[redacted]
Foreshore Unit,
Department of Housing, Local Government and Heritage,
Newtown Road,
Co. Wexford
9th March 2022

Marine Adviser Environment Screening Stage Report

Re: FS006893 MP2 project – construction of a new berth and alterations to existing berths.

Applicant: Dublin Port Company

I have reviewed the Foreshore Application FS006893 and all the environmental documents associated with it. My comments on and recommendations for this application are as follows:

Independent Environmental Consultant (IEC): The Department engaged **ARUP** as an IEC to provide assistance with regard to the statutory and non-statutory environmental assessments of this Foreshore Lease application. The IEC has conducted independent assessments of the information provided by the Applicant, having regard to the Habitats Directive, EIA Directive, and the public and prescribed bodies' consultations.

Environmental Impact Assessment Regulations: The Department's Marine Environment Adviser determined that the proposed project requires a mandatory EIA as it falls under Annex II 10(e) of the EIA Directive. As the Consent Authority (DHLGH) the Department must complete **an Examination for EIA** as part of its obligations under the EIA Directive [see Appendices].
Further information was sought by the IEC on the Environmental Impact Assessment Report submitted by the applicant and clarification was sought on the project's dredge quantities. These requests and the applicant's responses are included in the Appendices.

Risk Assessment of Annex IV Species of Directive (92/43/EEC) (as amended) (Habitats Directive: Following a review of the applicant's Risk Assessment of Annex IV species the IEC concluded that with the implementation of the mitigation and monitoring measures as outlined in section 7 of the EIAR it is very unlikely that there will be negative residual impacts from the proposed works on Annex IV species. It is also very unlikely that any of these animals will be injured or killed as a result of the proposed works.
Having considered the application by Dublin Port Company and the IEC's Risk Assessment of Annex IV species report I agree with and accept this report and its conclusions.

It should be noted that this risk assessment is not part of the Article 6.3 assessment and therefore identification and inclusion of mitigation measures within the risk assessment is appropriated at this stage.

Article 6(3) of Directive (92/43/EEC) (as amended) (Habitats Directive): Following a review of the proposed project, the IEC complete **Screening for Appropriate Assessment** which concluded that a Stage 2 Appropriate Assessment was required as the project, individually or in combination with other plans or projects, is likely to have a significant effect on European sites.

Having considered the application by Dublin Port Company and the IEC's Screening for Appropriate Assessment Report I agree with and accept the Screening for Appropriate Assessment and its conclusions. My signed Recommending Officer's **Screening for Appropriate Assessment Determination** which requires the signature of the Minister as part of the decision-makers obligations under the Habitats Directive is contained in the Appendices.

If the Minister adopts and approves these reports and a determination is made that a Stage 2 Appropriate Assessment is required a public consultation will be held on the Appropriate Assessment. On completion of this second consultation and the work of the IEC, I will furnish my final assessment report which will have regard to the information obtained during public participation and will include, if necessary, any case specific conditions.

Signature of Marine Advisor:  **9th March 2022**

Appendices

Appendix 1

Examination for EIA

EIA legislation sets down the types of projects that may require an EIA. Annex I of Directive 2011/92/EU, as amended by Directive 2014/52/EU' defines mandatory projects that require an EIAR and Annex II lists projects which can be subject to case by case analysis or thresholds to be determined by member states.
In the case of development which is under the relevant threshold, the consent authority is required to request an EIAR where it considers that the proposed development is likely to have significant environmental effects. The decision as to whether a development is likely to have such effects must be taken with reference to the criteria set out in Annex III (Schedule 7) inserted by (the Planning and Development Regulations 2001, as amended, (S.I. No. 600 of 2001)) the above Directive and the national guidance developed to assist.

Name of Proposed Development: Foreshore licence application for MP2 project –construction of a new berth and alterations to existing berths.

Foreshore Reference, where applicable: FS006893

Question 1: Is the proposed development included in Annex I and II of the Directive (Schedule 5 to the P& D Regs)?

- If Yes: EIA is required.
- If No, proceed to Q2. **Answer: Yes**

Question 2: Is the proposed development of <u>a type/class</u> included in Annex I and II of the Directive (Schedule 5 to the P&D Regs) but below the threshold specified?

- If Yes, <u>but</u> the development is below the quantity/area/other threshold, proceed to Q3.
- If No, no EIA or Screening for EIA is required.

Answer: N/A

Question 3: Are <u>significant effects</u> likely?

To decide whether significant effects are likely, use the Annex III of the Directive (Schedule 7 of the P&D Regs)

- If Yes, significant effects are likely; an EIA is required.
- If No, no significant effects are likely; no EIA is required.

Answer: N/A

Access to Information:

- The Consent Authority's process must be documented.
- A record of the decision and the decision-making process must be made public.

Appendix 2

Screening for Appropriate Assessment Determination

***Project reference*:** FS006893 MP2 project – construction of a new berth and alterations to existing berths.

In accordance with Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) and Regulation 42(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended ('The Regulations'), the Department of Housing, Local Government and Heritage has undertaken a Screening for Appropriate Assessment (AA) to assess, in view of best scientific knowledge and the conservation objectives of relevant European sites, if the proposed project for the construction of a new berth and alterations to existing berths, individually or in combination with other plans or projects would be likely to have a significant effect (s) on a European site(s).

In accordance with Regulation 42(6) of the European Communities (Birds and Natural Habitats) Regulations 2011 SI 477 as amended, the Department of Housing, Local Government and Heritage has made a determination following screening that an Appropriate Assessment is required as the project, individually or in combination with other plans or projects, is likely to have a significant effect on European sites.

The risk of likely significant effects on European sites cannot be excluded on the basis of objective evidence. This determination is based on the location, scale, extent and duration of the proposed development, including temporary works, and has not taken account of measures intended to avoid or reduce significant effects on European sites.

Signature and Date of Recommending Officer [redacted] **9th March 2022**

Signature and Date of the Decision Maker:

Appendix 3 Request for Clarifications on EIAR and Applicants Response
Independent Environmental Consultant's
Request for Clarifications Number 1
Submitted to Dublin Port Company on the 25th November 2021

Request for clarifications FS006893 Dublin Port MP2 Project Foreshore Application

We have reviewed the information submitted with the application for Foreshore consent, file reference FS006893 Dublin Port MP2 Project. To complete our work as independent environmental consultant on this project, we require clarification from the applicant on the following issues:

1. Only terrestrial transportation was addressed in Chapter 13 of the EIAR, Material Assets – Traffic and Transportation. Information is provided in various chapters of the EIAR and in the accompanying documents on the impacts of the project on material assets – port infrastructure, shipping and navigation and marine transportation. This information should be collated to provide a single assessment narrative. The capacity of the MP2 area of the Port, number and sizes of berths, depths available, sizes and types of ships which can use the berths and throughput capacity in the EIAR baseline year, in 2032, with the MP2 Project completed, and in 2040 should be described. Any impacts of the MP2 project during construction or operation on the other port facilities, such as the container terminals in the southern port lands, pilotage/navigation in the channel and approaches, number and operation of tugboats and pilots, should be described.

2. The impacts of the project on utilities, such as water and electricity, were screened out. However, not enough information was presented to allow this decision to be reviewed. Clarification is required of the estimated quantities of water and electrical power demand/consumption and wastewater generated by the Port in the EIAR baseline year, in 2032 and in 2040. Clarification is required of the impacts of the project on the capacity of the water, electrical power and wastewater infrastructure in 2032 and in 2040.

3. The waste arisings during current and future the operational phases are described. Provide clarification of the estimated quantities of waste arisings during operations in EIAR baseline year, and likely to arise in 2032 and in 2040.

Clarification is required of the impacts of the estimated waste arisings on the capacity of the waste management infrastructure in 2032 and in 2040.

4. Chapter 16 provides an assessment of the socio-economic impacts of the MP2Project, combined with other Masterplan projects, in 2040. Clarification is required of the socio-economic impacts of the MP2 Project in 2032, when it commences operation.

Dublin Port Company's
Response to Request for Clarifications Number 1
Submitted to the Foreshore Unit on the 9th of December 2021

DUBLIN PORT COMPANY
MP2 PROJECT
FORESHORE APPLICATION (FS006893)
RESPONSE TO CLARIFICATIONS ON FORESHORE APPLICATION

Introduction

The MP2 Project Planning Application was made directly by Dublin Port Company (DPC) to An Bord Pleanála (ABP) on 11th July 2019 following the determination of ABP on 9th August 2018 that the project constitutes a strategic infrastructure development under the Section 37 E of the Planning and Development Act 2000 as amended. The application was subject to an Oral Hearing on 16th December 2019 and granted permission by ABP on 1st July 2020.

ABP granted DPC a 15 year planning permission to construct all elements of the MP2 Project including the specific planning aspects relating to dredging, works on the proposed berths, including works on the seabed and foreshore.

A copy of the decision by ABP dated 1st July 2020 is appended to this response document at Appendix 1. Of particular note in that decision is that in coming to its decision that the proposed development was in the interests of proper planning and sustainable development ABP took account of the following;

- The evidence provided by the Applicant that the additional and longer berths and capital dredging were required in Dublin Port to meet the projected growth within the region, facilitate the berthing of larger ships and future proof the use of infrastructure within the Port Estate.
- The nature, scale and design of the proposed development.
- The range of mitigation measures set out in the documentation lodged, including the Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) incorporating Appropriate Assessment screening.
- ABP also undertook an Appropriate Assessment and was satisfied that the proposed development, by itself or in combination with other plans or projects would not adversely affect the integrity of the relevant European sites, in view of the sites Conservation Objectives.
- ABP also completed an environmental impact assessment of the proposed development and concluded that subject to the implementation of the mitigation measures referred to in the EIAR (including proposed monitoring) and subject to compliance with the conditions set out in the ABP decision, the

effects on the environment of the proposed development, by itself and in combination with other development in the vicinity would be acceptable.

- In light of the environmental impact assessment and the Appropriate Assessment, ABP concluded that the proposed development is in accordance with the proper planning and sustainable development of the area.
- ABP also recognised that the proposed development complies with EU Directives, national and local policy and would be acceptable in terms of biodiversity, noise, landscape, cultural heritage and traffic and as a consequence would be in accordance with proper planning and sustainable development of the area.
- ABP included specific planning conditions to address matters arising from proposed dredging and foreshore construction activities, including measures to address potential over-spilling, noise and impacts on marine mammals and birds and measures concerning the preservation, recording and protection of archaeological materials or features within the site.

A Foreshore Application was subsequently made to the Department of Housing, Local Government & Heritage (DHLGH) on 5th July 2020 supported by the same EIAR and Appropriate Assessment Screening Report & NIS which supported the Planning Application.

The Foreshore Application was subject to a period of public consultation (25th November 2020 to 3rd February 2021) and DHLGH confirmed that no public submissions were received. Responses to all submissions received from Prescribed Bodies were completed by June 2021.

DHLGH has subsequently appointed an Independent Environmental Consultant (IEC) to review the MP2 Project Foreshore Application. Four points of clarification were requested by the IEC which were forwarded by DHLGH to DPC on 25th November 2021 seeking a response.

This document sets out DPC's response to the four clarifications sought.

Clarification 1

Material Assets – Port Infrastructure, Shipping & Navigation and Marine Transportation

Requested Clarification

Only terrestrial transportation was addressed in Chapter 13 of the EIAR, Material Assets – Traffic and Transportation. Information is provided in various chapters of the EIAR and in the accompanying documents on the impacts of the project on material assets – port infrastructure, shipping and navigation and marine transportation. This information should be collated to provide a single assessment narrative. The capacity of the MP2 area of the Port, number and sizes of berths, depths available, sizes and types of ships which can use the berths and throughput capacity in the EIAR baseline year, in 2032, with the MP2 Project completed, and in 2040 should be described. Any impacts of the MP2 project during construction or operation on the other port facilities, such as the container terminals in the southern port lands, pilotage/navigation in the channel and approaches, number and operation of tugboats and pilots, should be described.

DPC Response

Details of the capacity of the MP2 area of Dublin Port, number and sizes of berths, depths available, sizes and types of ships which can use the berths and throughput capacity are presented in Volume 2 of the EIAR Chapters 2 & 3 and are summarized below:

The MP2 Project in the context of the Dublin Port Masterplan 2040

Dublin Port is the largest and most important port in the country. The combination of reasonable depth of water, proximity to the largest concentration of population on the island and excellent access to the national road and rail networks gives Dublin Port its importance in both the EU TEN-T network[1] and in the national port system.

