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Wetland and Waterbirds [A999]						
Dalkey Islands SPA (Site code: 004172)	Qualifying Interests Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194]	Designated	Dublin Bay Irish Sea Dublin (HA 09)	0.5		Yes	Within ZoI
North Bull Island SPA (Site code: 004006)	Qualifying Interests Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054] Shoveler (*Anas clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144]	Designated	Dublin Bay Liffey Estuary Lower Tolka Estuary North Bull Island	1.3		Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
	Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*11aritimtotanus*) [A162] Turnstone (*Arenaria interpres*) [A169] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Wetland and Waterbirds [A999]						
Baldoyle Bay SPA (7.0 km)	Qualifying Interests Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999]	Designated	Dublin Bay Liffey Estuary Lower	7.0	7.0	Yes	Within ZoI
The Murrough SPA (0 km)	Qualifying Interests Red-throated Diver (*Gavia stellata*) [A001] Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	Designated	Southwestern Irish Sea Killiney Bay (HA10)	25.9	0	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
	Wigeon (*Anas penelope*) [A050] Teal (*Anas crecca*) [A052] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Herring Gull (*Larus argentatus*) [A184] Little Tern (*Sterna albifrons*) [A195] Wetland and Waterbirds [A999]						
North-West Irish Sea cSPA (1.3 km)	Qualifying Interests Red-throated Diver (Gavia stellata) [A001] Great Northern Diver (Gavia immer) [A003] Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Common Scoter (Melanitta nigra) [A065] Little Gull (Larus minutus) [A177] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Lesser Black-backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Great Black-backed Gull (Larus marinus) [A187] Kittiwake (Rissa tridactyla) [A188]	Candidate	Dublin Bay Liffey Estuary Lower Tolka Estuary North Bull Island Irish Sea Dublin (HA 09)	1.6	1.3	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
	Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Little Tern (Sterna albifrons) [A195] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]						
North Dublin Bay SAC (Site code: 000206)	Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Junctecalia maritimi) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190]	Designated	Dublin Bay Liffey Estuary Lower Tolka Estuary North Bull Island	1.3		Yes	Within ZoI
Wicklow Reef SAC	Reefs [1170]	Designated	Southwestern Irish Sea Killiney Bay (HA10)	40	5.5	Yes	Within ZoI
Nature Reserves							

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
Bull Island	Supports nine internationally important habitats and a range of protected species, including: Petalwort; Marsh Fritillary Butterfly; Harbour and Grey Seal; Common Lizard; and at least three species of bat (Common Pipistrelle, Soprano Pipistrelle, and Leisler's). The island's flora is significant, with 361 plant species recorded thus far, including five rare species protected under the Flora Protection Order (2022). Internationally important numbers of waterfowl and wading birds overwinter on the islands salt marshes, tidal lagoons and mudflats. In the summer, the dunes on the island provide crucial habitat for ground nesting birds, including Skylark, Stonechats, and Meadow Pipit.	Local nature Reserve	Dublin Bay Liffey Estuary Tolka Estuary Bull Islans	2.2	1.7 (2.5 around Dublin Port)	Yes	Within ZoI
Booterstown Marshes	Internationally important feeding and roosting area for ducks, geese and waders, and probably holds the highest concentration of wintering waterfowl of an Irish estuary, and supports Moorhen, Reed Bunting, Sedge Warbler, Teal, Snipe, Lapwing, Oystercatcher, Redshank, Dunlin, and Brent Geese. *Puccinellia fasiculata* occurs in the marsh - protected under the Wildlife Act (Flora Protection Order of 1987).	Local nature Reserve	Dublin Bay	2.6	1.6	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
Shellfish Areas							
Malahide WB_CD: IE_EA_020_0000 EU_PA_Code: IEPA2_0057	Razor clams	A*** Seasonal Classification 1 Aug to 01 Jan, Reverts to Class B at other times	Irish Sea Dublin (HA 09)	N/A (No route to impact from onshore works)	11	No	Outside ZoI
Bathing Waters							
Sandymount Strand	Beach	Excellent (2023)	Dublin Bay	N/A (No route to impact from onshore works)	0.79	Yes	Within ZoI
Forty Foot Bathing Place	Beach	Excellent (2021)	Dublin Bay	N/A (No route to impact from onshore works)	0.86	Yes	Within ZoI
Sandycove Beach	Beach	Excellent (2021)	Dublin Bay	N/A (No route to impact from onshore works)	0.97	Yes	Within ZoI
Seapoint	Beach	Excellent (2021) Blue flag 2022	Dublin Bay	N/A (No route to	2.24	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
				impact from onshore works)			
White Rock Beach	Beach	Excellent (2021)	Southwestern Irish Sea – Killiney Bay (HA10)	N/A (No route to impact from onshore works)	2.51	Yes	Within ZoI
Killiney	Beach	Excellent (2021)	Southwestern Irish Sea – Killiney Bay (HA10)	N/A (No route to impact from onshore works)	3.27	Yes	Within ZoI
Dollymount Strand	Beach	Good (2021)	Dublin Bay	N/A (No route to impact from onshore works)	3.49	Yes	Within ZoI
White Rock	Beach		Irish Sea Dublin (HA 09)	N/A (No route to impact from onshore works)	2.5	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
North Bull Wall	Other bathing water	Excellent	Dublin Bay	N/A (No route to impact from onshore works)	2.2	Yes	Within ZoI
Half Moon	Other bathing water	Excellent	Dublin Bay	N/A (No route to impact from onshore works)	0.5	Yes	Within ZoI
Shelley Banks	Other bathing water	Excellent	Dublin Bay	N/A (No route to impact from onshore works)	0	Yes	Within ZoI
Merrion Strand	Other bathing water	Excellent	Dublin Bay	N/A (No route to impact from onshore works)	1.3	Yes	Within ZoI
Dun Laoghaire Baths	Other bathing water	Excellent	Dublin Bay	N/A (No route to impact from	1.4	Yes	Within ZoI

Name	Criteria / Description	Current Status	Associated Water bodies	Min. distance to infrastructure (km)		Screen in?	Rationale
				Onshore	Offshore		
				onshore works)			
Nutrient Sensitive Areas							
Liffey Estuary (Upper & Lower), Tolka Estuary and South Bull Lagoon (Ringsend) Seapoint	Secondary treatment in place	Currently not meeting objectives	Liffey Estuary Upper Liffey Estuary Lower Tolka Estuary	0	0.5	Yes	Within ZoI

4. Stage 2 Scoping

Section 4 remains unchanged except for Table 9 which is replaced by Table B below. This update has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and to include the latest information from the Water Quality in Ireland 2019-2024 report (see **FIR Response Document**).

Table B: Summary of Stage 2 Scoping

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
Dublin Bay	Biology: habitats	Yes	Footprint of activity exceeds 1% of the water body's area and is within 500 m of a higher sensitivity habitat. Footprint may exceed 1% of lower sensitivity habitats present within the water body.
	Biology: fish	No	. Activities are not anticipated to delay or prevent fish entering an estuary, impact normal fish behaviour, or cause entrainment or impingement of fish.
	Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
	Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity. Levels of contaminants, when assessed against Irish guidelines, the 2021 survey results showed that three stations had Arsenic levels above the Lower AL but below the Upper AL. Cadmium levels at one station were also between the Upper and Lower AL. In the 2025 survey, four stations in the OECC had

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
			Arsenic levels above the Lower AL but below the Upper AL. When assessed against Cefas guidelines, the 2021 survey showed levels of Cadmium, Chromium and Zinc at one station were slightly above AL1 but below AL2. In the 2025 survey, Chromium was slightly above AL1 but below AL2 at two stations in the intertidal area. No other contaminants assessed were above Irish Lower ALs or Cefas AL1 and none were above Irish or Cefas upper limits during site-specific surveys, which may be disturbed during the works.
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
	INNS	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
Dublin Groundwater body	Groundwater – Bedrock Aquifer	Yes	Works are small scale. Bedrock aquifer is located at a significant depth and overlain by low permeability materials. No significant modifications anticipated to the Groundwater Body.
Liffey Estuary Lower	Biology: habitats	No	Works are small scale (affect less than 1% of water body area).
	Biology: fish	Yes	Noise from piling during installation of the coastal

