

Environmental Impact Assessment Report

Chapter 5

Project Description

Volume 2 Part 1



5 PROJECT DESCRIPTION

This Chapter of the EIAR describes the project and contains information on the site, design, size and other relevant features, in order to establish the characteristics of the project for the purposes of environmental assessment.

The chapter first lays out the site location and the existing site usage, within the development area, including adjacent land usage.

The Proposed Development is then described, area by area, and given the marine nature of much of the proposed works, with a particular focus on elements of dredging and piling. The project description set out in this chapter is based on the final project concept after consideration of various potential alternatives set out in Chapter 4 Assessment of Alternatives.

The proposed construction sequence is described herein, to allow the assessment of traffic etc. In addition, information is set out in this chapter in relation to, *inter alia*, working areas, hours of work, principal construction methods and phases, volumes of materials, traffic and environmental controls.

The operational phase of the development is considered, followed by a description of the risk of major accident hazards, project change and decommissioning, and finally a description of other projects with potential for environmental effects.

This chapter provides a level of detail in relation to the context of the Proposed Development so as to enable the competent authority to conduct an examination of the information presented in the EIAR and to assess the significant effects of the project on the environment, taking into account the results of the examination of the information in the EIAR, in compliance with its obligations under the Environmental Impact Assessment Directive (Directive 2011/92/EU) as amended, whilst being accessible to readers without technical expertise. It should be noted that specific technical detail of elements of the project is included in a series of Architectural Design Reports, and Engineering Design Drawings that support this EIAR.

5.1 Location of the Project

5.1.1 Site Location

Dublin Port is the largest port in Ireland, situated on Ireland's eastern coastline, as shown in Figure 5.1. The South Estate of Dublin Port comprises 58ha. The North Estate of Dublin Port comprises 207ha. Together they make up the 265ha Dublin Port Estate, which is entirely within the ownership of Dublin Port Company (DPC). The South Estate therefore represents approximately 20% of the Dublin Port Estate.

DPC also has 44ha of lands at Dublin Inland Port near Dublin Airport. Therefore, the entire Port Estate comprises 309ha.

The majority of the works proposed in the 3FM Project are located on the Poolbeg Peninsula. Road improvements, however, are also required in the vicinity of the North Estate to facilitate the movement of HGV traffic between the Poolbeg Peninsula and the Dublin Tunnel. Figure 5.2 shows DPC land ownership on Poolbeg Peninsula and also the locations of numbered berths along the quays. The Great South Wall (GSW), which runs

through the spine of the peninsula, together with Pigeon House Precinct represent key heritage assets within the Poolbeg Peninsula. The Dublin Port Heritage Conservation Strategy (2024) and Masterplan 2040 reinforce DPC’s commitment to ensuring that development is socially and culturally sustainable, and in line with the Sustainable Development Goals (SDG). DPC also actively participates with AIVP, a worldwide network that supports joint city-port sustainable development strategies, and is committed to achieving the goals of the AIVP 2030 Agenda. This commitment has resulted in a Historic Urban Landscape (HUL) approach that recognises distinct heritage assets, and the landscape setting and context of these assets. HUL is a UNESCO concept established through a framework approach. These key heritage assets have informed the engineering design of all the elements of the project and their locations are shown in Figure 5.3.

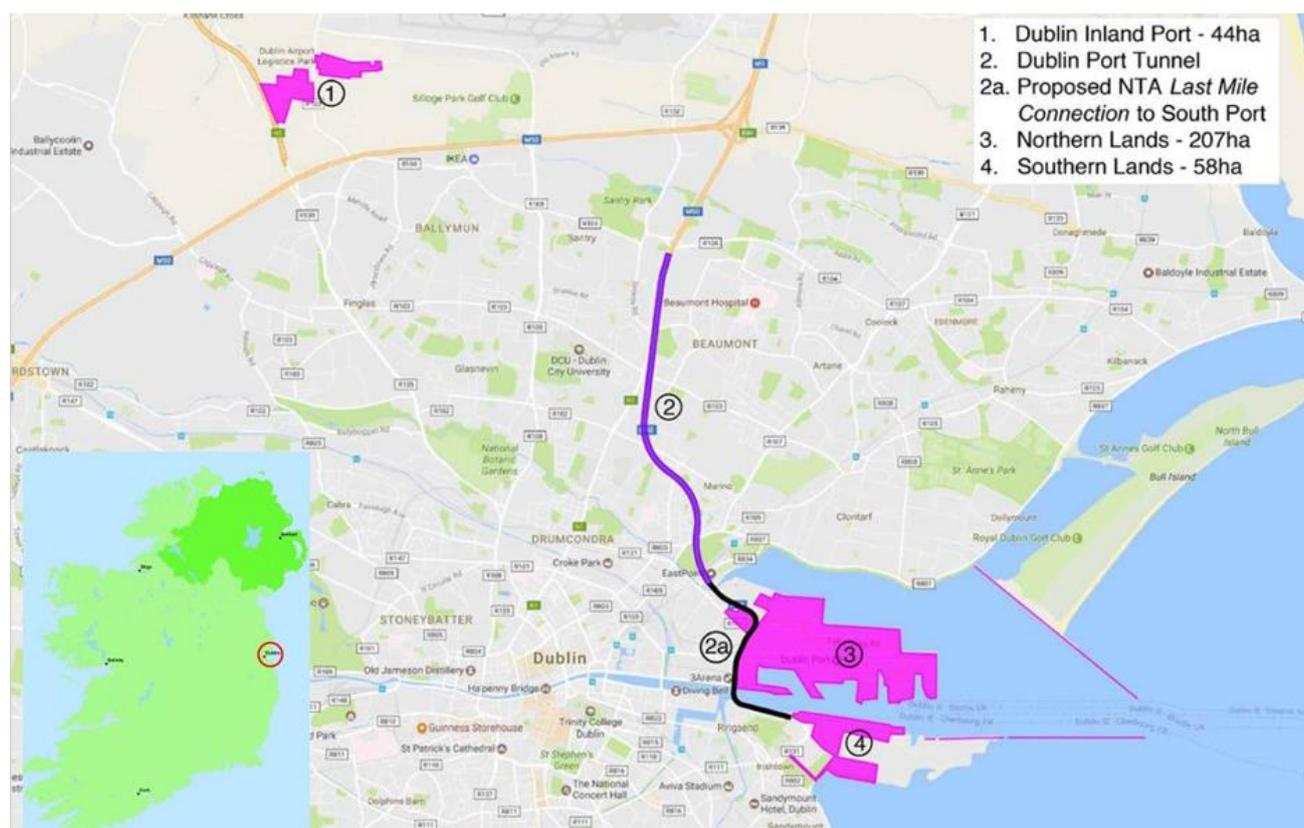


Figure 5.1 Site Location Map (reproduced from the Dublin Port Masterplan 2040, reviewed 2018)

The Poolbeg Peninsula also hosts a number of significant utilities and industrial operators including the National Oil Reserves Agency (NORA); ESB Poolbeg Generating Station; Synergen (Dublin Bay Power) Ringsend Generating Station; Uisce Éireann’s Ringsend Wastewater Treatment Plant (WwTP); and Encyclis (formerly Covanta) Waste to Energy Facility. Dublin City Council (DCC) is also a significant landowner and is responsible for the majority of the road network, Pigeon House Precinct and Irishtown Nature Park.

The main road transportation route between the Dublin Port Estate and the national road network is via the Dublin Tunnel. The Dublin Port Estate is also connected to the national freight rail network.

Dublin Port receives over 7,000 vessel arrivals annually. The majority of Dublin Port’s navigation channel and fairway were deepened to a design dredged level of -10.0m CD between 2017 and 2021 under the permitted Alexandra Basin Redevelopment (ABR) Project (ABP Ref. 29N.PA0034) to enable the safe passage of larger vessels bringing freight and passengers to and from the port.

Additional capital dredging will take place under the permitted MP2 Project (ABP-304888-19) and the proposed Dublin Harbour Capital Dredging Project (for which a Foreshore Licence has been granted (FS007164) and a Dumping at Sea Permit application has been submitted to the EPA). This additional dredging will complete the deepening of the navigation channel and fairway to a design dredged level of -10.0m CD between Alexandra Basin West and the western Oil Jetty, and will deepen Dublin Harbour's basins and berthing pockets. Further capital dredging is required under the 3FM Project.

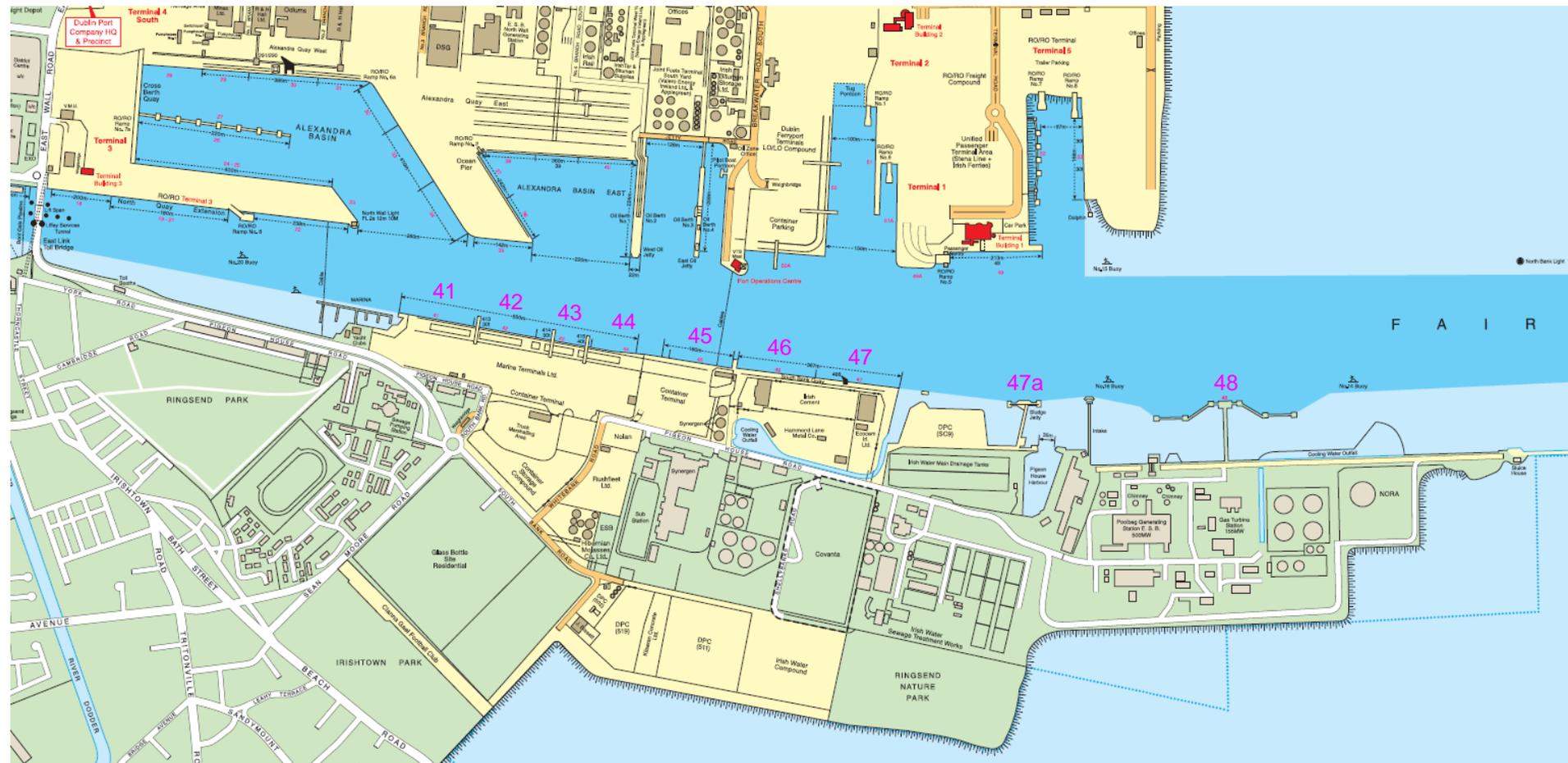


Figure 5.2 Location of South Estate of Dublin Port, Poolbeg Peninsula (generalised colour scheme - yellow owned by DPC, green owned by others, with berth numbers in Southern Lands enlarged)



Figure 5.3 Aerial Image showing key heritage assets within the Poolbeg Peninsula - Great South Wall (GSW) and Pigeon House Precinct

5.1.2 Development Area

The area of the proposed project for which planning permission is sought is defined by the 'red line' application boundary as illustrated on the application drawings and, in the context of the existing port layout, is presented in Chapter 1, Figure 1-2. The area enclosed by the planning application boundary is circa 1,000ha extending into Dublin Bay to include the established dumping site (licensed offshore dump site). The dump site will be used for the disposal of uncontaminated dredge spoil arising from the 3FM Project. This is the only dredging/construction activity which will take place in Dublin Bay for the 3FM Project.

Although roadworks will be carried out in the North Estate, the substantial 3FM Project works are mainly located within the South Estate of Dublin Port on the Poolbeg Peninsula. An aerial overview of the existing port layout and land use within the Poolbeg Peninsula is shown on Plate 5-1.



Plate 5-1 Existing Land Uses within the development area, viewed from the west

The 3FM Project includes the redevelopment of DPC-owned lands which currently host a small number of tenants. DPC will take possession of these sites prior to commencement of the construction phase. DPC holds the legal entitlement to develop these sites as owner of the freehold interest and lessor. DPC intends to negotiate with each of the tenants, and give as much notice as possible, to reach a settlement prior to the sites being vacated. Ultimately DPC has the authority to compulsory purchase order (CPO) the sites if a negotiated settlement is not possible, but will only initiate the CPO process as a last resort.

A description of the key existing land uses follows:

5.1.2.1 Lo-Lo (Lift-On Lift-Off) Container Freight Terminal

There is one major Lo-Lo Container Freight Terminal within the area of the 3FM Project, along Berths 41 to 45. The Terminal is operated by Marine Terminals Ltd (MTL), a Peele Ports company.

There are two main groups of cargo handling equipment used for containers: primary handling equipment; and secondary handling equipment.

Primary handling equipment refers to cranes of different types used to lift-on and lift-off containers from the ship at berth. There are two main types of crane in use in Dublin Port, rail mounted gantry cranes (Ship to Shore cranes) and dock mobile cranes. Containers are moved between storage stacks and the quay side cranes by special heavy-duty truck and trailer combinations (Terminal Tractors) or by reach stackers.

Secondary handling equipment refers to the equipment (usually gantry cranes) used to store containers in back areas in large stacks. In Dublin, there are rubber-tyred gantries (RTGs) and rail mounted gantries (RMGs). The largest RMGs in the South Estate can store containers in stacks up to four containers high and twenty wide. Such stacks occupy large areas of port land and DPC has a utilisation target of 40,000 twenty-foot equivalent units (TEU) per hectare per annum for the port's container freight terminals. One TEU is a container of 6.1m (20'0") long, 2.4m (8'0") wide and usually 2.6m (8'6") high.



Plate 5-2 Lo-Lo Container Freight Terminal

Stacks of empty containers up to six high are stored away from the quayside. These are handled by reach stackers, rather than the RMGs which are limited to four high stacking along the quay.

The MTL site lies entirely within the development consent application boundary of the 3FM Project. It is proposed to change the port function at this site from a Lo-Lo Container Freight Terminal to a Ro-Ro Unaccompanied Freight Terminal under the 3FM Project.

5.1.2.2 National Oil Reserves Agency (NORA)

The National Oil Reserves Agency (NORA) is responsible for ensuring that Ireland meets its obligations under EU legislation and International Energy Agency rules to maintain a minimum of 90 days' stock of oil for use in the event of a shortage of supplies.

NORA operate the following facilities on the Poolbeg Peninsula:

- NORA Ringsend Facility located to the west of Shellybanks Road, comprising a number of tanks all containing winter grade diesel. To transfer the fuel between the tanks and the quays for import/export, a manifold is located underground beneath a protective steel sheet within Area L (see Dublin Port Masterplan Drawing, Figure 1-1). The diesel in each tank is replenished in circa 10-year cycles to refresh the product, so the frequency of medium range (MR) oil tankers using the berth is very infrequent.
- NORA Poolbeg (Shellybanks Road) Facility adjacent to the ESB Poolbeg Generating Station, comprising of a number of tanks containing winter grade diesel and Jet A1 fuel, with one tank filled with water for fire-fighting purposes. The fuel storage tanks are supplied via the Poolbeg Oil Jetty (Berth 48) via overland pipelines. Vessels visit this jetty infrequently, with one to two times shipments a year on average. This jetty structure is owned by ESB. Other facilities include a control centre and loading area to transfer fuel to oil trucks for transport by road. Five Medium Range (MR) oil tankers were used to transfer fuel to the tanks between 2019 and 2021.



Plate 5.3 NORA Ringsend Facility from the south

Both facilities must be able to transfer their product at any time in case of a national emergency. This includes a loss of gas to the ESB Generating Station which would switch to oil and necessitate the replenishment of the two supporting oil tanks.

The NORA Ringsend and Poolbeg facilities both lie within the development consent application boundary of the 3FM Project. It is proposed to demolish the existing Poolbeg Oil Jetty as part of the 3FM Project and provide replacement berthage, oil manifold, above ground oil pipework and access route for maintenance. The 3FM Project has been designed to ensure that NORA's operations are not disrupted.



Plate 5.4 NORA Poolbeg Facility and part of ESB Poolbeg Generating Station from the southwest

ESB Poolbeg Generating Station

The ESB Poolbeg Generating Station site is of strategic importance for both power generation and power supply networks.



Plate 5.5 ESB Poolbeg Generating Station and part of NORA Poolbeg Facility from the northeast

There are two stations on the site:

- a) A thermal station which is no longer operational; and
- b) A combined cycle gas station which has an output of 480 MW which is located towards the eastern end of the site.

Cooling water is taken from the Liffey and discharged via an open channel and discharge weir. The open channel is also used by Uisce Éireann for the discharge of treated sewage from Ringsend Wastewater Treatment Plant (WwTP).

There are five 220kV cables connecting the site to the electricity network. One of these linking Poolbeg to the North Wall Substation crosses beneath the Liffey channel. Replacement of this circuit along a different route option is proposed by ESB.

New infrastructure is proposed including a second combined cycle gas station and facilities to support renewable energy, notably offshore wind, which will need to be accommodated within the existing footprint of the site.

The ESB cooling water intakes, open channel and discharge weir abuts the area of the 3FM Project. The entrance to the ESB Poolbeg site also lies within the 3FM Project area. The 3FM Project has been designed to ensure that ESB's operations are not disrupted during the construction of the proposed Lo-Lo Container Terminal and access road.

5.1.2.3 Synergen (Dublin Bay Power) Ringsend Generating Station

The Synergen (Dublin Bay Power) Ringsend Generating Station comprises a combined cycle gas station which has an output of 415 MW.

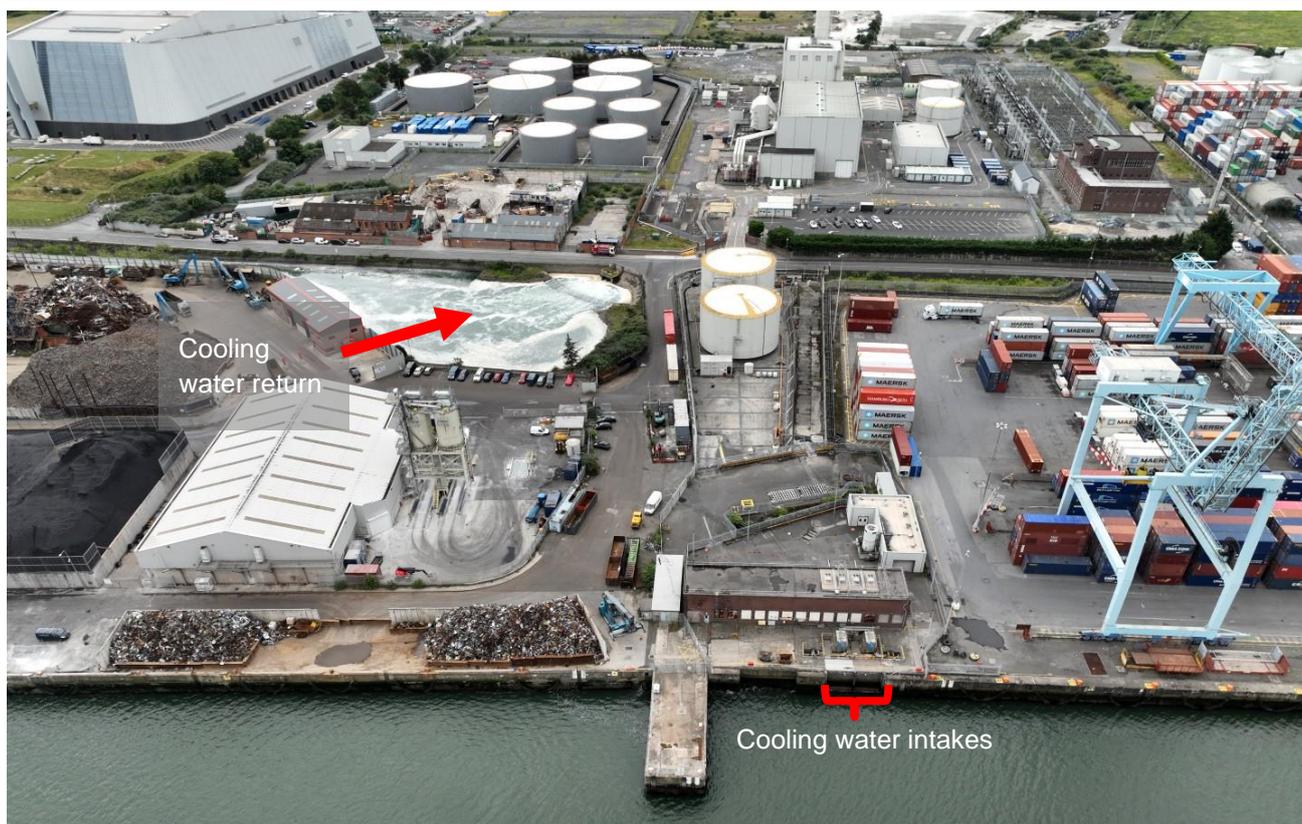


Plate 5.6 Synergen (Dublin Bay Power) Ringsend Generating Station from the north

Its cooling water intakes are located at the eastern end of Berth 45, in close proximity to a concrete caisson 'nib', and the cooling waters are returned via an open channel to the south of Area L (Plate 5.6). The open channel is also used by Encyclis (formerly Covanta) for the discharge of cooling water from its Waste-to-Energy Facility.

Synergen's cooling water intake and open discharge channel lie within the area of the 3FM Project. The 3FM Project has been designed to ensure that Synergen's operations are not disrupted during proposed construction work to change the function of the existing Lo-Lo Container Freight Terminal to a Ro-Ro Unaccompanied Freight Terminal.

5.1.2.4 Uisce Éireann Ringsend Wastewater Treatment Plant and Sludge Jetty

Uisce Éireann operate the Ringsend WwTP. The Ringsend WwTP is currently being upgraded to increase capacity to a population equivalent (PE) of 2.5 million. The Capacity Upgrade Contract (CUC) began in 2014 and is scheduled to be completed by 2025/26. Further to completion of the CUC works, Ringsend WwTP will reach its maximum capacity in 2025/26.



Plate 5.7 Ringsend WwTP Stormwater Tanks and Sludge Jetty, with Encyclis Waste to Energy Facility in the background

The main outfall channel for treated wastewater is shared with ESB's cooling water discharge from the ESB's Poolbeg Generating Station. The maximum flow from the WwTP is 11.4 cubic metres per second. This is close to the maximum flow that the hydraulic gradient allows for discharge from the WwTP to the outfall channel under gravity.

There is a storm water overflow located to the northeast of the existing storm water tanks, in close proximity to the base of the Sludge Jetty, which occasionally discharges partially treated sewage effluent into the Liffey during extreme storm events.

The sludge jetty was formerly used to load sewage sludge onto vessels for disposal at sea. This practice is now prohibited, and the sludge jetty is no longer used and has fallen into a state of disrepair.

The sludge jetty and stormwater overflow lie within the area of the 3FM Project. The main treated sewage discharge within the open channel and discharge weir shared with ESB's cooling water discharge also abuts the area of the 3FM Project. The 3FM Project has been designed to ensure that it does not impact on the hydraulic efficiency of Uisce Éireann's discharges.

5.1.2.5 Encyclis (formerly Covanta) Waste to Energy Facility

Encyclis operates a major Waste to Energy Facility within the Poolbeg Peninsula. Approximately 120 trucks arrive at the Encyclis plant each day. All large transfer trailers arrive via the Dublin Tunnel. Normal refuse vehicles can also arrive from the south of Dublin.

Bottom ash (125,000 tonnes/year) and fly ash (30,000 tonnes/year) are exported via Dublin Port at Berths 46 and 47. There are future plans to treat the ash in Ireland, whereby the ash will be transferred by road using the empty transfer trailers.

The Encyclis Facility includes maintenance buildings and parking yards to the west of Shellybanks Road. Staff regularly cross Shellybanks Road to the main site. The main site carpark lies to the south of the Encyclis building. Access is via Shellybanks Road.

There are plans for a District Heating System requiring pipework from the main Encyclis building to an area in the vicinity of Dublin Port Masterplan Area O, where it is proposed to construct a District Heating Energy Station. Further pipework will be required to connect this site with the intended recipients. The 3FM project has been designed to ensure that the proposed development will not disrupt the potential delivery of this district heating proposal.