In common with other important parts of national infrastructure, there has been significant underinvestment in Dublin Port for many decades. For example, for 31 years from 1979 to 2010 Dublin Port & Docks Board and latterly Dublin Port Company (DPC) sought permission to expand the port by infill into Dublin Bay opposite Clontarf rather than optimising existing quays and lands.

A new direction for the development of the Port was established by the Dublin Port ***Masterplan 2012-2040*** published in February 2012.

[1] The Trans European Network for Transport (TEN-T) is a central concept within EU Transport Policy as set out in the EU white paper *Roadmap to a Single European transport area – Towards a competitive and resource efficient transport system, COM(2011) 144 final* and in many EU policy and funding initiatives subsequently. The TEN-T network recognises ports as key nodes within the wider road, rail and shipping networks that facilitate trade within and outside the EU. There are 319 ports identified in the network. 83 (including Dublin) are in the *core* network and 236 are in the *comprehensive* network.

The Masterplan was reviewed and updated and the current version is ***Masterplan 2040 Reviewed 2018***, published in June 2018.

Between the publication of the original Masterplan in 2012 and the updated version in 2018, the challenges facing the Port changed significantly due to a number of factors:

- Rapid economic recovery after the 2008 recession led to large growth in cargo volumes from 28.1m gross tonnes in 2011 to 38.0m gross tonnes in 2018, an increase of 35.2%.
- The country's population increased by 6.2% from 4.6m in 2011 to 4.9m in 2018.
- Following the referendum in the UK in June 2016, and anticipation of Brexit in the near future, patterns of trade have changed with increased growth on services between Dublin and ports in Continental Europe such as Rotterdam, Zeebrugge and Cherbourg.

The review of the Masterplan modified DPC's view of how Dublin Port needs to be developed:

- Firstly, the long-term growth rate assumption for capacity planning[2] was increased from 2.5% to 3.3%
- Secondly, where the original Masterplan had posited the ultimate deepening of the Port to -12.0m CD, it is now accepted that the ultimate depth will be -10.0m CD.
- Thirdly, where the Masterplan published in 2012 had envisaged a possible return to the eastwards expansion of the Port, this has now been ruled out and all remaining developments will be based on the existing footprint of the Port.
- Finally, it is envisaged that major works in Dublin Port will need to be completed before 2040 at which stage the Port will have reached its maximum and ultimate capacity of 77.2m gross tonnes.

Figure 3 in the Masterplan (reproduced in Figure 2-1) identifies the land uses and development projects on port lands which will allow the Port to increase its capacity to 77.2m gross tonnes by 2040.

DPC envisages that the development of Dublin Port to its ultimate capacity will be achieved by three large developments, all SID projects:

1. Alexandra Basin Redevelopment (ABR) Project (PA0034), which is under construction.
2. MP2 Project, now proposed.
3. A final project including development of land areas K, L, M, N and O (Figure 2-1) and possibly also including the development of the South Port Access Route (SPAR) to provide connectivity between the Dublin Port Tunnel and the south port lands as envisaged in NTA's Transport Strategy for the Greater Dublin Area 2016 to 2035.

[2] 30 year average annual growth rate of gross tonnes of cargo

The MP2 Project complements the ABR Project in providing capacity for growth in the Ro-Ro and Lo-Lo modes[3] in **Area C** and **Area D** on the north side of the Port and at its eastern end (as shown in Figure 1-1).

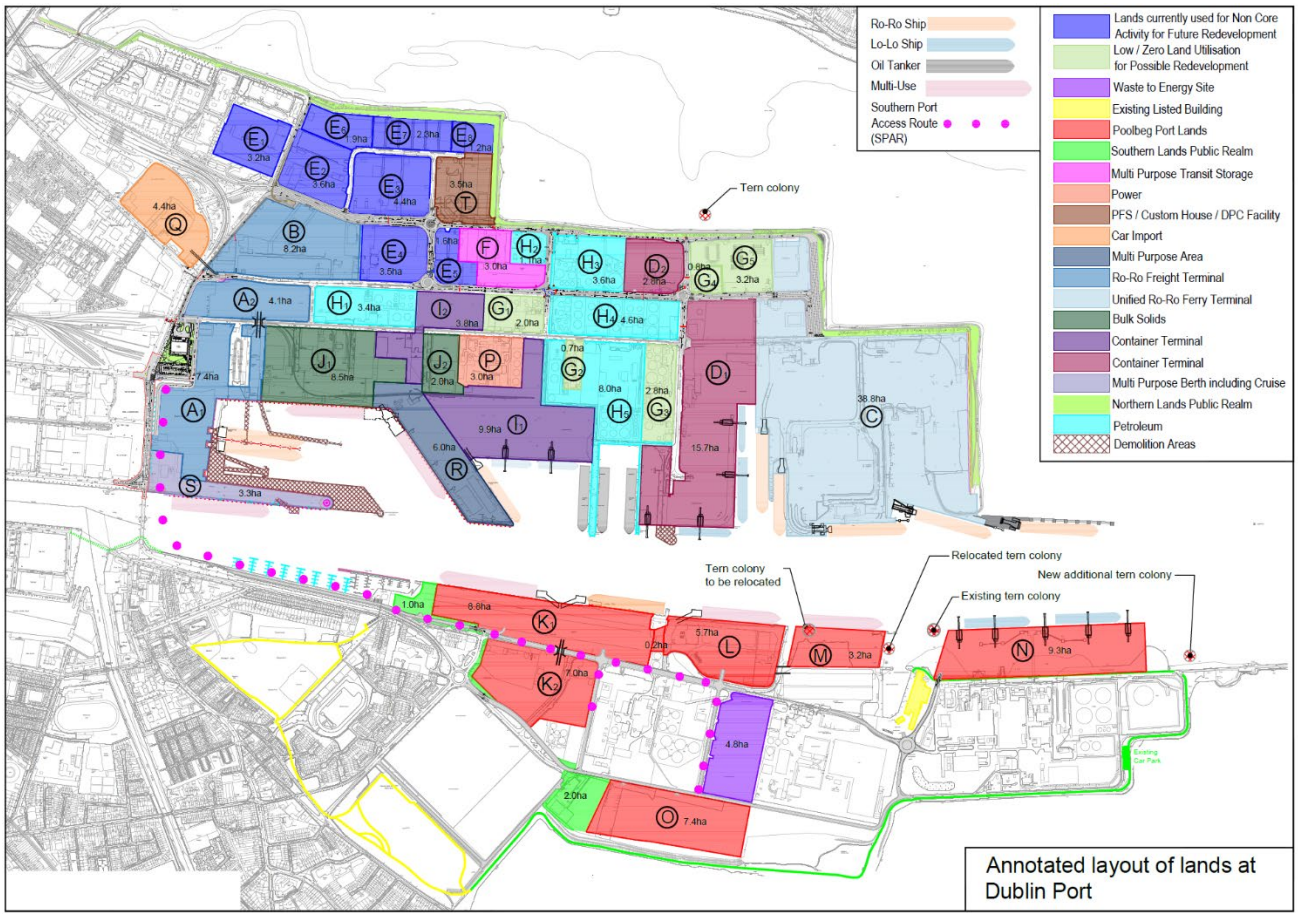

Figure 1-1 Dublin Port Masterplan 2040 (Figure 3)

Since the adoption of the Dublin Port Masterplan 2040, reviewed 2018, the anticipated growth in both Ro-Ro and Lo-Lo trade directly to Continental Europe has been realised, post Brexit, requiring the development of Berth 52 and Berth 53 to be fast-tracked, subject to Foreshore Consent.

The MP2 Project

The MP2 Project is intended to provide a second tranche (after the ABR Project) of the additional capacity required to cater for a projected demand of 77.2m gross tonnes by 2040.

The project has been carefully devised by DPC to ensure that:

- It is consistent with the Dublin Port Masterplan 2040
- The proposals selected for development make optimum use of the Port's finite resources of river berths and quayside lands

[3] Roll-On-Roll-Off (Ro-Ro) and Lift-On-Lift Off (Lo-Lo)

- The proposed configuration reflects and responds to assessments of the potential environmental impact of different options to achieve the project's objectives
- The chosen project option best meets all applicable environmental and ecological requirements
- The project can be constructed in a way that minimises the impact on existing port operations
- The proposed project is consistent with the principles of proper planning and sustainable development
- The project makes provision for future population growth and a concomitant increase in demand for port infrastructure at the location closest to where the need for additional capacity arises

The landside works proposed in the MP2 Project are all on the north side of Dublin Port at its eastern end. The existing layout of this area of the Port is shown in Figure 1-2[4].

The MP2 Project is designed to provide:

- A new Ro-Ro jetty (Berth 53) for ferries up to 240 metres in length on an alignment north of the Port's fairway and south and parallel to the boundary of the South Dublin Bay and River Tolka SPA (004024).
- A reorientation of the already consented (ABR Project, PA0034) Berth 52[5].
- 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.
- A lengthening of an existing river berth (50A) to provide the DFT Container 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.
- The redevelopment and future-proofing of Oil Berth 3 as a future deep water container berth (-13.0m CD) for the DFT Container Terminal. The future-proofing 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.

[4] Berth 52 and Berth 53 as shown in Figure 2-2 will be removed as part of the ABR Project and the basin between them will be infilled. The new river berth to be developed east of Berth 49 and to the south of this infilled basin will be designated as Berth 52. The designation Berth 53 is likewise being retained for the new jetty berth now proposed in the MP2 Project.

[5] Berth 52 is designed to accommodate ferries up to 240 metres in length. 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 240 metres in length. The combination of the ABR Project with the MP2 Project will deliver three river berths all capable of accommodating ferries up to 240 metres in length.

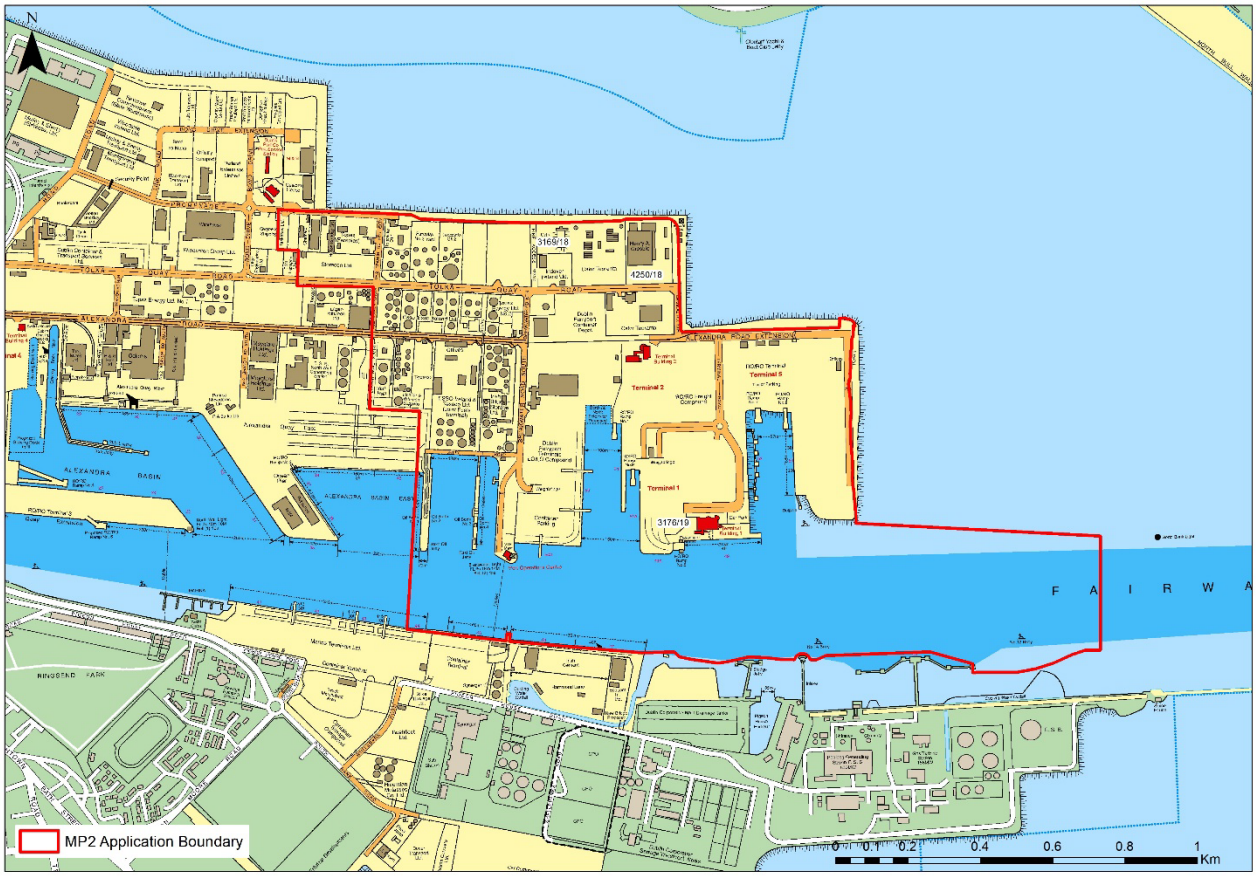

Figure 1-2 Existing layout of the area in which the MP2 Project works are proposed

Capacity enhancements as a result of the MP2 Project

In the wider context of Masterplan 2040, the MP2 Project is one of a number of projects which together will deliver the capacity required to cater for the Masterplan's projections to 2040.