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
			wall could impact on normal fish behaviour in the estuary.
	Hydromorphology	No	Works are small scale, and effects imperceptible.
	Water quality	Yes	Phytoplankton status for 2019-2024 is good.
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
Irish Sea Dublin	Biology: habitats	Yes	Works have the potential to exceed 1% of the water body's area, and are within 500 m of a higher sensitivity habitat
	Biology: fish	No	Not an estuary, no estuaries associated with this water body are within ZoI of the works.
	Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
	Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity.
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
Southwestern Irish Sea - Killiney	Biology: habitats	Yes	Footprint of sediment plume exceeds 1% of the water body's area.
	Biology: fish	No	Not an estuary, no estuaries associated with this water body are within ZoI of the works.
	Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
	Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity.
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
Tolka Estuary	Biology: habitats	No	Works are small scale. No modifications to waterbody hydromorphology.
	Biology: fish	Yes	While noise is not a monitored characteristic under WFD, noise from piling works in the Liffey could impact on normal fish behaviour in the estuary.
	Hydromorphology	No	No overlap. No modifications to hydromorphology.
	Water quality	Yes	Phytoplankton status for 2019-2024 is good.
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
Liffey Estuary Upper	Biology: habitats	No	Works are small scale.
	Biology: fish	Yes	While noise is not a monitored characteristic under WFD, noise from piling works undertaken downstream could impact on normal fish behaviour in the estuary. Activities are not anticipated to delay or prevent fish entering an estuary, impact normal fish behaviour, or cause entrainment or impingement of fish.
	Hydromorphology	No	Works are small scale. No modifications to hydromorphology.
	Water quality	No	Works are small scale and temporary No predicted effects.
	Protected areas	No	There are no WFD protected areas associated with this water body.
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
North Bull Island	Biology: habitats	No	Works are small scale. No modifications to the water body hydromorphology
	Biology: fish	No	Activities are not anticipated to delay or

Water Body	Receptor	Potential risk to receptor?	Risk issues for impact assessment
			prevent fish entering an estuary, or cause entrainment or impingement of fish.
	Hydromorphology	No	No modifications to the water bodyhydromorphology.
	Water quality	No	No predicted effects on water quality .
	Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
	Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.
River Dodder	All	No	Water body is upstream of works, no overlap, no route to impact.
Grand Canal Basin	All	No	Water body is upstream of works, no overlap, no route to impact.

5. Stage 3 Identification of mitigation

Section 5 is unchanged.

6. Stage 4 Impact Assessment

6.1. Dublin Bay Coastal water Body

Section 6.1 is unchanged.

6.1.1. Biology: Habitats

Section 6.1 is unchanged.

6.1.2. Water Quality

Section 6.1.2 is replaced entirely by the following text. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Assessment is required where activities could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days). Modelling suggests that a maximum transport distance of disturbed material for the entire offshore development area is 7 km (**Appendix 6-A** of the **EIAR Addendum**).

The activity has the potential to disturb sediment with contaminants above Irish Lower ALs or Cefas AL1.

Water Clarity

Increases in SSC are anticipated to last up to 12 days, affecting water clarity for less than 14 days, however, from a precautionary standpoint, the assessment is undertaken. Other factors such as temperature, salinity etc. will not be affected.

Increased SSC has the potential to interact with algae and phytoplankton due to the potential for reduction of light in the water column, and also from the potential release of sediment bound nutrients resulting in an increase in phytoplankton concentration (Essink, 1999). Nutrient input in coastal and estuarian areas typically come from terrestrial sources, such as river input, diffuse run-off during wet weather (EPA, 2023d), with nutrient inputs in Dublin Bay primarily come from terrestrial sources (Wilson, 2005), with limited accumulation in the seabed due to the mobile nature of sediments. This is reflected in the low total organic carbon (TOC) levels detected in site-specific surveys (see **Appendix 8.3 Benthic Baseline Report** of the EIAR and **Appendix 8-A Benthic Subtidal Survey Report 2025** of the **EIAR Addendum**). Release of sediment-bound nutrients from construction activities are anticipated to be localised and of low concentration, and not expected to influence phytoplankton growth within the water body.

Background SSC within Dublin Bay overlapping the offshore development area are observed to peak between 8 and 12 mg/L (Silva, 2016), however this can increase by a factor of 10 in storm conditions, as recorded during Storm Barra in 2021, where SSC increased from <10 Nephelometric Turbidity Units (NTU) to 110 NTU in storm conditions (RPS, 2022b). Total suspended solids (mg/l) within the approach channel to Dublin Port is estimated at 1.61 times the turbidity (NTU) (RPS, 2022b), therefore suspended sediments in Dublin Bay have been recorded to exceed 170 mg/l in storm conditions.

Based on the results of modelling outputs presented in **Appendix 6-A** of the **EIAR Addendum**, peak levels of SSC from the proposed activities only persist for a very short period of time (hours) and therefore it is assumed will affect only a very small area around the location of the activity (< 1 km). Increases in SSC and sediment deposition arising from construction activities in both the array site and OECC are mainly predicted to be transported north – south / slight east, away from Dublin Bay. Only finer fractions (particle size range of <63 µm) are expected to remain in suspension at levels equivalent to background concentration for up to 12 days. This is not anticipated to significantly affect phytoplankton concentration or algal condition in the Dublin Bay coastal water body.

Increases in SSC as a result of dredge disposal, modelling release at 5 km from the coast (and closest to water bodies)

While these increases are anticipated to exceed one tide cycle (up to 12 days), effects are temporary and localised, and are not anticipated to impact the growth of algae and phytoplankton in the water body, and are therefore not anticipated to result in a deterioration of the water body's good status.

Contaminated sediments

Levels of contaminants above Irish lower AL or Cefas AL1 were detected at four stations in the 2021 survey and at six stations in the 2025 survey (two in the intertidal area, and four along the OECC) The 2021 survey results showed that, when assessed against Irish guidelines, stations 28, 30 and 77 had arsenic levels above the lower AL but below the upper AL. Cadmium levels at Station 59 were also between the lower and upper AL. The 2025 intertidal survey results showed that, stations 16 and 20 had chromium concentrations slightly above Cefas AL 1 but below AL2, and below Irish lower and upper levels. The 2025 OECC survey results showed that, stations 8, 10,11 and 13 had arsenic levels above Irish lower AL but below the Irish upper AL, and below Cefas AL1 and AL2. (**Appendix 8.3** of the EIAR and **Appendix 8-A** of the **EIAR Addendum**). No station from either the 2021 or 2025 surveys exceeded Cefas AL2 or Irish Upper Levels, and no other pollutants exceeded risk levels. Stations 59 from the 2021 survey and Stations 16 and 20 from the 2025 intertidal survey are located within the Dublin Bay coastal water body, and as a result there is potential for contaminated sediments to be released within the Dublin Bay coastal water body. Stations 28, 30 and 77 in the 2021 survey and stations 8, 10, 11 and 13 in the 2025 OECC survey are located outside of the WFD water bodies, and a minimum of 5 km from the Dublin Bay coastal water boundary and is therefore outside the ZoI.

The potential for sediments to accumulate chemical contamination is linked with sediment type. Finer particles (muds and silts, <63 µm) have greater surface area to volume ratio and adsorptive capacity compared to coarser grains (sands and gravels) (Sheahan *et al*., 2001). As described in **Volume 3**, **Chapter 6 Marine Geology, Sediments and Coastal Processes** and site-specific PSA analysis (Osiris Projects, 2014), seabed across the offshore development area is predominantly sandy gravel (grain size >2 mm), with a higher percentage of sand (0.063 – 2.0 mm) found closer to the coastline.