The cooling water intake and outlet are essential to the Encyclis plant operations. The cooling water intake is located at the eastern end of Berth 47. The cooling water is discharged to an open channel which is shared with the cooling water discharge from Synergen (Dublin Bay Power) Ringsend Generating Station.

Encyclis's cooling water intake and open discharge channel lies within the area of the 3FM Project. The 3FM Project has been designed to ensure that proposed capital dredging works will not disrupt Encyclis's operations.

5.1.2.6 Dublin Port Masterplan Area L

Dublin Port Masterplan Area L is currently utilised by three DPC Tenants:

- Irish Cement (cement and petroleum coke);
- Hammond Lane (scrap metal); and
- EcoCem (eco-cement production).

The quayside area, comprising Berth 46 and Berth 47, is shared between the three operators. Separate manifolds are set into the quayside to transfer molasses, vegetable oil and fuel to storage tanks from ships which also use these berths. Harbour Mobile Cranes and smaller mobile plant, including long reach excavators, serve the berths.

The landside area is being used for bulk storage of petroleum coke, cement and scrap metal, with warehouses and plant to process the metal and produce cement products.



Plate 5.8 Dublin Port Masterplan Area L, centred on Irish Cement's petroleum coke yard from the north

Area L of the Dublin Port Masterplan lies within the area of the 3FM Project. Subject to future negotiation and settlement, Irish Cement and Hammond Lane will be required to relocate. The 3FM Project has been designed to ensure that it does not impact operations of EcoCem.

5.1.2.7 Poolbeg Yacht & Boat Club, Marina and Stella Maris Rowing Club

The Poolbeg Yacht & Boat Club, Marina and Stella Maris Rowing Club comprise a key sporting and amenity centre which is in daily use by members of the clubs, visitors and the local community. There are approximately 72 local groups which make use of the facilities, demonstrating their importance as a focal point to many users of the Liffey.

Poolbeg Yacht & Boat Club and Marina have provided berthing and clubhouse facilities for over fifty years. They currently provide a 100-berth marina and also organise racing on the River Liffey. Stella Maris is a traditional skiff rowing club, which was established in 1937.

The Poolbeg Yacht & Boat Club, Marina and Stella Maris Rowing Club lie within the area of the 3FM Project. It is intended to demolish the existing centre and to replace it with an extensive Maritime Village. To achieve this goal, consultations with the Ringsend River User Groups have been undertaken to facilitate their input as presented in Chapter 3 Consultation & Project Scoping, Section 3.4.4.4. The various interest groups are represented by the following three organisations:

- Stella Maris Rowing Club;
- Poolbeg Yacht and Boat Club; and
- Ringsend Registered Fishermen and Private Boat Owners Clubs.

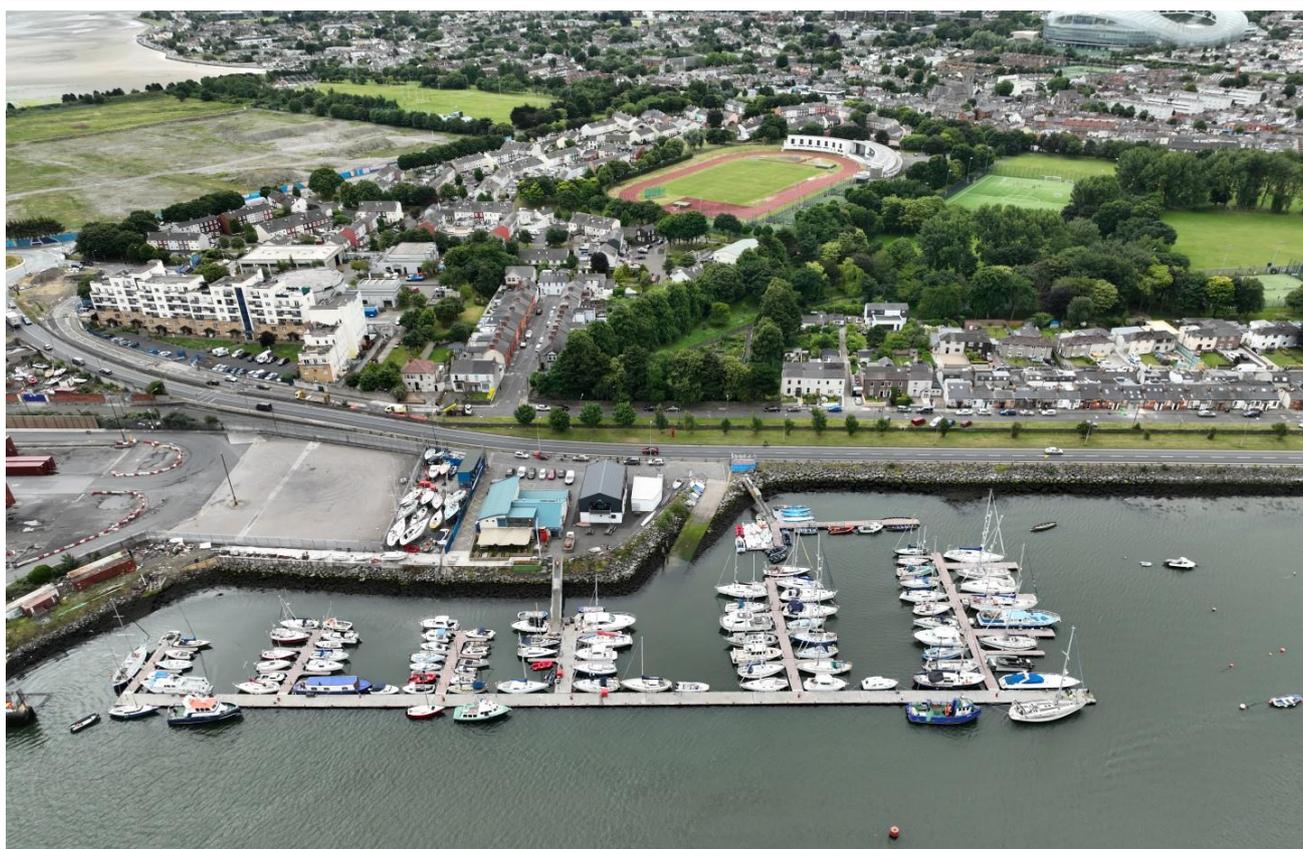


Plate 5.9 Poolbeg Yacht & Boat Club, Marina and Stella Maris Rowing Club from the north

The 3FM Project has been designed to ensure that the proposed Maritime Village will provide a significant gain to the river users and to the local community.

5.1.2.8 Dublin Port Masterplan Area O

The DPC-owned lands located on the southern side of the Poolbeg Peninsula comprise a brownfield / hardstand site which is currently being used for a range of activities including:

- Kilsaran Concrete Ltd plant which comprises a concrete batching plant and associated facilities;
- Bissett Engineering plant which is currently not operational; and
- Site compounds to facilitate engineering contractor's offices for works at Uisce Éireann's Ringsend WwTP in temporary site cabin facilities, with car parking, fencing and materials storage. Previously this was used as a construction compound for works at the Encyclis (formerly Covanta) Waste to Energy Facility.

This area lies within the area of the 3FM Project. Its intended use under the 3FM Project comprises the development of Active Travel Routes, Port Park, wildflower meadow, Ro-Ro Terminal, site for DCC's proposed District Heating Energy Station and an extension to Irishtown Nature Park. The potential development of the District Heating Energy Station is proposed to be advanced separately by DCC and does not form part of the 3FM Project planning application.



Plate 5.10 View from the south of DPC-owned lands on the southern side of the Poolbeg Peninsula

5.1.2.9 Roadways and Footways

There are a number of roads and footways which lie within the area of the 3FM Project.

The existing road network is primarily owned by Dublin City Council (DCC), with the exception of White Bank Road and the eastern portion of South Bank Road which are owned by DPC. The network serves the various commercial sites on the Poolbeg Peninsula, as well as providing public access to the amenity areas, notably to the GSW where DCC maintain a public carpark.

A corridor for a roadway through DPC's northern lands lies within the area of the 3FM Project, to connect a proposed bridge crossing of the River Liffey to Alexandra Road, thereby removing the majority of port related traffic from East Wall Road. A corridor has been prepared during the ABR Project for the section of road between Terminal 4, which currently operates as a Ro-Ro Unaccompanied Freight Terminal and the Port Centre.

Additional road improvements are also required in the vicinity of the North Estate to facilitate the movement of HGV traffic between the Poolbeg Peninsula and the Dublin Tunnel.

5.1.2.10 Adjacent Land Uses

The main elements of the 3FM Project, located within the Poolbeg Peninsula, are bounded to the north by the River Liffey which is the main navigation channel for Dublin Port. DPC is the authority with responsibility for the safe passage of all shipping entering and leaving the port. All vessel movements and activities within the navigation channel are controlled by DPC's Harbour Master. A number of events are hosted by DPC including the annual 'Riverfest'. Accommodation is also made for sailing and boating activity based at the Poolbeg Yacht & Boat Club, Marina and Stella Maris Rowing Club.

The high value amenity areas of Sandymount Strand and Irishtown Nature Park lie to the south and east of the site. There are a number of well-established paths linked to Irishtown Nature Park.

The site is bounded to the west by Irishtown and Ringsend residential area.

Furthermore, Phase 1 of the Pembroke at Dublin Four (Glass Bottle site), also located to the west of the site, has been granted permission by DCC in March 2022 (DCC Ref. PWSDZ3207/21) and has commenced works on site. Phase 1 of the Glass Bottle Development proposal is for a primarily residential, mixed-use, development on a site of 15.3ha (including some 0.2ha of public domain on Sean Moore Road and the junction with Pine Road), focused primarily, but not exclusively, on a net site area of 2.4ha (identified as within the A3 Lands) in the Poolbeg West Strategic Development Zone Planning Scheme (April 2019).

5.1.2.11 Designated Sites

As set out in more detail in Chapter 7 Biodiversity, Flora & Fauna of this EIA/CHAP 5 and, in particular, the Appropriate Assessment Screening Report (AASR) and Natura Impact Statement (NIS) submitted with the application for permission in respect of the 3FM project, there are a number of Natura 2000 sites designated as Special Protection Areas (SPAs) or Special Areas of Conservation (SACs) which have the potential to interact with the proposed development, namely:

- South Dublin Bay and River Tolka Estuary SPA;
- North Bull Island SPA;
- North Dublin Bay SAC;
- South Dublin Bay SAC;
- Rockabill to Dalkey Island SAC; and
- North-West Irish Sea SPA.

The spatial configuration of these protected sites and their relationship with the proposed project is presented and assessed in Chapter 7 of this EIA/CHAP 5, and in the AASR and NIS submitted with the application for permission.

Separately, there are a number of protected archaeological and/or industrial heritage features designated within the development area. The key sites are:

- The GSW and environs;
- Pigeon House Harbour;
- Pigeon House Fort;
- Pigeon House Hotel;
- Former St Catherine's Hospital (Smallpox hospital and later tuberculosis sanatorium);
- Pigeon House Generating Station;
- Poolbeg Generating Station and chimneys; and
- North Wall Quay Extension.

The spatial configuration of these amenity sites and their relationship with the proposed project is presented and assessed in Chapter 16 of this EIAR.

5.2 Proposed Works

This section of the EIAR describes the proposed marine and landside works for which permission is sought to achieve the 3FM Project's objectives. A site plan of the proposed works is presented in Figure 5.5.

An overview of the works proposed as part of the 3FM Project is presented below. Specific technical detail of project elements is set out in a series of Architectural Design Reports, and Engineering Design Drawings that support this EIAR and are submitted with the application for development consent.

The 3FM Project has six key elements:

1. Construction of a new public road and bridge called the **Southern Port Access Route (SPAR)** to link the North and South Port Estates.

The route will include a new bridge over the River Liffey. It will be located immediately east of Tom Clarke Bridge and north of the R131. The route will facilitate Heavy Goods Vehicles (HGVs), active travel users (pedestrians, cyclists, wheelers etc), emergency (blue light) vehicle services and public transport users moving to and from the South Port and Poolbeg Peninsula. The SPAR will allow the 3FM Project to be fully rail enabled through rapid shunting of freight by electric vehicles from the South Port Estate, across the Liffey, to rail intermodal facilities in the vicinity of the North Port Estate. The SPAR will also have a direct connection to the Dublin Tunnel via the North Port Estate road system.

2. Construction of a **new Lift-on Lift-off (Lo-Lo) Terminal** with an annual throughput capacity of 550,000 Twenty-foot Equivalent Units (TEU) or 5.34m tonnes.

The Lo-Lo Terminal will consist of two main components:

- a) A terminal located north of the ESB's Generating Station on the eastern end of Poolbeg Peninsula. The terminal will have 650m of deep water berthage dredged to a design dredged level of -13.0m CD (Chart Datum), plus associated cargo handling areas (Dublin Port Masterplan Area N). This terminal will accommodate Lo-Lo vessels of up to 240m length overall, primarily from continental Europe, on a new open-piled wharf. The works will require the demolition of the existing Poolbeg Oil Jetty which will be replaced by a new oil transfer facility at the eastern end of the wharf.
- b) The terminal above will operate in conjunction with a transit container storage yard located on waterside land currently used for bulk cargo handling (Dublin Port Masterplan Area L).

3. Replacement of the existing Lo-Lo container terminal, currently operated by Marine Terminals Limited (MTL), with a **new Roll-On Roll-Off (Ro-Ro) Terminal** with an annual throughput capacity of 360,000 Ro-Ro units or 8.69m tonnes.

The Ro-Ro Terminal will consist of two main components:

- a) A terminal to be located at existing Berths 42 – 45 including provision of two berths, each with a single tier Ro-Ro ramp, plus associated cargo handling facilities (Dublin Port Masterplan Area K).

- b) The terminal will operate in conjunction with a transit Ro-Ro trailer yard located on Port owned land on the southern side of the Poolbeg Peninsula (Dublin Port Masterplan Area O).

This combined terminal will accommodate Ro-Ro vessels of up to 240m length, primarily from continental Europe.

4. Provision of a **325m diameter ship turning circle** in the river channel north of Pigeon House Harbour, dredged to a depth of -10.0m CD.

The ship turning circle will enable safe navigation and efficient manoeuvring of vessels up to 240m in length. The boundary with Masterplan Area M (47A Hardstand) will comprise a vertical steel combi-wall. The construction of the Turning Circle will require the demolition of the existing Sludge Jetty.

5. Construction of a **Maritime Village** at Pigeon House Road and Berth 41.

This village will accommodate local rowing, sailing, and boat clubs and will provide a significantly enhanced public realm and facilities on the waterside. It will also accommodate the relocation of Port Harbour Operations from the North Port Estate.

The 3FM Project will require the demolition of the existing Poolbeg Yacht & Boat Club and the Stella Maris Rowing Club buildings, to make way for the proposed SPAR. The existing facilities will be replaced by the construction of the Maritime Village which will have a significantly larger footprint including the hinterland to Berth 41 (currently part of the existing Lo-Lo Container Terminal operated by MTL).

6. Construction of **Community Gain** elements

Integrating Dublin Port with Dublin City and its people is a core objective of the Masterplan for Dublin Port. Development of proposed new public amenities on the Poolbeg Peninsula as part of the 3FM Project will provide **community gain** and contribute towards integrating the port with the city. Proposed new public amenities include:

Enhanced **recreational amenity** through:

- **7km of new or upgraded Active Travel Path** (cycle, pedestrian, wheelers etc.) **and 4.9km of new or upgraded footway** for the North Port Estate, SPAR and Poolbeg Peninsula, which will link with the 1.4km Liffey Tolka Greenway in the North Port Estate, and from there to the 4.0km Tolka Estuary Greenway currently under construction by Dublin Port. DPC will also provide Dublin City Council with a €5 million contribution for future upgrading of the existing coastal path along the southern perimeter of the Poolbeg Peninsula.
- Development of a **sailing, rowing and maritime campus** (Maritime Village) adjacent to the existing Poolbeg Yacht and Boat Club in consultation with local yacht and boating clubs, including a public slipway and facilities for maritime skills training.
- Provision of recreational space in the form of **Port Park and Wildflower Meadow** (2.5ha), and **Coastal Park** (1.6ha)
- Provision of a 1.1ha extension to **Irishtown Nature Park**.

Enhanced **public realm** through:

- Development of a new **public plaza** as a key part of the Maritime Village.
- Extensive **boundary softening** works adjacent to the development sites forming part of the 3FM Project.

Community support through:

- Establishment of a new €2 million **Community Benefit Fund** for Education, Heritage & Maritime Training Skills projects within the Poolbeg area. The initial capital for the Fund will be administered by DPC in consultation with local stakeholders.

Heritage & Biodiversity enhancements through:

- Commissioning a new **Public Access Feasibility Study** regarding the Great South Wall so as to identify improved public interpretation, accessibility, facilities and conservation possibilities.
- Provision of up to €1 million **funding to implement the study recommendations**.
- Construction of an additional permanent marine structure (dolphin) to **expand the available habitat and range of the Dublin Port Tern Colonies**.
- Provision of Interpretative Markers to delineate the alignment of the Great South Wall (GSW)

Other significant ancillary works include:

- Improvements to the existing road network in both the North and South Port, linking and providing access to the port terminals, including new signal-controlled junctions and a new roundabout on Pigeon House Road;
- Improved pedestrian access from Irishtown to the proposed Maritime Village; and
- Demolition of the existing Poolbeg Oil Jetty and Sludge Jetty.

A more detailed description of each of the 3FM Project elements for the purpose of environmental assessment is presented in the following Sections 5.2.2 to 5.2.7. A series of Computer-Generated Images (CGIs) are used throughout the text to provide a visual interpretation of the project description. A complete set of these CGI images, including additional views, is presented in Appendix 5-1.

These descriptions should be read in conjunction with the following Technical Appendices in addition to the Planning Drawings:

- Appendix 5-1 CGI Renders of 3FM Project (RPS)
- Appendix 5-2 Dublin Port 3FM Development, Navigation Simulation Study (HR Wallingford)
- Appendix 5-3 Dublin Port 3FM, Passing Ship Study (HR Wallingford)
- Appendix 5-4 Construction Sequence (DPC/RPS)

and the following standalone reports, which are also appended to this EIAR under separate covers:

SPAR

- SPAR (South Port Access, Road Opening) Bridge, Preliminary Design Report (COWI)

- SPAR (Southern Port Access Road) Viaduct, Preliminary Design Report (RPS)

Maritime Village

- Maritime Village: Architectural Design Report (Darmody Architecture)
- Maritime Village: Landscape Design Report (thirtythreetrees)
- Maritime Village: Engineering Report for Planning (Roughan & O'Donovan)
- Maritime Village: Mechanical and Electrical Services Report (Varming Consulting Engineers Ltd)
- Maritime Village: Concept Lighting Planning Report (Cundall)

Community Gain Elements – Recreational Amenity, Active Travel

- Active Travel: Architectural Design Report (Darmody Architecture)
- Active Travel: Landscape Design Report (thirtythreetrees)
- Active Travel: Concept Lighting Planning Report (Cundall)

Community Gain Elements – Recreational Amenity, Port Park

- Port Park: Architectural Design Report (Darmody Architecture)
- Port Park: Landscape Design Report (thirtythreetrees)
- Port Park: Concept Lighting Planning Report (Cundall)
- Port Park: Arboricultural Assessment (Joe McConville)

Community Gain Elements – Heritage, Great South Wall

- Great South Wall Overview of Impacts, Mitigation & Interpretation (Darmody Architecture)

An aerial overview CGI of the 3FM Project is shown in Figure 5.6.

The construction phase of the 3FM Project has been divided into discreet elements that will be undertaken in a programmed sequential manner as dictated by the nature of those works, the requirements of the operational port and other stakeholders, and the relevant environmental constraints. Some elements will require preparatory enabling works and temporary structures to allow completion. Some of the major elements will be completed in phases. The ultimate details of sequencing of some construction elements will be finalised at the procurement and detailed design phase prior to commencement. The sequencing described here is therefore indicative only, but is designed to represent a 'worst case scenario' for environmental assessment, in line with the EPA "Guidelines on the information to be contained in Environmental Impact Assessment Reports" (May 2022), and may be subject to some adjustment.

Completion of the 3FM Project will require construction of temporary site compounds and logistic zones to facilitate the works. Different compounds will be used for different phases of the works. The compounds are sized to accommodate welfare facilities, site offices and parking, construction plant storage, and materials storage. Each compound is located in or immediately adjacent to the relevant works phase so as to cause minimal interference to general port operations. Logistic zones will be used for materials storage, loading and unloading for distribution to the relevant work areas. Compounds and logistic zones may change function as

project phasing and work elements demand. Security fencing will be erected, maintained and dismantled as required. Temporary Ro-Ro ramps are also proposed to aid efficient handling of materials.

The location of the proposed temporary site compounds and logistic zones are shown in Figure 5.4.

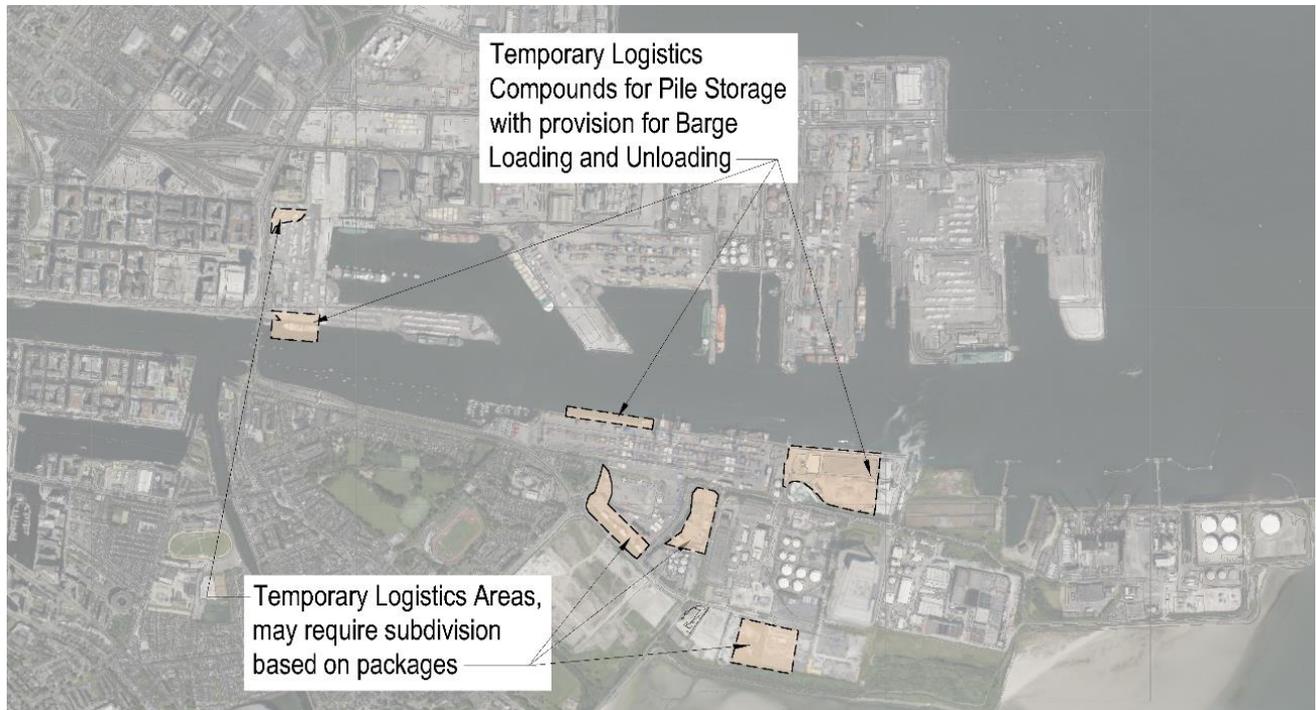


Figure 5.4 Proposed Site Compounds and Logistics Zones

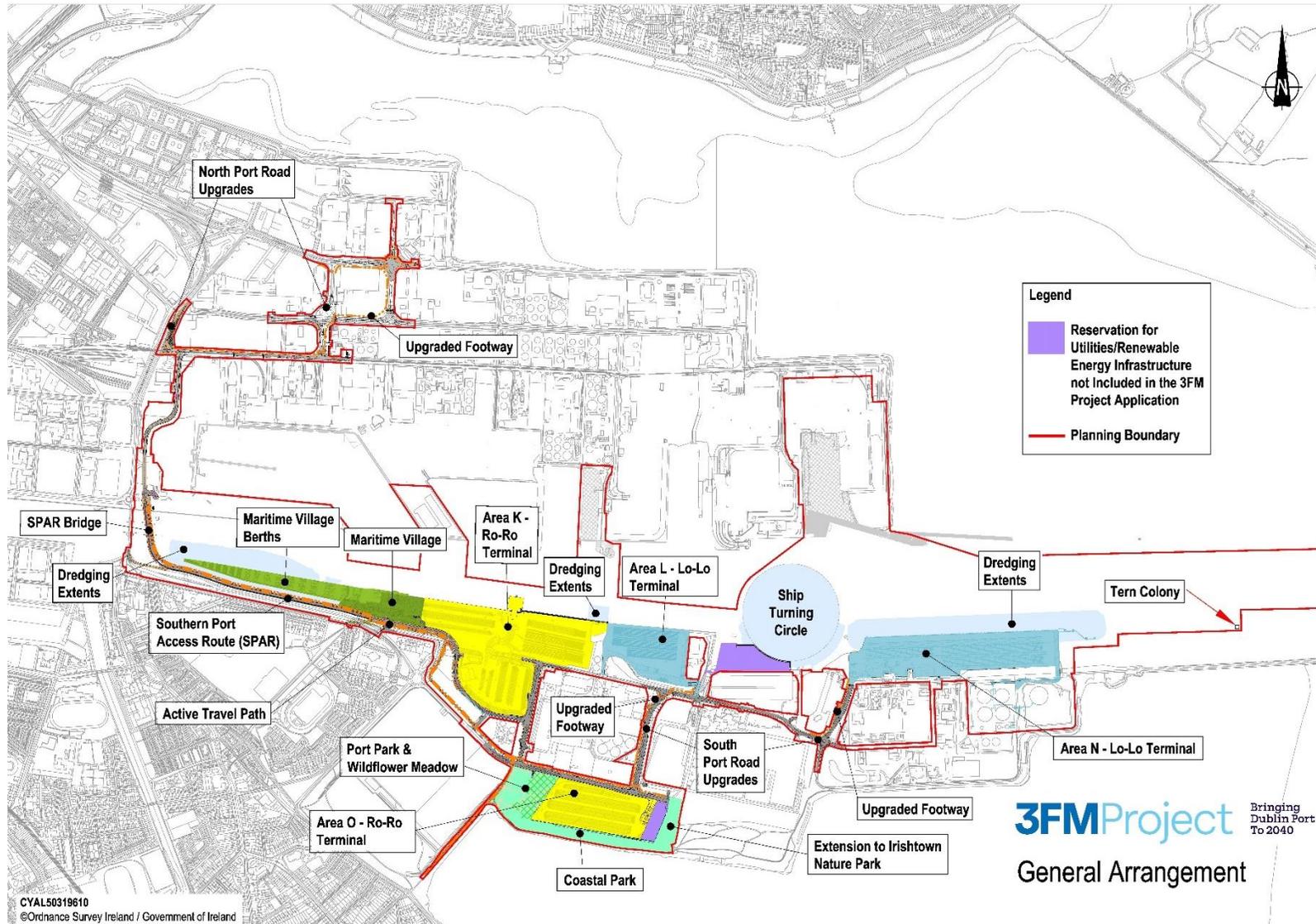


Figure 5.5 Proposed 3FM Project infrastructure works



Figure 5.6 CGI Aerial View of the Proposed 3FM Development, looking southeast

5.2.1 Construction Design Considerations

The following design criteria have guided the design of the various elements of the project:

- Maximise the potential of the existing port infrastructure in the context of the Dublin Port Masterplan 2040, reviewed in 2018, through the refunctioning of the existing Lo-Lo Container Terminal (Masterplan Area K) and Bulk Cargo sites (Masterplan Area L) and other sites within the South Estate;
- Create additional berthage along the River Liffey to balance the quayside requirements with landside availability;
- Provide sufficient water depth at each berth for the design vessels proposed;
- Provide a turning circle to accommodate the manoeuvring of vessels;
- Provide for the operational requirements of NORA, ESB, Uisce Éireann, Synergen, Encyclis and DCC;
- Minimise the impact of construction on the ongoing operation of existing berths;
- Minimise the impact of proposed marine infrastructure on existing port navigation;
- Take full cognisance of environmental constraints, and where feasible provide mitigation through engineering design;
- Ensure that the integrity and stability of the GSW is maintained; and
- Design quay structures for a working life of 100 years, design viaduct and bridge structures for a working life of 120 years.