In particular, the MP2 Project directly links with three other projects (all consented with one complete and two under construction) to deliver the Masterplan's vision for **Area C** and **Area D**. These three projects are summarised in Table 1-1.

Table 1-1 Developments complementary to the MP2 Project

Project name	Planning reference	Status	Comment
ABR Project	PA0034	Underway	Includes the infill of the Berth 52/53 basin to provide additional land in **Area C**.
Roads project	3084/16	Underway	Provides expanded capacity for Dublin Port's internal roads network sufficient for projected volumes to 2040.
Redevelopment of Blugas Yard	2429/17	Complete	Provides an additional 2.8 hectares of terminal storage area for the DFT Container Terminal (**Area D_2** in Figure 1-1).

The MP2 Project will deliver additional capacity in each of the Ro-Ro and Lo-Lo modes in circumstances where existing facilities are inadequate for future growth.

Ro-Ro Trade

The **first focus** of the MP2 Project is to complete the development of a single unified Ro-Ro ferry terminal in **Area C** to cater both for existing operators (Irish Ferries, Stena Line and P&O) and for possible new operators. Current arrangements are not adequate to cater for anticipated growth and for the emerging changes in trade patterns. The existing operators provide services to ports in Britain and, increasingly, to ports in France. It is expected that there will be a further increase of services to France as a result of Brexit.

The various traffics serviced by these ferries are:

- Driver accompanied freight vehicles
- Unaccompanied freight vehicles
- Passenger traffic mostly in vehicles (private cars and coaches) but also as foot passengers

The unified Ro-Ro ferry terminal will also cater for seasonal fast craft operations (currently by Irish Ferries and the Isle of Man Steam Packet Company).

The MP2 Project will complete development in this part of the Port for Ro-Ro ferry operations and will deliver three long river berths (49, 52 and 53), all with double tier ramps, together with Berth 51 (double-tiered ramp) and Berth 51A (single tiered ramp)

Summary information on Throughput and Berth usage in **Area C** is presented in Table 1-2 for the following years

- 2018 - Base Year
- 2032 – Year of MP2 Project Opening (estimate based on an annual average growth rate of 3.3%)
- 2040 – End of Masterplan Period

Indicative Ro-Ro freight berth capacity in 2040 for the five berths in **Area C** is presented in Table 1-3. The impact of expanding the capacity of Area C in 2040 is presented in Table 1-4.

Table 1-2 Indicative increase in Ro-Ro throughput in Area C from 2018 to 2040

	2018	2032	2040
Throughput (units)	725,000	1,164,000	1,164,000
Average units per day	1,986	3,189	3,189
Average sailings per day	13	18	18
Average units per sailing	153	177	177

Table 1-3 Indicative berth throughout capacities in Area C in 2040

	Units p.a.	Indicative use
Berth 51	240,000	Freight services to Liverpool
Berth 51A	100,000	Fast craft passenger services and occasional use for freight services
Berth 49	350,000	Combined freight / passenger ferry services to Holyhead
Berth 52	350,000	Combined freight / passenger ferry services to Holyhead
Berth 53	240,000	Combined freight / passenger ferry services to Continental Europe
Totals	1,280,000	

Table 1-4 Impact of landside handling capacity of Area C in 2040

	Area C	Comment
Use	Ro-Ro units	
Area	38.8	Hectares
Franchise Policy[6] target	30,000 units	Per hectare per annum
Capacity	1,164,000 units	Per annum
Masterplan projections 2040	2,249,000 units	

The growth in the volume of Ro-Ro freight to 2040 will come on routes to the UK (Holyhead, Liverpool and Heysham) and also on routes to Continental Europe (to ports such as Cherbourg, Zeebrugge and Rotterdam).

Berths dedicated to services to Holyhead can achieve high throughput levels (in the order of 350,000 units per annum) due to the reliability of shipping schedules on the short Dublin to Holyhead route and due to fast cargo handling operations because much of the Ro-Ro freight is accompanied.

Berths used for services to Liverpool, Heysham or ports in Continental Europe have lower potential throughput levels (up to 240,000 units per annum) due to the lower schedule reliability of longer sea routes and due also to the longer time needed for cargo handling operations as a result of a preponderance of unaccompanied Ro-Ro freight units.

In addition to providing capacity for freight and combined freight / passenger ferries, the five berths in **Area C** will also provide capacity for seasonal fast craft services (such as Irish Ferries' *Dublin Swift* service to Holyhead and the Isle of Man Steam Packet Company's service to Douglas).

The berth capacity of 1,280,000 units per annum shown in Table 1-3 compares to the land capacity of 1,164,000 units per annum for **Area C** shown in Table 1-4.

[6] Following the adoption of Masterplan 2012-2040 in February 2012, DPC completed a land use review which culminated in the publication of Dublin Port's Franchise Policy in May 2014 (https://www.dublinport.ie/wp-content/uploads/2017/03/Dublin-Port-Co.-Franchise-Policy-2014.pdf. This policy specifies a target of not less than 40,000 units per hectare per annum for Accompanied Ro-Ro and 20,000 units per hectare per annum for Unaccompanied Ro-Ro. The actual proportions of Accompanied and Unaccompanied units in the future will be a function of supply / demand dynamics. In this table, an average of 30,000 units per hectare per annum is used for illustrative purposes.

A margin of surplus berth capacity over land capacity is essential to provide contingency capacity for berth downtime for a range of reasons including: planned maintenance; equipment failure; impact of adverse weather on ship schedules.

The layout of the land area of **Area C** will be capable of being adapted to the requirements of the trade. In general, the higher the proportion of accompanied Ro-Ro units, the greater will be the throughput capacity of **Area C**.

Should there be a higher proportion of unaccompanied Ro-Ro in 2040 than is envisaged in Table 1-4, then it will be necessary for DPC to implement measures to increase the utilisation of the capacity of **Area C**, such as:

- Moving trailer units to back areas within Dublin Port (notably Area E in Figure 1-1)
- Implementing pricing initiatives which financially penalise trailers with long dwell times

Lo-Lo Trade

The **second focus** of the MP2 Project is to bring the development of capacity for Lo-Lo operations in the DFT Container Terminal to completion in **Area D**.

Summary information on Berth usage, Land usage, Capacity and Throughput is presented in Table 1-5 for the following years

- 2018 - Base Year
- 2032 – Year of MP2 Project Opening (estimate based on an annual average growth rate of 3.3%)
- 2040 – End of Masterplan Period

Table 1-5 Indicative increase in Lo-Lo throughput and utilisation levels in Area D from 2018 to 2040

	2018	2032	2040
Berthage	560 m	927 m	927 m
Berth usage (TEU per metre p.a.)	590	798	798
Land area	12.7 ha	18.5 ha	18.5 ha
Land usage (TEU per hectare p.a.)	26,027	40,000	40,000
Capacity (TEU p.a.)	508,000	740,000	740,000
Capacity utilisation	65%	79%	100%
Average TEU per week (throughput)	6,357	11,237	14,231
Ships per week	8.3	10.0	11.0
Average TEU per ship	766	1,124	1,294

Ferry Passengers

In addition to being the country's largest port for cargo, Dublin is also the largest port for passengers, both on ferries and cruise ships. Table 1-6 shows that two million passengers passed through Dublin Port in 2018, the vast majority (90.3%) on ferry services to Holyhead, Liverpool and Cherbourg.

Table 1-6 Dublin Port passenger numbers, 2018

Ferries	1,827,674	90.3%
Cruise	196,899	9.7%
Total	**2,024,573**	**100.0%**

Ferry passenger numbers in 2018 were are on an upward trend and the planned introduction by major ferry operators (Irish Ferries and Stena Line) of large new ships in the next two years will support a continuing increase in ferry passenger numbers not only on routes to Holyhead but also increasingly to France.

Although the main focus of the developments proposed in the MP2 Project is on cargo, the overall development of **Area C** (both as a result of the works proposed within the MP2 Project and as a result of other Masterplan projects) will provide capacity for the continued growth of Dublin Port's ferry passenger business.

In 2018 there were 1.83 million passangers. If the upward trend continues, there is likely to be circa 2.7 million passangers by 2032 and circa 3.6 million passangers by 2040 (see Section 4, Figure 4-3).

Area C will be the only area in Dublin Port where passenger ferry services will operate.

Petroleum Trade

The Lo-Lo developments in **Area D** entail the immediate loss of Oil Berth 4 (OB4) and the planned cessation of petroleum imports through OB3 at some point in the future as petroleum imports decline.

Table 1-7 shows the average annual throughputs and capacity utilisations of the Port's four oil berths over the five years to 2018.

Table 1-7 Oil berths' throughput and capacity utilisation, five year averages from 2014 - 2018

	Tonnes	Share	Utilisation
Oil Berth 1	1,732,287	43.3%	48.7%
Oil Berth 2	2,109,846	52.7%	57.8%
Oil Berth 3	147,395	3.7%	11.3%
Oil Berth 4	15,222	0.4%	1.1%
Totals	**4,004,751**	**100.0%**	

The proposed loss of OB4 is of no consequence to the Port's overall throughput capacity.

Growth in Ship Sizes

The future growth in Ro-Ro and Lo-Lo will be accompanied by increases in ship sizes and the MP2 Project will provide longer and deeper berths both for Ro-Ro ferries and for Lo-Lo container ships.

The MP2 Project is being proposed against a background where work is progressing within the ABR Project. The deepening of the navigation channel at Dublin Port to -10.0m CD was completed in March 2021.

Moreover, Masterplan 2040 has confirmed that this will be the final deepening of Dublin Port.

These factors provide a clear context in which to relate the developments proposed in the MP2 Project to future ship sizes.

Looking firstly at the depth constraints in Dublin Port within which the MP2 Project is being proposed, Table 1-8 shows maximum ship draughts which Dublin Port will be capable of handling.

Table 1-8 Draught handling capabilities at -10.0m CD

		Mean high water	Channel depth	Max draught		Mean low water	Channel depth	Max draught
Spring tides		4.1m	14.1m	13.1m		0.7m	10.7m	**9.7m**
Neap tides		3.4m	13.4m	**12.4m**		1.5m	11.4m	10.4m
Note: max draughts assume an under keel clearance of 1.0m								

In order to be able to maintain set schedules, **Ro-Ro** ferries need to be able to access Dublin Port at all stages of the tide. Table 1-8 above indicates that ferries with draughts up to about 9.7 metres will be able to access the port. This is sufficient for any conceivable size of Ro-Ro ferry that might be deployed by operators in the future.

Within the MP2 Project, therefore, the proposed depth at Berth 52 and at Berth 53 is -10.0m CD. This is also sufficient for any conceivable size of Ro-Ro ferry.

Table 1-9 shows the dimensions of selected Ro-Ro ferries including both ferries in service in Dublin Port or planned to be introduced together with ferries in service elsewhere or under construction.

Table 1-9 Sample Ro-Ro ferries

Ship	Operator	LOA	Draught	Comment
Ulysses	Irish Ferries	209m	6.4m	In service in Dublin Port since 2001
W.B. Yeats	Irish Ferries	195m	6.7m	In service in Dublin Port since January 2019
Hull 777	Irish Ferries	226m	6.7m	Commences in Dublin Port in 2020
Stena Hollandica	Stena Line	240m	6.5m	In service on Harwich to Hook route
Stena E-flexer	Stena Line	215m	6.4m	Commences in Dublin Port in 2019
Stena E-flexer	Stena Line	240m	6.4m	Construction of two ships commenced in July 2018
Celine	CLdN	234m	8.1m	In service in Dublin Port since October 2017
Laureline	CLdN	216m	8.2m	In service in Dublin Port since March 2019

It is envisaged that both Irish Ferries and Stena Line will operate from the river berths (specifically Berth 49 and Berth 52). Each operator has ferries in operation or on order with lengths (LOA) in excess of what can currently be accommodated.