In general, seabed sediments are mobile and susceptible to regular resuspension by tidal currents and waves, resulting in high natural dispersion and diffusion of any low level contaminants. Any disturbance of sediments as a result of the works would likely dilute contaminants further, and would not risk deterioration of the overall good chemical status of the water body.

The onshore infrastructure is located on an area previously used for landfill, and while no contamination has been found during site-specific surveys (which are ongoing), it is assumed for the purpose of assessment that there may be chemicals present that are on the EQSD list as a conservative approach. All landfall works will be undertaken within a cofferdam or soil berm in dry conditions, resulting in no connectivity between the marine environment and potential for disturbance of contamination from onshore sources. In addition, all works will be carried out in accordance with project management plans such as the CEMP, to manage and mitigate potential release of pollutants, therefore will be no additional contamination of the marine environment as a result of the works. Any soil found to be contaminated will be removed and disposed of appropriately in accordance with the relevant onshore management plan, such as the Construction Environmental Management Plan (CEMP).

Impacts to water quality are therefore are not anticipated to result in a deterioration of the water body's good chemical status.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles, and given the localised nature of disturbance and short timescale of impacts, impacts to water quality via changes to water clarity and release of contaminants from sediments will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.1.3. INNS

Section 6.1.3 is unchanged.

6.1.4. Summary

Section 6.1.4 is unchanged.

6.2. Dublin Groundwater body

Section 6.2 is unchanged.

6.2.1. Summary

6.3. Liffey Estuary Lower Transitional Water Body

Section 6.3 is unchanged except for Section 6.3.2 below.

6.3.1. Biology: Fish

6.3.2. Water Quality

Section 6.3.2 is replaced entirely by the following text. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Assessment is required where the phytoplankton status for a water body is moderate.

Phytoplankton status of the Lower Liffey Estuary for 2019-2024 was good, indicating low sensitivity to blooms of phytoplankton and algae. As per **Section 6.1.2**, SSC has the potential to interact with algal and phytoplankton compliment of the water body due to the potential for reduction of light in the water column, and also from the potential release of sediment bound nutrients resulting in an increase in phytoplankton concentration (Essink, 1999).

Nutrient input in coastal and estuarian areas typically come from terrestrial sources, such as river input, diffuse run-off during heavy rainfall (EPA, 2023d). Potential additional sources from the works include run-off from the onshore site compound which flows into the Liffey. Increased turbidity and release of sediment bound nutrients from construction activities are anticipated to be localised and of very low concentration, and not expected to influence phytoplankton growth within the water body. Water use and run-off from the site will be managed via best practice on-site drainage management, managed via the CEMP, and will be disposed of in accordance with Onshore Infrastructure Drainage Strategy.

Contaminated sediments

Levels of contaminants above Irish lower AL or Cefas AL1 were detected at four stations in the 2021 survey and at six stations in the 2025 survey (two in the intertidal area, and four along the OECC) The 2021 survey results showed that, when assessed against Irish guidelines, stations 28, 30 and 77 had arsenic levels above the lower AL but below the upper AL. Cadmium levels at Station 59 were also between the lower and upper AL. The 2025 intertidal survey results showed that, stations 16 and 20 had chromium concentrations slightly above Cefas AL 1 but below AL2, and below Irish lower and upper levels. The 2025 OECC survey results showed that, stations 8, 10,11 and 13 had arsenic levels above Irish lower AL but below the Irish upper AL, and below Cefas AL1 and AL2. (**Appendix 8.3** of the **EIAR** and **Appendix 8-A** of the **EIAR Addendum**). Stations 16 and 20 from the 2025 intertidal survey are 1.8 km and 1.5 km southwest from the boundary of the Liffey Estuary Lower transitional water body. All other stations are in excess of 4 km away.

Remobilisation of contaminated sediments can occur when such sediments are disturbed and enter the water column and are transported and redeposited elsewhere. However, construction activities within the intertidal area

will be undertaken at low water, with limited sediment dispersal predicted, thereby reducing the potential for increases in SSC. Although the contaminated stations are located within 4 km of the Lower Liffey Estuary, they are situated at a minimum distance of 1.5 km and are largely separated by the Great South Wall. Contamination was recorded at two of the ten intertidal sampling stations, with concentrations slightly above Cefas AL1 but below AL2 and the Irish lower and upper action levels. This indicates that affected areas are patchy and isolated, with only trace levels of contamination present. On this basis, disturbance of contaminated sediments is not expected to result in a deterioration of the overall status of the water body.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles and given the localised nature of disturbance and short timescale of impacts, impacts to water quality via changes to phytoplankton status and release of contaminants from sediments will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.3.3. INNS

6.3.4. Summary

6.4. Irish Sea Dublin

Section 6.4 is unchanged except for 6.4.1 below

6.4.1. Water Quality

Section 6.4.1 is replaced entirely by the following text. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l (see **FIR Response Document**).

Increase in SSC anticipated to last up to 12 days, affecting water clarity.

Water clarity

As per **Section 6.1.2** above, increases in SSC anticipated to last up to 12 days, affecting water clarity. Other factors such as temperature, salinity etc. will not be affected. Water clarity may be affected for less than 14 days, however increases will not exceed storm levels. Effects are temporary and localised and are not anticipated to impact the growth of algae and phytoplankton in the water body, and are therefore not anticipated to result in a deterioration of the water body's good status.

Contaminated Sediments

Levels of contaminants above Irish lower AL or Cefas AL1 were detected at four stations in the 2021 survey and at six stations in the 2025 survey (two in the intertidal area, and four along the OECC) The 2021 survey results showed that, when assessed against Irish guidelines, stations 28, 30 and 77 had arsenic levels above the lower AL but below the upper AL. Cadmium levels at Station 59 were also between the lower and upper AL. The 2025 intertidal survey results showed that, stations 16 and 20 had chromium concentrations slightly above Cefas AL 1 but below AL2, and below Irish lower and upper levels. The 2025 OECC survey results showed that, stations 8, 10,11 and 13 had arsenic levels above Irish lower AL but below the Irish upper AL, and below Cefas AL1 and AL2. (**Appendix 8.3** of the EIAR and **Appendix 8-A** of the **EIAR Addendum**). Stations 30 from the 2021 survey is 2.9 km and station 8 from the 2025 survey is 3 km southeast from the boundary of the Irish Sea Dublin (HA 09) water body. All other stations are in excess of 4 km away.

As per **Section 6.1.2**, the potential for sediments to accumulate chemical contamination is linked with sediment type. Finer particles (muds and silts, <63 µm) have greater surface area to volume ratio and adsorptive capacity compared to coarser grains (sands and gravels) (Sheahan *et al*., 2001). As described in **Volume 3**, **Chapter 6 Marine**

Geology, Sediments and Coastal Processes and site-specific PSA analysis (Osiris Projects, 2014), seabed across the offshore development area is predominantly sandy gravel (grain size >2 mm), with a higher percentage of sand (0.063 – 2.0 mm) found closer to the coastline. Sample 36 taken during the 2021 survey is within the Irish Sea Dublin (HA 09) water body indicates that the seabed is predominantly composed of coarse gravel/cobble/boulder, with predicted habitat mapping showing this is likely widespread through the area, and is unlikely to accumulate contaminated sediments suggesting a low background incidence of contaminants within sediments in the water body. The potential for disturbance of contaminated sediments is therefore not expected to result in a deterioration of the overall good status of the water body.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles, and given the localised nature of disturbance and short timescale of impacts, impacts to water quality via changes to water clarity and release of contaminants from sediments will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.4.2. INNS

6.4.3. Summary

6.5. Southwestern Irish Sea – Killiney Bay

Section 6.5 remains unchanged except for 6.5.1 and 6.5.2 below.