5.2.2 Construction of the Southern Port Access Route (SPAR) and Road Upgrades

The SPAR is a new 2.3km road, linking the Dublin Port North Estate to the South Estate. The SPAR itself is defined as the entire route from North Wall Quay Extension in the north, to the Area O access point at the south, as shown in Figure 5.7.

At the northern end, the SPAR will connect into the proposed Berth 18 Access Road which connects to Alexandra Road, providing a congestion free link across the River Liffey on a new 220m bridge and 595m viaduct, landing on the southern shoreline in close proximity to the proposed Maritime Village. The SPAR will then connect into a re-aligned Whitebank Road which connects into the Pigeon Hose Road and onto the extended South Bank Road, providing connectivity as far as the new Area O Ro-Ro terminal. The 3FM Project will also provide upgrades to the existing road network throughout the South Port and North Port Estates.

The SPAR bridge will be located east of the Tom Clarke Bridge and will include a 45m lifting section to maintain the navigable channel.

The SPAR will be a public road with restricted use. The SPAR will accommodate port-related traffic movements from Areas K, L, N and O and connect them to the North Estate and the M50 (Dublin Tunnel). Although the majority of SPAR traffic will be HGVs connected with the operation of the port, the SPAR will also accommodate other traffic flows such as public transport, traffic movements from the Encyclis (formerly Covanta) Waste-to-Energy Plant and other heavy goods vehicles.



Figure 5.7 3FM Project Preliminary General Arrangement Layout (May 2024)

The key principles behind the development of the SPAR are:

- HGV vehicles will be removed from the external DCC road network,
- Port traffic will be relocated further away from residential areas,
- Traffic flows will be relatively free-flowing.

These principles shall reduce the impact of HGVs on traffic capacity, congestion, air quality and noise on the surrounding road network, including on the Tom Clarke Bridge.

The bridge section and viaduct will accommodate substantial active travel facilities to provide sustainable transport connections for staff and visitors of the 3FM Project, in addition to providing a community gain and interconnection between public realm schemes.

5.2.2.1 North Port Road Upgrades

Road improvements in the North Estate include the following, also shown on Figure 5.8:

- Provision of a left slip lane from East Wall Road onto Alexandra Road,
- Conversion of Promenade Road / Bond Drive roundabout to a signal controlled junction with associated upgrade and lane reallocation of approach arms,

- Lane reallocation of approach arms to Tolka Quay Road / Bond Drive roundabout,
- Provision of new T10 Link Road roundabout and associated approach arms (already permitted),
- Provision of new signalised junction at proposed T10 Link Road / Alexandra Road intersection,
- Provision of new Berth 18 Access Road providing access from Alexandra Road to Berth 18 and the proposed SPAR,
- Provision new and upgraded active travel connections and footways in conjunction with upgraded roadworks in the North Estate.

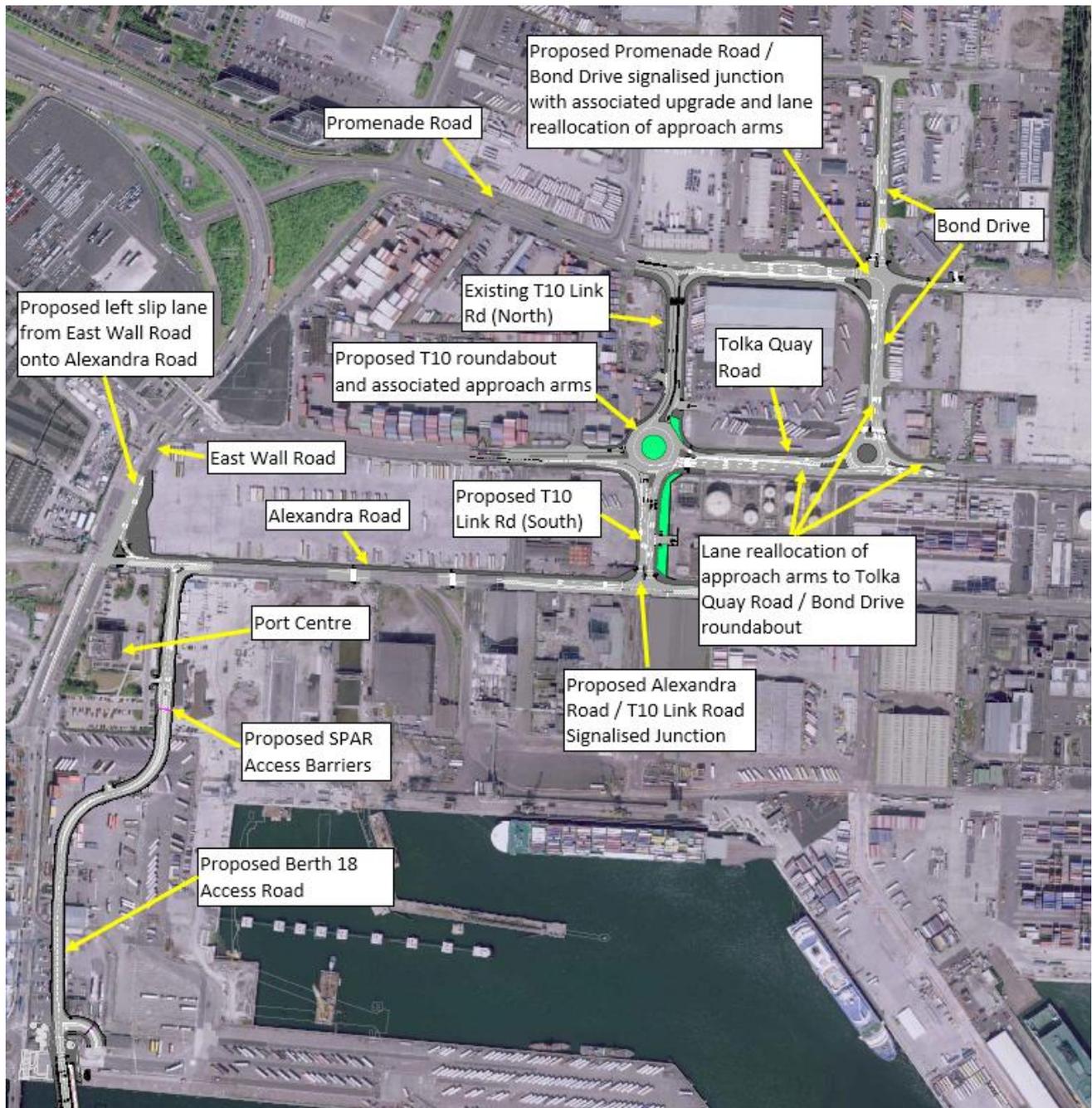


Figure 5.8 North Port Road Upgrade Works

The proposed Berth 18 Access Road, T10 Roundabout and T10 Link Road (South) are through existing port areas with a variety of hardstand surfaces and uses. Where possible the existing hardstand will be retained. Demolition of some existing buildings at the Seatruck T4 terminal will be required to facilitate construction. The remainder of the North Port roadworks are largely within the existing road corridor with minimal impact on adjacent land uses. Drainage, road lighting and signage will be amended to suit the new road layouts.

Design standards will comply with the Design Manual for Urban Roads and Streets (DMURS), with a design speed of 40kph (kilometres per hour).

Boundaries with adjacent lands will largely be unaffected where roads are upgraded within the existing road corridor. Boundaries along the proposed Berth 18 Access Road, T10 Roundabout and T10 Link Road (South) will be treated as required, typically including 2.9m fencing to comply with International Ship and Port Facility Security code (ISPS).

A new access to Port Centre will be provided from the proposed Berth 18 Access Road. SPAR access control infrastructure will be provided just south of the proposed new access to Port Centre.

The Berth 18 Access Road will comprise a two-lane carriageway with a total width of 8m (including 2 x 0.5m hard strips). A 2m wide footway will be constructed on each side of the carriageway.

5.2.2.2 SPAR Bridge and Viaduct and connection to Whitebank Road

The SPAR begins just north of the SPAR Bridge northern abutment, at the signalised Active Travel crossing connecting the SPAR Bridge Active Travel to North Wall Square, which forms part of the permitted Liffey Tolka public realm scheme.



Figure 5.9 CGI Aerial View of Proposed SPAR River Liffey crossing and Tom Clarke Bridge in the foreground

The SPAR Bridge is a 220m crossing of the Liffey and is positioned immediately east of Tom Clarke Bridge on a skewed alignment. The bridge will include a lifting span above the navigation channel. The 45m straight lifting span will be constructed to align with the opening section of the Tom Clarke Bridge. The design of the SPAR bridge is intended to maximise the amount of offsite construction. This will facilitate safety management, optimise quality, and reduce environmental and social impact during construction. It is anticipated that entire

span lengths (up to 35m for the approach spans, and a 45m main span) including the carriageway and cantilevers may be preassembled and painted at the fabrication works. The main span is anticipated to weigh approximately 475t. For the Samuel Beckett Bridge the entire 2500t bridge was assembled in Holland and transported to site by sea.

Site preparation is generally confined to the North Wall Quay Extension (NWQE). This will include diversion of the ESB 38kV cable duct which currently passes through the intended abutment inspection chamber. Measures to protect heritage features will also be implemented. Original mooring rings on the north quay wall will be temporarily removed. The granite façade of the quay wall will be surveyed in detail and disassembled. Granite blocks will be marked before storage to allow accurate reinstatement of the wall after construction and the bridge deck is in place. No modification to the protected substructure of Bindon Blood Stoney's original quay wall is required since the northern abutment of the bridge will be situated behind the wall.



Figure 5.10 SPAR Bridge and Viaduct and connection to Whitebank Road

Site access will be from DPC-owned land and will include a site compound and moorings for construction vessels along the northern quays of the Liffey, probably at Berth 18.

The bridge will be supported on five Y-shaped piers installed in the channel, creating six spans. Each pier will be supported on six bored concrete piles circa 1.2m diameter. The piers will align with the piers of the Tom Clarke Bridge as closely as possible, reducing any impact on existing navigation channels and the hydrodynamics (flow) of the river. A single machine pier will be installed mid-channel to support the bridge spans and also the machinery for the lifting span. This pier will be supported on nine bored concrete piles circa 1.2m diameter, and will also be aligned with the machinery pier of the Tom Clark Bridge. Typically, the construction of pier foundations requires the use of cofferdams. An example of a cofferdam used during construction of the

Samuel Beckett Bridge is shown in Figure 5.11. Pier construction may be staggered to prevent impairment of use of the navigation channel. However, some temporary narrowing or relocation of the channel is expected and will require approval from the Port authority.

Temporary cofferdams will be constructed using sheet piles driven into the seabed to eliminate ingress of water. Each standard pier requires a cofferdam with plan dimensions of approximately 8m x 12m, requiring use of approximately 58 sheet piles in total. The machine pier requires a cofferdam with plan dimensions of approximately 16m x 16m, requiring use of approximately 92 sheet piles.



Figure 5.11 Example of cofferdam used during construction of Samuel Beckett Bridge.

Temporary access causeways using steel piles will be required during pier construction. In total, approximately 190m of 6m wide causeway may be required alongside the bridge's footprint, with smaller structures around the cofferdams. Bored piles for the river piers will be installed from within the dewatered cofferdams. Reinforced concrete pile caps and piers may then be installed. Temporary dolphins may also be required to protect the cofferdams and causeways from ship impact. Figure 5.12 shows indicatively the arrangement of these temporary structures.

The northern abutment of the bridge will be situated behind North Wall Quay Extension and will be supported on six bored concrete piles circa 1.2m diameter. The southern interface will be a single pier supporting the final bridge span and the first span of the viaduct structure, which will be a transition span to ensure the scheme remains cohesive. This pier is also likely to be piled.

The bridge deck will comprise a traffic-carrying central deck with width varying from 10.8m to 11.8m, including a two-lane carriageway with total width varying from 7m to 8m, and a vehicle containment system, drainage, etc. There will be a primary Active Travel path to the east side of the traffic. This will include a two-way cycleway

with a minimum clear width of 3m, and an adjacent footway with a clear width of 2m. The footway is located to the outside edge of the bridge to allow pedestrians to avail of the view. An additional path will be located to the west side of the traffic, with a clear width of 3.3m. This will initially be considered as a shared footway and cycle path but with provision to be converted to accommodate the LUAS, in the event that the LUAS network is extended in this vicinity.

Thus, the design of the SPAR Bridge has been future proofed to accommodate a potential LUAS crossing of the Liffey comprising two LUAS tracks. The 3FM Project has been designed so that it does not compromise potential future LUAS route alignments towards Irishtown and/or the Glass Bottle Site.

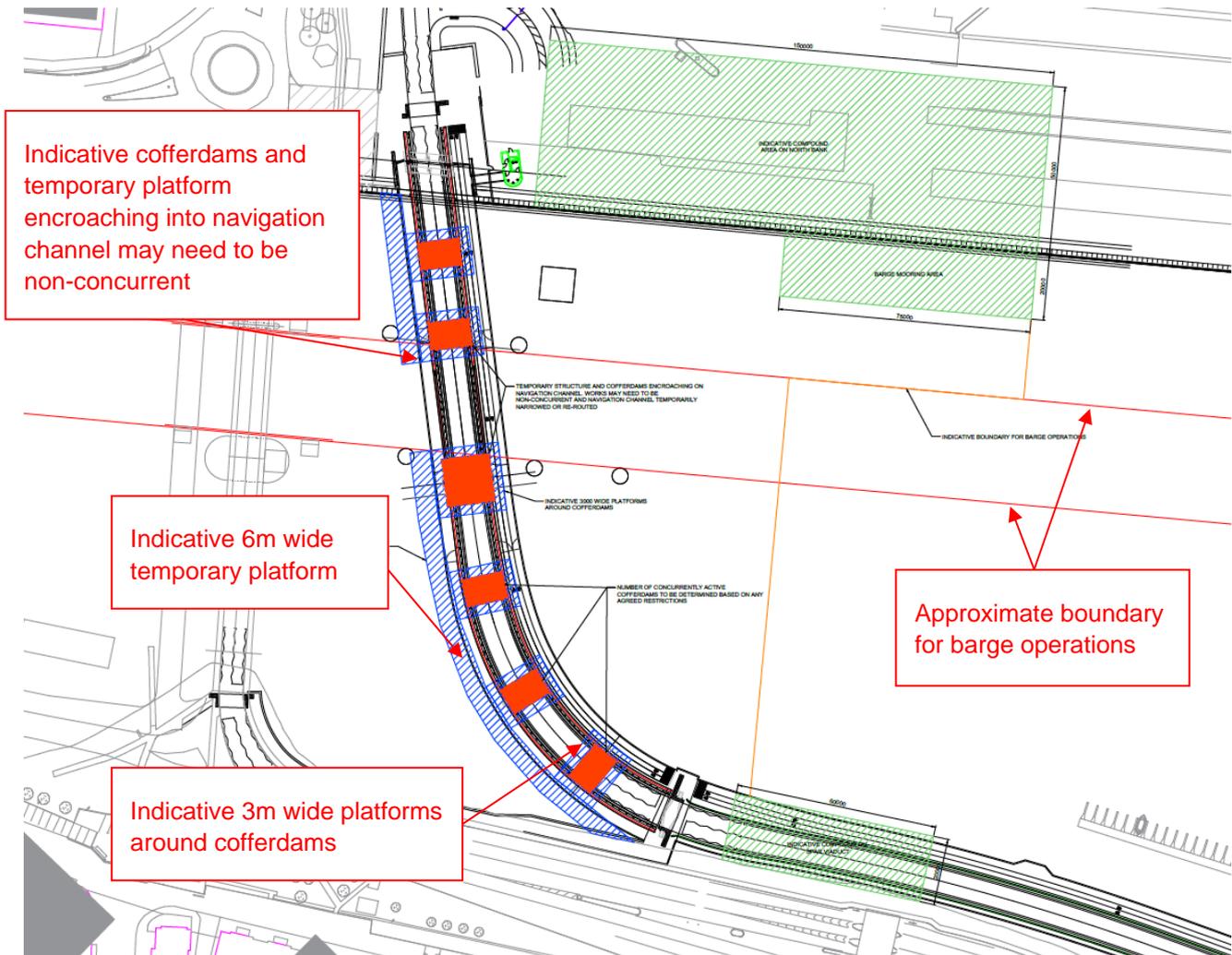


Figure 5.12 Illustrative example of temporary works for River Liffey crossing, extract from Drawing COWI-SBR-SP-DR-S-100-00090, Rev 0, Temporary Works Arrangement

Bridge spans will be lowered into place from a barge and connected to adjacent spans as required. Prior installation of the approach spans improves access to the central machine pier so that the mechanical equipment can be lifted in to place and the counterweight installed.

Road signage, traffic barriers, vehicle restraint systems, traffic signals, and bridge lighting will be installed on the road network as required.

For more detail on the SPAR Bridge, see SPAR (South Port Access, Road Opening) Bridge, Preliminary Design Report (COWI) under separate cover.

The SPAR Viaduct is a 595m long structure that runs alongside the existing R131 public road and spans from its connection to the southern end of the SPAR bridge to its landing point near the Maritime Village. The proposed viaduct will be a prestressed concrete integral Y beam construction, with a 3.5m cantilever, comprising 22 spans of a repeating 27m grid. Beyond the viaduct it becomes a ground-bearing structure. This section will comprise a two-lane carriageway with total width of 8m including drainage, etc. Verges and buffer zones have been included beyond this width. For more detail on the SPAR Viaduct, see SPAR (Southern Port Access Road) Viaduct, Preliminary Design Report (RPS) under separate cover.

The SPAR Viaduct will be constructed at the same time as the SPAR Bridge. Dredging of the Maritime Village area will precede construction of the SPAR bridge and viaduct. Restrictions on access from the existing R131 require that construction of the viaduct and logistics must be primarily executed from the water using a mix of jack-up barges and floating barges.

There will be a 5m wide active travel route, similar to that provided on the SPAR Bridge with 2m footway and 3m segregated cycleway, to facilitate efficient commuter links, see Figure 5.13. This active travel route is to the north of the carriageway, providing an uninterrupted connection from the northern end of the SPAR Bridge to the proposed Maritime Village. Viewing and rest points are provided at four locations along the north of the viaduct, as shown in Figure 5.13. A 5m shared Active Travel connection will be provided from the southern end of the SPAR Bridge alongside the R131 to St Patrick's Rowing Club via a proposed signalised crossing at the southern end of the Tom Clarke Bridge.

The section of the SPAR from the viaduct to Whitebank Road is designed to follow the southern boundary of the Maritime Village and Area K, through existing port areas with a variety of hardstand surfaces and uses. Where possible the existing hardstand will be retained. Site clearance will be required along the route by Area K.

Vehicular access to the Maritime Village will be from the public road network via Sean Moore Roundabout and Pigeon House Road. A signalised at-grade crossing of the SPAR will be provided to Maritime Village from Pigeon House Road, with the addition of vehicular barriers to prevent unpermitted access to SPAR from the public road network.

Active Travel connections and at-grade crossings will also be provided to the Maritime Village from Ringsend Park. The online segregated active travel route along the SPAR diverges from the SPAR just east of the Coastguard cottages, runs alongside Southbank Road and crosses South Bank Road to provide connectivity to Port Park, the existing path along the southern shoreline of the Poolbeg Peninsula, Sean Moore Park and the wider Sandymount area.

A 3m wide active travel shared footway/cycleway will run to the north of the SPAR, beyond the at-grade crossing, providing an active travel route into the proposed Ro-Ro Terminal - Area K. Vehicular access into Area K will also be provided for staff from this section of the SPAR.

The SPAR will be designed to DMURS with a design speed of 50kph. It is noted that the section of the SPAR from North Wall Quay to Maritime Village will also be aligned to TII standards with a design speed of 60kph.

The SPAR meets the realigned Whitebank Road with a signalised junction.

SPAR access control infrastructure will be provided along this section prior to its junction with Whitebank Road. Road drainage, lighting, signage and other ancillary infrastructure will be provided as required. Boundaries will

be treated as required, typically including 2.9m fencing to comply with International Ship and Port Facility Security code (ISPS).

Landscaping and vegetation strips will increase the separation between residents and the route. This will include vehicle restraint barriers as required. A 4m high noise barrier along the Coastguard Cottages and along the southern boundary of Area K will be installed to mitigate noise impacts.



Figure 5.13 CGI View along the SPAR 5m active travel route, looking east

5.2.2.3 South Port Roads and SPAR

The section of the SPAR from where it makes landfall near the Maritime Village (as described in the previous section) extends further southwards encompassing the southern section of Whitebank Road and the connection to Area O, from the junction with South Bank Road. For the benefit of this section of the report, each section of road that the SPAR includes will be referred to by its name, for ease of reference.

Road improvements in the South Port Estate include the following, also shown on Figure 5.14:

- Realignment of Whitebank Road including new signalised junctions with Pigeon House Road to the north and South Bank Road to the south. Include provision of access to Area K, with exit from Area K onto the new signalised junction with Pigeon House Road. A signalised junction will be provided approximately mid-length along Whitebank Road to provide access to the western extents of the SPAR and onward connection to the North Estate and Dublin Tunnel (M50). The portion of Whitebank Road south of this signalised junction forms part of the SPAR.
- Extension of South Bank Road, connecting to the realigned Whitebank Road and Shellybanks Road, providing access to Area O – Ro-Ro terminal. This portion of South Bank Road will form part of the SPAR. Includes 3m shared Active Travel on northern side of road, providing connectivity to Area O, Encyclis and Area L – Lo-Lo terminal.
- Widening and upgrade of Shellybanks Road including improvements to horizontal alignment at northern end. Includes signalised junctions with Pigeon House Road and the extended South Bank Road. Includes 3m shared Active Travel providing connectivity to Area L – Lo-Lo terminal.

- Upgrades to Pigeon House Road including widened access to Ecocem / Area L exit, provision of new right-turn facility into existing Encyclis site, widening of footway serving Ecocem / Area L, localised curve widening and verge clearance/widening on approach to Area N Access Road to improve cross-section and visibility, provision of a terminal roundabout at the eastern end of the road which facilitates access to Area N, ESB and the access road towards Poolbeg Lighthouse, as well as providing u-turn capability.
- Provision of Area N Access Road which provides exclusive access to the Area N – Lo-Lo Terminal. Includes 3m shared Active Travel on western side of road and vehicle scanning infrastructure.