Moreover, there are already large ferries (*Celine* with a length of 234m and *Laureline* at 216m) in operation elsewhere in Dublin Port.

There is, therefore, a clear requirement for the MP2 Project to provide three river berths capable of accommodating ships up to 240m in length.

In the case of **Lo-Lo** container ships, the maximum size which can currently be handled in Dublin is limited by a combination of constraints (including berth depths and channel depth) to give a practical maximum draught in the region of 9.0m. The maximum size of container ship which has called to the Port in recent years is in the order of 1,400 TEU.

The deepening of the Port to -10.0m CD as part of the ABR Project removes the channel constraint. The lengthening of Berth 50A and the redevelopment of OB3 would lessen the existing berth constraints and allow large container ships to operate at the DFT Container Terminal.

The planned capacities of these berths is shown in Table 1-10.

Table 1-10 Planned capacities of Berth 50A and OB3

Berth	Length	Depth
50A	306 metres	-11.0m CD
OB3	242 metres	-13.0m CD

These berth capacities would allow considerably larger container ships berth at DFT. The median ship capacity in 2018 at DFT was 864 TEU (nominal). Figure 1-4 shows the distribution of ship capacities for the 432 container ships handled at DFT in 2018.

Nominal TEU	# ships
340	1
508	41
509	1
515	1
750	4
801	1
803	155
822	7
864	6
868	53
900	1
974	161
Total	**432**

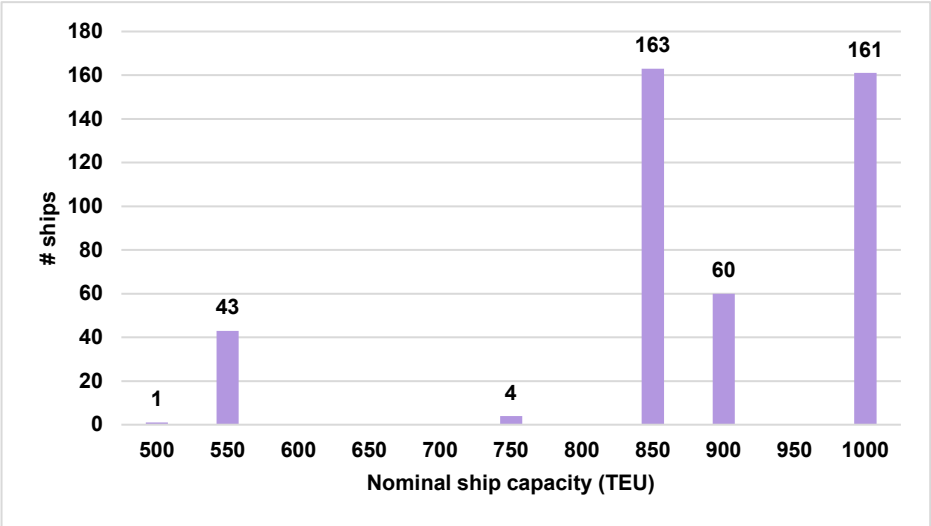

Figure 1-4 Distribution of container ship capacities at DFT (nominal TEU), 2018

Table 1-11 shows an analysis of the distribution of ship lengths and ship draughts for 2,726 ships in the 1,000 TEU to 3,500 TEU subset of the worldwide fleet of container ships.

Table 1-11 Distribution of container ship lengths and draughts in the range 1,000 TEU to 3,500 TEU[7]

Length	# ships
100m	11
150m	327
200m	1,620
250m	737
300m	31
	2,726

Draught	# ships	Cumulative %
8.0m	100	3.7%
9.0m	460	20.5%
10.0m	574	41.6%
11.0m	545	61.6%
12.0m	829	92.0%
12.4m	111	96.1%
13.0m	76	98.9%
14.0m	31	100.0%
	2,726	

Comparing the berth capacities in Table 1-10 with the distribution of ship lengths and draughts in Table 1-11 shows that the MP2 Project would enable a large proportion of the world fleet of container ships in the capacity range from 1,000 TEU to 3,500 TEU to be handled at the DFT Container Terminal.

The ability to handle larger container ships at DFT is essential if the increased throughput projected at the terminal (740,000 TEU by 2040) is to be achieved.

Potential impact on other Port Facilities and Users of the River Liffey

The impact of the MP2 Project on other Port Facilities and Users of the River Liffey is presented in Volume 2 of the EIAR, Chapter 3 and also detailed within the MP2 Project Foreshore Application Form. The results of the assessment are summarized below

Are there public navigational safety implications arising from the proposed works?

Dublin Bay, the approaches to the Port and the shipping channel are monitored by Vessel Traffic Services (VTS). All vessels are advised regarding works, developments or issues that are ongoing in the Dublin Port area of jurisdiction. Prior to any quay works / dredging a DPC “Notice of Mariners” is sent out to all shipping informing them about the planned work and dates. During the construction / dredging operations the vessel traffic is supervised and controlled.

What marine activity is there in the area?

Dublin Bay is very busy with marine leisure events and small craft movements especially during the summer months. Agreement was reached with all the sailing and motor clubs how best to co-exist. To that end the commercial shipping channels, access routes and anchorage areas are well defined and kept clear. The

[7] Based on data extracted from Sea-Web™ database (www.sea-web.com)

organised leisure industry operates within the confines of the areas agreed for their events. Individual craft must operate within the international maritime legislation governing all vessels big and small.

How will the marine activity be affected by the proposed works?

Marine activity will be able to operate with little or no disruption as the construction / dredging operations proceed. Dredging works will be subservient to the demands of commercial movements. The leisure craft are not normally allowed to operate within the confines of the main navigation channel. As the dredging is confined to the navigation channel, basins and berths there will be no effect. When small craft are entering or leaving the Port they must do so under the control of VTS. Therefore they will be well informed and aware of any dredging operations and of their requirements to stay clear. Again this is in compliance with International Legislation.

What mitigating measures will be put in place?

The activity which has the potential to cause most disruption is dredging. The Harbour Master will issue a Notice to Mariners specifying in detail the areas to be dredged and the requirements of all craft, not directly involved with the dredging operation to keep clear. In relation to commercial traffic they will be coordinated and controlled by VTS who will be in communication with all involved.

How will the proposed works affect Marine Navigation in the future?

Periodic maintenance dredging ensures that the access into the Port is maintained and therefore ensures the safe passage of vessels into and from the Port. The buoyage defining the navigation routes will remain the same after the MP2 Project is completed.

Other Navigational Issues

Vessel Speed Limit - The development will not impact upon the navigation speed limit enforceable within the harbour.

Navigation Charts - The proposed development will require updating of the appropriate navigation charts for the area. This will be done through consultation with the United Kingdom Hydrographic Office.

Radar and GPS - Impacts on radar are not envisaged. Global Positioning System navigation charts will be updated based on updates to Navigation Charts.

VHF & Communication - Impacts on VHF radio and other communication systems are not envisaged.

Marine Notices - Marine Notices will be issued to alert the general public of the proposed changes to the port.

Vessel Manoeuvring - The dredging works will improve navigability on the approach to Dublin Port.

Availability of Tugs and Pilot Boats

DPC operate two tug boats and three pilot boats to aid the safe passage of large vessels to and from Dublin Port. A third Party also provides these services thereby providing competition for these services. The Harbour Master has confirmed that the current arrangements in place are suitable for port operations to 2040.

Conclusion

The port operations in place, under the control of the Harbour Master, will ensure there will be no impact on other port facilities including the MTL container terminal within the South Port and leisure users of the River Liffey.

Concluding remarks

The MP2 Project is the second major strategic infrastructure project to emerge from Dublin Port's Masterplan 2040. Completion of all of the developments needed to realise the vision of the Masterplan will likely involve one subsequent and final major strategic infrastructure project.

Between 2010 and 2018, 9.1% of the growth projected in Masterplan 2040 has occurred. The MP2 Project will provide capacity for a further **30.2%** of the volume projected in 2040.

The MP2 Project will bring development at the eastern end of Dublin Port on the north side of the Liffey to its ultimate limit and will provide much needed capacity for both Ro-Ro and Lo-Lo cargo. The Masterplan, as a whole, will bring Dublin Port to its ultimate capacity by 2040 and the MP2 Project is an essential step on this path.

The MP2 Project redevelops assets currently used for the importation of petroleum products and future-proofs these assets for alternative uses as and when national and EU policies result in a transition away from fuels such as petrol and diesel.

Finally, given the large rate of growth of cargo volumes in Dublin Port and the absence of either demand or significant capacity elsewhere in the Irish port's system, the MP2 Project is designed to provide essential nationally important port capacity in line with both Government policy (notably National Ports Policy and the National Planning Framework) and with EU transport policy (TEN-T).

The port operations in place, under the control of the Harbour Master, will ensure there will be no impact on other port facilities including the MTL container terminal within the South Port and leisure users of the River Liffey.

Clarification 2

Potential impact on Utilities

Requested Clarification

The impacts of the project on utilities, such as water and electricity, were screened out. However, not enough information was presented to allow this decision to be reviewed. Clarification is required of the estimated quantities of water and electrical power demand/consumption and wastewater generated by the Port in the EIAR baseline year, in 2032 and in 2040. Clarification is required of the impacts of the project on the capacity of the water, electrical power and wastewater infrastructure in 2032 and in 2040.

DPC Response

Volume 2 of the EIAR, Chapter 5 Project Scoping & Consultation describes how DPC scoped the contents of an Environmental Impact Assessment Report (EIAR) by engaging in consultations with prescribed and other statutory bodies and stakeholders and through public consultation. The scoping was undertaken in accordance with the European Commission's 2017 "Environmental Impact Assessment of Projects Guidance on Scoping", which states:

> "*It is good practice to carry out Scoping even if it is not required by legislation: Developers should endeavour to include a Scoping stage in their work programme for EIA, so that all of the concerns can be identified and addressed during the Scoping stage*."

The purpose of the EIAR scoping process is to identify the issues which are likely to be important during the environmental impact assessment and to eliminate those that are not relevant.

In conducting the scoping process, and in preparing this EIAR, consideration has been given to publications including the Advice Notes and various other documents.

The scoping of the MP2 Project has greatly benefitted from the environmental monitoring programme which is currently in place for the construction of the ABR Project.

The monitoring programme comprises:

- Continuous noise and dust monitoring at two locations
- Periodic vibration monitoring
- Continuous Water Quality monitoring within the inner Liffey channel at four locations (turbidity, dissolved oxygen, temperature, salinity)
- Continuous Water Quality monitoring within Dublin Bay at four locations (turbidity at three depths at each location). This is complemented by continuous wave climate and tidal current measurements.
- Passive Acoustic Monitoring (PAM) for Harbour Porpoise detection at two locations within Dublin Bay
- Static Acoustic Monitoring (SAM) for Harbour Porpoise detection at four locations within Dublin Bay
- Records of marine mammal sightings by MMOs during dredging and piling operations

- Benthic surveys of the licenced dumping at sea site at the entrance to Dublin Bay
- Monthly seal surveys at Bull Island
- Lamprey surveys within the Liffey
- Wintering waterbird surveys within the South Dublin Bay & River Tolka Estuary SPA
- Tern colony surveys
- Black Guillemot surveys
- Underwater surveys during piling and dredging activities to validate models used to assess the impact on migratory fish and marine mammals.

The site-specific scientific data collected to date has been used to support the preparation of the EIAR and NIS for the MP2 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 MP2 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 MP2 Project, described in Volume 2 of the EIAR, Sections 5.2 and 5.3, 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.

The scope of the EIAR, conducted in respect of the MP2 Project, has had due regard to the following statutory and guidance documents:

- Statutory requirements of the Planning and Development Act 2000 – 2017 and the Planning and Development Regulations 2001 – 2018.
- European Commission Environmental Impact Assessment of Projects Guidance on Scoping (Directive 2011/92/EU as amended by 2014/52/EU), (2017)
- Guidelines on the information to be contained in Environmental Impact Statements and Advice Notes on Current Practice in the preparation of an EIS both published by the EPA 2003.
- Advice Notes for preparing Environmental Impact Statements (Draft) EPA 2015
- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Draft) EPA 2017
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, 2018
- The requirements of Dublin City Council as detailed in the Dublin City Development Plan 2016 – 2022.