6.5.1. Biology: Habitats

Section 6.5.1 is replaced entirely by the following text. This revision has been made to include the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Footprint of activities within the water body is anticipated to be up to 0.3 km^2 representing 0.6% of the water body's area, however the sediment plume as a worst case from the disturbance point has the potential to overlap over 5 km^2, exceeding 1% of the water body's area.

Due to the distance from the works, only small increases in SSC (up to 7 mg/l above background levels) are expected to be observed within the water body. Increased SSC relating to dredge disposal however is expected to travel up to 6 km parallel to the coast, with increases up to 400 mg/l within the water body. This is based on a single disposal location within the OECC, however the final disposal location will be determined as part of the EPA dredge licensing, and currently a precautionary approach is taken to assume spoil disposal could occur anywhere in the Project area, including along the OECC.

The array site is a minimum of 9.2 km away from WFD jurisdiction. The prevailing currents in the offshore area are predominantly in an easterly direction, therefore it is concluded that the majority of sediment disturbance from within the array site is not expected to impact WFD jurisdiction.

Regional data (INFOMAR) suggests that the sediment types within the Southwester Irish Sea – Killiney coastal water body consist of fine sand or infralittoral muddy sand (A5.23 or A5.24) with patches of rock (A3) to the north of the water body, giving way to coarser sediments (A5.13, A5.14 and A5.15) to the south. Sediments also become more coarse with water depth. Patches have also been identified as deep circalittoral sand (A5.27) and circalittoral mixed sediments (A5.44). As a precautionary approach in the absence of site-specific data, these will be assessed as low sensitivity habitats consistent with intertidal and subtidal soft sediments like sand and mud and cobbles, gravel and shingle. Rocky substrata may contain patches of reef habitat.

Benthic habitats are assessed in **Volume 3**, **Chapter 8 Subtidal and Intertidal Ecology** of the EIAR. The assessments conclude no significant effects for both low and high sensitivity habitats.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles and given the localised nature of disturbance and short timescale of impacts, impacts to benthic habitats will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.5.2. Water Quality

Section 6.5.2 is replaced entirely by the following text. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Increase in SSC anticipated to last up to 12 days, affecting water clarity. The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1 in the vicinity of the water body.

Water clarity

Increase in SSC anticipated to last up to 12 days, affecting water clarity. Other factors such as temperature, salinity etc. Will not be affected. Water clarity may disimprove for less than 14 days, however increases will not exceed storm levels.

Contaminated Sediments

Levels of contaminants above Irish lower AL or Cefas AL1 were detected at four stations in the 2021 survey and at six stations in the 2025 survey (two in the intertidal area, and four along the OECC) The 2021 survey results showed that, when assessed against Irish guidelines, stations 28, 30 and 77 had arsenic levels above the lower AL but below the upper AL. Cadmium levels at Station 59 were also between the lower and upper AL. The 2025 intertidal survey results showed that, stations 16 and 20 had chromium concentrations slightly above Cefas AL 1 but below AL2, and below Irish lower and upper levels. The 2025 OECC survey results showed that, stations 8, 10,11 and 13 had arsenic levels above Irish lower AL but below the Irish upper AL, and below Cefas AL1 and AL2. (**Appendix 8.3** of the EIAR and **Appendix 8-A** of the **EIAR Addendum**). Stations 28 and 30 from the 2021 survey are 3.1 km east and 2.6 km southeast respectively, stations 8, 10 and 11 are 2.6 km, 3 km and 3.4 km southeast respectively at closest distance from the boundary of the Southwestern Irish Sea – Killiney (HA 10) water body. All other stations are in excess of 4 km away.

As per **Section 6.1.2**, the potential for sediments to accumulate chemical contamination is linked with sediment type. Finer particles (muds and silts, <63 µm) have greater surface area to volume ratio and adsorptive capacity compared to coarser grains (sands and gravels) (Sheahan *et al*., 2001). As described in **Section 6.5.1** above, the seabed is predominantly composed of sandy to coarse sediments and is unlikely to accumulate contaminated sediments. The potential for disturbance of contaminated sediments is therefore not expected to result in a deterioration of the overall good status of the water body.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles and given the localised nature of disturbance and short timescale of impacts, impacts to water quality via changes to water clarity and release of contaminants from sediments will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.5.3. INNS

6.5.4. Summary

6.6. Tolka Estuary Transitional Water Body

Section 6.6 is unchanged except for Section 6.6.2 below.

6.6.1. Biology: Fish

6.6.2. Water Quality

Section 6.6.2 is replaced entirely by the following text. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report and the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l (see **FIR Response Document**).

Assessment is required where the phytoplankton status for a water body is moderate.

Phytoplankton status of the Tolka Estuary for 2019-2024 was good. As per **Section 5.1.2**, SSC has the potential to interact with algal and phytoplankton compliment of the water body due to the potential for reduction of light in the water column, and also from the potential release of sediment bound nutrients resulting in an increase in phytoplankton concentration (Essink, 1999).

Nutrient input in coastal and estuarian areas typically come from terrestrial sources, such as river input (EPA, 2023d), and the Upper Tolka which flows into the Tolka Estuary is subject to additional actions for management under the 2018-2021 RBMP due to excess nutrient loading (EPA, 2022a).

Potential sources affecting water quality from the works include run-off from the onshore site compound under the power plant's cooling channel, which flows into the Liffey. Increased turbidity and release of sediment bound nutrients from construction activities are anticipated to be localised and low concentration, and not expected to influence phytoplankton growth within the water body. The construction compound wastewater will be collected and stored in sealed holding tanks. Wastewater or effluent from the construction works will be discharged under licence to the local sewer network. A Discharge licence to sewer is required under Section 16 of the Local Government (Water Pollution) Act 1977, as amended. Discharge licences to the foul/combined sewer are issued by Irish Water.

Contaminated sediments

Levels of contaminants above Irish lower AL or Cefas AL1 were detected at four stations in the 2021 survey and at six stations in the 2025 survey (two in the intertidal area, and four along the OECC) The 2021 survey results showed that, when assessed against Irish guidelines, stations 28, 30 and 77 had arsenic levels above the lower AL but below the upper AL. Cadmium levels at Station 59 were also between the lower and upper AL. The 2025 intertidal survey results showed that, stations 16 and 20 had chromium concentrations slightly above Cefas AL 1 but below AL2, and below Irish lower and upper levels. The 2025 OECC survey results showed that, stations 8, 10,11 and 13 had arsenic levels above Irish lower AL but below the Irish upper AL, and below Cefas AL1 and AL2. (**Appendix 8.3** of the EIAR and **Appendix 8-A** of the **EIAR Addendum**). Stations 16 and 20 from the 2025 intertidal survey are 2.7 km and 2.5 km south from the boundary of the Tolka Estuary Lower transitional water body. All other stations are in excess of 4 km away.

Remobilisation of contaminated sediments can occur when such sediments are disturbed and enter the water column and are transported and redeposited elsewhere. However, construction activities within the intertidal area will be undertaken at low water, with limited sediment dispersal predicted, thereby reducing the potential for increases in SSC. Although the contaminated stations are located within 4 km of the Tolka Estuary, they are situated at a minimum distance of 2.5 km and are largely separated by the Great South Wall. Contamination was recorded

at two of the ten intertidal sampling stations, with concentrations slightly above Cefas AL1 but below AL2 and the Irish lower and upper action levels. This indicates that affected areas are patchy and isolated, with only trace levels of contamination present. On this basis, disturbance of contaminated sediments is not expected to result in a deterioration of the overall status of the water body.