Figure 5.14 South Port Road Works

The proposed Whitebank Road, extension of South Bank Road and Area N Access Road are through existing port areas with a variety of hardstand surfaces and uses. Where possible, the existing hardstand will be retained. Demolition of some existing buildings at the Area N Access Road will be required to facilitate construction. The remainder of the South Estate road works are largely within the existing road corridor with minimal impact on adjacent land uses. Drainage, road lighting and signage will be amended to suit the new road layouts. 3m wide shared active travel paths will provide connections to Areas K, L, N and O, with 2m wide pedestrian footpaths also provided where appropriate.

Design standards will comply with DMURS with a design speed of 50kph.

Boundaries along the proposed Whitebank Road, extension of South Bank Road and Area N Access Road will be treated as required, typically including 2.9m fencing to comply with International Ship and Port Facility Security code (ISPS). Some minor amendments to the Encyclis boundary fencing will be required, particularly where widening is required at their site frontage on Pigeon House Road. The majority of the existing fence lines along Shellybanks Road and Pigeon House Road will remain unaffected.

Updated access arrangements into private sites such as ESB, Encyclis and ED&F Mann have been provided. An emergency (blue light) vehicle access route will be provided through the ESB Poolbeg site to Area N.

5.2.3 Construction of a Lo-Lo Terminal

The proposed Lo-Lo Terminal will deliver an annual throughput capacity of approximately 550,000 Twenty-foot equivalent units (TEU) or 5.34m tonnes.

The Lo-Lo Terminal will consist of two main components:

- Lo-Lo Terminal - Area N: Construction of an open-piled wharf. This 9.1ha site will be operated using 6 no. Ship-to-Shore (STS) cranes and 6 no. Rubber Tyred Gantry (RTG) cranes, across 1,088 TEU ground slots, with six-high container stacking.
- Lo-Lo Terminal - Area L: Construction of a container transit storage yard to be operated in conjunction with Area N. This 4.6ha waterside site will be operated using 6 no. RTG cranes, across 637 TEU ground slots, with six-high container stacking.

5.2.3.1 Lo-Lo Terminal – Area N

The proposed works at Area N are illustrated in Figure 5.15 and Figure 5.16. The main site access will be located at the south-western corner of the Terminal and will comprise the construction of a new road and reinforced concrete bridging structure, on steel tubular piles circa 0.9m in diameter, spanning over the GSW. Precast pretensioned beams at circa 14.5m length spans, are the main spanning elements of the bridge. They will be transferred to site by road and lifted into place once the piles have been installed and capped.

The new wharf will be an open-piled structure with a reinforced concrete deck supported on tubular steel piles. The berthing face of the wharf will be circa 650m in length and the width of the wharf will be circa 135m. The level of the wharf will be +4.6m OD Malin to mitigate for climate change to 2100.



Figure 5.15 CGI View of Proposed Area N – Lo-Lo Terminal, looking southeast

The wharf will include the construction of crane rails to support the STS cranes and these will be supported on beams and tubular piles. The piles supporting the crane rails will be circa 1.63m diameter. Smaller tubular piles circa 1.22m diameter will be used to support the deck and container stacks landward of the STS crane rails. The construction of the wharf will utilise circa 5 piling rigs to install the circa 2,600 piles, using both marine plant and working from the wharf itself once sufficient deck is in place to do so.

A new oil manifold and above ground pipelines will be constructed along a 15m wide strip at the eastern end of the new wharf to facilitate the transfer of fuel between an MR Oil Tanker berthed at the wharf and the NORA Poolbeg Oil Storage Tanks. Two berthing dolphins and two mooring dolphins, linked with walkways, will be constructed to effectively add an additional length of 60m berthing face enabling the MR Oil Tanker to berth mid-ship at the location of the oil manifold. The dolphins will consist of tubular steel piles, capped with a reinforced concrete platform. This oil facility will be separated from the Lo-Lo Terminal by appropriate fencing. A separate access road for maintenance vehicles coupled with a pipe bridge will be constructed, spanning over the GSW.

The existing Poolbeg Oil Jetty will be demolished following completion of the new oil facilities including the diversion of services. The majority of the existing piles will be cut off below deck level and remain in-situ where they do not conflict with the new piling arrangement for the wharf. In doing so, the marine growth on the existing piles will be retained. The existing crossing of the GSW by the Poolbeg Oil Jetty will also be retained and used for an emergency access to the wharf.

A 4.0m high screen will be installed along the western edge of the wharf to create a visual barrier from the Tern Colonies. Quay furniture will also be installed on the quayside and dolphins including barriers, vehicle restraints, fenders, mooring bollards, handrails, ladders, safety chains and provision for an automated mooring system.

Infrastructure will be provided for STS cranes, electrified RTGs and terminal transport equipment, containerised substations for refrigerated container stacks, and high mast lights. Infrastructure to support Ship to Shore Power will be installed. These will be fed off a ring main round the site, from a dedicated ESB MV substation.

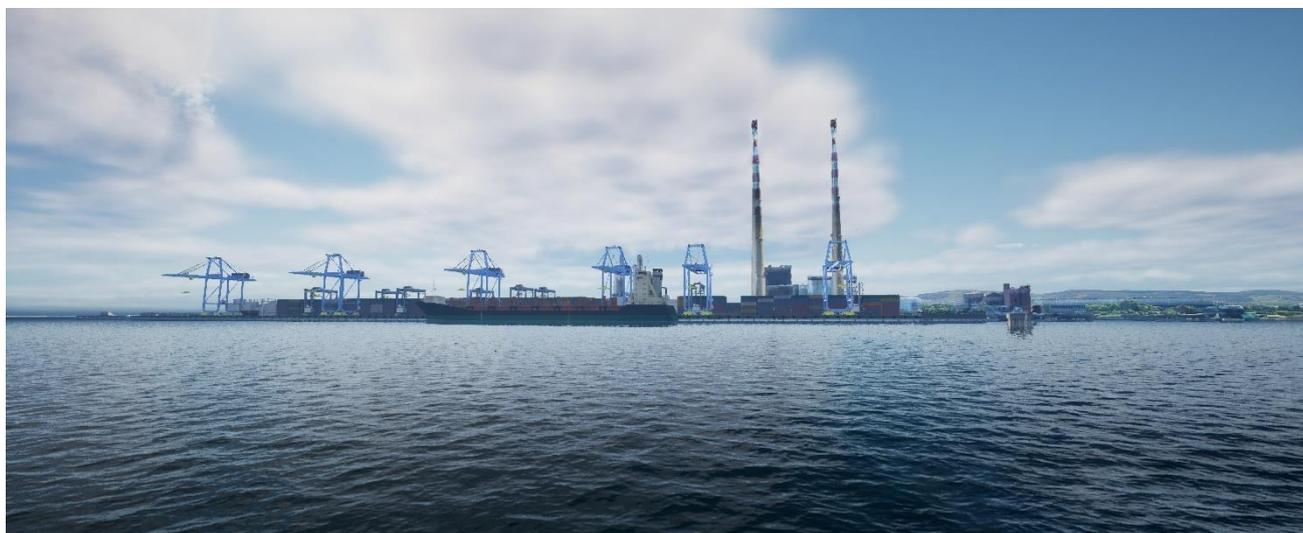


Figure 5.16 CGI Water Level View of Proposed Area N – Lo-Lo Terminal, looking south

Other standard infrastructure to be provided includes water mains for firefighting and building supply, wastewater network including wastewater packaged pumping station, surface water drainage system, and a waste collection facility with bunded area to accept any leaking containers.

The terminal will include a three-storey (14.8m high) administration building and carparking, and a 12.5m high maintenance building.

Optical Character Recognition (OCR) frames, entrance and exit kiosks and all associated ancillary infrastructure to facilitate the terminal operating system and vehicle booking system will be provided. Boundary fencing to comply with ISPS requirements, as well as providing visual screening and vehicle restraint where required, will be constructed.

Construction of the Lo-Lo Terminal requires capital dredging of an 800m long, 50m wide berthing pocket immediately adjacent to Area N to a design dredged level of -13.0m CD to provide sufficient depths for vessels at all stages of the tide. Capital dredging of a pocket underneath the eastern end of the wharf to a design dredged level of -3.0m CD is also required to facilitate construction by marine plant. Dredging will run concurrently with the piling works.

The capital dredging works will be undertaken using a Trailing Suction Hopper Dredger and/or a Backhoe Dredger. The dredge material has been shown to be suitable for Disposal at sea (see Chapter 8) and will be disposed of at the licensed offshore disposal site located at the approaches to Dublin Bay, west of the Burford Bank. The volume of material to be dredged is approximately 533,000m³ from the berthing pocket and 72,000 m³ from the pocket for marine construction, leading to a total of 605,000m³ from Area N. All capital dredging works will take place within the period October to March.

It is envisaged that full time access to a Ro-Ro ramp will be required to facilitate the construction of the Lo-Lo Terminal at Area N. A temporary Ro-Ro berth will be constructed at the Turning Circle area. This Ro-Ro ramp will consist of a bank-seat support structure, bridge and floating pontoon which will be kept in position by locating piles. The bank-seat will be located at the landward end of an existing sludge jetty which will be demolished as part of the construction works for the Turning Circle. This will allow safe and efficient delivery of materials to the work area. All elements of the temporary Ro-Ro berth will be removed on completion of the works.

A second temporary Ro-Ro ramp will also be constructed at Berth 46 using similar construction elements. Again, the temporary Ro-Ro berth at Berth 46 will be removed on completion of the works.

5.2.3.2 Lo-Lo Terminal – Area L

The proposed works at Area L are illustrated in Figure 5.17. Site clearance will include the demolition of a number of existing structures serving the current sites and the majority of existing surfacing which comprise a series of concrete slabs.

The container storage yard will require the construction of a new reinforced concrete yard slab, to provide for container handling and storage which will be tied into the existing quay levels. The site access route and circulation lanes will be of standard flexible asphalt road construction. New reinforced concrete crane runway beams will be constructed to support electrified RTGs operating the site. No piling is required to support the concrete yard slab or the crane runway beams.

A small section of sheet-piling will however be required at a pinch point between the cooling water lagoon, located immediately to the south of site, and the proposed container stacks to allow for sufficient space for a circulation road. The sheet-piles will encroach on the existing revetment to the cooling water lagoon but will be placed above the High-Water Mark to avoid any potential impact on the surface area of the cooling water lagoon.

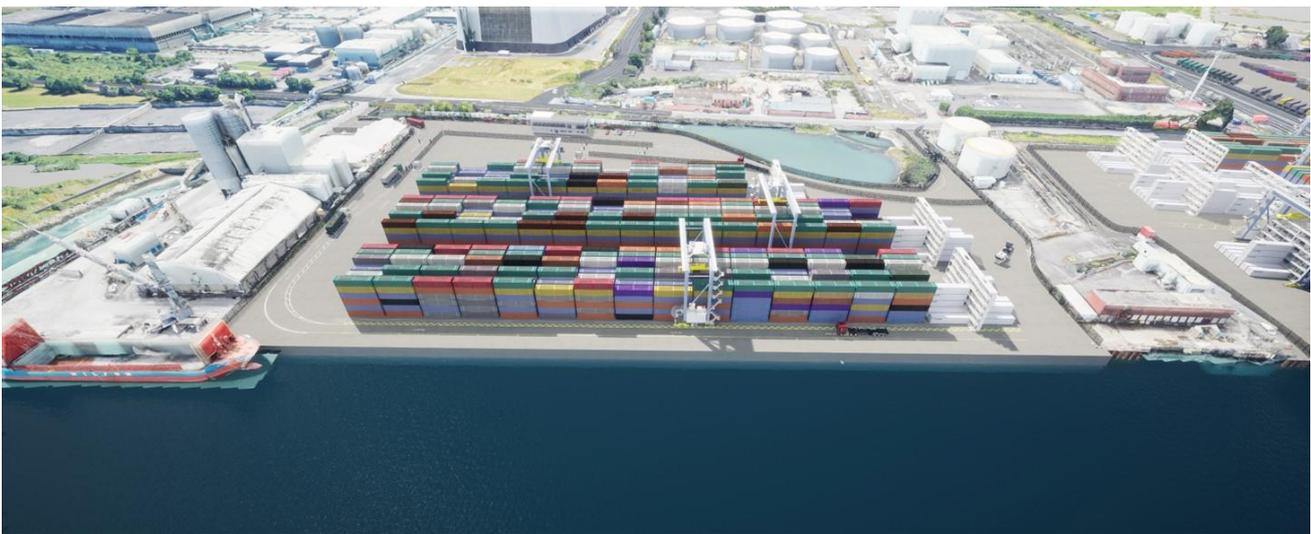


Figure 5.17 CGI Aerial Image of Proposed Area L – Lo-Lo Terminal, looking south

An extension to the existing 24m single span access bridge, at the south-east corner of Area L is required to accommodate vehicle turning movements and active travel. The existing bridge is a 9.4m wide prestressed concrete integral W beam structure. This will be widened by a further 7m to the west, comprising prestressed concrete integral TY beam construction. The widened deck is supported on a concrete bored pile substructure. Some localised demolition of the existing bridge's parapet edge beam is required, along with relocation of the existing service crossing.

A new boundary wall will be constructed between the container yard and the neighbouring EcoCem Plant.

Refrigerated container gantries will be provided within the container stacks.

A single-storey (4.9m high) administration building will be constructed.

Other standard infrastructure to be provided includes watermains for firefighting and building supply, wastewater network including wastewater packaged pumping station and surface water drainage system.

Optical Character Recognition (OCR) frames, entrance and exit kiosks and all associated ancillary infrastructure to facilitate the terminal operating system and vehicle booking system will be provided. Boundary fencing to comply with ISPS requirements, as well as providing visual screening and vehicle restraint where required, will be constructed.

High Mast Lights (HML) on reinforced concrete foundations are proposed as part of the works. Three containerised substations will provide power supply to the HML, pedestrian lighting, RTG cranes and other site infrastructure facilities. These will be fed off a ring main round the site, from a dedicated ESB MV substation.

The site will be bounded by 2.90m high ISPS fencing, providing vehicle restraint where required, along with gates positioned at the access points to the container yard area.

The existing molasses, vegetable oil and fuel lines will be maintained through the site.

5.2.4 Construction of a Ro-Ro Terminal

The proposed Ro-Ro Terminal will deliver an annual throughput capacity of approximately 360,000 Ro-Ro units or 8.69m tonnes.

The Ro-Ro Terminal will consist of two main components:

- Ro-Ro Terminal – Area K: Construction of an unaccompanied freight terminal located at existing Berths 42 – 45 including provision of two berths, each with a single tier Ro-Ro ramp, plus associated cargo handling facilities.
- Ro-Ro Terminal – Area O: Construction of a transit Ro-Ro trailer yard located on Port owned land on the southern side of the Poolbeg Peninsula.

5.2.4.1 Ro-Ro Terminal – Area K

The proposed works at Area K are illustrated in Figure 5.18 and Figure 5.19.

The quayside at Area K is currently operated as a Lo-Lo container terminal by MTL. On completion of the new wharf at Area N, this Lo-Lo container terminal will be relocated to Area N which will allow the re-functioning of Area K to a major new Ro-Ro unaccompanied freight terminal with an area of 12.9ha. The site will be accessed by vessels via two berths, each with a single tier Ro-Ro ramp. Landside operations will comprise 441 TEU ground slots for trailers, with a section of six high container stacking, served by 4 no. RTGs for transit storage of containers arriving on cassettes (CONRO).



Figure 5.18 CGI Aerial Image of Proposed Area K – Ro-Ro Terminal from riverside, looking southeast

Construction works will commence with site clearance which will include the demolition or removal of a number of existing structures serving the current site including buildings, fenders and bollards along the quay face, high-mast lighting columns and bases, ship-to-shore cranes and rail-mounted gantry cranes along with crane rails and reinforced concrete beams. Existing surfacing, concrete and underlying gravel infill will be removed or reused as Construction and Demolition Waste, if suitable.

Diversion of services around the site will also take place including the 1500mm diameter Rathmines and Pembroke Sewer operated by Uisce Éireann.

Approximately 235m of the existing caisson quayside along the eastern portion of Berth 44 and the majority of Berth 45 will be re-fronted with a steel combi-wall. This will comprise vertical tubular steel piles of circa 1.42m diameter, interspersed with pairs of steel sheet piles, secured with tie rods to a sheet pile anchor wall, located 25-30m behind the quay wall. This re-fronting will provide scour protection and prevent undermining of the original caisson quay structure. The new combi-wall will be future proofed to enable dredging to a design dredged level of -11.0m CD if required at some point in the future. Piling will be carried out from the existing quayside and from a jack-up barge. Piles will be driven with a vibro-hammer through upper soft bed material, and subsequently with a hydraulic hammer through deeper granular strata and boulder clay. After piling and tie-rod installation is complete, the narrow space between the existing caisson quay and the new combi-wall will be infilled.

A 68m long, 50m wide pocket within the Liffey, in front of the Synergen (Dublin Bay Power) operated pumphouse, will be dredged to a depth of -12.5m CD. This is to facilitate the placing of rock armour, as scour protection to prevent the original caissons from being undermined, and to protect the ESB 220kV cables running under the Liffey between the eastern end of Berth 45 and Breakwater Road in the North Estate.

A section of the existing quay structure at Berth 44, will be broken out to form a recess for construction of a bank-seat and transition structure, connecting to the proposed new single tier Ro-Ro ramps. The recess will have a plan area of circa 45m x 30m and 7m in depth and will require the cutting and removal of tie rods which anchor the existing quay to a steel sheet piled anchor wall. A transition slab, bank-seat and linkspan with two 2.4m diameter steel pile guides for a floating linkspan pontoon will be constructed to form the two single tier Ro-Ro ramps,



Figure 5.19 CGI Aerial Image of Proposed Area K – Ro-Ro Terminal from landside, looking north

A reinforced concrete capping beam will encapsulate the new combi-wall and will provide locations for the installation of mooring bollards. Other quay furniture to be installed include visual screening barriers, vehicle restraints, fenders, handrails and provision for an automated mooring system. Six isolated mooring bollards with reinforced concrete base will be constructed. Two of these will be located within the Synergen (Dublin Bay Power) operated pumphouse area.

Other marine works include the demolition of the concrete caissons making up the 'nib' structure between Berth 45 and Berth 46 to reduce the risk of siltation at the Synergen (Dublin Bay Power) cooling water intake.

A reinforced concrete deck slab will be constructed with normal and heavy loading areas for HGV/terminal tractors and for RTG stacking areas respectively. Reinforced concrete crane runway beams, on vertical tubular steel piles of circa 1.02m diameter, will be constructed to support electrified RTGs. Refrigerated container gantries within the container stacks, and refrigerated parking bays will also be provided.

Two buildings are proposed to be located at the Area K - Ro-Ro Terminal; a two-storey (10.5m high) administration building, and a 12.5m high maintenance building. These buildings will be supported on piled foundations.

ESB switch rooms within the buildings will provide power supply to high mast lights, gantries and ground slots for refrigerated containers, pedestrian lighting, electric HGV/car charging ports and RTG cranes. Infrastructure to support Ship to Shore Power will also be installed. These will be fed off a ring main round the site, from a dedicated ESB MV substation.

Other infrastructure servicing the Ro-Ro Terminal will include underground watermains for firefighting and building supply with sluice valves and fire hydrants, a wastewater network to connect into the existing wastewater system via gravity, and a surface water drainage system discharging to receiving waters via oil interceptors.

OCR frames, entrance and exit kiosks and associated ancillary infrastructure to facilitate the terminal operating system and vehicle booking system will be constructed.

Site boundary fencing will comply with ISPS requirements, as well as providing visual screening and vehicle restraint as required.

5.2.4.2 Area O – Ro-Ro Terminal (single height containers or trailers)

The proposed works at Area O are illustrated in Figure 5.20. It entails the construction of a transit Ro-Ro trailer yard to be operated in conjunction with Area K. The 5.3ha site will be operated across 354 trailer ground slots, with single height containers or trailers only. This constitutes a change, following extensive community engagement and consideration of alternative layouts and designs, to the originally proposed design which envisaged a container yard with containers stacked several units high. This was changed to the current less-visually obtrusive proposal.

Ground levels at the site will be raised on average 500mm (with a maximum of 900mm) above existing ground level across the site and the ground compacted to mitigate the risk of settlement in the upper soils. Where soft deposits occur on the site they will be removed for disposal to a licensed facility and replaced with suitable imported granular material. A reinforced concrete retaining wall will be constructed along the southern boundary of the site to retain the existing perimeter bund. The area behind the retaining wall be infilled and planted to form part of the Coastal Park.



Figure 5.20 CGI Aerial Image of Proposed Area O – Ro-Ro Terminal, from Port Park looking east

A new reinforced concrete yard slab will be constructed to provide for trailer handling and storage, with standard road construction details for the access route and circulation lanes. Gantry structures to direct traffic to and within the terminal will be on reinforced concrete foundations. A single-storey (5.0m high) administration building will be constructed at the site. It will be supported on shallow concrete foundations.

Two containerised substations will be installed, supplying refrigeration and 15m high lighting columns. These will be fed off a ring main round the site, from a MV substation. Power supply will also be provided for infrastructure facilities such as OCR frames, entrance and exit kiosks and all associated ancillary infrastructure to facilitate the terminal operating system and vehicle booking system.

Other infrastructure to be constructed includes below ground watermains for firefighting and building supply with sluice valves and fire hydrants; a wastewater network to connect into the existing wastewater system via gravity; and a surface water drainage system, including stormwater attenuation, discharging to the existing stormwater network, through oil interceptors. The additional attenuation negates the need for additional outfalls.

Site boundary fencing will be 2.9m in height and will comply with ISPS requirements as well as providing visual screening and vehicle restraint as required.

5.2.5 Construction of a Turning Circle

A new 325m ship turning basin will be constructed to the north of Pigeon House Harbour, with dredging to a depth of -10.0m CD.

The design of the Turning Circle has been the subject of extensive navigational simulation modelling, led by the Dublin Port Harbour Master, and will allow safe and efficient turning of 240m long vessels – the largest class served by the port.

The navigational simulations were undertaken at HR Wallingford's facilities and the detailed results are presented in Appendix 5-2 and Appendix 5-3.

An example from HR Wallingford's Ship Simulator, illustrating the Turning Circle in use, is presented in Figure 5.21.



Figure 5.21 Example visual scene from HR Wallingford's Ship Simulator, illustrating the Turning Circle in use. Turning Circle shown indicatively in red. View looking west.

The 325m diameter Turning Circle will be constructed by capital dredging to a design dredged level of -10.0m CD including the formation of side slopes. The capital dredging works will be undertaken using a Trailing Suction Hopper Dredger and/or a Backhoe Dredger. The dredge material has been shown to be suitable for Disposal at sea (See Chapter 8) and will be disposed at the licensed offshore disposal site located at the approaches to Dublin Bay, west of the Burford Bank. The total volume of material to be dredged is approximately 444,000m³. All capital dredging works will take place within the period October to March.

A retaining combi-wall will form a vertical boundary between the Turning Circle and the adjacent hardstand area that will be used to support the Offshore Renewable Energy Sector (Masterplan Area M). A separate planning application for an onshore substation at this location is expected to be submitted by Codling Wind Park.

The proposed combi-wall structure will be 225m in length comprising steel tubular piles of circa 2.03m diameter and steel sheet piles. The combi-wall will be connected by tie rods to anchor structures behind the wall.

The construction of the Turning Circle will require the north-eastern corner of the adjoining Area M to be excavated. The excavated material will be taken ashore and re-used as infill material.

It will also require an area to the south of the Turning Circle to be infilled, requiring circa 26,500m³ of suitable infill material.

The combi-wall is designed to terminate to the west of a culvert which is occasionally used to discharge partially treated sewage effluent from the Ringsend WwTP Storm Water Tanks operated by Uisce Éireann. At this location, the boundary to the Turning Circle will comprise a rock-armoured revetment. The existing culvert will be extended through the rock armour.

The boundary to the Turning Circle to the south-east and east will be formed of natural slopes.

The northern section of the Turning Circle merges with the existing navigation channel which is already dredged to circa -10.0m CD.

The construction of the Turning Circle will require the demolition of the disused sludge jetty. The concrete decking and buildings will be demolished using marine plant and floating platforms and crushed for potential reuse. The steel piles of the structure will then be removed.

The masonry wall to the south of the Turning Circle forms part of the original Pigeon House Harbour Wall and it is therefore essential to protect this structure. The construction of the rock armoured revetment in front of the existing masonry wall will preserve the integrity of this structure and maintain its visibility above the high-water line.

The Turning Circle lies in close proximity to two tern colonies which have been established on man-made Dublin Port and ESB infrastructure (CDL Dolphin and ESB Dolphin). The extensive Navigation Simulation Studies undertaken at HR Wallingford has demonstrated that the risk of vessel collision with the dolphins is negligible. Geotechnical Site Investigations have also shown that the foundations of the two dolphins will not be undermined by the presence or use of the Turning Circle by vessels. The physical risk to the tern colonies is therefore considered to be negligible.

New navigation markers and lights will be provided on the Turning Circle perimeter.

5.2.6 Construction of a Maritime Village

The construction of a Maritime Village will accommodate local rowing, sailing, and boat clubs and will provide a significantly enhanced public realm and facilities on the waterside. It will also accommodate the relocation of Port Harbour Operations from the North Estate.