Following the scoping process, all environmental topics have been comprehensively addressed within the EIAR including:

- Examination of Alternatives

- Risk of Major Accidents
- Biodiversity, Flora and Fauna
- Soils, Geology and Hydrogeology
- Water Quality and Flood Risk
- Noise & Vibration
- Material Assets – Coastal Processes
- Material Assets – Traffic and Transportation
- Archaeology and Cultural Heritage
- The Landscape and Visual Impacts
- Population and Human Health
- 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 MP2 Project. These impacts are evaluated in terms of their significance, nature and magnitude.

Through the scoping process which has been carried out in the preparation of the EIAR, the issues which are likely to be important during the environmental impact assessment have been identified. The scoping process has identified the sources or causes of potential environmental effects, the pathways by which the effects can happen, and the sensitive receptors, which are likely to be affected, and has defined the appropriate level of detail for the information to be provided in the EIAR.

Two potential issues have been screened out as a result of the scoping process

- Material Assets – Services; and
- Water Quality – Discharges from vessels.

The reasons why these two topics were screened out are set out in Volume 2 of the EIAR, Chapter 5, repeated below in Table 2-1.

Table 2-1 Topics screened out during the scoping process

Topic	Reasons for screening topic out
MATERIAL ASSETS - SERVICES	
Water Supply	The supply of potable water to the Dublin Port Estate is provided by Irish Water. Water is used in the port for a variety of uses including; - :Supply of water to passenger terminals and administration buildings; - Supply of water to vessels to re-stock their internal water tanks; - Washing down facilities Irish Water has confirmed that it can meet the water demand requirements of the MP2 Project with no impact on the water supply to tenants within the Dublin Port Estate or on the neighbouring communities
Electricity Supply	The electricity supply to the Dublin Port Estate is provided by ESB Networks. The current electricity supply to the port is robust and provides ample capacity to the Dublin Port Estate. ESB Networks has confirmed that it can meet the electricity demand requirements of the MP2 Project with no impact on the electricity supply to tenants within the Dublin Port Estate or on the neighbouring communities
Natural Gas Supply	The area within the MP2 Project application boundary is not currently connected to the natural gas network, The MP2 Project will therefore have no impact on the natural gas supply to the neighbouring communities.
Wastewater	Separate foul and storm water drainage systems are in existence within the Dublin Port Estate. The existing set-up will continue within the footprint of the MP2 Project in that surface water will be directed to a storm water drainage system and wastewater will be directed to the existing sewerage network. The sewerage network is in turn connected to the municipal wastewater system for Dublin City which is operated and managed by Irish Water. It is not anticipated that there will be any increase in the peak wastewater discharge to the public sewer as a result of the MP2 Project. The wastewater demand requirements of the MP2 Project will therefore not impact on the wastewater demand of tenants within the Dublin Port Estate or of the neighbouring communities

Topic	Reasons for screening topic out
WATER QUALITY – DISCHARGE FROM VESSELS	
Discharge from vessels	Ships arriving and departing from Dublin Port are strictly forbidden to discharge wastewater of any sort within the basins or approach waters to Dublin Port. This includes - Foul sewage; - Bilge Water; and - Ballast Water There are currently no pump-out facilities for vessels at the port and there are no plans for same as a result of the MP2 Project.

The clarifications sought by DHLGH's Independent Environmental Consultants relate to

- Water Supply
- Wastewater
- Electricity Supply

Water Supply

The proposed engineering works are set out in Volume 2 of the EIAR, Chapter 3.

– The MP2 Project will extend the existing watermain network to serve Berth 52 and Berth 53. Facilities will be provided for freshwater bunkering at these berths.

The supply of potable water to the Dublin Port Estate is provided by Irish Water. Water is used in the port for a variety of uses including;

- Supply of water to passenger terminals and administration buildings;
- Supply of water to vessels to re-stock their internal water tanks;
- Washing down facilities

The water usage within the Dublin Port Estate in 2018 was circa 192,000m^3. To put the water usage in perspective, it equates to population equivalent of circa 4,046 p.e. based on a usage of 130 litre per day per capita (Irish Water Consumption Research Project - CER Reg_PP_IW_TPD_008).

The water usage predicted by 2032 is 278,000m^3 and by 2040 it is predicted to be 351,000m^3 in line with overall expected throughput. The population equivalent is therefore expected to increase to circa 7,400 p.e by 2040.

In comparison the population of Dublin in April 2021 was estimated to be 1.43 million persons, making the drawdown of potable water to the Dublin Port Estate insignificant.

It is however recognised that the daily water demand will not be constant. Consultation therefore took place with Irish Water during the preparation of the scoping phase of the EIAR. A Pre-Connection Enquiry was issued to Irish Water setting out the proposed water supply requirements of the MP2 Project.

Water demand requirements, post project development within the MP2 Project area only, are set out below

- Volume per day 300m^3
- Peak Hour Flow 40m^3

These volumes are applicable to the year of opening in 2032 and 2040.

Irish Water wrote to DPC on 21st November 2021 confirming that, subject to a valid water connection agreement being put in place, the proposed connection to the Irish Water network can be accommodated.

The correspondence with Irish Water, including the populated Pre-Connection Enquiry, is set out in Volume 3 of the EIAR, Appendices (see Appendices related to Chapter 5 of the EIAR). The relevant correspondence is attached for ease of reference.

The An Bord Pleanála grant of permission, Condition 15, states that DPC shall enter into water and wastewater connection agreements with Irish Water, prior to commencement of the development.

DPC would be pleased to accept a similar Condition should DHLGH consider it relevant to the MP2 Project Foreshore Application.

Based on the above analysis, Water Supply was screened out from the EIAR because its impact was proven to be *de minimus*.

Waste Water

The proposed engineering works are set out in Volume 2 of the EIAR, Chapter 3.

- Wastewater Drainage: A gravity sewer is proposed to link the proposed toilet blocks to the existing gravity sewer serving Terminal 5 (which is to be demolished). The existing toilet provision at Terminal 1 Building is considered adequate for the proposed use. It is not anticipated that there will be any significant increase in the peak wastewater discharge to the public sewer as a result of the development.
- Stormwater Drainage: There is limited additional hardstanding area proposed within the Unified Ferry Terminal (UFT) to that already in place and that consented under the ABR Project. The additional hardstanding is due to the proposed Berth 53. It is proposed to collect storm water on the new hardstanding areas in a closed system and discharge via a new silt trap and oil interceptor/separator to the outfall at Berth 52 as consented as part of the ABR Project.

The MP2 Project area will thereby operate on a separate storm water and waste water drainage systems as set out in the Foreshore Application drawings.

The volume of waste water arising will therefore be of a similar volume to that set out above under Water Supply as summarised below

- Estimated volume of waste water (2018) 4,046 p.e
- Estimated volume of waste water (2040) 7,400 p.e

The waste water arising from the Dublin Port Estate is treated at Ringsend Waste Water Treatment Plant (WwTP), located on the Poolbeg Peninsula and operated by Irish Water. The Ringsend WwTP is currently being upgraded to increase capacity to a population equivalent of 2.5 million. The Capacity Upgrade Contract (CUC) began in 2014 and is scheduled to be completed by 2025/26.

The volume of waste water arising from the MP2 Project will be less than 0.3% of the Ringsend WwTP capacity.

Based on this analysis, Waste Water was screened out from the EIAR because its impact was proven to be *de minimus*.

Electricity Supply

The proposed engineering works are set out in Volume 2 of the EIAR, Chapter 3.

- It is proposed to provide a new substation to the South East corner of the UFT to facilitate the additional power demand of the proposed UFT and to replace the loads provided by two existing substations within Terminal 5 which are proposed to be demolished. The new substation will also facilitate Shore to Ship Power (SSP) for Berth 52 and 53 to provide required hoteling power demand of berthed vessels. Each berth will be equipped with the required transformer within the new substation building which will serve as galvanic separation between harbours electric grid and the vessels electric system. The substation will link to a power outlet at Berth 52 and Berth 53 to facilitate a connection to berthed vessels.

The electricity supply to the Dublin Port Estate is provided by ESB Networks. The current electricity supply to the port is robust and provides ample capacity to the Dublin Port Estate. This is because of the MP2 Project proximity to a major hub of electricity generation

- ESB Generating Station, Poolbeg
- Synergen Generating Station (Dublin Bay Power), Poolbeg
- Covanta Waste to Energy Plant, Poolbeg

The North Wall Power Station is also located within the North Port Estate. It is currently not producing electricity but contains a significant substation served by 220 kV cables from the ESB Generating Station.

DPC's Total Primary Energy Requirement (TPER) was 16.5 GWh in 2018. DPC's energy consumption comprises of 33% electricity, 54% transport fuels for vessels and vehicles and 13% for space heating. By 2020 the TPER was reduced to 14.1 GWh representing an energy efficiency of 38.9% against DPC's 2009 baseline. At a 38.9% energy efficiency rate DPC consumed 381kWh for every 1,000 tonnes of trade handled in 2020. By 2030 DPC expect to achieve a 50% improvement on energy efficiency versus the 2009 baseline. On this basis, the predicted TPER for 2032 and 2040 are presented in Table 2-2.

Table 2-2 DPC's Total Primary Energy Requirement (TPER)

Year	2020	2032	2040
Predicted annual throughput of cargo Tonnes (,000)	36,864	61,040	77,157
Energy Efficiency Target (%)	38.9%	50%	50%
TPER (GWH)	14.1	20.6	26.1
kWh/1,000 tonnes	381	338	338

DPC's Total Energy consumption is therefore expected to be 20.6 GWH by 2032 and 26.1 GWH by 2040.

Consultations with ESB Networks during the scoping of the MP2 Project confirmed that ESB Networks can provide the required level of capacity to feed the proposed sub-station from their existing network, with MV cables uprated locally where required.

Electricity Supply was therefore screened out from the EIAR because its impact on the electricity supply to tenants within the Dublin Port Estate or on the neighbouring communities was proven to be *de minimus*.

Clarification 3

Potential impact on Waste Management

Requested Clarification

The waste arisings during current and future the operational phases are described. Provide clarification of the estimated quantities of waste arisings during operations in EIAR baseline year, and likely to arise in 2032 and in 2040. Clarification is required of the impacts of the estimated waste arisings on the capacity of the waste management infrastructure in 2032 and in 2040.

DPC Response

Background

Chapter 17 of the EIAR provides a summary of the Operational Waste being managed at Dublin Port. Table 17-5 of the EIAR identifies waste types as Ship Waste, Port Waste and Cargo Waste and provides details of the management route of those waste types.

- Operational wastes generated on-board vessels arriving in Dublin Port including hazardous wastes (waste fuels and hydraulic oils/lubricants, bilge water, filters, WEEE) and non-hazardous wastes (residual waste, food waste, bulk waste). Other vessel wastes include cargo residues, sludge, ballast water, glass, paper, plastic packaging and metal packaging.
- Waste generated by terminal building staff and occasional contractors employed on the site, including food waste and office type waste. This waste, classed as commercial waste, is anticipated to be of a similar composition to household waste and will include, but not be limited to food wastes, paper, packaging, cardboard and plastics;
- Waste generated by members of the public in the passenger terminal building. It is anticipated that the majority of this waste would be food based waste and associated packaging materials and hence will be similar in nature to household waste;
- Wastes produced as a result of the activities on site. This will include for example waste cleaning and sanitisation materials, ground maintenance waste, waste chemicals and waste oils.

Baseline Data

Management of waste in the port is carried out by private waste contractors who then report the data to Dublin Port Company on an annual basis in terms of waste collected and management routes. Baseline waste data for 2018 is summarised in Table 3-1. Ship and Cargo waste is reported by Dublin Port Company Harbour office to be managed mainly at the other ports outside of Ireland as waste management costs in Ireland would be considered higher compared to other countries.

Table 3-1 Waste Arising

Waste Type	European List of Wastes (LoW)	Waste Arising 2018 (Tonnes)
Port Waste		
BULKY MMW	200307	86.1
Mixed Municipal Waste	200301	104.3
Mixed Dry Recyclables	200301	9.2
Wood Packaging i.e. pallets	150103	13.4
Metal Mixed Ferrous e.g Steel	191202	14.0
WEEE IT	200136	2.6
Processed Cardboard i.e. Baled	150101	5.2
Compostable Food Waste	200108	3.3
Total Passenger Terminals and Offices		**238.2**

Waste Management Solutions

In 2018 90% of the Port Waste was recovered with the remainder being sent to Landfill. Section 17.5.3.1 of the EIAR identifies the facilities in the Eastern-Midlands Region for this form of waste treatment. Section 17.5.3.2 provides details of disposal solutions in the region.