Impacts to WFD Status

WFD status is reviewed in 6 year cycles and given the localised nature of disturbance and short timescale of impacts, impacts to water quality via changes to phytoplankton status and release of contaminants from sediments will not result in deterioration of WFD status, or prevent the attainment of good WFD status.

6.6.3. INNS

6.6.4. Summary

6.7. Liffey Estuary Upper Transitional Water Body

Section 6.7 is unchanged.

6.7.1. Biology: Fish

6.7.2. INNS

6.7.3. Summary

6.8. North Bull Island

Section 6.8 is unchanged.

6.8.1. INNS

6.8.2. Summary

6.9. Protected Areas

Section 6.9 is unchanged except for Section 6.9.4 below.

6.9.1. SACs

6.9.2. SPA/Ramsar

6.9.3. Nature Reserve

6.9.4. Bathing Waters

Section 6.9.4 is replaced entirely by the following text. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

In the case of Sandymount Strand and Shelley Banks, this includes direct disturbance of the beach area, as well as increases in SSC. For all other bathing areas, impact is limited to increased SSC.

Direct disturbance

The offshore development area overlaps the Sandymount Strand bathing water for 0.268 km^2, which represents approx. 27 % of the total designated bathing area. Landfall works are anticipated to be completed in two phases, affecting two bathing seasons. Activities in each phase are set out in detail in **Section 4.7** of **Volume 3**, **Chapter 4 Project Description** of the EIAR, but can be summarised as activities relating to duct installation (Phase 1) and activities relating to cable installation including onshore connection (Phase 2). The total duration of landfall works for open cut trenching is expected to be 10 - 12 months with varying levels of activity on site, however vehicular and pedestrian site access will remain in place throughout, requiring restriction of public access until the works are completed. While this may impact local residents' use of the bathing water, which is outside the scope of this chapter, (assessed in **Volume 3**, **Chapter 29 Population** of the EIAR), it will not affect the bathing water's quality status. The beach area at Sandymount Strand is composed of soft sediments which are generally mobile and, as assessed in **Section 6.1.1**, are expected to recover in the short term between 6 months and 2 years. Any hard substrate introduced will either be replacing existing revetment and would not affect the safety or quality of the area as a bathing water.

Similarly, access to Shelley Banks can be expected to be restricted for two bathing seasons. The beach area is composed of soft sediments which are generally mobile and, as assessed in **Section 6.1.1**, are expected to recover in the short term between 6 months and 2 years. Any hard substrate introduced will either be replacing existing revetment, and would not affect the safety or quality of the area as a bathing water. Beach access will likely be affected and this is assessed in **Volume 3**, **Chapter 29 Population**.

Direct disturbance is therefore not expected to affect the quality status for Sandymount Strand or Shelley Banks.

Increases in SSC

Each of the following bathing waters are anticipated to experience increased SSC for up to 12 days during trenching works during a single bathing season:

- Sandymount Strand;
- Forty Foot Bathing Place;
- Sandycove Beach;
- Seapoint;
- White Rock Beach;
- Killiney;
- Dollymount Strand;
- White Rock;
- North Bull Wall;
- Half Moon;
- Shelley Banks;
- Merrion Strand; and
- Dun Laoghaire Baths

The highest concentrations will be seen at Sandymount Strand and Shelley Banks, where public access will also be restricted.

Local bathing waters are occasionally subject to temporary bathing restrictions, typically associated with heavy rainfall (and resulting increased terrestrial run-off) or pollution events, typically associated with wastewater overflows. Such closures are typically short lived (1 to 4 days) (EPA, 2022c). Previous studies on heavily nutrified sediment (from river dredging material) showed that disturbance and disposal of dredged material increased bacterial levels in the water course for up to 2 km downstream of a disposal site (Grimes, 1980), but returned to normal levels within 1 hour (Grimes, 1975; Grimes, 1980; Essink, 1999; Cefas, 2011 for review).

Background nutrient levels in coastal waters are known to be higher due to run-off from terrestrial sources (EPA, 2023d), however the status of the bathing waters within the ZoI have attained at least good status based on samples collected between 2018 and 2022.

Contaminated sediments were detected at four stations during the 2021 survey and at 4 stations during the 2025 survey within the OECC, all stations are situated at greater than 4 km from all bathing waters. Contaminant sediment concentrations slightly above Cefas AL1 but below AL2, and below Irish lower and upper levels were detected at two of the ten stations within the intertidal area that are within 4 km of six bathing waters. This indicates that affected areas are patchy and isolated, with only trace levels of contamination present. Construction activities within the intertidal area will be undertaken at low water, with limited sediment dispersal predicted, thereby reducing the potential for increases in SSC. As a result, any contamination released from these locations is anticipated to be very dilute and not anticipated to affect bathing waters.

6.9.5. Nutrient sensitive areas

6.9.6. Summary

7. Stage 5 Article 4.7 Derogation

Section 7 is unchanged.

8. Summary and Conclusion

Section 8 is unchanged.

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Appendices

A. WFD Scoping Tables

A.1. Dublin Bay Coastal Water Body

Table A 1 in section A.1 is replaced entirely by Table A-A below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-A: Dublin Bay coastal water body

Water body	Description, notes or more information
WFD water body name	Dublin Bay
Water body ID	EA_090_0000
Water body type (estuarine or coastal)	Coastal
Water body total area (ha, km^2)	6591.75868644 ha 65.91758686 km^2
Heavily modified water body and for what use	Not heavily modified
Higher sensitivity habitats present	Intertidal Seagrass; Saltmarsh
Lower sensitivity habitats present	Cobbles, gravel and shingle; intertidal soft sediments; rocky shore; subtidal rocky reef; subtidal soft sediments
History of harmful algae	Not provided
WFD protected areas within 2km/ZoI	SAC • Rockabill to Dalkey Island (overlaps OECC) • South Dublin Bay (overlaps OECC and landfall below MHW) • North Dublin Bay (1.28 km from OECC)SPA/Ramsar • Baldoyle Bay SPA (to OECC, km to cable corridor) • North-West Irish Sea cSPA (to OECC, km to cable corridor) • North Bull Island SPA (1.3 km to OECC, 1.9 km to cable corridor) • North Bull Island Ramsar (1.3 km to OECC, 1.9 km to cable corridor) • South Dublin Bay and River Tolka Estuary SPA (overlaps cable route and landfall below MHW) • Sandymount Strand/Tolka Estuary Ramsar (overlaps) • Dalkey Islands SPA (0.4 km to OECC, 0.5 km to cable route) • Howth Head Coast SPA (borders, no overlap) • Sandymount Strand/Tolka Estuary Ramsar • • Nature Reserve • North Bull Island (1.3 km to OECC, 1.9 km to cable corridor) • Booterstown Marsh (1.5 km to OECC and landfall) Bathing Water • Dollymount Strand (3.1 km, around the sea walls) • Sandymount Strand (overlaps) • Seapoint (2 km) • Sandycove Beach (1.1 km) • Forty Foot Bathing Place (1 km) There are no shellfish waters overlapping this water body

Water body	Description, notes or more information
	Nutrient sensitive areas are terrestrial designations and therefore not relevant to coastal water bodies.

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Good	Good	N/A	Not at risk
Ecological status	Good	Good	Good	
Chemical status	Good	Failing to achieve good	N/A	
Hydromorphology Status	Good	Good	Good	
Quantitative Status	N/A	N/A	N/A	
Phytoplankton status	High		High	
Target water body status and deadline		N/A – Good status		

A.1.1. Section 1: Biology

Section A.1.1 is unchanged.

A.1.2. Section 2: Hydromorphology

Section A.1.2 is unchanged.