The 3FM Project will require the demolition of the existing Poolbeg Yacht & Boat Club and the Stella Maris Rowing Club buildings, to make way for the proposed SPAR. The existing facilities will be replaced by the construction of the Maritime Village which will have a significantly larger footprint including the hinterland to Berth 41 (currently part of the existing Lo-Lo Container Terminal operated by MTL).



Figure 5.22 CGI Aerial Overview Image of Proposed Maritime Village and interface with SPAR, looking north

The Maritime Village has been developed in consultation with local groups and will replace the current, much smaller facilities, as well as improving opportunities to view port activities from the new waterside public plaza area. The Maritime Village area will also include a slipway, berths, maritime training centre, harbour operations buildings and pontoons.

The proposed works at the Maritime Village are presented in Figure 5.22 to Figure 5.26.

An overview of the landside elements of the Maritime Village are presented below. A more detailed description is presented in the Maritime Village Design Reports led by Darmody Architecture (under separate cover). A unified 13.7m high structure will house the Stella Maris Rowing Club, Poolbeg Yacht & Boat Club, and the Maritime Training Centre: comprising three distinct building volumes at ground and first floor level, with a unified external deck area at the first-floor level to unite the three volumes. The form is recommended as in-situ reinforced concrete construction generally, with a Glue Laminated Timber (Glulam) roof structure supported on Glulam columns.



Figure 5.23 CGI Water Level View of Proposed Maritime Village, Harbour Operations and fuel berth pontoons, looking south



Figure 5.24 3D View of Proposed Maritime Village from Public Plaza North, adjacent to Harbour Operations Building looking southwest back at boat clubs

The Harbour Operations Building is proposed as a five-storey (27.1m high) structural steel framed building, with glazed facades to all elevations and large cantilevered floor and roof slabs. The Maritime Village will include a 12.2m high Boat Maintenance Shed, recommended as a Glulam portal frame structure single storey building. A communications mast will also be constructed. All buildings will be founded on continuous-flight auger (CFA) piled foundations. Buildings will be heated by air source heat pumps, utilising a heat recovery ventilation system where natural ventilation cannot be achieved.

Landscaping and planting will be completed throughout the site, and a Public Plaza in the Maritime Village will include Installation of a Seafarers' Memorial, and a Feature Crane. White-lining and installation of kerbs will be completed for internal roads network including active travel paths, boat parking bays, staff car parking, other Maritime Village users parking. Boundary fencing to comply with ISPS requirements will be constructed around the Port Operations area, and secure access ways to the berths, boat yard and other members-only facilities will be installed.

An overview of the marine elements of the Maritime Village are presented below.

The Construction of the Maritime Village will include a 258 berth marina facility and nine berth rowing pontoon facility, both including piled pontoon guides circa 0.61m diameter, 3m wide walkway pontoons, vessel finger berths and dedicated access gangways. The marina facility pontoons will include service bollards providing light, power and water supply. The rowing facility will also include interconnected floating platforms, between the landing pontoon for the gangway and the berthing pontoons. Access gangways will connect the marina and rowing pontoons to the landing points.



Figure 5.25 3D View of Proposed Maritime Village looking eastwards along dockside promenade towards Harbour Operations

A 9m wide slipway will also be constructed to provide access from the landside to the Harbour Operations pontoon basin. A slipway hoist, to facilitate the movement of vessels into the boat yard will also be provided. A commercial pontoon and fuel berth for Port Operations will be constructed, both including piled pontoon guides circa 0.6 – 0.7m diameter, 5m wide walkway pontoons, vessel finger berths for Port Operations only and dedicated access gangways from the quayside at Berth 41.

Quay furniture will be installed on quayside and pontoons as appropriate, including, vehicle restraints, fenders, mooring bollards, handrails, ladders and safety chains. The power supply to the site will be upgraded with a new substation and adjacent metering room to serve the new development from the Boat Maintenance Building.

The Construction of the Maritime Village will be undertaken in phases to allow for the continuous operation of the existing River User Groups. The construction sequence is summarised in Section 5.2.10 and presented in detail in Appendix 5-4.

A new quay around the waterside perimeter of the Maritime Village will be constructed, except at Berth 41 where the existing concrete caisson frontage will be retained. The new quay will be formed by the construction of a twin steel sheet piled wall. Tie rods will connect across the twin wall void, and the gap between the walls will be filled with selected fill material at the lower levels, and mass concrete on the higher levels. The existing concrete nib structure protruding at Berth 41 will all be demolished.

The new quay will enable the landside area to be developed and will require the demolition of all existing structures and the importation of fill material to achieve the required design floor levels of the new buildings.



Figure 5.26 3D Aerial View of Proposed Maritime Village, looking northeast

Services will also be constructed including underground watermains for building supply and firefighting connected to the public main; and a new foul sewer. Foul water collected from the boat wash down slab and boat storage area will be treated and re-used. Pump-out wastewater storage tanks will be installed in proximity to the Harbour Operations pontoon and marina pontoon, which will discharge to the foul network within the site, and in turn to the public sewer. A new surface water drainage system will discharge to receiving waters through new outfalls. Street level lighting will be installed and connections to existing Eir telecommunication network will be provided as required.

The proposed Maritime Village berths will be capital dredged to a standard depth of -3.0m CD. Sediment chemistry analysis of the material to be dredged has shown that the top one metre contains moderate levels of contamination and through discussion with the Marine Institute, this material is considered not suitable for disposal at sea. However, the underlying material is uncontaminated and is suitable for disposal at sea. The results of the sediment chemistry sampling and analysis programme is presented in Chapter 8. As a consequence, the capital dredging will be completed in stages. The top one metre of material, comprising 70,000 m³ will be dredged using a backhoe dredger and taken ashore for treatment and disposal. The treatment and disposal options are presented in Chapter 8. The underlying material comprising 197,000 m³ will be dredged using a Trailing Suction Hopper Dredger and/or Backhoe Dredger and will be disposed off at the licensed offshore disposal site located at the approaches to Dublin Bay, west of the Burford Bank.

A rock armour falling apron revetment will be constructed to protect the existing slopes, primarily below the SPAR Viaduct.

To enable capital dredging works and construction of the new marina facilities to proceed, the existing yacht swinging moorings will be removed and temporary pontoons put in place along North Wall Quay Extension, to accommodate the displaced yachts. The temporary pontoons will be positioned using a tethered anchoring system.

5.2.7 Construction of Community Gain Elements

The core objective of the 3FM Project community gain elements is to contribute towards integrating Dublin Port with the city.

There are elements of community gain which do not require construction including:

- Community Benefit Fund for Education, Heritage & Maritime Training Skills projects within the Poolbeg area;
- Commissioning a new Public Access Feasibility Study regarding the Great South Wall so as to identify improved public interpretation, accessibility, facilities and conservation possibilities and provision funding to implement the study recommendations.

There are also elements of community gain which have been described in the sections above, for example:

- Provision of Active Travel Path (cycle, pedestrian, wheelers etc.) and new or upgraded footway for the SPAR and Poolbeg Peninsula - See Section 5.2.2, Proposed 3FM Active Travel Route for DPC, Architectural Design Statement (under separate cover) and 3FM Project, Active Travel Route - Landscape Design Report (under separate cover).

- Development of a sailing, rowing and maritime campus (Maritime Village) adjacent to the existing Poolbeg Yacht and Boat Club in conjunction with local yacht and boating clubs, including a public slipway and facilities for maritime skills training - See Section 5.2.6, Proposed 3FM Maritime Village for DPC, Architectural Design Statement (under separate cover) and 3FM Project, Maritime Village - Landscape Design Report (under separate cover).
- Development of a new public plaza as a key part of the Maritime Village - see Section 5.2.6, Proposed 3FM Maritime Village for DPC, Architectural Design Statement (under separate cover) and 3FM Project, Maritime Village - Landscape Design Report (under separate cover).

Further elements of community gain requiring construction works include:

- Port Park, Wildflower Meadow, Coastal Park and extension to Irishtown Nature Park
- Provision of an additional permanent marine structure (dolphin) to expand the available habitat and range of the Dublin Port Tern Colonies.
- Provision of Interpretative Markers to delineate the alignment of the Great South Wall (GSW)
- These elements are described in more detail below.

5.2.7.1 Port Park, Wildflower Meadow, Coastal Park and extension to Irishtown Nature Park

The development of Port Park and wildflower meadow represents a rejuvenation of previously underused industrial lands, creating a contemporary parkland that offers public spaces and amenities tailored to a wide array of activities, functions, and environmental considerations. The collaborative approach undertaken by the design team in consultation with Dublin City Council has resulted in a welcoming and inclusive hub for the local community and visitors.



Figure 5.27 3D View of the Proposed Port Park, view looking east towards the sports pitches

A sports facility will be constructed as a multi-use games area see Figure 5.27, with toilet pavilion. This will include synthetic grass all-weather pitches to meet the most recent GAA 2022 standards including drainage, fencing, netting, lighting etc. Lighting will be by smart LED 5G technology that can automatically adjust the brightness of the lighting according to changes in ambient conditions, and can also activate power saving mode at night.

The parkland will include construction of a play tower, cyclist bike parking, planting of woodland trees, public lighting and seating along pathways. A wildflower meadow will be created with natural mown pathways for pedestrian permeability and connectivity. Species selection for the wildflower meadow will be guided by DCC's policies, objectives and actions as set out in the Dublin City Biodiversity Action Plan, and the All-Ireland Pollinator Plan.



Figure 5.28 3D View of the Proposed Port Park, view looking northeast along the Active Travel link to Coastal Park

A 5m wide shared-user path will be constructed along the active track and pedestrian corridor, to the west of Port Park, and a 3.5m active travel route to the south of Port Park will connect with an existing pathway eastwards towards Irishtown Nature Park.

For further detail see Port Park Design Reports led by Darmody Architecture (under separate cover).

Irishtown Nature Park lies to the east of the proposed Ro-Ro Terminal (Area O). The 3FM Project will provide an extension to the Irishtown Nature Park on Port owned land immediately to the east of the proposed Ro-Ro Terminal (Area O). Planting of this area will again be guided by DCC's policies, objectives and actions as set out in the Dublin City Biodiversity Action Plan, and the All-Ireland Pollinator Plan.

In total, an area of circa 5.2ha will be allocated to the proposed Port Park, wildflower meadow, Coastal Park and the extension to the Irishtown Nature Park. This represents 47% of the land on the southern portion of the Poolbeg Peninsula owned by DPC released for the benefit of the local community and as a significant biodiversity gain.

Construction will entail clearance of the site area, including demolition of buildings and removal of a small section of the existing coastal berm, to create linkage alongside Pembroke Cove to the south. Use will be made of Sustainable Drainage Systems for surface water management. Extensive soft landscaping, boundary treatment and planting will be undertaken.

5.2.7.2 Permanent Dolphin Structure for Tern Colony

The proposed biodiversity enhancements include the construction of a permanent dolphin structure for nesting terns. The platform level will be +4.6m OD Malin to mitigate for climate change to 2100. The structure will comprise a reinforced concrete deck supported on steel piles.

The area of potential nesting habitat on the proposed permanent dolphin (14m x 14m) will be 44% larger than the existing floating pontoon (17m x 8m). The proposed dolphin will include suitable habitat, a hide for observations and lockable hatch which will allow access for monitoring and maintenance, whilst preventing mammalian predators from accessing the platform.

5.2.7.3 Interpretative Markers to delineate the alignment of the Great South Wall (GSW)

A series of interpretative markers will be constructed to delineate the alignment of the GSW along its length initially between the Maritime Village and ESB Generating Station under the 3FM Project. The interpretative markers will be made from stainless steel to demarcate the northern parapet wall and corten steel to demarcate the southern parapet wall. The markers will form an acute triangular shape of various height dependent on location and sightlines (minimum height of 2.0m).

For further detail on the GSW Interpretative Markers see Great South Wall Overview of Impacts, Mitigation & Interpretation Report (Darmody Architecture) under separate cover.

These structures will require foundations prior for installation using standard engineering construction techniques.

5.2.8 Dredging and Disposal Works

The volume of capital dredging required for each element of the works, as described in the previous sections, is tabulated in Table 5.1. These volumes include an allowance for dredging tolerance beyond the design dredged levels stated. The dredging tolerance allowance is a standard 500mm generally, except the -3.0mCD portion to facilitate construction at Area N, where an allowance of 300mm has been included. Areas of proposed dredging works are shown in Figure 5.29.

In order to determine the suitability of the marine sediments for disposal at sea, a comprehensive sediment chemistry sampling and analysis programme was carried out as described in Chapter 8 Land, Solis, Geology and Hydrogeology. The full results of the sediment chemistry sampling and analysis were provided to the Marine Institute who examined the results in detail in combination with other relevant data held by the Marine Institute.

Table 5.1 Dredging Summary

Element of Work	Reference within EIAR	Design Dredged Level	Volume
Area N – Proposed Lo-Lo Terminal	Section 5.2.2	-13.0m CD	533,000 m ³
		-3.0m CD	72,000 m ³
Area K – Proposed Ro-Ro Terminal	Section 5.2.4	Pocket for scour protection -12.5m CD	13,000 m ³
Turning Circle	Section 5.2.5	-10.0m CD	444,000 m ³
Maritime Village	Section 5.2.6	-3.0m CD	197,000 m ³
Total Volume to be dredged			1,259,000 m³

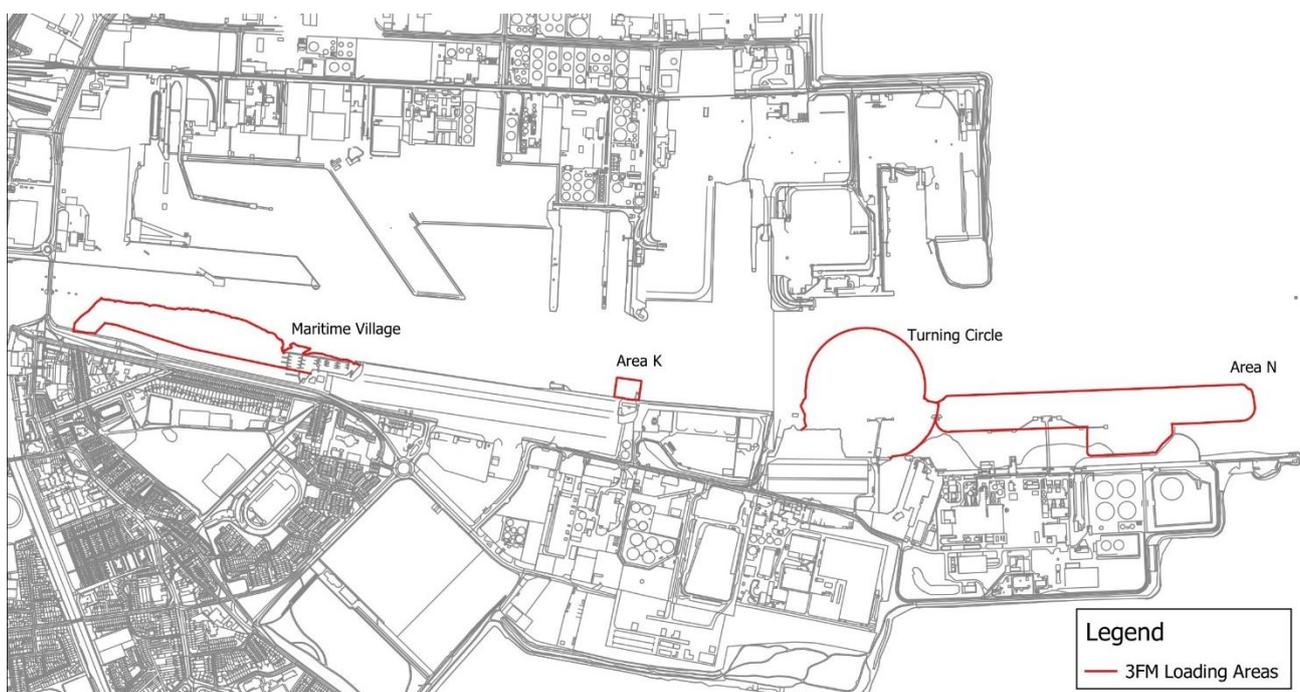


Figure 5.29 Location of dredging (loading) sites

It was concluded that the following dredged sediments can be classified as Class 1 (Uncontaminated: no biological effects likely), subject to the formal approval of the Marine Institute, and are therefore suitable for disposal at sea in the absence of a more sustainable alternative.

- Ro-Ro Terminal (Area K) – Localised Scour Protection to 220 kV cables;
- Turning Circle; and
- Lo-Lo Terminal (Area N) Berthing Pocket and an area towards the eastern end of the Wharf to enable construction using marine plant.

It was also concluded that the top 1.0m of material at the Maritime Village contained widespread levels of Class 2 material making it unsuitable for disposal at sea, equating to 70,000m³ or 6% of the total volume required to be dredged. The underlying sediments can be classified as Class 1 (Uncontaminated: no biological effects likely), subject to the formal approval of the Marine Institute, and are therefore suitable for disposal at sea in the absence of a more sustainable alternative.

A summary of the capital dredge volumes and the suitability of the material for disposal at sea is summarised in Table 5.2.

Table 5.2 Capital Dredging – Suitability of Dredged Material for Dumping at Sea

Location	Design Dredged Level	Volume
Maritime Village	-3.0 m CD	197,000 m ³
Area K - Ro-Ro Terminal – Localised Scour Protection to 220 kV cables	-12.5 m CD	13,000 m ³
Turning Circle	-10.0m CD	444,000 m ³
Area N - Lo-Lo Terminal Berthing Pocket	-13.0 m CD	533,000 m ³
	-3.0m CD	72,000 m ³
Total Dredge Volume		1,259,000 m³
Volume not suitable for disposal at sea (top 1.0m at Maritime Village)		70,000 m³
Total Dredge Volume suitable for disposal at sea		1,189,000 m³

Loading and Dumping of Dredged Material Suitable for Disposal at Sea

The capital dredging works will be carried out using a trailing suction hopper dredger and/or a back-hoe dredger. Other ancillary equipment will include a survey vessel and a bed-leveller to remove peaks and troughs created by the dredger. All capital dredging works will take place within the period October to March.

It is proposed to dispose of the majority of the dredged material (1,189,000 m³) at the licensed disposal site at the entrance to Dublin Bay located to the west of the Burford Bank, presented in Figure 5.30. Alternative options to disposal at sea were considered and are presented in Chapter 4 of this EIAR.

The loading and dumping of the dredged material will be subject to a separate Dumping at Sea Permit from the Environmental Protection Agency (EPA).



Figure 5.30 Location of licensed offshore disposal site

Consideration of options for removal of Class 2 Material at Maritime Village

The Class 2 element of dredged sediment from the Maritime Village, which is unsuitable for disposal at sea, will be dredged and brought ashore using a backhoe. The disposal options of the Class 2 material will, in order of preference, be:

1. Filled to Berth 52/53 under a revised Industrial Emissions (IE) licence subject to availability of receptor capacity;
2. Recovered at a soil recovery or soil treatment facility in Ireland subject to testing of the sediments in line with the selected facility licence at the time of the works;
3. Recovered at a soil treatment facility in Great Britain or northern Europe; or
4. Disposed of at a licenced landfill facility in Ireland.

5.2.9 Piling Works

Piling works are required on land to provide the foundations of buildings and within the Liffey to provide the marine infrastructure required for the 3FM Project. Chapter 4 Assessment of Alternatives sets out the piling options which have been considered and the final piling design.

Piling within the marine environment gives rise to underwater noise which has the potential to adversely impact on marine mammals and fish, without appropriate mitigation measures being put in place. Details of the piles required in the marine environment are set out in Table 5.3. This information has been used for the underwater noise assessment presented in Chapter 12.

Table 5.3 In Water Piling Works

Location	Permanent Works	Pile Diameter/Width	Pile Thickness	Installation method
SPAR Bridge	Y	1.2 m dia.	n/a	Bored reinforced concrete, within dewatered sheet pile cofferdam
SPAR Bridge Dolphins	Y	0.81m dia.	22mm	Vibration and impact driving
SPAR Bridge Cofferdams	N	1.4m wide pair		Vibration and impact driving
SPAR Bridge Causeway	N	0.8m dia.		Vibration and impact driving
SPAR Bridge Temporary Dolphins	N	1.0m dia.		Vibration and impact driving
SPAR Viaduct	Y	1.2 m dia.	10mm	Vibration driving
SPAR Viaduct Mooring Guides	N	0.75-0.9m		Vibration and impact driving
Maritime Village, Marina Finger Berth Guide Piles	Y	0.61 m dia.	25.4mm	Vibration and impact driving
Area K - Ro-Ro Terminal, King Piles	Y	1.42 m dia.	25.4mm	Impact driving
Area K - Ro-Ro Terminal, Infill Sheet Piles	Y	1.4 m wide pair	9mm	Vibration driving
Area K – Ro-Ro Terminal, Ro-Ro Ramp Guides	Y	2.4 m dia.	40mm	Impact driving
Area L/Turning Circle, Ro-Ro Ramp Guides	N	1.07 and 1.22m dia.	25.4mm	Impact driving
Turning Circle, King Piles	Y	2.03m dia.	22mm	Impact driving
Turning Circle, Infill Sheet Piles	Y	1.6m wide pair	12.5mm	Vibration driving
Area N – Lo-Lo Terminal	Y	1.63 m dia. 1.22m	22mm 18mm	Impact driving
Oil Terminal Dolphin	Y	1.02 m dia. 1.47m dia	22mm 22mm	Impact driving
Tern Colony	Y	0.51m dia	22mm	Impact driving

5.2.10 Construction Sequence Summary

A construction sequence has been developed for the 3FM Project over the proposed 15-year construction period to inform the environmental appraisals set out within the EIAR. A 15-year construction period is required given the scale of the proposed development and the overriding imperative to ensure that Dublin Port continues to operate effectively during construction which will require works to be staged in distinct phases.

A summary of the construction sequence is presented in this Section of the EIAR. Further detail is presented in Appendix 5-4. It is important to note that the actual construction sequence is likely to vary over the 15-year construction period due to the difficulty of undertaking the redevelopment of brown-field sites within a working port of national importance. The construction sequence presented is therefore indicative only but is designed to represent a 'worst case scenario' for environmental assessment.

An outline proposed phasing of the key work elements over a 15 year project period, with a potential commencement in 2026, is presented in a proposed construction programme in Figure 5.31. The construction programme serves to illustrate the necessity for a 15-year permission, given the scale and complexity of the project, with the clear illustration of the quantum of works to be undertaken after Year 10. Precise phasing and timing of work elements may be subject to some change. Following permission for the proposed development, if granted, there will be a period of approximately 12-18 months during which initial design and procurement will take place before construction commences.

Road upgrades will be undertaken at the outset of the project to facilitate access to construction logistics zones and to the key 3FM Project sites.

The proposed Ro-Ro Terminal located on DPC-owned land on the south side of the Poolbeg Peninsula (Masterplan Area O) and the proposed Lo-Lo Terminal yard adjacent to the Liffey (Masterplan Area L) will be used for landside and marine logistics respectively for up to the first 10 years of the project duration. An area at North Wall Quay Extension will also be used for marine logistics during construction of the SPAR.

Tree planting and landscaping will be undertaken early in the project to create green buffer zones, particularly around Masterplan Area O that will provide a barrier to mitigate visual impacts.

Construction of the Turning Circle and Lo-Lo Terminal (Masterplan Area N) will commence at an early stage in the project which includes the construction of the open-piled wharf at Area N. Both will entail capital dredging which will be confined to the winter months (October to March).

The proposed Tern Colony will be constructed at an early stage of the construction of the open-piled wharf at Area N.

The completion of the new Lo-Lo Terminal at Masterplan Area N will allow the existing Lo-Lo Terminal, currently operated by MTL, at Masterplan Area K to be relocated to Area N. This in turn will free up Berth 41 for the construction of the buildings associated with the Maritime Village and Port Operations. This work will be completed prior to demolition of the existing Poolbeg Yacht & Boat Club and Stella Maris buildings to allow for the continuous operation of the marina. Public Realm space will then be constructed on the site of the existing buildings and environs.

The freeing up of space at Area K also allows for the construction of the new Ro-Ro Terminal.

The next stages in the construction of the 3FM Project will focus on the SPAR Bridge, SPAR Viaduct and the Maritime Village berths. To enable these works to proceed, the existing yacht swinging moorings will be removed and temporary pontoons put in place along North Wall Quay Extension, to accommodate the displaced yachts. This will enable the construction of the SPAR Bridge, and capital dredging in advance of the construction of the SPAR Viaduct. At this point in the construction sequence the existing marina berths will continue to operate as normal.

After the SPAR Bridge and SPAR Viaduct works are well advanced, permanent pontoons will be installed to form the western portion of the new marina. This will allow sailing craft using the existing marina to relocate to this new facility. Temporary access arrangements will be put in place to transfer boat owners between the western portion of the new marina and landside facilities by boat (such as the Liffey Taxi).

This in turn will free up the use of the existing marina which will be demolished to allow further capital dredging, completion of the SPAR Viaduct and the eastern portion of the new marina.

Construction of the Lo-Lo Container Yard at Masterplan Area L and Ro-Ro Terminal at Area O are required after Year 10 of the 3FM Project, when the sites are no longer needed as logistics areas. This timing also suits the expected growth in cargo from the Lo-Lo Terminal at Area N and the Ro-Ro Terminal at Area K.

Remaining community gain elements, including Port Park, Wildflower Meadow and the extension to Irishtown Nature Park will also be completed within the final 5 years of the project.