Change in Activity

The EIAR recognises the increased activities associated with the MP2 Project will result in additional waste being generated. Data in relation to Ferry Passengers presented in response to Clarification 1 can be used as a mechanism to estimate the anticipated waste increases linked to specific changes in the activity associated with Port Waste in the MP2 Project. This is summarised in Table 3-2.

Table 3-2 Activity Changes

Activity	Method for Measurement	2018	2032	2040
Ferry Passenger[8]	Passenger Numbers	1,827,674	2,700,000	3,600,000

Projected Tonnage

Using the baseline data from 2018 and taking account of the increased activity associated with the MP2 Project development, estimated waste arising can be calculated as set out in Table 3-3.

[8] The MP2 Project does not include for increased cruise ship capacity and therefore passenger number increases are limited to Ferry Passengers.

Table 3-3 Estimated Waste Arising

Waste Type	European List of Wastes (LoW)	Waste Arising 2018 (Tonnes)	Estimated Waste Arising 2032 (Tonnes)	Estimated Waste Arising 2040 (Tonnes)
Passenger Terminals and Offices				
BULKY MMW	200307	86.1	127.2	169.6
Mixed Municipal Waste	200301	104.3	154.1	205.4
Mixed Dry Recyclables	200301	9.2	13.5	18.0
Wood Packaging i.e. pallets	150103	13.4	19.8	26.4
Metal Mixed Ferrous e.g Steel	191202	14.0	20.7	27.7
WEEE IT	200136	2.6	3.9	5.2
Processed Cardboard i.e. Baled	150101	5.2	7.7	10.2
Compostable Food Waste	200108	3.3	4.9	6.5
Total Passenger Terminals and Offices		**238.2**	**351.9**	**469.2**

Conclusion

The EIAR assessed the impact of Operational Waste as neutral given the minor increase in waste arising and the availability of waste recovery and landfill capacity in the Eastern-Midlands Region. The estimated tonnages arising in 2032 and 2040 confirm this assessment remains valid.

Clarification 4

Expected Socio-Economic impact in 2032

Requested Clarification

Chapter 16 provides an assessment of the socio-economic impacts of the MP2 Project, combined with other Masterplan projects, in 2040. Clarification is required of the socio-economic impacts of the MP2 Project in 2032, when it commences operation.

DPC Response

Background

Dublin Port's Masterplan 2040 outlines the following three major Strategic Infrastructure Development projects which will enable Dublin Port to meet its ultimate and final capacity by 2040:

- The Alexandra Basin Redevelopment (ABR) Project;
- The MP2 Project; and
- The 3FM Project.

The MP2 Project is the second major Strategic Infrastructure Development from Dublin Port's Masterplan 2040, involving an application to An Bord Pleanála for a 15-year permission for phased development works within existing port lands in the eastern part of the North Port Estate.

Prior to Dublin Port's Masterplan 2040, the initial Masterplan 2012-2040 guided the development of the Port particularly through two major initiatives:

- The ABR Project received planning permission in July 2015, with construction commencing in November 2016.
- The 44 hectare Dublin Inland Port, located 14 km from Dublin Port, allowing port-related but noncore activities to be relocated away from Dublin Port which will free up much needed land close to the quays and berths in Dublin Port for the transit and storage of cargo.

The Masterplan 2012-2040 originally estimated that average annual volume growth rate (AAGR) would average 2.5% from 2010 to 2040. However, Dublin Port's Masterplan 2040 provided a review of the Masterplan 2012-2040, and concluded that to meet anticipated capacity requirements Dublin Port needs to be developed on the basis of an AAGR of 3.3% over the 30 years from 2010 to 2040, rather than the 2.5% originally assumed in 2012.

On the basis that a 2.5% AAGR was originally assumed in the initial Masterplan 2012-2040, the Population and Health EIAR chapter used a 2.5% AAGR as the 'do-minimum' scenario. In order to be conservative, the same 2.5% AAGR was applied to socio-economic factors explored (Gross Value Added (GVA), tax and passenger throughput) until construction was completed on the MP2 Project (forecast for phased opening between 2029

and 2032). From 2029 onwards, the updated 3.3% AAGR outlined in Dublin Port's Masterplan 2040 was applied to the socio-economic factors explored in a 'do-something' scenario.

Expected Socio-Economic Impact in 2032

The cumulative impacts of other projects associated with Dublin Port's Masterplan 2040 were included within the assessment of population and health effects.

Due to the integral nature of the projects within the 2040 Masterplan, it is difficult to fully or accurately separate out the impacts associated with each of the infrastructure improvements considered within Dublin Port's Masterplan 2040, which underpins the original assessment point, and remains consistent with the wider technical disciplines.

To take a conservative approach to the analysis, it is reasonable to assume that the MP2 Project would account for circa 40% of the total throughput of the port. On this basis, a theoretical 60% reduction factor on the cumulative figures presented within the Population and Health EIAR chapter have been applied to respond to the clarification request. The results are presented below:

Operational employment

As stated in the Population and Health EIAR chapter, OECD research states that an increase of one million tonnes of port throughput has the potential to generate up to 300 additional direct, indirect and induced jobs.

As per Dublin Port's Masterplan 2040, the development options will provide capacity to cater for growth to 77 million gross tonnes of port throughput by 2040, which is calculated to support an additional 12,630 direct, indirect and induced employment opportunities. By applying the 3.3% AAGR to scale this figure back, Dublin Port would be able to handle approximately 59 million gross tonnes of port throughput by 2032. Cumulatively, the growth anticipated by 2032 would support an additional 7,340 direct, indirect and induced employment opportunities.

By applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, it is anticipated that a total of 4,400 direct, indirect and induced employment opportunities would be directly attributable to the MP2 Project by 2032.

The Population and Health EIAR chapter reported that the magnitude of impact on population and health from operational employment would be medium, where in an area of high sensitivity, would result in a moderate beneficial significance of effect, which is considered significant in EIA terms. Even when applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, the magnitude of impact would remain medium and the significance of effect would remain moderate beneficial (significant). On this basis, there is no material change to the original conclusions drawn.

Operational GVA

Figure 4-1 shows the forecasted combined direct and indirect GVA for both the do-minimum scenario (applying a 2.5% AAGR) and the do-something scenario (applying a 3.3% AAGR after 2029).

The difference between these two forecasts represents the cumulative effect of Dublin Port's Masterplan 2040; as stated in the Population and Health EIAR chapter, a total addition of approximately €27.7 million (direct and

indirect GVA) is expected by 2040. However, by 2032, the figure for direct and indirect GVA would equate to approximately €6 million.

By applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, it is anticipated that a total of €2.4 million of direct and indirect GVA would be directly attributable to the MP2 Project by 2032. This would increase to €11.1 million by 2040.

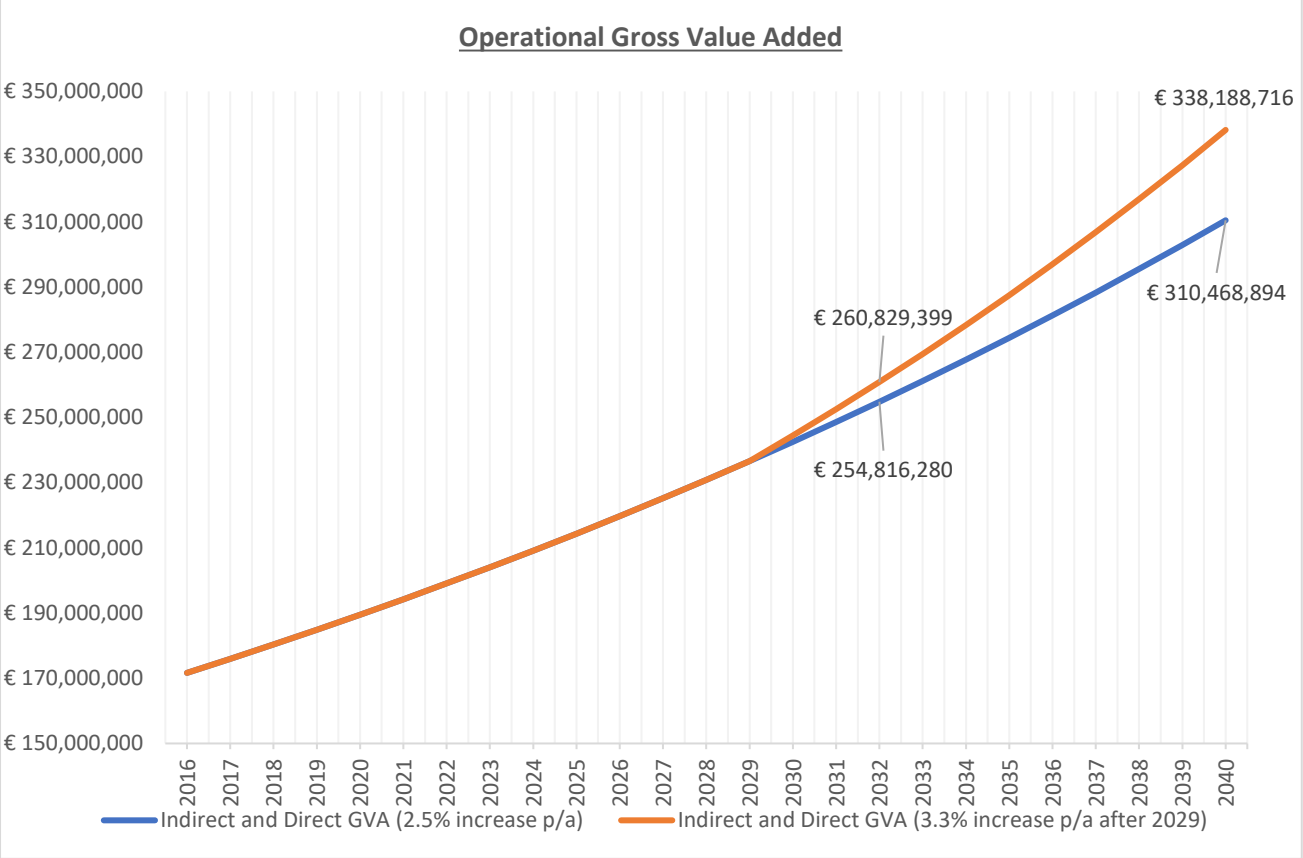

Figure 4-1 Operational Gross Value Added

The Population and Health EIAR chapter reported that the magnitude of impact on population and health from operational GVA would be high, where in an area of high sensitivity, would result in a major beneficial significance of effect, which is considered significant in EIA terms. When applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, the magnitude of impact would reduce to medium and the significance of effect would reduce to moderate beneficial. However, the overall effect remains significant. On this basis, there is no material change to the original conclusions drawn.

Operational Tax

Figure 4-2 shows the forecasted tax generation for both the do-minimum scenario (applying a 2.5% AAGR) and the do-something scenario (applying a 3.3% AAGR after 2029).

The difference between these two forecasts represents the cumulative effect of Dublin Port's Masterplan 2040; as stated in the Population and Health EIAR chapter, approximately €932,000 of tax is expected to be generated by 2040. However, by 2032, the figure for the amount of tax generated would equate to approximately €202,000.

By applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, it is anticipated that a total of €81,000 of tax generated would be directly attributable to the MP2 Project by 2032. This would increase to €373,000 by 2040.