A.1.3. Section 3: Water quality

Table A 4 in section A.1.3 is replaced entirely by Table A-B below. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Table A-B: Water Quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment		Marine activities are temporary and transient in nature. While the activities will temporarily increase SSC in the vicinity of the works. Initial increases in suspended sediments in the immediate vicinity of the works are anticipated to be 400-80 mg/l, finer fractions are anticipated to travel greatest distance, remaining suspended at low concentration for up to 12 days.
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	Phytoplankton status (2019-2024) was high.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Is in a water body with a history of harmful algae		Impact assessment not required	History of harmful algae is not provided for this water body, however activities are not anticipated to affect algal complement in the water body.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?	Requires impact assessment		The chemical status (2019-2024) is not provided for this water body. Site specific chemical analysis for contaminants indicted there were exceedances of Irish Lower ALs or Cefas AL1 for contaminants at 4 stations in the 2021 survey and at 6 stations in the 2025 survey. One station from the 2021 survey and 2 stations from the 2025 intertidal survey are located within this water body. All other stations are a minimum of 5 km from this water body. The onshore infrastructure is located on an area previously used for landfill, and while no contamination has been found during site-specific surveys (which are ongoing), it is assumed for the purpose of assessment that there may be chemicals present that are on the EQSD list as a conservative approach.
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the EQSD list		Impact assessment not required	The design does not include a discharge pipeline or outfall.

A.1.4. Section 4: WFD protected areas

Section A.1.4 is unchanged.

A.1.5. Section 5: Invasive non-native species (INNS)

Section A.1.5 is unchanged.

A.1.6. Summary

Table A 7 in section A.1.6 is replaced entirely by Table A-C below. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Table A-C: Summary

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
Biology: habitats	Yes	Footprint of activity exceeds 1% of the water body's area and is within 500 m of a higher sensitivity habitat. Footprint may exceed 1% of lower sensitivity habitats present within the water body.
Biology: fish	No	Activities are not anticipated to delay or prevent fish entering an estuary, impact normal fish behaviour, or cause entrainment or impingement of fish.
Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity. Levels of contaminants above Irish Lower ALs or Cefas AL1 were detected at 4 stations in the 2021 and 6 stations in the 2025 site-specific surveys, which may be disturbed during the works.
Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.

A.2. Dublin Groundwater body

Table 9.11 in section A.2 is replaced entirely by Table A-D below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-D: Dublin groundwater body

Water body	Description, notes or more information	
WFD water body name	Dublin	
Water body ID	IE_EA_G_008	
Water body type	Ground waterbody	
Water body total area (ha, km^2)	82525 ha	825 km^2
WFD protected areas within 2km/ZoI	None with water dependent elements	

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Good	Good	Good	Review
Quantitative Status	Good	Good	Good	
Chemical status	Good	Good	Good	
Target water body status and deadline	N/A – Good status			

A.2.1. Section 1: Hydromorphology

Section A.2.1 is unchanged.

A.2.2. Section 2: Water quality

Section A.2.2 is unchanged.

A.2.3. Section 4: WFD protected areas

Section A.2.3 is unchanged.

A.2.4. Summary

Section A.2.4 is unchanged.

A.3. Liffey Estuary Lower

Table A 12 in section A.3 is replaced entirely by Table A-E below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-E: Liffey Esturay Lower

Water body	Description, notes or more information	
WFD water body name	Liffey Estuary Lower	
Water body ID	EA_090_0400	
Water body type (estuarine or coastal)	Transitional	
Water body total area (ha, km^2)	480.6 ha	4.806 km^2
Heavily modified water body and for what use	Yes, Navigation and Port Facilities	
Higher sensitivity habitats present		
Lower sensitivity habitats present		
History of harmful algae		
WFD protected areas within 2km/ZoI	SAC • North Dublin Bay SAC (1.28 km from OECC, 2.6 km revetment/coastal wall works) SPA/Ramsar • Baldoyle Bay SPA (to OECC, km to cable corridor)	

Water body	Description, notes or more information
	• North-West Irish Sea cSPA (to OECC, km to cable corridor)• North Bull Island SPA (1.3 km to OECC, 1.9 km to cable corridor, revetment/coastal wall works) • South Dublin Bay and River Tolka Estuary SPA (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Ramsar • North Bull Island Ramsar (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) • Sandymount Strand/Tolka Estuary Ramsar (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Nature Reserve • North Bull Island (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) There are no bathing waters overlapping this water body There are no shellfish waters overlapping this water body Nutrient sensitive area

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Good	Moderate	N/A	At risk
Ecological status	Good	Moderate	Moderate	
Chemical status	Good	Good	N/A	
Hydromorphology Status	Moderate	Moderate	Poor	
Quantitative Status	N/A	N/A	N/A	
Phytoplankton status	Good	Moderate	Good	
Target water body status and deadline		2027		

A.3.1. Section 1: Biology

Section A.3.1 is unchanged.

A.3.2. Section 2: Hydromorphology

Table A 1: Hydromorphology

Section A.14 is unchanged.

A.3.3. Section 3: Water quality

Table A 15 in section A.3.3 is replaced entirely by Table A-F below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-F: Water quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)		Impact assessment not required	Increases in SSC will be localised and temporary, and not expected to affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment		Phytoplankton status for 2019-2024 is good, which has improved from moderate since the 2016-2021 evaluation.
Is in a water body with a history of harmful algae		Impact assessment not required	History of harmful algae is not provided for this water body, however activities are not anticipated to affect algal complement in the water body.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?	Requires impact assessment		The chemical status (2019-2024) is not provided for this water body. Site specific chemical analysis for contaminants indicted there were exceedances of Irish Lower ALs or Cefas AL1 for contaminants at 4 stations in the 2021 survey and at 6 stations in the 2025 survey. Two stations from the 2025 intertidal survey are located within 4 km of this water body. The onshore infrastructure is located on an area previously used for landfill, and while no contamination has been found during site-specific surveys (which are ongoing), it is assumed for the purpose of assessment that there may be chemicals present that are on the EQSD list as a conservative approach. Establishment of site run-

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
			off management systems will prevent loss of material into the marine environment.
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the EQSD list		Impact assessment not required	The design does not include a discharge pipeline or outfall.

A.3.4. Section 4: WFD protected areas

Section A.3.4 is unchanged.

A.3.5. Section 5: Invasive non-native species (INNS)

Section A.3.5 is unchanged.

A.3.6. Summary

Section A.3.6 is unchanged.

A.4. Irish Sea Dublin (HA 09) Coastal Water Body

Table A 19 in section A.4 is replaced entirely by Table A-G below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-G: Irish Sea coastal water body

Water body	Description, notes or more information	
WFD water body name	Irish Sea Dublin (HA 09)	
Water body ID	EA_070_0000	
Water body type (estuarine or coastal)	Coastal	
Water body total area (ha, km^2)	4386.3506076 ha	43.86350608 km^2
Heavily modified water body and for what use	Yes, Urban, Navigation and Port Facilities	
Higher sensitivity habitats present		
Lower sensitivity habitats present		
History of harmful algae		
WFD protected areas within 2km/ZoI	SAC • North Dublin Bay (overlaps) • South Dublin Bay (0.03 km across Great South Wall, approx. 0.5 km open	

Water body	Description, notes or more information
	water) SPA/Ramsar • North-West Irish Sea cSPA (to OECC, km to cable corridor) • North Bull Island SPA (overlaps) • South Dublin Bay and River Tolka Estuary SPA (overlaps) Ramsar • North Bull Island Ramsar (overlaps) • Sandymount Strand/Tolka Estuary Ramsar (0.03 km across Great South Wall, approx. 0.5 km open water) Nature Reserve • North Bull Island (overlaps) Bathing Waters • Portmarnock, Velvet Strand Beach (8 km straight line, 15.8 km around Howth Head) • Sutton, Burrow Beach (7.5 km, 13.3 km around Howth Head) • Claremont Bech (7.9 km, 12 around Howth Head) Shellfish Waters • Malahide

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Good	Good	N/A	Not at Risk
Ecological status	Good	Good	Good	
Chemical status	N/A	N/A	N/A	
Hydromorphology Status	N/A	N/A	N/A	
Phytoplankton status	Good	Good	Good	
Target water body status and deadline		N/A – good status		

A.4.1. Section 1: Biology

Section A.4.1 is unchanged.