The construction sequence, described above, has been designed to enable the construction works to proceed without significant disruption to existing port operations and to enable the continued use of the marina facilities at Poolbeg. However, to satisfy these constraints, the construction of the SPAR Bridge can only be completed towards the end of the construction sequence. The transportation of plant, materials and construction staff to site must therefore use the existing road networks. Consequently, the construction sequence has been used to derive an estimate of the maximum envisaged construction traffic volumes in order to undertake a robust assessment of the maximum potential impact on the local road network, in combination with other planned construction activity in the area, and to assess the maximum potential impact at sensitive receptors with regard to Noise and Air Quality.

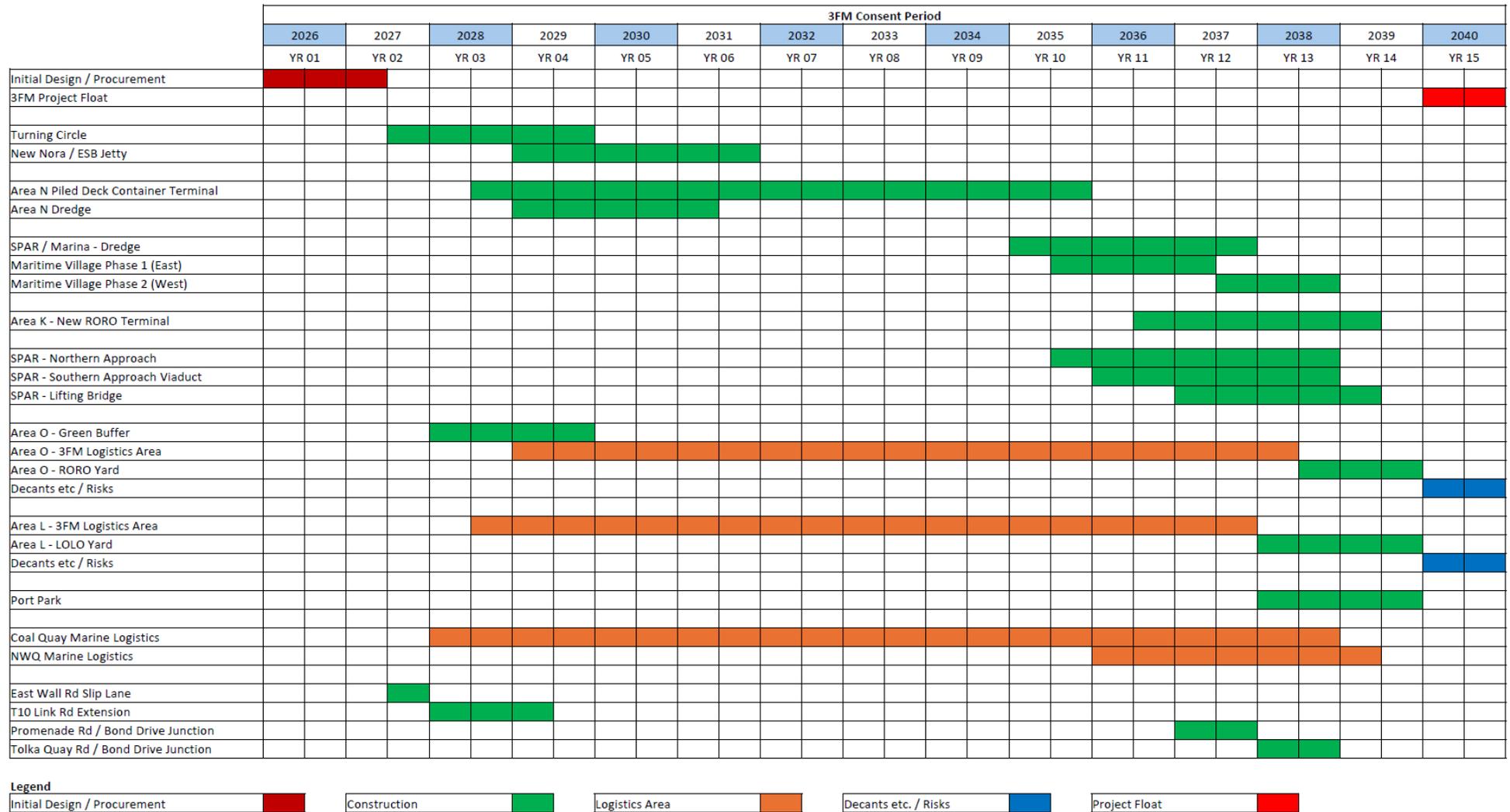


Figure 5.31 Construction Sequencing Programme and Legend

5.2.11 Sources of Fill Material

Suitable infill material (granular fill and crushed rock) is required for a range of construction activities within the 3FM Project including the requirement to raise the height of building floor levels and hardstand areas within the Maritime Village to reduce the risk of flooding, taking into account the predicted increase in tidal heights as a result of climate change. It is intended to use a combination of quarried fill and suitable Construction and Demolition Waste arising from demolition works within the 3FM Project site.

Larger rock armour is also required to form part of the boundary of the Turning Circle.

The total volume of infill material required is circa 96,000 m³ which equates to circa 172,800T.

Suitable infill and rock armour material will be sourced from authorised quarries and will be imported by road to the 3FM Project site. The majority of this material will be sourced from within the Greater Dublin region. The availability of potentially suitable quarries is presented in Figure 5.32. Quarries from which fill material shall be extracted for use in the 3FM project must have been registered with the local authority and have the necessary planning permission and other consents in place for the extraction, processing and haul of such material.

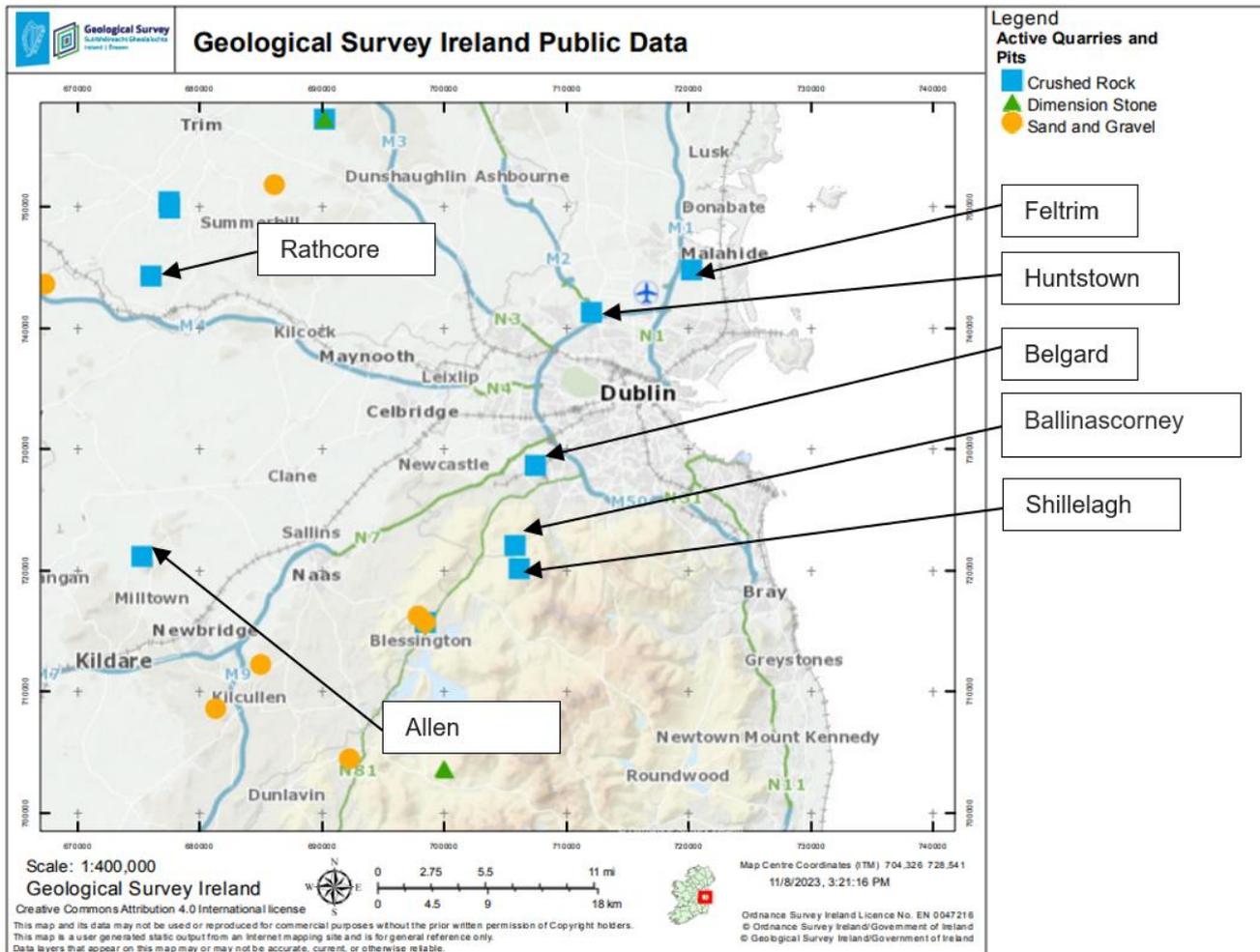


Figure 5.32 Map of active quarries in vicinity of Dublin Port (Source: GSI)

The distance between these potentially used quarries and the 3FM Project site and the haul routes to be taken are presented in Table 5.4.

Table 5.4 Potential Quarries, Distance to the 3FM Project Site

Quarry Name	Location	Council Licensed / Registered	Availability to Provide Required Engineering Fill	Figure 5.32 Reference	Distance to Site
Feltrim Quarry	Swords, Co. Dublin.	✓	✓	Feltrim	17km
Huntstown Quarry	North Road, Finglas, Dublin 11.	✓	✓	Huntstown	21km
Rathcore Quarry	Kilsaran Build, Rathcore, Enfield, Meath.	✓	✓	Rathcore	62km
Allen Quarry	Kilmeague, Naas, Kildare.	✓	✓	Allen	87km
Shillelagh Quarries	Aghfarrell, Brittas, South County Dublin.	✓	✓	Shillelagh	23km
Ballinascorney Quarry	Kilsaran Build, Ballinascorney, South County Dublin.	✓	✓	Ballinascorney	21km
Belgard Quarry	Fortunestown, Tallaght, Dublin.	✓	✓	Belgard	18km

The Haulage Route from each of the quarries will be obliged to approach the 3FM Project site via the Dublin Tunnel, East Wall Road, Tom Clarke Bridge and R131. No HGV construction traffic will be permitted through residential areas.

The transportation of fill material to the 3FM Project site has been taken into account within the assessment of Construction Traffic.

5.2.12 Working Hours

Where construction activity takes place for the development in the vicinity of residential properties, the activities will operate between the hours of 07:00 and 19:00 on Monday to Fridays, between 08:00 and 13:00 on Saturdays and there will be no activity on Sundays or Bank Holidays.

Where additional or alternative working hours are required, a request for derogations to work outside the permitted working hours will be submitted to Dublin City Council at least five working days in advance. The request will be supported by a detailed case including an Engineering report explaining the requirement to work outside the permitted working hours and listing proposed dates with commencement and finishing times.

All affected residents and stakeholders shall be notified on receipt of any approved derogations including the rationale for the extended working hours.

Capital Dredging works which are remote from residential properties are proposed to be undertaken on a 24 hour / 7 days per week basis.

5.2.13 Construction Traffic

Construction traffic will arrive at and depart from the port via the national road network. All HGV movements will comply with the DCC HGV Management Strategy. Within the Dublin Port Estate, traffic will be routed through the existing road network to reach the proposed 3FM Project site.

The Construction Sequence Programme for the 3FM Project (Figure 5.31 and Appendix 5-4) has been used to determine future construction traffic on the road network. Two aspects of site traffic have been analysed. These numbers include: 1) staff vehicles arriving or leaving the site (i.e. a one-way trip), and 2) construction traffic which includes deliveries to the site (excludes site staff and are also one-way trips). As both counts represent one-way trips, the graph numbers represent the outbound and return trips to the site, rather than a singular return journey.

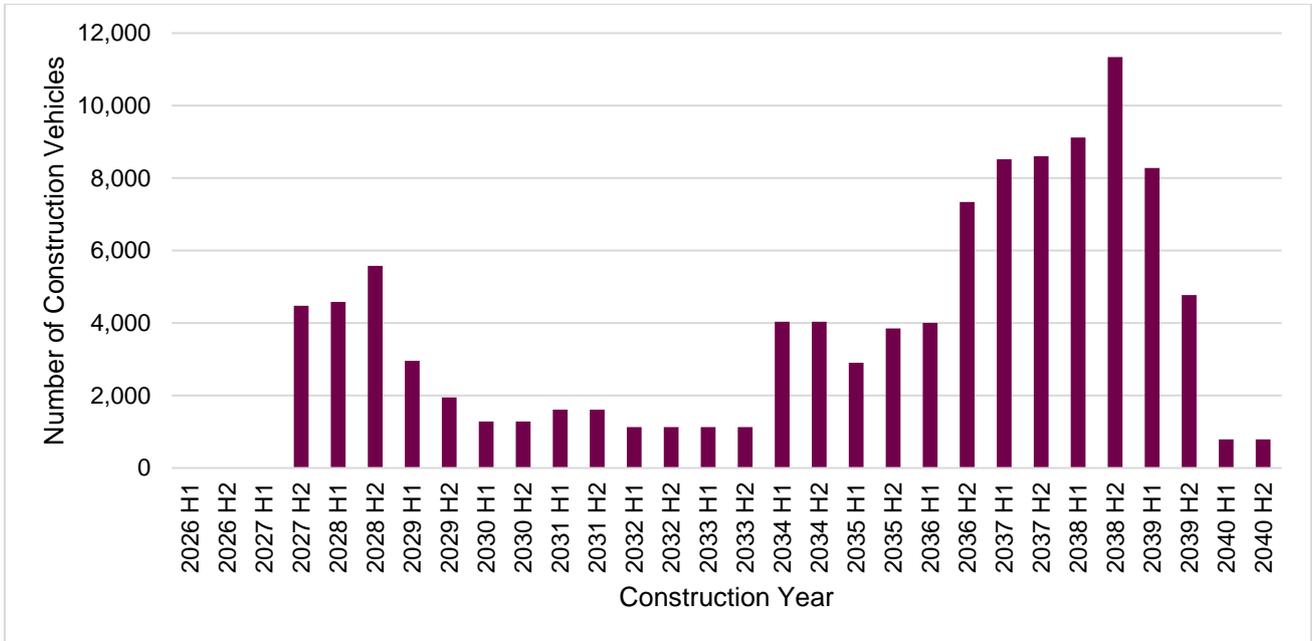


Figure 5.33 Construction traffic (excluding site worker vehicles) present during 3FM construction programme. Construction vehicle numbers equate to one-way traffic trips, presented per half year.

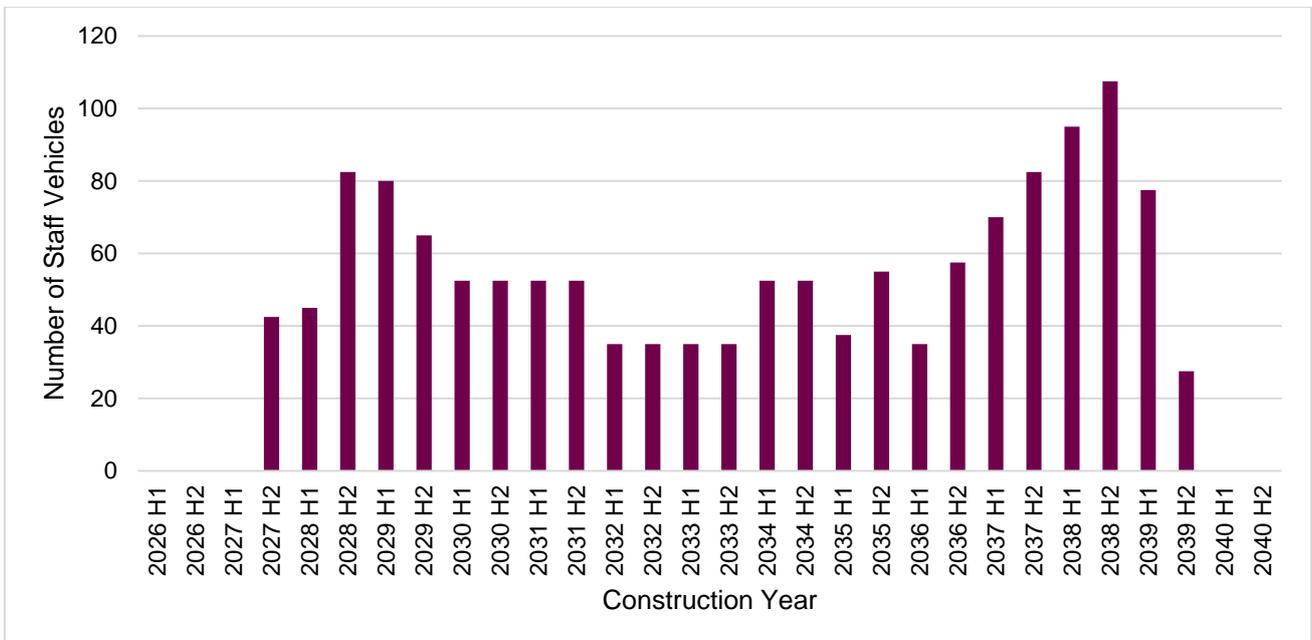


Figure 5.34 Staff vehicles present daily during the 3FM construction programme. A factor of 2 for Vehicle Occupancy Rate (VOR) is used to allow for car sharing, public transport access, cycling, etc given the toll costs and travel at peak times (i.e. the estimated number of staff is double the value in the graph).

The predicted number of one-way trips of construction traffic per half-year over the duration of the project is presented in Figure 5.33. Staff vehicles throughout the programme are presented in Figure 5.34. A factor of 2 for Vehicle Occupancy Rate (VOR) was used when calculating staff vehicles to allow for car sharing, public transport access, cycling, etc given the toll costs and travel at peak times (i.e. the estimated number of daily staff is double the daily staff vehicle value).

The peak vehicle trips (11,338 one-way trips, or 5,669 return trips) and staff numbers (108 staff vehicles, or 216 personnel) are expected in the second half of 2038. This phase of the programme includes the construction of Phase 2 of the Maritime Village, Plot K (New RORO Terminal), the Northern Roads, Plot LOLO Yard, and the SPAR. During the construction programme, an average of 3,608 one-way traffic trips (approximately 1,804 return journeys) are expected per 6 month period. Regarding staff vehicles accessing and exiting the site, the average will be 47 staff vehicles per day.

5.2.14 Construction Environmental Protection Measures

A series of 3FM Project construction environmental protection measures have been developed through the preparation of this EIAR whose primary objective is to identify the baseline environmental context of the proposed development, predict potential beneficial and/or adverse effects of the development during the construction phase, and propose appropriate mitigation measures where necessary. Details of the proposed mitigation are set out in individual chapters dealing with the various relevant environmental factors, and a 3FM Project-specific Construction Environmental Management Plan has been prepared to ensure effective implementation of required mitigation and best practice measures.

The preparation of the environmental appraisals was guided by the requirements of EU Directives and Irish law regarding Environmental Impact Assessment. The following legal provisions and guidelines, amongst others, were followed:

- The requirements of EU Directives (Directive 2011/92/EU as amended by 2014/52/EU) and Irish law regarding Environmental Impact Assessment (including the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, as amended);
- European Commission Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU) (European Commission, 2017);
- The Planning and Development Act 2000 (as amended); and
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022).

Detailed project consultation and scoping is described in Chapter 3 of this report. Scoping was undertaken in respect to the 3FM Project in accordance with the European Commission's 2017 "Environmental Impact Assessment of Projects Guidance on Scoping", and greatly benefitted from the environmental monitoring programme which is currently in place for the construction of the ABR Project and MP2 Project. The site-specific scientific data collected to date has been used to support the preparation of the EIAR and NIS for the 3FM Project and facilitates a depth of understanding of the environment in and around Dublin Port, including the inner Liffey channel and Dublin Bay. The scope of the 3FM Project was further considered in the context of the

extensive environmental datasets collated during the preparation of the Strategic Environmental Assessment (SEA) which complemented the review of the Dublin Port Masterplan during 2017 and 2018.

Above all, the extensive consultation process undertaken during both the review of the Dublin Port Masterplan and specifically for the 3FM Project provided a sound basis for confirming the key issues to be addressed, the extent of the environmental appraisals required, and the level to which these issues needed to be addressed.

Following the scoping process, all environmental topics required by the EIA Directive (Directive 2011/92/EU as amended by Directive 2014/52/EU) have been comprehensively addressed within the EIAR. Article 3(1) requires that the following environmental factors be considered in an EIA so as to appropriately identify, describe and assess the likely significant effects which might impact upon them as a result of the implementation of the project:

- Examination of Alternatives
- Risk of Major Accidents
- Biodiversity, flora and fauna;
- Land, soils, geology and hydrogeology;
- Water quality and flood risk;
- Air;
- Climate;
- Noise and vibration;
- Material assets - coastal processes;
- Material assets - traffic and transportation;
- Material assets - services
- Archaeology and cultural heritage;
- Landscape and visual;
- Population and human health; and
- Waste
- Cumulative Effects

Once the key issues were identified, baseline studies/surveys were carried out. The studies enable the prediction of the likely environmental impacts arising from the 3FM Project. These impacts are evaluated in terms of their significance, nature and magnitude.

Integration of the engineering design team with the planning and environmental team from an early stage in the project has enabled mitigation by design to be used, causing many potential significant effects to be eliminated or reduced to an acceptable level during the preliminary design stage.

A prime example is the construction of the proposed Lo-Lo Terminal at Area N. This has been a key environmental consideration due to the following factors:

- It is located within the foreshore of the inner Liffey channel which is used by migratory fish, including Salmon, Sea Trout and Eel;
- Its western boundary lies close to the Tern Colony which occupies the ESB Dolphin and is included within the South Dublin and Tolka Estuary SPA
- Its southern boundary lies close to the Great South Wall;
- Its eastern boundary lies close to natural foreshore which is an important feeding area for waterbirds at low water including species identified as Qualifying Interests of the nearby South Dublin and Tolka Estuary SPA such as Black-tailed Godwit.
- It lies north of the ESB Poolbeg Generating Station and adjoins its Cooling Water intakes and outlet channel. The outlet channel also receives the treated effluent from Ringsend Wastewater Treatment Plant.
- Its proposed location is currently occupied by the Poolbeg Oil Jetty which supplies hydrocarbons to NORA.
- It lies immediately south of the main Dublin Port navigation channel.

In light of the environmental constraints, the wharf required to support the Area N - Lo-Lo Terminal has been designed as an entirely open-piled structure. This design minimises the impact of the structure on the natural tidal flows of the inner Liffey channel and will therefore not cause any significant impediment to migratory fish.

The open-piled design also ensures that there is no significant change to the dispersion characteristics of the thermal plume discharge from the Cooling Water outlet channel. Similarly, there will be no significant change to the dispersion characteristics of the treated effluent discharge from Ringsend Wastewater Treatment Plant.

The western end of the wharf has been designed to avoid the Tern Colony, leaving a 50m gap between the wharf and the Tern Colony. A 4.0m fence will be erected along its western perimeter to prevent a visual que between nesting terns and people working on the wharf.

The eastern end of the wharf has been designed to avoid the natural waterbird feeding grounds by terminating the wharf at the Cooling Water weir.

The wharf has also been designed as a standalone structure to enable a circa 10m buffer to be created between the wharf and the Great South Wall.

Automated mooring systems have been incorporated into the design to ensure the safe navigation of ships berthing and ships passing the berth.

The construction sequence has been designed to ensure uninterrupted operation of NORA during the construction phase of the project.

Mitigation by avoidance has also been used, where possible.

Examples of mitigation by avoidance include restricting capital dredging to the winter seasons (October to March) to avoid disturbance of nesting terns. The proposed capital dredging Closed Periods are set out in Figure 5.35.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All Capital Dredging												
Upstream of Berth 49 includes the period 15th to 31st March												

Figure 5.35 Capital Dredging Closed Periods (denoted by orange coloured cells)

Riverside impact piling activity is also restricted to avoid disturbance of migrating salmon. The proposed Closed Periods for riverside impact piling are set out in Figure 5.36.

- The period March to May represents the peak smolt run (river to sea)
- The period July to August represents the peak adult salmon return (sea to river).

Vibratory piling is allowable during these periods.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SPAR Bridge												
SPAR Viaduct												
Maritime Village, Marina (pontoon piles)												
Area K - Ro-Ro Terminal, Berth 45												
Area K Ro-Ro ramp locating piles												
Turning circle and temporary works piling												
Area N - Lo-Lo Terminal, outer piles x 5 rigs												
Area N - Lo-Lo Terminal, inner piles x 5 rigs												
Oil Terminal Dolphin												

Figure 5.36 Impact Piling Closed Periods (denoted by orange coloured cells)

Impact piling activity within 75m of Dublin Port’s tern colonies is also restricted to avoid disturbance. The proposed closed periods for impact piling proximate to the tern colonies are set out in Figure 5.37. These closed periods coincide with the restrictions for Salmon impacts mitigation at Area K and Area N.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Impact Piling within 75m of the Tern Colonies												

Figure 5.37 Piling Closed Periods within 75m of Dublin Port’s Tern Colonies (denoted by orange coloured cells)

Following an examination, analysis and evaluation of the direct and indirect significant effects of the project in relation to the receiving environment, additional mitigation measures and monitoring programmes have been recommended which will be fully implemented during the construction phase of the 3FM Project.