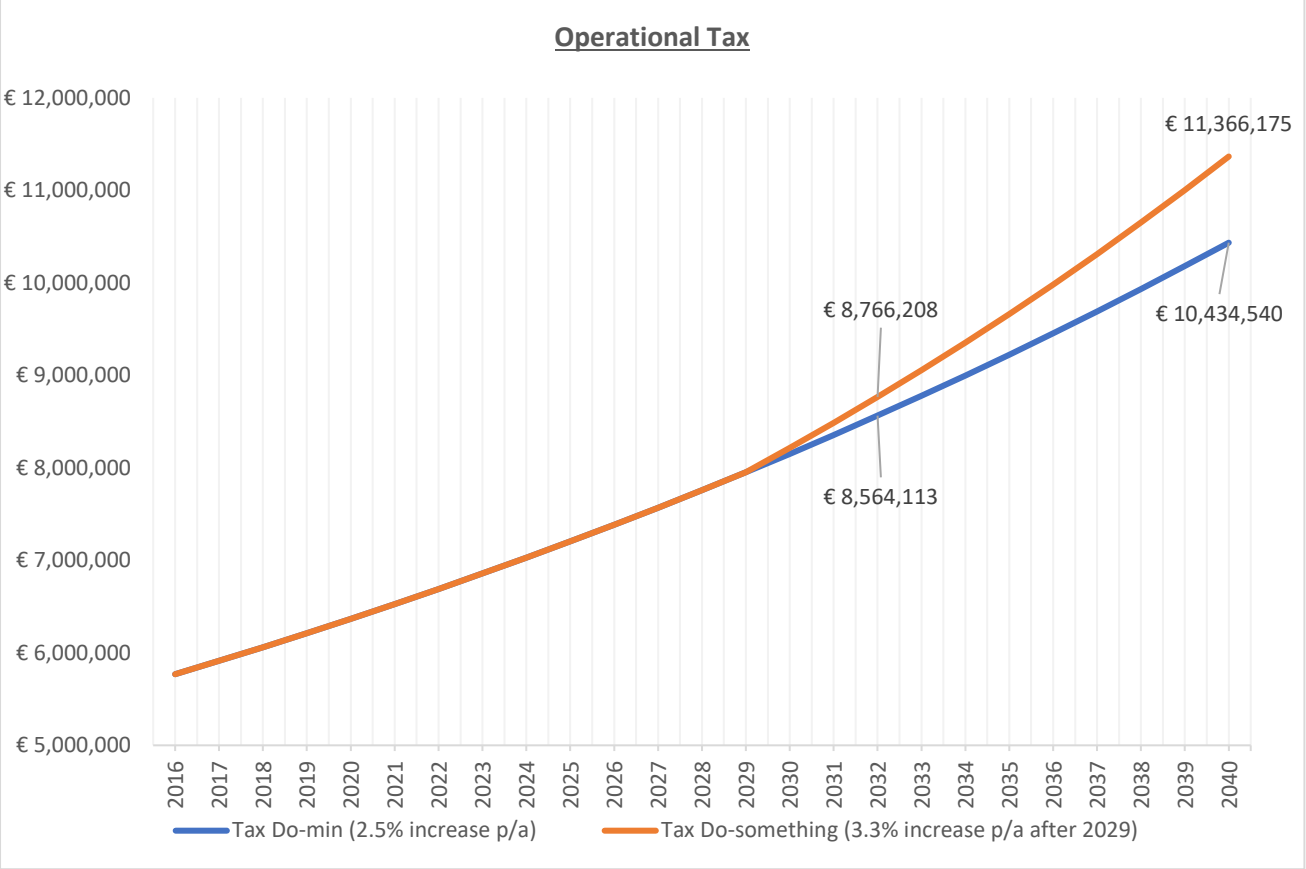

Figure 4-2 Operational Tax

The Population and Health EIAR chapter reported that the magnitude of impact on population and health from operational tax would be low, where in an area of high sensitivity, would result in a minor beneficial significance of effect, which is not considered significant in EIA terms. Even when applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects, the magnitude of impact would remain low and the significance of effect would remain minor beneficial (not significant). On this basis, there is no material change to the original conclusions drawn.

Tourism

Figure 4-3 shows the forecasted ferry passenger throughput for both the do-minimum scenario (applying a 2.5% AAGR) and the do-something scenario (applying a 3.3% AAGR after 2029).

The difference between these two forecasts represents the cumulative tourism effect of Dublin Port's Masterplan 2040; as stated in the Population and Health EIAR chapter, approximately 290,000 additional passengers are

likely to pass through Dublin Port by 2040. However, by 2032, the figure for additional passengers passing through Dublin Port would be approximately 63,000.

All ferry passengers' will pass through the MP2 Project Area and therefore the 60% reduction factor to theoretically separate out the effects of the MP2 Project does not apply.

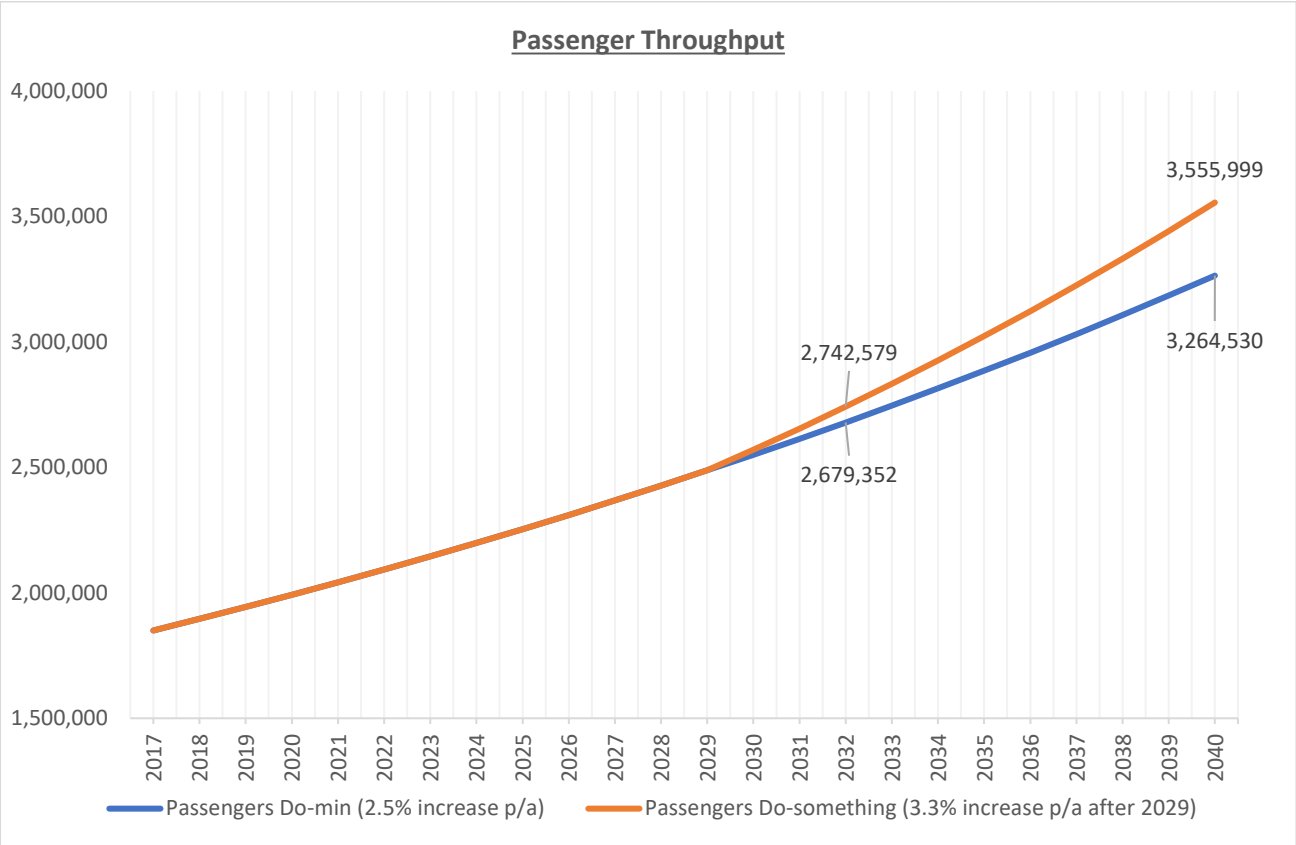

Figure 4-3 Passenger Throughput

The Population and Health EIAR chapter reported that the magnitude of impact on population and health from tourism would be low, where in an area of high sensitivity, would result in a minor beneficial significance of effect, which is not considered significant in EIA terms. On this basis, there is no material change to the original conclusions drawn.

Conclusion

Overall the effects directly attributable to the MP2 Project by 2032 are as follows:

- Operational employment (direct, indirect and induced): 4,400
- Operational GVA (direct and indirect): €2.4 million
- Operational tax: €81,000
- Tourism (i.e. passenger throughput): 63,000

The significance of effects reported in the Population and Health EIAR chapter have not materially changed as a result of applying the 60% reduction factor to theoretically separate out the effects of the MP2 Project alone from the cumulative effects associated with all masterplan infrastructure projects. Operational employment

effects remain significant and the magnitude unchanged; operational GVA effects remain significant although the magnitude of impact is reduced; and both operational tax and tourism effects remain not significant, with their magnitude of impacts unchanged. On this basis, there is no material change to the original conclusions drawn.

APPENDIX 1

Decision to grant permission by An Bord Pleanála MP2 Project (ABP-304888-19)

Our Case Number: ABP-304888-19

Your Reference: Dublin Port Company

An Bord Pleanála

RPS Planning & Environment
West Pier Business Campus
Dun Laoghaire
Co. Dublin
A96 N6T7

Date:

Re: 15-year permission for development at Oil Berth 3 and Oil Berth 4, Eastern Oil Jetty and at Berths 50A, 50N, 50S, 51, 51A, 49, 52, 53 and associated terminal yards to provide for various elements including new Ro-Ro jetty and consolidation of passenger terminal buildings.
Dublin Port, off Jetty Road and Breakwater Road South, Terminal Road South, Alexandra Road Extension, Alexandra Road, Tolka Quay Road and Promenade Road, Dublin 1 and 3.

Dear Sir / Madam,

An order has been made by An Bord Pleanála determining the above-mentioned case. A copy of the order is enclosed.

Please be advised that in accordance with the provisions of section 37H(4) of the Planning and Development Act, 2000 as amended a grant of permission under section 37G shall not become operative until payment by the applicant of a sum in respect of costs has been complied with.

Furthermore, section 37H(5) states that where an applicant for permission fails to pay a sum in respect of costs in accordance with a requirement made under subsection 2(c) the Board, the authority or any person concerned (as may be appropriate) may recover the sum as a simple contract debt in any court of competent jurisdiction.

In accordance with section 146(5) of the Planning and Development Act, 2000, as amended, the Board will make available for inspection and purchase at its offices the documents relating to the decision within 3 working days following its decision. In addition, the Board will also make available the Inspector's Report and the Board Direction on the decision on its website (www.pleanala.ie). This information is normally made available on the list of decided cases on the website on the Wednesday following the week in which the decision is made.

The attachment contains information in relation to challenges to the validity of a decision of An Bord Pleanála under the provisions of the Planning and Development Act, 2000, as amended.

If you have any queries in relation to the matter please contact the undersigned officer of the Board.

Teil	**Tel**	(01) 858 8100
Glao Áitiúil	**LoCall**	1890 275 175
Facs	**Fax**	(01) 872 2684
Láithreán Gréasáin	**Website**	www.pleanala.ie
Ríomhphost	**Email**	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

[redacted]

Executive Officer
Direct Line: [redacted]

PA17

Teil	**Tel**	(01) 858 8100
Glao Áitiúil	**LoCall**	1890 275 175
Facs	**Fax**	(01) 872 2684
Láithreán Gréasáin	**Website**	www.pleanala.ie
Ríomhphost	**Email**	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Judicial review of An Bord Pleanála decisions under the provisions of the Planning and Development Act, 2000, as amended

A person wishing to challenge the validity of a Board decision may do so by way of judicial review only. Sections 50, 50A and 50B of the Planning and Development Act 2000 (as substituted by section 13 of the Planning and Development (Strategic Infrastructure) Act 2006, as amended/substituted by sections 32 and 33 of the Planning and Development (Amendment) Act 2010 and as amended by sections 20 and 21 of the Environment (Miscellaneous Provisions) Act 2011) contain provisions in relation to challenges to the validity of a decision of the Board.

The validity of a decision taken by the Board may only be questioned by making an application for judicial review under Order 84 of The Rules of the Superior Courts (S.I. No. 15 of 1986). Sub-section 50(6) of the Planning and Development Act 2000 requires that subject to any extension to the time period which may be allowed by the High Court in accordance with subsection 50(8), any application for judicial review must be made within 8 weeks of the decision of the Board. It should be noted that any challenge taken under section 50 may question only the validity of the decision and the Courts do not adjudicate on the merits of the development from the perspectives of the proper planning and sustainable development of the area and/or effects on the environment. Section 50A states that leave for judicial review shall not be granted unless the Court is satisfied that there are substantial grounds for contending that the decision is invalid or ought to be quashed and that the applicant has a sufficient interest in the matter which is the subject of the application or in cases involving environmental impact assessment is a body complying with specified criteria.

Section 50B contains provisions in relation to the cost of judicial review proceedings in the High Court relating to specified types of development (including proceedings relating to decisions or actions pursuant to a law of the state that gives effect to the public participation and access to justice provisions of Council Directive 85/337/EEC i.e. the EIA Directive and to the provisions of Directive 2001/12/EC i.e. Directive on the assessment of the effects on the environment of certain plans and programmes). The general provision contained in section 50B is that in such cases each party shall bear its own costs. The Court however may award costs against any party in specified circumstances. There is also provision for the Court to award the costs of proceedings or a portion of such costs to an applicant against a respondent or notice party where relief is obtained to the extent that the action or omission of the respondent or notice party contributed to the relief being obtained.