A.4.2. Section 2: Hydromorphology

Section A.4.2 is unchanged.

A.4.3. Section 3: Water quality

Table A 22 in section A.4.3 is replaced entirely by Table A-H below. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Table A-H: Water quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment		Marine activities are temporary and transient in nature. While the activities will temporarily increase SSC in the vicinity of the works. Initial increases in suspended sediments in the immediate vicinity of the works are anticipated to be 400-80 mg/l, remaining suspended at low concentration for up to 12 days.
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	Phytoplankton status (2019-2024) was good.
Is in a water body with a history of harmful algae		Impact assessment not required	Harmful algal blooms are not monitored for this water body, therefore this is unknown however activities are not anticipated to affect algal complement in the water body. The water body contains several high-quality bathing areas however, which are classified as having 'good' or ‘excellent’ status (EPA, 2022c). It is considered therefore that harmful algal blooms are not a common occurrence.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?	Impact assessment required		The chemical status (2019-2024) is not provided for this water body. Site specific chemical analysis for contaminants indicted there were exceedances Irish Lower ALs or Cefas AL1 for contaminants at four stations in the 2021 survey and at 6 stations in the 2025 survey. Two stations are located within 4 km of the water body.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the EQSD list		Impact assessment not required	Design does not include discharge requirements.

A.4.4. Section 4: WFD protected areas

Section A.4.4 is unchanged.

A.4.5. Section 5: Invasive non-native species (INNS)

Section A.4.5 is unchanged.

A.4.6. Summary

Table A 25 in section A.4.6 is replaced entirely by Table A-I below. This revision has been made to include the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document)**.

Table A-I: Summary

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
Biology: habitats	Yes	Works have the potential to exceed 1% of the water body's area, and are within
Biology: fish	No	Not an estuary, no estuaries associated with this water body are within ZoI of the works.
Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity.
Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.

A.5. Southwestern Irish Sea – Killiney Bay Coastal Water Body

Table A 26 in section A.5 is replaced entirely by Table A-J below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-J: Southwestern Irish Sea – Kiliney Bay Coastal Water Body

Water body	Description, notes or more information
WFD water body name	Southwestern Irish Sea – Killiney Bay (HA10)
Water body ID	EA_100_0000
Water body type (estuarine or coastal)	Coastal
Water body total area (ha, km^2)	8728.65608128 ha 87.28656081 km^2
Heavily modified water body and for what use	Not heavily modified
Higher sensitivity habitats present	
Lower sensitivity habitats present	Reefs
History of harmful algae	None provided
WFD protected areas within 2km/ZoI	SAC • Rockabill to Dalkey Island SAC (overlaps) • Wicklow Reef SAC (5.5km) SPA • Dalkey Islands SPA (0.5 km) Bathing Water • White Rock Beach (2.5 km) • Killiney (3.3 km) • Bray South Promenade (5.2 km) • Greystones South (5.8 km) • Silver Strand (12.5 km) • The Murrough SPA (0 km) There are no shellfish waters overlapping this water body Nutrient sensitive areas are terrestrial designations and therefore not relevant to coastal water bodies.

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	N/A	N/A	N/A	Not a risk
Ecological status	High	High	Good	
Chemical status	N/A	N/A	N/A	
Hydromorphology Status	Good	Good	Good	
Phytoplankton status	High	N/A	High	
Target water body status and deadline		N/A - high status		

A.5.1. Section 1: Biology

Section A.2.2 is unchanged.

A.5.2. Section 2: Hydromorphology

Section A.5.2 is unchanged.

A.5.3. Section 3: Water Quality

Table A 29 in section A.5.3 is replaced entirely by Table A-K below. This revision has been made to include the contaminant analysis results from the 2025 benthic and intertidal site-specific surveys in response to FIR item 8k and 8l and the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document**).

Table A-K: Water Quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment		Marine activities are temporary and transient in nature. While the activities will temporarily increase SSC in the vicinity of the works. Initial increases in suspended sediments in the immediate vicinity of the works are anticipated to be 400-80 mg/l, finer fractions are anticipated to travel greatest distance from the works, remaining suspended at low concentration for up to 12 days.
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	Phytoplankton status (2019-2024) was high.
Is in a water body with a history of harmful algae		Impact assessment not required	Harmful algal blooms are not monitored for this water body, therefore this is unknown, however activities proposed are not predicted to increase occurrence of such. The water body contains several high quality bathing areas however, all of which are classified as having 'excellent' status (EPA, 2022c). It is assumed for the purpose of this assessment that harmful algal blooms are not a common occurrence.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?	Requires impact assessment		The chemical status (2019-2024) is not provided for this water body. Site specific chemical analysis for contaminants indicted there were

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
			exceedances Irish Lower ALs or Cefas AL1 for contaminants at 4 stations in the 2021 survey and at 6 stations in the 2025 survey. Five stations are located within 4 km of the water body.
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the EQSD list	Requires impact assessment	Impact assessment not required	Design does not include discharge requirements.

A.5.4. Section 4: WFD protected areas

Table A 3 in section A5.4 is replaced entirely by Table A-L below. This revision has been made to include the updated boundary to The Murrough SPA Section A.5.4 remains unchanged.

Table A-L: Summary

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within the ZoI of any WFD protected area			There are several WFD protected areas with water-dependent features associated with this water body, outlined below. There are no nature reserves or shellfish waters overlapping this water body. Nutrient sensitive areas are terrestrial designations and therefore not relevant to coastal water bodies.
SAC	Requires impact assessment		• Wicklow Reef SAC (5.5km) •Rockabill to Dalkey Island SAC (overlaps)
SPA	Requires impact assessment		• The Murrough SPA (0 km) • Dalkey Islands SPA (0.5 km)
Bathing waters	Requires impact assessment		There are 5 bathing waters associated with this water body, only 2 lie within the ZoI: • White Rock Beach (2.5 km) • Killiney (3.3 km) • Bray South Promenade (5.2 km) - outside ZoI, scoped out • Greystones South (5.8 km) - outside ZoI, scoped out • Silver Strand (12.5 km) - outside ZoI, scoped out

A.5.5. Section 5: Invasive non-native species (INNS)

Section A.5.5 is unchanged.

A.5.6. Summary

Table A 32 in section A.5.6 is replaced entirely by Table A-M below. This revision has been made to include the updated sediment plume modelling in response to FIR Item 6i (see **FIR Response Document)**.

Table A-M: Summary

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
Biology: habitats	Yes	Footprint of sediment plume as a worst case of 4 km exceeds 1% of the water body's area.
Biology: fish	No	Not an estuary, no estuaries associated with this water body are within ZoI of the works.
Water quality	Yes	Increase in SSC anticipated to last up to 12 days, affecting water clarity.
Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.