These include a range of noise, dust and construction traffic mitigation measures to minimise nuisance to neighbouring communities during construction.

Precautionary measures will be undertaken to minimise the risk of injury or disturbance to marine mammals in the area of operations in line with National Parks and Wildlife Service (NPWS) Guidelines (2014). Notably a trained and experienced Marine Mammal Observer (MMO) will be put in place during piling, dredging, demolition and dumping operations. The MMO will scan the surrounding area to ensure no marine mammals are in a pre-determined exclusion zone in the 30-minute period prior to operations. The NPWS exclusion zone is 500m for dredging and demolition works and 1,000m for piling activities.

Chapter 21 of the EIAR sets out all of the mitigation measures and monitoring programmes which will be implemented during the construction phase of the 3FM Project.

5.2.15 Construction Environmental Management

The 3FM Project construction works will be undertaken in compliance with a Construction Environmental Management Plan (CEMP) which will include all measures identified in the draft CEMP which have been brought forward from the environmental assessments undertaken during the preparation of this EIAR as well as any additional measures required pursuant to conditions of development consent. A draft CEMP has been prepared to enable a comprehensive assessment of the construction phase of the 3FM Project and forms part of the application for permission (under separate cover).

5.3 Operational Phase

The key objective of the 3FM Project is to increase the throughput of cargo by providing the infrastructure required to maximise the efficient use of existing port lands. A description of the existing port operations forms part of the application for permission (under separate cover). There are no significant changes to the existing types of port operations, processes and activities (regular and occasional) proposed by the 3FM Project.

DPC is a member of EcoPorts - the main environmental initiative of the European port sector - and is accredited to the certified Port Environmental Review System (PERS) standard. PERS incorporates the main general requirements of recognised environmental management standards (e.g. ISO 14001), but also takes into account the specificities of ports. PERS builds upon the policy recommendations of European Sea Ports Organisation (ESPO) and gives ports clear environmental objectives to achieve sustainable development. DPC is committed to continued PERS membership to achieve the highest certified performance standards throughout all aspects of its operation.

The following maintenance, pollution control and navigational measures will be implemented.

5.3.1 Maintenance

5.3.1.1 Infrastructure

During the operational stage, maintenance of the newly developed infrastructure will be required, including the provision of cathodic protection of steel piles against corrosion. DPC has a comprehensive maintenance programme in place for all its assets, supported by documented procedures, to ensure the upkeep and efficient operation of the port.

All new infrastructure and operations at new facilities will fall within the scope of DPC's existing maintenance and environmental management protocols.

5.3.1.2 Maintenance dredging

DPC requires regular maintenance dredging of the Port's navigation channel, basins and berthing pockets to remove sediment which builds up over time in order to maintain sufficient water depth to allow the safe passage of cargo and passengers to and from the Port.

The source of sediment is primarily from material entering Dublin Port from the upstream Liffey catchment (circa 120,000m³ per annum) and from the natural circulation of fine sands within Dublin Bay, a portion of which tends to settle in the Port's navigation channel. This volume of material varies significantly from year to year depending on the strength and frequency of storm events.

DPC undertakes maintenance dredging, usually on an annual basis, using a Trailing Suction Hopper Dredger in accordance with the conditions of a Dumping at Sea Permit from the EPA. DPC's current eight-year maintenance dredging programme is permitted under Dumping at Sea Permit S0004-03 which allows for the maximum dredging of 300,000m³ of sediment each year within the period April to September up to 2029.

The requirement for ongoing maintenance dredging will extend to the new berths and the turning circle created from capital dredging under the 3FM Project when they become operational. This future maintenance dredging will be subject to statutory consents, including a Dumping at Sea Permit from the EPA but it is not envisaged that the current maximum dredging allowance of 300,000m³ of sediment each year within the period April to September will need to be increased.

The cumulative impact of the DPC's capital dredging requirements under the 3FM Project in combination with other capital dredging programmes (MP2 Project and Dublin Harbour Capital Dredging Project) together with DPC's current maintenance dredging programme is assessed in detail in Chapter 13 Material Assets – Coastal Processes of this EIAR.

During the operational phase of the 3FM Project, no increase in cumulative effects are expected due to routine maintenance dredging requirements.

5.3.2 Pollution Control

5.3.2.1 Surface Water

DPC has considered best environmental practices and relevant environmental legislation, such as the Water Framework Directive, in the design and management of its surface water drainage systems. These systems include sufficient capacity, attenuation, and appropriate interceptor separators to minimise risks to receiving

waters and ensure compliance with relevant legislation. Design of systems has also considered and incorporated Sustainable Drainage System (SuDS) principles where possible, for example drainage of pathways to permeable surfaces at Port Park. Appropriate bunding of storage tanks will be installed where required.

DPC operates a programme of regular inspection, cleaning and maintenance of the surface water drainage system, including surface water interceptors, within Dublin Port which is supported by documented procedures. Procedures for handling drain cleaning waste are also in place. This inspection, cleaning and maintenance programme will be extended to include all new port drainage systems created or altered as part of the 3FM Project.

5.3.2.2 Wastewater

Wastewater from new infrastructure will be collected in foul sewer systems that are fully compliant with Uisce Éireann requirements, and discharged by gravity, or through wastewater packaged pumping stations if required, to the public sewer, subject to Uisce Éireann approval, for treatment at Ringsend WwTP. It is not anticipated that there will be a significant increase in the peak wastewater discharge to the public sewer as a result of the development (see Chapter 15 Material Assets – Services).

All new wastewater infrastructure and operations at new facilities will fall within the scope of DPC's existing maintenance and environmental management protocols.

5.3.2.3 Waste Disposal from Vessels

All waste from berthed vessels will be handled and disposed of in accordance with the Dublin Port Waste Reception and Handling Plan, which meets the requirements of EU Directive 2019/883 of the European Parliament and of the Council on port reception facilities for the delivery of waste from ships, and S.I. No. 296 of 2021: European Union (Port Reception Facilities for the delivery of waste from ships) Regulations 2021.

The reception facilities for ship and port waste are assessed continually. At this time Dublin Port accepts MARPOL Annex V waste – garbage. DPC requires that contractors and suppliers engaged by the Waste Contractor shall demonstrate commitment to maintaining a high level of safety management conforming to all relevant legal requirements as well as relevant DPC policies and procedures.

The Plan covers the Port area under the jurisdiction of DPC, and includes facilities at the following areas: Terminal 1, Terminal 2, Terminal 3, Terminal 5, Alexandra Quay West, Ocean Pier, Alexandra Quay East, Dublin Freight Terminal, MTL, Coal Quay, Poolbeg Jetty, Berth 18, Sir John Rogerson's Quay, Oil Zone Berths and Alexandra Basin West New Berths. It will be extended to include any additional facilities delivered by the 3FM Project.

5.3.2.4 Ship to Shore Power

Ship to Shore Power infrastructure will be provided for vessels berthed at Area N – Lo-Lo Terminal and Area K - Ro-Ro Terminal. This will provide required hoteling load for vessels, allowing engines to be turned off when vessels are berthed. This will result in significant reductions in fuel consumption and in emissions to air.

5.3.3 Navigation

The proposed development will require updating of the appropriate navigation charts for the area. This will be completed through consultation with the UK Hydrographic Office. Global Positioning System navigation charts will be updated based on updates to Navigation Charts.

The development will not impact on other aspects of navigation in the port. The navigation speed limit enforceable within the harbour will apply to all new facilities. Impacts on radar, or VHF radio and other communication systems are not envisaged. The capital dredging works will significantly improve vessel manoeuvring through the provision of the Turning Circle and improved berthage at the South Estate.

Marine Notices will be issued to alert the port users and the general public to the proposed changes to the port.

5.4 Description of the risk of major accident hazards

DPC is responsible for the safe management, control, operation and development of the Port, and is committed to ensuring the safety of its employees and other persons affected by its activities. The risk of major accident hazards can arise during both the construction and operational stages of the 3FM Project. There are no substances or technologies being proposed that are not considered 'normal' either by the construction industry or by Port operations. Risk of accident is managed by strict adherence to DPC's Health and Safety Policy and supporting accredited documentation.

The proposed development is within the vicinity of several establishments that fall within the scope of the *Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations, 2015* (the COMAH Regulations) including the NORA fuel storage establishments that are notified to the Health and Safety Authority as an Upper Tier Seveso site. In light of the nature of the activities that will take place at the 3FM Project site, and the nature of the surrounding environment, the most significant risks of major accidents and disasters are associated with the COMAH establishments.

The assessment of the risk of major accidents and disasters is presented in Chapter 6 of this EIAR which concludes that, from a COMAH perspective, the potential direct and indirect risks arising from the 3FM Project satisfy the Health and Safety Authority's COMAH land use planning guidance. It also concludes that other, non-COMAH direct and indirect major accident and disaster risks arising from the 3FM Project are not significantly different from the current risks.

DPC has developed a comprehensive Emergency Management Plan that caters for the range of accident and emergency events that may occur within its estate (or that may occur outside the estate and that have a direct, knock-on effect), and this plan is provided to the other relevant stakeholders, including An Garda Síochána, DCC, Transport Infrastructure Ireland, and the Principal Response Agencies. In the event of an incident at a COMAH establishment that could impact on people at other facilities in the Port, or on road traffic entering or exiting the Port, DPC will activate its Emergency Management Plan, in which case people would be directed away from the source of the hazard.

5.5 Project change and decommissioning

Following completion of the construction phase of the works, all temporary works required to facilitate project construction will be removed from site. Temporary works requiring the use of temporary piles have been designed to be incorporated into the permanent works, where possible, negating the need to remove them.

There are no plans proposed for the decommissioning of the permanent marine elements of the 3FM Project given the nature of port development which can be considered as ‘permanent works’, with a 100-year design life.

The landside elements of the 3FM Project have been designed as far as possible to allow maximum flexibility to ensure sufficient space is provided to run state of the art freight facilities, with automation, electrification, vehicle booking systems etc. To provide this flexibility the proposed landside structures have been kept to a minimum, with building locations guided by existing services, and minimising disruption to the overall flow of the sites. Any changes to the landside layout which may be required, including decommissioning, will be the subject of subsequent planning consent and appropriate mitigation will be applied to any such consents.

5.6 Other related projects and potential for ex-situ effects

5.6.1 Developments in the Surrounding Area

There are a number of existing and/or approved projects in the vicinity of the subject site which may have potential to cause cumulative effects and/or interactions with the proposed 3FM Project. These are summarised in Table 5.5 (see Chapter 20 Cumulative Effects and Environmental Interactions for the methodology used to derive Table 5.5).

These projects have informed the assessment of cumulative effects and environmental interactions which have been examined and analysed within the individual technical assessment chapters (Chapters 6 – 19).

Table 5.5 Description of existing and/or approved projects within Dublin Port, for assessment of potential cumulative effect with the 3FM Project

Existing and/or approved Project	Project Description
<p>Alexandra Basin Redevelopment (ABR) ABP Reg. Ref. PL29N.PA0034</p>	<p>DPC was granted planning permission subject to conditions (ABP Reg. Ref. PL29N.PA0034) in July 2015 for the redevelopment of Alexandra Basin, Berths 52 and 53 and dredging of the channel of the River Liffey together with associated works in Dublin Port. Elements of the proposed development can be summarised as follows:</p> <p><i>Alexandra Basin West:</i></p> <ul style="list-style-type: none"> • The infilling of graving Dock No. 2 having an area of 6,055sq.m; • The excavation and restoration of historic Graving Dock No. 1; • The demolition of the bulk jetty having an area of 3,200sq.m; • A section of North Wall Quay extension having an area of 21,700sq.m; • Extension of Alexandra Quay West of 130m in length;

Existing and/or approved Project	Project Description
	<ul style="list-style-type: none"> • New 273 m long Ro-Ro jetty and provision of three Ro-Ro ramps; and • the dredging of: 470, 000sq.m of contaminated material to a depth of -10.0m Chart Datum (CD) over an area of 194,000sq.m within the redeveloped Alexandra Basin and its remediation. <p><i>Berth 52 and 53:</i></p> <ul style="list-style-type: none"> • The demolition of existing berths 52 and 53; • Jetty at Berth 52 having an area of 500sq.m; • Concrete Dolphin at Berth 53 having an area of 500sq.m; • The construction of: A new river berth at Berths 52/53, 300m long; New 75 m mooring jetty at new river berth; New 40 m long mooring jetty to extend existing berth 49, 50m long; • The infilling of the Terminal 5 Ro-Ro basin, an area of 45,650sq.m; Raising of existing levels by 1.4 m over an area of 95,000sq.m; and dredging of new river berth to -10.0m CD. <p><i>Liffey Channel:</i></p> <ul style="list-style-type: none"> • Construction of a marina protection structure to a height of +7.0m CD and a length of 220m on the south side of the river channel. • Dredging of the shipping channel to a depth of -10m CD from a point 55m to the east of the East link bridge, to a location in the vicinity of Dublin Bay, a total distance of 10,320m. <p>The ABR Project is now being implemented by DPC.</p>
<p>MP2</p> <p>Reg. Ref. ABP-304888-19</p>	<p>The works proposed in the MP2 Project comprise the following elements:</p> <ul style="list-style-type: none"> • Construction of a new Ro-Ro jetty (Berth 53) for ferries up to 240m in length on an alignment north of the Port's fairway and south and parallel to the boundary of the South Dublin Bay & River Tolka SPA (004024). • A reorientation of the already consented Berth 52 (ABP Ref. 29N.PA0034). Berth 52 is also designed to accommodate ferries up to 240m in length. The works will also comprise an amendment to the consented open dolphin structure (ABP Ref. 29N.PA0034) to create a closed berthing face at the eastern end of Berth 49. <p>[Elsewhere within the ABR Project, the extension of the existing Berth 49 is already consented to also make this berth capable of accommodating ferries up to 240m in length. The combination of the ABR Project with the MP2 Project will therefore deliver three river berths all capable of accommodating ferries up to 240m in length].</p> <ul style="list-style-type: none"> • A lengthening of an existing river berth (50A) to provide the Container Freight Terminal with additional capacity to handle larger container ships. These works will include the infilling of the basin east of the now virtually redundant Oil Berth 4 on the Eastern Oil Jetty. These works will also include dredging to a standard depth of -11.0m CD which is a proposed amendment to the

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	<p>channel dredging as permitted under the ABR Project (ABP Ref. 29N.PA0034).</p> <ul style="list-style-type: none"> As part of the infilling of Oil Berth 4, it is proposed to redevelop Oil Berth 3 as a future deep-water container berth (standard depth of -13.0m CD) for the Container Freight Terminal. This will facilitate the change of use of the berth from petroleum importation to container handling when the throughput of petroleum products through Dublin Port declines as a result of national policies to decarbonise the economy. The dredging of a berthing pocket to a standard depth of -13.0m CD at Oil Berth 3 will require stabilisation of the existing quay wall at Jetty Road. It is not proposed to use this quay wall for the berthing of vessels. Dredging at the proposed Berth 53 and channel widening to a standard depth of -10.0m CD which is a proposed amendment to the channel dredging as permitted under the ABR Project (ABP Ref. 29N.PA0034). Consolidation of passenger terminal buildings, demolition of redundant structures and buildings, and removal of connecting roads to increase the area of land for the transit storage of Ro-Ro freight units as a Unified Ferry Terminal (UFT). Works include reorganisation of access roads; two proposed check in areas comprising a total of 14 check lanes; proposed set down and parking area for the existing Terminal 1 building; proposed pedestrian underpass to access the existing Terminal 1 building; three proposed toilet blocks and a proposed ESB Substation. These works will comprise amendments to consented developments with planning reference numbers 3084/16 & 3638/18, and the ABR Project (ABP Ref. 29N.PA0034). A heritage zone adjacent to Berth 53 and the Unified Ferry Terminal set down area. This will comprise an alteration to consented development planning reference 3084/16.
<p>1.4km pedestrian walkway and a 2-way cycle lane Reg. Ref. 3220/21</p>	<p>Dublin Port Company were granted permission for a development that will consist of constructing a new 1.4km pedestrian walkway and a 2-way cycle lane along East Wall Road and Bond Road from the River Liffey to the Tolka Estuary and will comprise the following:</p> <ul style="list-style-type: none"> Removal of part of existing Dublin Port western boundary wall / fence. Removal of the existing access to Terminal 3 on East Wall Road. Modifications to layout of Terminal 3 along eastern boundary including removal of private car parking spaces. Relocation of 3 no. existing double billboards. Relocation of existing flagpoles. Relocation of existing temporary office building of 15sq.m. Closure of left turn from Alexandra Road to East Wall Road southbound. Removal of 17 no. car parking spaces from the Dublin Port Centre car park. Realignment of Bond Road north of the Promenade Road junction.

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	<ul style="list-style-type: none"> • Construction of new boundary along sections of the Dublin Port western boundary comprising railings over plinth or wall to a height of c. 4m along East Wall Road and Bond Road or for a section along Bond Road a wall of c. 2.6m in height. • Creation of a civic space adjacent to the River Liffey at North Wall Quay Extension. • Provision of 25 no. bicycle parking spaces. • Provision of a Dublin Port Irish language installation as part of the boundary treatment adjacent the Crane 292 enclosure. • Provision of hard and soft landscaping including trees along the extent of the route, amenity, interpretation and wayfinding features including bins and seating. • Provision of an indented bus stop on the east side of East Wall Road. • Provision of pedestrian and cycle facilities to enable road crossing on the east side of East Wall Road to connect with permitted road crossings on East Wall Road by Dublin City Council. • Provision of lighting and CCTV along the proposed pedestrian and cycle route. • Modifications to the existing maritime garden adjacent to Dublin Port Centre. • Reduction in the width of the vehicular carriageway and omission of footpath on internal roadway in Terminal 3. • Provision of a new vehicular access to Dublin Port Centre car park off the internal road network. • Amendments to the junction between the Terminal 3/4 access road and Alexandra Road to include right-out only from the proposed access road onto Alexandra Road and changing the junction from signalised to priority controlled. • Amendments to the permitted Alexandra Road / East Wall Road Junction to include the retention of the left slip lane from East Wall Road into Alexandra Road. • Relocation of the emergency access gate at the junction of Tolka Quay Road and East Wall Road. • Omission of the private secure access route for multi-modal berth between Tolka Quay Road and Alexandra Road. <p>Omission of a section of the internal road to the south of Dublin Port Centre car park.</p>
<p>T10 Link Road Reg. Ref. 4894/22</p>	<p>Dublin Port Company were granted Retention permission for a development that is part of a link road known as T10 Link Road connecting Promenade Road with Tolka Quay Road to the west of the Terminal 10 State Services yard. The road and associated infrastructure comprises of:</p> <ul style="list-style-type: none"> • An approximately 125 metre long and 14.4 m wide two-way road (two northbound lanes and one southbound lane), with 2 no. 3m wide footpaths. • A T-junction with Promenade Road; • A pedestrian zebra crossing at the northern end of the link road; and • A vehicular entrance to the Terminal 10 state services yard;

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	<ul style="list-style-type: none"> • Revisions to fence line previously permitted under Reg.Ref. 4483/19 at northeast corner of Terminal 4 North boundary; and • All associated ancillary works including site clearance, demolitions, earthworks, pavement construction, drainage services, diversion and installation of utility services, installation of road markings and signs, lighting, CCTV and associated boundary fencing. <p>Permission is sought for development which will consist of a new link road from north of Tolka Quay Road to Alexandra Road. The new link road and associated infrastructure will comprise of:</p> <ul style="list-style-type: none"> • An approximately 250m long two-way road (two north bound and two south bound lanes) with 3 m wide footpaths on either side of the road and two-way segregated cycleway on eastern side of road; • New roundabout, connecting proposed new link road with Tolka Quay Road; • New link road will incorporate a swept bend to integrate continuously with Alexandra Road to the west, a T-junction from Alexandra Road to the east to the proposed new link road, and closure of access to No. 2 Branch Road South; • Closure and removal of No. 1 Branch Road North along with boundary walls to east and west, accommodating an extension of Terminal 4 including new yard surface into area of current Circle K Terminal 1; • Realigned port cycle network along Alexandra Road; • Upgrade of road and footpath connections on Tolka Quay Road and a zebra crossing on Tolka Quay Road to the east of the proposed roundabout; and • Revisions to fence line previously permitted under Reg. Ref. 4483/19 at southeast corner of Terminal 4 North boundary. <p>Permission is also sought for development comprising:</p> <ul style="list-style-type: none"> • Relocation of 5 no. parking spaces within and provision of new 2.4 m western boundary wall to the Circle K Terminal 1; • Revisions to access from Circle K Terminal 1 to Alexandra Road as previously permitted under Reg. Ref. 3773/20 to now omit previous access arrangements and provide for two vehicular entrances and gateways to Alexandra Road and one vehicular entrances and gateways to T10 Link Road; <p>The demolition/ breaking out of:-Existing T10 Link Road junction on Tolka Quay Road;- Section of Circle K Terminal 1 perimeter fence; and All associated ancillary works, including site clearance, demolitions, earthworks, pavement construction, drainage services, diversion and installation of utility services, installation of road markings and signs, lighting, CCTV and associated boundary fencing. Part of the site comprises of an establishment to which the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I.209 of 2015) applies.</p>
<p>Dublin Harbour Capital Dredging Project</p> <p>Reg. Ref. Foreshore</p>	<p>Dublin Port Company have acquired an eight year foreshore license to carry out capital dredging. The total area to be dredged is circa 27 hectares. The material to be dredged comprises of clays, silts, sands and gravels with occasional cobbles. No dredging of rock is required. The total volume to be dredged is circa 500,000 m³. It is proposed to dispose of the dredged material at the licenced dump site at the entrance to Dublin</p>

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<p>Application FS007164</p> <p>DAS Application S0033-01</p>	<p>Bay located to the west of the Burford Bank. It is intended that the capital dredging works will be carried out using a trailing suction hopper dredger and/or a backhoe dredger. Other ancillary equipment will include a survey vessel and bed leveller to remove peaks and troughs created by the dredger. The proposed capital dredging works will be restricted to the winter period (October– March).</p> <p>The works proposed in the Dublin Harbour Capital Dredging Project comprise a number of elements:</p> <ul style="list-style-type: none"> • Deepening the navigation channel between North Wall Quay Extension and the Western Oil Jetty, including riverside Berth 35; • Deepening of Alexandra Basin East and deepening/widening of berths; • Deepening of the Oil Basin and widening of berths; • Deepening of the Ferryport Basin; • Deepening of riverside Berth 52; • Widening the South Port (Berths 42 - 47) berths; and • Removal of ridge between the navigation channel and the Poolbeg Oil Jetty (Berth 48)
<p>Dublin Port Maintenance Dredging Programme 2022–2029</p> <p>Reg. Ref. FS007132</p> <p>DAS Permit S0004-03</p>	<p>Dublin Port Company (DPC) was granted a Dumping at Sea Permit (S0004-03) by the EPA on the 4th October 2022 for the loading and dumping at sea of dredged material arising from maintenance dredging of the Inner Liffey Channel and Dublin Bay.</p> <p>The activities involved the loading and dumping of a maximum of 3,960,000 tonnes of dredged material during the month of April to September from 2022 – 2029, or a maximum quantity of 495,000 tonnes per annum for eight years.</p>
<p>Open Cycle Gas Turbine (OCGT) and a generating plant.</p> <p>Reg. Ref. PWSDZ3074/23 – done Q26</p>	<p>ESB Engineering and major projects have proposed the construction of a 299-megawatt electrical output (MWe), Open Cycle Gas Turbine (OCGT) and a generating plant.</p> <p>The proposed development will consist of the following elements:</p> <ul style="list-style-type: none"> • Demolition of two storage buildings and demolition of four oil tanks within the bunded area of the NORA Ringsend oil farm • Construction/installation of an Open Cycle Gas Turbine (OCGT) generating unit and associated plant and equipment, comprising the following main components: <ul style="list-style-type: none"> a) Gas Turbine Air Intake (approx. 24m L x 18m W x 26m H) b) Generator Enclosure (approx. 24m L x 18m W x 14.5m H) c) Gas turbine enclosure including Gas Turbine auxiliaries and loading/ rotor turning area (approx. 53m L x 15m W x 26m H) d) Exhaust Diffuser (approx. 14.5m L x 10.4m W x 10.5m H) e) An exhaust stack 40m in height (approx. 8.0m diameter and 40m H)

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	<p>f) Gas Turbine Power Control and Electrical Control & Instrumentation(C&I) Module (approx.24m L x 18m W x 10m H)</p> <p>g) 10 No. Fin Fan Coolers (approx. 45m L x 12.7 m W x 8m H)</p> <p>h) Main Transformer (approx. 12.2 m L x7.5m W x 9.3 m H)</p> <p>i) Main Transformer Bund including 3no blast walls (approx. 19.3 m L x 18.9 m W x 12m H)</p> <p>j) Auxiliary Transformer (approx. 4.7m L x 4.0m W x 6.9m H)</p> <p>k) Auxiliary Transformer Bund including 2no blast walls (approx.8.9m L x 8.5m W x 12m H)</p> <p>l) Demineralised Water Treatment Plant (approx. 20m L x 10m W x 5.4m H)</p> <p>m) Demineralised Water Tank (approx. 22.2m diameter and 14.7m H)</p> <p>n) Water Supply / Gas Supply Rack (approx. 89.8m L x 102m W x 7m H)</p> <p>o) Raw/Fire Water Tank (approx. 15.2m diameter and 14.7m H)</p> <p>p) Fuel Oil Forwarding Pumps (approx. 10m L x 4m W x 5m H)</p> <p>q) Combined Fire Fighting and Demin Water Forwarding Pumphouse (approx. 12m L x 5m W x 5.4m H)</p> <p>r) 1No <1MW thermal output emergency diesel generator-250KWe (approx. 10m L x 4m W x 5m H)</p> <p>s) Generator Circuit Breaker (approx. 8.8m L x 5.1m W x 4m H)</p> <p>t) Gas Conditioning Compound (approx. 33.4m L x 25.3m W x 3.6m H), which includes: Gas Compressor and Auxiliaries Building (approx. 24m L x 7.5m W x 5m H) Gas Compressor Reducing Building (approx. 8m L x 6m W x 6m H) Gas Compressor Cooler (approx. 7m L x 4m W x 5 m H) Gas Compressor Blast Wall (approx. 30m L x 20m W x 8m H)</p> <p>u) Continuous Emissions Monitoring System (CEMS) (approx. 3.5m L x 2.5m W x 5m H)</p> <p>v) 220kV Indoor Switchgear Building (approx. 30m L x 18m W x 18m H) and 3 No bolted connections (approx. 12.5m L x 15m W x 15m H)</p> <p>w) Hydrogen Storage Compound (approx. 6.5m L x 3.5m W x 3m H)</p> <p>x) Containerised Office Building (approx. 12.2m L x 2.4m W x 2.6m H)</p> <p>y) Containerised Storage (approx. 12.2m L x 2.4m W x 2.6m H)</p> <p>z) Cable Joint Chamber (Underground) (approx. 5m L x 3m W)</p> <ul style="list-style-type: none"> • Construction of bund wall between the proposed OCGT and NORA oil farm (approx. 69m L x 1.2m W x 3.5m H) • Connection to the existing gas Above Ground Installation (AGI) • All associated works to facilitate the development e.g. temporary construction compound, security fencing and gates, baffle walls, underground cables, new lighting arrangement, lightning and telecommunication masts, parking and surface water drainage network.

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<p>Underground Cable Programme is set to replace and upgrade five 220kV circuits</p> <p>Capital reference projects CP114 6, CP121 6, CP110 0</p>	<p>EirGrid have proposed planning for the Dublin Replacement Underground Cable Programme is set to replace and upgrade five 220kV circuits across Dublin city and the surrounding areas. Three of the best performing options have been published:</p> <ul style="list-style-type: none"> • Carrickmines to Poolbeg • North Wall to Poolbeg • Finglas to North Wall
<p>Construction of a new 220kV gas insulated switchgear (GIS) Switchboard building</p> <p>Reg. Ref. 4057/23</p>	<p>EirGrid have proposed planning for the development that will consist of:</p> <ul style="list-style-type: none"> • Construction of a new 220kV gas insulated switchgear (GIS) Switchboard building measuring 65.2 x 51.8m and 17m high; construction of 2no. • New shunt reactor units (each within a 4.3m x 8.2m x 5.5m enclosure) and 1no. • New series reactor unit (within a 4.7m x 12.7m x 16.6m enclosure), associated connections to the 220kV GIS switchboard building an decommissioning and removal of 2no. existing shunt reactors. • An extension of the existing internal access road around the new GIS switchgear building and 4no. car parking spaces. • All ancillary and associated works to facilitate the development including removal of existing perimeter berm and new 2.6m high boundary fence around extended substation compound, perimeter planting, 3m high lightning protection to new GIS switchboard building, surface water drainage network including an attenuation pond, lighting and laying of 2 temporary cable circuits for the construction and commissioning period connection the existing AIS building to the new GIS switchboard building and all other associated site excavation, raising of site levels, infrastructural and site development works above and below ground. <p>Planning permission is sought for a period of 10 years. A Natura Impact (NIS) will be submitted to the Planning Authority with the application.</p>
<p>continuation of use of an existing concrete batching plant and associated facilities.</p> <p>Reg. Ref. PWSDZ3469/22</p>	<p>Planning permission for the continuation of use of an existing concrete batching plant and associated facilities (previously granted under Reg. Refs. No 2482/19; 2209/13 & ABP Ref. No PL29S.241965; 1420/04 & ABP Ref. No. PL29S.207144) for a temporary period of five years at South Bank Road, Irishtown, Dublin 4. The application is located within the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme area.</p>
<p>Development at the Ringsend Wastewater Treatment Plant.</p> <p>Reg. Ref. 5319/22</p>	<ul style="list-style-type: none"> • Irish Water were granted permission for development on this site at the Ringsend Wastewater Treatment Plan, located on Pigeon House Road, Ringsend, Dublin 4. The proposed development consists of: • 2 no. units comprising a Combined Heat and Power Engine and Steam Generator unit with roof top plant areas. • The Combined Heat and Power unit has gross floor area of approximately 30sq m, and a height of approximately 2.6 m.

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	<ul style="list-style-type: none"> The rooftop plant area will have a height of approximately 3.2m giving an overall height of approximately 5.8m. The Steam Generator unit has a gross floor area of approximately 30 sq m, and a height of approximately 2.6 m. <p>The rooftop plant area will have a height of approximately 3.2m giving an overall height of approximately 5.8m. All associated site works and utility connections.</p>
<p>Upgrade of the Ringsend Wastewater Treatment Plant (WwTP).</p> <p>Reg. Ref. PL29S.301798</p>	<p>Uisce Éireann has submitted a planning application for strategic infrastructure development to the Board (Ref. PL29S.301798) seeking permission to further progress the upgrade of the Ringsend Wastewater Treatment Plant (WwTP). The application seeks permission for works required to facilitate the use of Aerobic Granular Sludge (AGS) technology, to omit the previously permitted long sea outfall tunnel and to upgrade the sludge treatment facilities at Ringsend, Dublin 4, and to provide for a Regional Biosolids Storage Facility in Newtown, Dublin 11.</p>
<p>North Lotts & Grand Canal Dock Planning Scheme 2014</p> <p>BP Ref. PL29N.ZD2011</p>	<p>The North Lotts and Grand Canal Planning Scheme was approved by An Bord Pleanála on 16th May 2014 and includes lands adjacent to Dublin Port to the west. The proximity of Dublin Port to the Planning Scheme lands and the opportunity to maintain the maritime character of the area and integrate better with Dublin Port is recognised in the Planning Scheme.</p> <p>There are limited policies and objectives within the Planning Scheme pertaining to Dublin Port, however a number of objectives support improved cruise liner and passenger facilities including:</p> <p>“ER17 To engage with Dublin Port Company, Fáilte Ireland and the Department of Transport, Tourism and Sport to facilitate the development of a new cruise tourism terminal at Alexandra Basin.</p> <p>PR12 To support the provision of a suitable terminal for cruise liners and other passenger vessels with Dublin Port”.</p>
<p>Point Bridge and Dodder Bridge</p> <p>Reg. Ref. ZE29N.ZE0006</p>	<p>DCC was granted proposed Amendments to North Lotts & Grand Canal Dock Planning Scheme in the form of the addition of Point Bridge, (now named Point Pedestrian & Cycling Bridge and Tom Clarke Bridge Widening) by An Bord Pleanála with conditions under the case ZE29N.ZE0006. The scheme will consist of two new bridges over the Liffey for cyclists and pedestrians.</p>
<p>The Howth Yacht Club Marina Extension</p> <p>Reg. Ref. DAS Permit Reg. No. S0010-01</p>	<p>Howth Yacht Club (HYC) is proposing to extend the marina at Howth within the confines of the existing breakwater. A Dumping at Sea Permit was granted in August 2011 (Reg No. S0010-01) for the disposal of 120,000 tonnes of dredged material at the licensed offshore spoil grounds located to the west of the Burford Bank, the same offshore site for the dredge spoil from the 3FM Project.</p>
<p>Development that will be for mixed usage</p> <p>Reg.Ref. PWSDZ3270/19</p>	<p>Becbay Ltd & Fabrizia Developments Ltd have been granted permission for a development that will consist of;</p> <ul style="list-style-type: none"> Streets. Transportation.

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	<ul style="list-style-type: none"> • Water services. • Utilities infrastructure. • Public realm and public amenity spaces. • Temporary landscaping of a school site to facilitate Phase 1 development as provided for under the approved Poolbeg West SDZ Planning Scheme.
<p>Development that will be for mixed usage</p> <p>Reg.Ref. PWSDZ3207/19</p>	<p>Permission for development at a site forming part of the former Irish Glass Bottle and Fabrizia sites, Poolbeg West, Dublin 4. The application site is located within the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme 2019 area.</p> <p>The proposed development will consist of: streets, transportation, water services and utilities infrastructure; public realm and public amenity spaces; and, temporary landscaping of a school site, to facilitate Phase 1 development as provided for under the approved Poolbeg West SDZ Planning Scheme. The site extending to approximately 4.3 ha forms part of the former Irish Glass Bottle and Fabrizia sites at Poolbeg West, Dublin 4, and is bound to the north west by Sean Moore Road, to the north east by South Bank Road, to the south east by Dublin Port lands and Dublin Bay, and to the south west by Sean Moore Park. A 10 year permission is sought.</p>
<p>Development that will be for mixed usage</p> <p>Reg.Ref. PWSDZ3207/21</p>	<p>Permission for development for a mixed use development on a site of 15.3 hectares (including some 0.2 hectares of public domain on Sean Moore Road and the junction with Pine Road), focused primarily, but not exclusively, on a net site area of 2.4 hectares (identified as within the A3 Lands) in the Poolbeg West Strategic Development Zone Planning Scheme (April 2019).</p> <p>The overall site is bounded to the northwest by Sean Moore Road, to the north east by South Bank Road, to the south east by Dublin Port lands and Dublin Bay, and to the south west by Sean Moore Park. The overall site subsumes the 4.3 hectares site of the infrastructure permission (Parent Permission) (Reg. Ref. PWSDZ3270-19) for which Dublin City Council issued a Notification of Final Decision (10-year permission) on 28 January 2020, permitting, streets, transportation, water services and utilities' infrastructure, public realm and public amenity spaces; and temporary landscaping of a school site, to facilitate Phase 1 development as provided for under the approved Poolbeg West SDZ Planning Scheme.</p> <p>The proposed development will consist of: amendment to Permission Register Reference PWSDZ3270/19 in those areas where the net site of 2.4 hectares overlaps with the boundaries of the earlier 4.3 hectare infrastructure permission (including amendments to the streets to be taken in charge, amendments to permitted vehicular and basement access points, materials, urban tree locations and landscaping, and changes in level for permitted streets, parks and public realm and public amenity spaces); and the construction of a residential and mixed-use scheme comprising a floor area of 61,310 sq m (53,048 sq m above basement, together with a basement undercroft area of 8262 sqm, comprising 4 No. blocks (identified as Blocks O, M and K (with Block M comprising two separate structures: a larger block and a smaller townhouse block) to provide: 600 No, apartment units and associated residential amenity facilities; a childcare facility; café restaurant unit; and two retail units; together with associated infrastructural works on the overall site.</p>

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	<p>The 600 No apartment units will consist of: 304 No, apartment units; 144 No. 'Build-To-Rent' apartments (including resident support facilities and resident services and amenities (as per the requirements of the Sustainable Urban Housing: Design Standards for New Apartments (December 2020); 90 No. affordable housing apartments; and 62 No. social housing apartments. (The social and affordable housing is provided in accordance with Objective H7 of the Planning Scheme.)</p> <p>The proposed development will consist of:</p> <ul style="list-style-type: none"> • Blocks K, M and O ranging in height from 3 - 16 storeys over basement undercroft to provide 600 No. apartment units (with balconies terraces to be provided on all elevations at all levels for each residential block, consisting of: 32 No. studio units; 267 No. 1-bedroom units; 245 No. 2-bedroom units; and 56 No. 3 bedroom units (for the avoidance of doubt, Section 11.5.1 of the Planning Scheme clarifies the description of 'height' in Figure 11.3 to be taken from the constructed ground floor level; references to 'basement' and 'undercroft', respectively, are interchangeable given the changes in level across the site); • The provision of 804 sq m of residential amenity facilities (to include a gym, lounge, meeting room, cinema room and other private amenities.) • A childcare facility (458 sq m) located at the ground floor of Block k providing c.80 No. childcare places, and an outdoor play area of c.200 sq m; • 2 No, retail units located at the ground floor of Block K (314 sq m (82 sq m and 232 sqm)); • 1 café restaurant located at the ground floor of Block K (97 sq m); • A total of 166 No. car parking spaces (with 128 No. located at basement level with vehicular access from the ground floor of Block M from the new adjacent side street, and the provision of 38 No. on-street car parking spaces); • Provision of 961 No. bicycle parking spaces (911 No. long-stay bicycle parking spaces located at basement and surface level; and 50 No. short-stay bicycle parking spaces located at surface level); • Plant rooms and resident storage spaces located at basement level; • Landscaped open spaces to comprise 4052 sq m of residential communal courtyards (incl. children's play areas), and roof terraces to Block K (4th & 7th Floor), Block M (3rd & 6th Floor) and Block O (8th & 16th Floor); and • 1 No. ESB substation located within each of the ground floors of Block O (32 sqm) and M (32 sq m), and 2 No. ESB substations located within the ground floor of Block K (64 sq m). <p>The proposed development will also include the provision of additional streets and site services, hard and soft landscaping, pedestrian and cycle links, boundary treatments, tree removal and tree planting, interim site hoarding, public lighting, green roofs, commercial and residential waste facilities, piped site wide services (including a temporary attenuation detention basin to serve Phase One) and all ancillary works and services necessary to facilitate construction and operation.</p>

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	<p>This application will be accompanied by an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS).</p>
<p>Development that will be for mixed usage</p> <p>Reg.Ref. PWSDZ3406/22</p>	<p>Pembroke Beach DAC was granted permission for development for a mixed-use development (Referred to as Phase1B) on this site of 15.06 hectares including lands known as the Former Irish Glass Bottle & Fabrizia Sites, Poolbeg West, Dublin 4, focused primarily, but not exclusively, on a net site area of 0.76 hectares (identified as within the A3 Lands) in the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme (April 2019).</p> <p>The overall site subsumes the 4.3 hectares site of the infrastructure permission (Parent Permission) (Reg. Ref. PWSDZ3270/19) for which Dublin City Council issued a Notification of Final Decision (10-year permission) on 28 January 2020, permitting: streets, transportation, water services and utilities’ infrastructure; public realm and public amenity spaces; and temporary landscaping of a school site, to facilitate Phase 1 development as provided for under the approved Poolbeg West SDZ Planning Scheme.</p> <p>The proposed Phase 1B development will consist of: amendment to Permission Register Reference PWSDZ3270/19 in those areas where the net site of 0.76 hectares overlaps with the boundaries of the earlier 4.3 hectare infrastructure permission (including amendments to the permitted vehicular and basement access point, materials, urban tree locations and landscaping, and changes in level for the permitted streets, village green and public realm and public amenity spaces); and the construction of a residential and mixed-use scheme comprising a floor area of 43,944 sq m (37,020 sq m above basement, together with a basement/undercroft area of 6,924 sq m, comprising 1 No. block (identified as Block L) to provide: 356 No. apartment units and associated residential amenity facilities; ground floor retail unit; together with associated infrastructural works on the overall site.</p> <p>The 356 No. apartment units will consist of: 264 No. apartment units; 55 No. affordable housing apartments; and 37 No. social housing apartments. (The social and affordable housing is provided in accordance with Objective H7 of the Planning Scheme.)</p> <p>The proposed Phase 1B development will consist of:</p> <ul style="list-style-type: none"> • The building will range in height from 5 – 18 storeys over basement/undercroft to provide 356 No. apartment units (with balconies/terraces to be provided on all elevations at all levels for each residential block, consisting of: 89 No. 1-bedroom units (2no. studio 1-bedroom 1 person and 87 no. 1-bedroom 2 persons); 213 No. 2-bedroom units; and 54 No. 3-bedroom units (for the avoidance of doubt, Section 11.5.1 of the Planning Scheme clarifies the description of ‘height’ in Figure 11.3 to be taken from the constructed ground floor level; references to ‘basement’ and ‘undercroft’, respectively, are interchangeable given the changes in level across the site); • The provision of 844 sq m of residential amenity facilities (to include a lounge, meeting area, and other private amenities); • Retail space located at the ground floor (310 sq m); • A total of 69 No. car parking spaces (incl. 6 No. car share spaces) located at basement level with vehicular access from the street level along the north-western elevation and the new adjacent side street, and the provision of 11 No. on-street car parking spaces (incl. 2 No. EV on-street car parking spaces)) (Note

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	<p>the 11 No. on-street car parking spaces is inclusive of 2 No. on-street car parking spaces proposed as part of the Phase 1 Residential application for planning permission (PWSDZ3207/21));</p> <ul style="list-style-type: none"> • Provision of 610 No. bicycle parking spaces (550 No. long-stay standard bicycle parking spaces located at basement level); 38 No. short-stay standard bicycle parking spaces located at surface level; 17 No. cargo bicycle parking spaces located at basement level; and 5 No. cargo bicycle parking spaces located at surface level); • plant rooms and resident storage spaces located at basement level; • Landscaped open spaces to comprise c.2441 sq m of residential communal courtyards (incl. children’s play areas), and roof terraces (6th, 8th, 10th & 17th Floors); and • 1 No. ESB double substation and associated LV switch rooms located at ground floor along the south elevation. <p>The proposed development will also include hard and soft landscaping, pedestrian and cycle links, boundary treatments, tree planting, interim site hoarding, public lighting, green roofs, commercial and residential waste facilities, piped site wide services and all ancillary works and services necessary to facilitate construction and operation.</p>
<p>Development that will be for mixed usage PWSDZ4341/23</p>	<p>"Planning permission for development comprising modifications to a permitted mixed-use scheme (Referred to as Phase 1B) at a site including lands known as Former Irish Glass Bottle & Fabrizia Sites, Poolbeg West, Dublin 4. The site is identified as being within the A3 Lands in the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme (April 2019).</p> <p>The proposed development consists of a change of plan and a change of unit types from that permitted under Dublin City Council Planning Reference PWSDZ3406/22. The proposed development will comprise a total of 324 no. residential units (as permitted).</p> <p>The amendments related to the replacement of 8 no. 2 bed units with 8 no. 1 bed units resulting in an overall unit mix of 100 no. 1 beds, 166 no. 2 beds, and 58 no. 3 beds. These unit modifications are to facilitate the construction of an additional stairs from the 10th to 17th storey within the permitted development to address fire safety requirements. The proposal will result in minor elevational changes."</p>
<p>Development that will be for mixed usage PWSDZ3062/24</p>	<p>Pembroke Beach DAC was granted permission for development for the construction of a 6 storey structure to accommodate a multi-functional Community Hub and an Innovation Hub (12,556 sqm GFA) (referred to as Block P, accommodating community, innovation (office), leisure, cultural, artistic, café, educational and library uses) on a site of 15.06 hectares (identified as ‘Glass Bottle’) including lands known as the Former Irish Glass Bottle & Fabrizia Sites, Poolbeg West, Dublin 4, focussed primarily, but not exclusively, on a net site area of 0.4523 hectares in the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme (April 2019).</p> <p>The proposed Block P development will also consist of the: - Provision of 5 No. new on-street car parking spaces (incl. 2 No. Accessible car parking spaces) and 1 No. on-street loading/taxi bay; and - Provision of 219 No. bicycle parking spaces (147 No. long-stay standard bicycle parking spaces located at the Innovation Hub Bike Store; 70 No. short-stay standard bicycle parking spaces located on-street at surface level; and 2 No. cargo bicycle parking spaces located at surface level). Access and servicing</p>

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	<p>of the proposed Block P development will be by way of the permitted Local Street (Side Street) identified on the emerging Masterplan as “Holbrook Street” (as included in the Permitted Phase 1 (Reg. Ref. PWSDZ3207/21) and Phase 1B (Reg. Ref. PWSDZ3406/22) Schemes) and by the Coastal Link to be delivered as part of this development between Holbrook Street and the Village Green (permitted under the ‘Parent Permission’ (Reg. Ref. PWSDZ3270/19). The proposed development will also consist of the provision of: hard and soft landscaping incl. Coastal Link Planting, and roof terraces; publicly-accessible roof amenity space; a mural on the south-east elevation; pedestrian and cycle links; boundary treatments; tree removal and tree planting; interim site hoarding; public lighting; green and blue roofs; piped site wide services; and all ancillary works and services necessary to facilitate construction and operation.</p>
<p>Development that will be for mixed usage PWSDZ3798/24</p>	<p>Planning permission for development of an office and mixed-use scheme (Referred to as Phase A Commercial) on an infill site of c.15.08 hectares (with a net focused site area of c. 1.75 ha) of land within the former Irish Glass Bottle (IGB) and Fabrizia sites on Sean Moore Road, Dublin 4 (including some 198 sq metres of public domain on Southbank Road to accommodate vehicle and pedestrian access). The site is identified as within the A1 Lands in the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme (April 2019).</p>
<p>Development that will be for mixed usage PWSDZ3700/24</p>	<p>Pembroke Beach DAC intends to apply for permission for development for a mixed used development (referred to as Phase 2) on this site of 15.06 hectares including lands known as the Former Irish Glass bottle & Fabrizia Sites, Poolbeg West, Dublin 4, focused primarily on a net site area of 1.99 hectares (identified as within the A1 Lands) in the Poolbeg West Strategic Development Zone (SDZ) Planning Scheme (April 2019).</p> <p>The proposed Phase 2 development will consist of: amendment to permission Register Reference PWSDZ3270/19 and PWSDZ3207/21 in those areas where the net site of 1.99 hectares overlaps with the boundaries to the earlier permitted developments (including amendment to the urban tree plant along the Sean Moore Road interface & minor amendment to permitted public realm at the junction between Central Boulevard and South Bank Link Road) and the construction of a residential and mixed use scheme comprising an above ground gross floor area (GFA) of C. 48,648 sq.m., together with a basement/undercroft area of c. 10,654 sq.m., comprising 5 no. blocks (identified as blocks D1, D2, E1, E2, E2A) to provide: 502 no. apartment units and associated residential amenity facilities; a childcare facility; 3 no. Retail/ Food & Beverage units; 3 no. Retail Units, 2 no. Food/ beverage units; Health Facility; basement carparking; together with associated infrastructural works on the overall site. The proposed development will also include provision of the South Bank Link Road as identified in the SDZ Planning Scheme.</p>
<p>Dublin Array Wind Farm Reg. Ref. FS007188</p>	<p>The Dublin Array project was on of a few offshore wind farms that was granted a Maritime Area Consent (MAC) in December 2022. Planning permission is to be submitted in 2024.</p> <p>The project will consist of:</p> <ul style="list-style-type: none"> • Erection of between 39 and 50 turbines. • Turbine tip heights of between 270 metres and 310 metres.

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	<ul style="list-style-type: none"> • Total capacity up to 824MW. • Individual turbine capacities up to 15 MW+. • Fixing of turbine foundations to the seabed. • Installation of meteorological equipment. • Construction of one or more offshore collector substation(s) • Laying of cables from the offshore substation(s) to the landfall. • Laying of inter-turbine cabling to connect the turbines to each other, and to the collector substation(s). • Landfall and Transition Joint Bay (TJB) site(s), • The construction of an onshore substation(s), adjacent to Carrickmines, Poolbeg or any other connection point as agreed by EirGrid.
<p>Codling Wind Park</p> <p>Reg. Ref. FS007045</p>	<p>Codling Wind Park was awarded a MAC by the Department of the Environment, Climate and Communications in December 2022. In a combination of two proposed projects the project area is approximately 125km².</p> <p>The project will consist of:</p> <ul style="list-style-type: none"> • The maximum of 100 Wind Turbine Generators (WTGs) and supporting foundations. Each WTG will consist of a tower section, nacelle and three rotor blades. • Construction of up to 3-4 Offshore Substations (OSPs) and supporting foundations. • Installation of subsea array cables, linking the wind turbines to the offshore substations. • Installation of subsea export cables, connecting the offshore substations to the shore. • Cable protection associated with array and export cables and cable crossings (if required). • Scour protection around WTG and OSP foundations (if required). • Landfall site(s) with associated transition pits to connect the offshore and onshore cables. • Onshore 220 kV underground cables. • Onshore 220 kV substation(s), compound(s) and transformer stations (if required).
<p>North Irish Sea Array</p> <p>Reg. Ref. FS007031</p>	<ul style="list-style-type: none"> • Erection of between 35 and 46 turbines. • Turbine tip heights with a maximum of 320 metres. • Total capacity of 530MW. • Installation of subsea array cables, linking the wind turbines to the offshore substations.

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	<ul style="list-style-type: none"> • Installation of subsea export cables, connecting the offshore substations to the shore. • Landfall site(s) with associated transition to connect the offshore and onshore cables. • Onshore grid facility adjacent to landfall. • Construction of Operation and Maintenance Facility (OMF) including: <ul style="list-style-type: none"> a) Main OMF building. b) Warehouse and workshop. c) External storage area. d) Berthing facilities to support 3-4 Crew Transfer Vessels (CTVs). e) Vessel bunkering services for fuel and potable water. f) Storage tanks for marine fuel and waste oil. g) Additional supporting infrastructure such as lighting, perimeter security fencing, access control gates & Close-circuit television (CCTV).
<p>Seastacks Wind Farm Reg. Ref. FS007134</p>	<ul style="list-style-type: none"> • Erection of between 40 and 55 turbines. • Total capacity of 800MW. • Installation of subsea array cables, linking the wind turbines to the offshore substations. • Installation of subsea export cables, connecting the offshore substations to the shore. • Landfall site(s) with associated transition to connect the offshore and onshore cables. • Onshore substation site. • Cable protection associated with array and export cables and cable crossings (if required).