A.6. Tolka Estuary Transitional Water Body

Table A 33 in section A.6 is replaced entirely by Table A-N below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-N: Tolka Estuary Transitional Water Body

Water body	Description, notes or more information	
WFD water body name	Tolka Estuary	
Water body ID	EA_090_0200	
Water body type (estuarine or coastal)	Transitional	
Water body total area (ha, km^2)	357.82205784 ha	3.57822058 km^2
Heavily modified water body and for what use	Not heavily modified	
Higher sensitivity habitats present	Seagrass; saltmarsh	
Lower sensitivity habitats present		
History of harmful algae	Not provided	

Water body	Description, notes or more information
WFD protected areas within 2km/ZoI	SAC • North Dublin Bay SAC (1.28 km from OECC, 2.6 km revetment/coastal wall works) SPA/Ramsar • North-West Irish Sea cSPA (to OECC, km to cable corridor) • North Bull Island SPA (1.3 km to OECC, 1.9 km to cable corridor, revetment/coastal wall works) • South Dublin Bay and River Tolka Estuary SPA (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Ramsar • North Bull Island Ramsar (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) • Sandymount Strand/Tolka Estuary Ramsar (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Nature Reserve • North Bull Island (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) There are no bathing waters overlapping this water body There are no shellfish waters overlapping this water body Nutrient sensitive area

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Moderate	Poor	N/A	At risk
Ecological status	Moderate	Poor	Poor	
Chemical status	N/A	N/A	N/A	
Hydromorphology Status	Moderate	Good	Good	
Phytoplankton status	Moderate	Moderate	Good	
Target water body status and deadline		N/A		

A.6.1. Section 1: Biology

Section A.6.1 is unchanged.

A.6.2. Section 2: Hydromorphology

Section A.6.2 is unchanged.

A.6.3. Section 3: Water Quality

Table A 36 in section A.6.3 is replaced entirely by Table A-O below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-O: Water Quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	Impact assessment not required	Increases in SSC will be localised and temporary, and not expected to affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment		Phytoplankton status for 2019-2024 is good.
Is in a water body with a history of harmful algae		Impact assessment not required	Not specified for this water body. Activities not predicted to increase levels of harmful algae.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?		Impact assessment not required	The chemical status (2019-204) is not provided for this water body however as the works do not overlap this water body, there is no potential for disturbance of contaminated sediment. Site specific chemical analysis for contaminants indicted there were exceedances Irish Lower ALs or Cefas AL1 for contaminants at 4 stations in the 2021 survey and at 6 stations in the 2025 survey. Two stations are located within 4 km of the water body The risk of contaminated sediments being introduced from the works is low, due the low levels of contamination recorded. Both stations recorded contamination levels below Cefas AL2 and Irish upper and lower Als. In addition, the minimum distance between revetment/coastal wall works is 1 km and 2.7 km from cable installation works. Any potential contaminants present would be very

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
			dilute and would not pose a risk to the water body.
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the EQSD list		Impact assessment not required	The design does not include a discharge pipeline or outfall.

A.6.4. Section 4: WFD protected areas

Section A.6.4 is unchanged.

A.6.5. Section 5: Invasive non-native species (INNS)

Section A.6.5 is unchanged.

A.6.6. Summary

Table A 39 in section A.6.6 is replaced entirely by Table A-P below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-P: Summary

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	Works are small scale. No significant modifications anticipated to affect hydromorphology.
Biology: habitats	No	Works are small scale.
Biology: fish	Yes	Underwater noise impacts may affect fish species normal behaviours.
Water quality	Yes	Phytoplankton status for 2019-2024 is good.
Protected areas	Yes	There are WFD protected areas within the ZoI of the works.
Invasive non-native species	Yes	Activities require the use of marine vessels and equipment from outside the local area which could increase the risk of introduction or spread of INNS.

A.7. Liffey Estuary Upper

Table A 40 in section A.7 is replaced entirely by Table A-Q below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-Q: Liffey Estuary Upper

Water body	Description, notes or more information	
WFD water body name	Liffey Estuary Upper	
Water body ID	EA_090_0300	
Water body type (estuarine or coastal)	Transitional	
Water body total area (ha, km^2)	19.5210223 ha	0.19521022 km^2
Heavily modified water body and for what use	Not heavily modified	
Higher sensitivity habitats present	None	
Lower sensitivity habitats present	None	
History of harmful algae	Not provided	
WFD protected areas within 2km/ZoI	None	

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Good	Good	N/A	Review
Ecological status	Good	Good	Moderate	
Chemical status	N/A	Good	N/A	
Hydromorphology Status	Moderate	Moderate	Poor	
Phytoplankton status	Good	Good	Good	
Target water body status and deadline		N/A - good status		

A.7.1. Section 1: Biology

Section A.7.1 is unchanged.

A.7.2. Section 2: Hydromorphology

Section A.7.2 is unchanged.

A.7.3. Section 3: Water Quality

Table A 43 in section A.7.3 is replaced entirely by Table A-R below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-R: Water Quality

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)		Impact assessment not required	Increases in SSC will be localised and temporary, and not expected to affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	Phytoplankton status for 2019-2024 is good.
Is in a water body with a history of harmful algae		Impact assessment not required	Not specified for this water body. Activities not predicted to increase algal levels

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the EQSD list		Impact assessment not required	No chemicals on the EQSD list are intended for use during construction.
The activity will disturb sediment with contaminants above Irish Lower ALs or Cefas AL1?		Impact assessment not required	The chemical status (2019-2024) of the water body is not provided however as the works do not overlap this water body, there is no potential for disturbance of contaminated sediment. The onshore infrastructure is located on an area previously used for landfill, downstream of the water body. Establishment of site run-off management systems will prevent loss of material into the marine environment. No impact predicted
Where the activity has a mixing zone (like a discharge pipeline of outfall), the chemicals released are on the Environmental Quality Standards Directive (EQSD) list		Impact assessment not required	The design does not include a discharge pipeline or outfall.

A.7.4. Section 4: WFD protected areas

Section A.7.4 is unchanged.

A.7.5. Section 5: Invasive non-native species (INNS)

Section A.7.1 is unchanged.

A.7.6. Summary

Section A.7.6 is unchanged.

A.8. North Bull Island

Table A 47 in section A.78 is replaced entirely by Table A-S below. This revision has been made to include the latest information from the Water Quality in Ireland 2019-2024 report.

Table A-S: North Bull Island

Water body	Description, notes or more information
WFD water body name	North Bull Island
Water body ID	EA_090_0100
Water body type (estuarine or coastal)	Transitional
Water body total area (ha, km^2)	212.5857468 ha 2.12585747 km^2
Heavily modified water body and for what use	Not heavily modified
Higher sensitivity habitats present	Yes
Lower sensitivity habitats present	Yes
History of harmful algae	Not provided
WFD protected areas within 2km/ZoI	SAC • North Dublin Bay SAC (1.28 km from OECC, 2.6 km revetment/coastal wall works) SPA/Ramsar • North-West Irish Sea cSPA (to OECC, km to cable corridor) • North Bull Island SPA (1.3 km to OECC, 1.9 km to cable corridor, revetment/coastal wall works) • South Dublin Bay and River Tolka Estuary SPA (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Ramsar • North Bull Island Ramsar (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) • Sandymount Strand/Tolka Estuary Ramsar (overlaps cable route, landfall below MHW, approx. 0.5 km from revetment/coastal wall works) Nature Reserve • North Bull Island (1.3 km to OECC, 1.9 km to cable corridor, 2.6 km from revetment/coastal wall works) There are no bathing waters overlapping this water body There are no shellfish waters overlapping this water body Nutrient sensitive area

Status	2013-2018	2016-2021	2019-2024	Current Risk
Overall Water Body Status	Moderate	Moderate	N/A	Review

Status	2013-2018	2016-2021	2019-2024	Current Risk
Ecological status	Moderate	Moderate	Moderate	
Chemical status	N/A	N/A	N/A	
Hydromorphology Status	N/A	N/A	N/A	
Quantitative Status	N/A	N/A	N/A	
Target water body status and deadline	N/A			

A.8.1. Section 1: Biology

Section A.8.1 is unchanged.

A.8.2. Section 2: Hydromorphology

Section A.8.2 is unchanged.

A.8.3. Section 3: Water Quality

Section A.8.3 is unchanged.

A.8.4. Section 4: WFD protected areas

Section A.8.4 is unchanged.

A.8.5. Section 5: Invasive non-native species (INNS)

Section A.7.1 is unchanged.

A.8.6. Summary

Section A.8.6 is unchanged.

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