General information on judicial review procedures is contained on the following website, **www.citizensinformation.ie.**

Disclaimer: The above is intended for information purposes. It does not purport to be a legally binding interpretation of the relevant provisions and it would be advisable for persons contemplating legal action to seek legal advice.

An Bord Pleanála

Board Order ABP-304888-19

Planning and Development Acts, 2000 to 2019

Planning Authority: Dublin City Council

Application for permission under section 37E of the Planning and Development Act 2000, as amended, in accordance with plans and particulars, including an Environmental Impact Assessment Report and a Natura Impact Statement, lodged with An Bord Pleanála on the 11th day of July, 2019 by Dublin Port Company care of RPS Group Limited of West Pier Business Campus, Dun Laoghaire, County Dublin, as amended by the revised public notice received by An Bord Pleanála on the 11th day of October, 2019.

Proposed Development:

- A new Ro-Ro jetty (Berth 53) for ferries up to 240 metres in length on an alignment north of the port's fairway and south and parallel to the boundary of the South Dublin Bay and River Tolka Estuary Special Protection Area (site code: 004024).
- A reorientation of Berth 52 permitted under An Bord Pleanála case reference number PL29N.PA0034.
- 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.
- The redevelopment and future-proofing of Oil Berth 3 as a future deep-water container berth for the Container Freight Terminal. The future-proofing 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 de-carbonise the economy.

- Consolidation of passenger terminal buildings, demolition of redundant structures and buildings, removal of connecting roads and re-organisation of access roads to increase the area of land for the transit storage of Ro-Ro freight units.

The proposed development will consist of the following elements:

(a) **Berth 53:** Construction of a new open structure Ro-Ro jetty of approximately 406 metres in overall length to accommodate a new Berth 53. The development will comprise: construction of eight number reinforced concrete mooring dolphins on tubular steel piles; construction of a new linkspan structure to allow two-tier access to the Ro-Ro ferries; construction of a new ramp structure to access the upper linkspan tier; construction of a new deck structure to allow access to the lower linkspan tier and dolphins; construction of a reinforced concrete access/maintenance route to the dolphins; construction of a reinforced concrete bankseat for the linkspan; dredging of a berthing pocket to a standard depth of -10.0 metres CD; installation of scour protection mattresses to provide slope stabilisation and scour protection to the dredged berthing pocket; installation of a wash protection structure to the north line of the 406-metre jetty structure; installation of jetty furniture including visual screening barriers, fenders, mooring bollards, handrails and an automated mooring system; and installation of a power outlet for Ship to Shore Power which will be fed from the proposed substation adjacent to the proposed parking and set down area. Berth 53 will accommodate vessels up to 240 metres in length.

(b) **Berth 52:** The development of Berth 52 was granted permission under An Bord Pleanála case reference number PL29N.PA0034. As a result of the proposed development of Berth 53 permitted Berth 52 requires re-positioning. Proposed amendments to Berth 52 comprise: rotation of Berth 52 and all associated elements, including Ro-Ro jetty (288 metres); linkspan structure to allow two-tier access to the Ro-Ro ferries; ramp structure to access the upper linkspan tier; and reinforced concrete bankseat for the linkspan by approximately nine degrees (clockwise); installation of a new power outlet for Ship to Shore Power which will be fed from the proposed substation adjacent to the proposed parking and set-down area; and construction of a new piled quay wall structure approximately 52 metres in length to accommodate the linkspan structure associated with Berth 52 and to provide additional operational quayside space at Berth 49. Berth 52 will accommodate vessels up to 240 metres in length.

(c) **Berth 49:** The development of Berth 49 was granted permission under An Bord Pleanála case reference number PL29N.PA0034. As a result of the

proposed re-positioning of Berth 52 permitted Berth 49 requires amendments. Proposed amendments to Berth 49 comprise: encompassing the eastern dolphins associated with Berth 49 within a new piled quay wall structure approximately 40 metres in length at the eastern end of Berth 49. Berth 49 will accommodate vessels up to 240 metres in length.

(d) **Berth 50A:** Demolition of the Eastern Breakwater Pier Head (2,950 square metres) (which forms part of the Eastern Breakwater Dublin City Industrial Heritage Record 19-09-002), the southern end of the Eastern Oil Jetty (275 square metres) and Port Operations Building and ancillary structures (600 square metres); construction of a new quay wall approximately 125 metres in length extending Berth 50A westwards to provide an overall quay length of approximately 305 metres; infilling of Oil Berth 4 and construction of a new piled reinforced concrete deck (20,000 square metres) which includes works to the Eastern Breakwater (Dublin City Industrial Heritage Record 19-09-002); dredging of a berthing pocket to a standard depth of -11.0 metres CD; and; installation of quay and deck furniture, including crane rails, fenders, mooring bollards and emergency ladders. Extension to existing Berth 50A will provide a multi-purpose predominately Lo-Lo Container Vessel berth.

(e) **Eastern Oil Jetty:** The Eastern Oil Jetty comprises Oil Berth 3 and Oil Berth 4 with access from Jetty Road. The proposed development will involve the removal of Oil Berth 4 and consolidating operations to Oil Berth 3. The berth will be designed as a multi-purpose structure, initially for oil tanker berthing, with a future potential use as a container vessel berth. The basin at Oil Berth 4 will be infilled to provide an additional container terminal storage area. Proposed works will comprise: demolition of the southern end of the Eastern Oil Jetty (275 square metres) (as per description of Berth 50A) and existing pilot boat pontoon and gangway; construction of a new quay wall providing an overall quay length of approximately 239 metres in front of Oil Berth 3; infilling of the basin at Oil Berth 4 and construction of a new reinforced concrete deck of approximately 20,000 square metres (as per description of Berth 50A); construction of a circa two-metre high wall as a separation boundary between the Container Freight Terminal and Oil Berth 3; high mast lighting (30 metres); dredging of a berthing pocket to a standard depth of -13.0 metres CD; stabilisation of the existing quay wall at Jetty Road through the construction of a new quay wall in front of existing Jetty Road quay approximately 120 metres long; re-decking of Jetty Road; and installation of quay and deck furniture to include fenders, mooring bollards and emergency ladders. Consolidation of operations at the Eastern Oil Jetty will facilitate multi-purpose berthing at Oil Berth 3.

(f) **Channel Widening:** Dredging works to the south of the existing navigation channel east of the Poolbeg Oil Jetty to a standard depth of -10.0 metres CD to facilitate the manoeuvring of design vessels from Berths 49, 52 and 53.

(g) **Unified Ferry Terminal:** Provision of a new Unified Ferry Terminal yard. The development will comprise: demolition of Terminal 2 building (1,058 square metres), Terminal 2 check-in (603 square metres) part of which are permitted under the Interim Unified Ferry Terminal Dublin City Council register reference number 3638/18 (these facilities will be developed as permitted and continue to be used for a temporary period until the yard is developed), Terminal 5 building (796 square metres), Terminal 5 check-in (97 square metres), Terminal 5 sheds (three number) (325 square metres, 162 square metres and 316 square metres) and ESB substations (two number) (47 square metres and 100 square metres); demolition of Terminal 1 car check-in booths (72 square metres); regrading of infill area permitted under An Bord Pleanála case reference number PL29N.PA0034 and provision of new surface to unified ferry terminal yard; construction of road access to the unified ferry terminal yard and car park/drop-off area, including amendments to the tie-in with the permitted Dublin Port Internal Road Network Dublin City Council register reference number 3084/16 (as amended by register reference number 2684/17); provision of two check-in areas with associated check-in booths at Alexandra Road and adjacent to Alexandra Road Extension; overhead gantry signage; passenger walkway plant for vessels berthed at Berths 51 and 52; ESB substation (160 square metres); three number toilet blocks (each 80 square metres); high mast lighting (30 metres); repositioning of high mast lighting (30 metres) permitted under An Bord Pleanála case reference number PL29N.PA0034; four-metre high International Ship and Port Facility Security (ISPS) fence; bus shelter and; car, bicycle and bus parking; drop-off facilities and proposed pedestrian underpass from parking area to Terminal 1 building.

(h) **Heritage Zone:** Amendments to the eastern end of the pedestrian and cycleway element of the Dublin Port Internal Road Network as permitted under Dublin City Council register reference number 3084/16 (as amended by register reference number 2684/17) to include a gate control access at certain intervals to the end of the pedestrian and cycleway and to include a Heritage Zone which will accommodate a public art installation of 20.4 metres in height (comprising an elevated viewing platform and material from the Eastern Breakwater Pier Head) together with associated lighting and hard and soft landscaping works.

(i) **Ancillary works:** The proposed development will also include site clearance, boundary treatments, landscaping, construction compounds, public street lighting, utilities and all ancillary site works.

All at Oil Berth 3 and Oil Berth 4, Eastern Oil Jetty, Dublin Port, off Jetty Road and Breakwater Road South, and at Berths 50A, 50N, 50S, 51, 51A, 49, 52, 53 and associated terminal yards, Dublin Port, off Breakwater Road South, Terminal Road South, Alexandra Road Extension, Alexandra Road, Tolka Quay Road and Promenade Road, Dublin.

Decision

Grant permission under section 37G of the Planning and Development Act 2000, as amended, for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

Determine under section 37H(2)(c) the sum to be paid by the applicant in respect of costs associated with the application as set out in the Schedule of Costs below.

Matters Considered

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

Reasons and Considerations

In coming to its decision, the Board had regard to the following:

European legislation, including, of particular relevance:

- Directive 2014/52/EU amending Directive 2011/92/EU (EIA Directive) on the assessment of the effects of certain public and private projects on the environment.
- Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directives) which set the requirements for Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.

- Trans-European Transport Network (TEN-T) Regulations, 2013 and 2019 which address the development of a trans-European transport network within the European Union.

National and regional planning and related policy, including:

- The National Development Plan – Ireland 2040, which identifies major national infrastructure projects including investment at Ports including Dublin Port to create high quality international connectivity.
- The National Planning Framework – Ireland 2040, which states that the role of Tier 1 ports (Dublin Port Company) will be considered in tandem with long-term infrastructural requirements as part of the Regional Spatial and Economic Strategy and Metropolitan Area Strategic Plan processes through National Policy Objective 40.
- National Port Policy, 2013 which states that the Government endorses the core principles of the Dublin Port Masterplan and the continued commercial development of Dublin Port Company is a key strategic objective of national Ports Policy.
- The Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly (RSES) 2019-2031 which supports the role of Dublin Port as a Port of National Significance (Tier 1 Port) and its continued commercial development, including limited expansion and improved road access, including the Southern Port Access Route.
- The Greater Dublin Area Transport Strategy 2016-2035 which states that the safeguarding of landside access to the national gateways at Dublin Port and Dublin Airport should be considered as a priority strategic objective for all relevant agencies.

The local planning policy including:

- The provisions of the Dublin City Development Plan 2016-2022, which supports and recognises the important national and regional role of Dublin Port in the economic life of the city and region and seeks to facilitate port activities and development, having regard to the Dublin Port Masterplan 2012-2040.

The following matters:

(a) The evidence provided that additional and longer berths and capital dredging to facilitate same is required in Dublin Port in order to meet the projected growth within the Region, facilitate the berthing of larger ships and future proof the use of infrastructure within the Port estate.

(b) The nature, scale and design of the proposed development including proposed Berth 53.

(c) The range of proposed mitigation measures set out in the submitted documentation lodged, including the Environmental Impact Assessment Report, and Natura Impact Statement incorporating appropriate assessment screening.

(d) The submissions made in relation to the application including those submitted at the Oral Hearing; and

(e) The report and recommendation of the Inspector.

Appropriate Assessment: Stage 1

The Board agreed with and adopted the screening assessment and conclusions carried out in the Inspector's report that the only European sites in respect of which the proposed development has the potential to have a significant effect are South Dublin Bay and River Tolka Estuary Special Protection Area (Site Code: 004024), North Bull Island Special Protection Area (Site Code: 004006), North Dublin Bay Special Area of Conservation (Site Code: 000206), South Dublin Bay Special Area of Conservation (Site Code: 000210), Rockabill to Dalkey Island Special Area of Conservation (Site Code: 003000) and Lambay Island Special Area of Conservation (Site Code: 000204).

Appropriate Assessment: Stage 2

The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, the oral hearing submissions and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development as part of the overall proposed upgrade project for the aforementioned European sites in view of the sites' Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

(a) the likely direct and indirect impacts arising from the development of the proposed development, both individually, when taken together and in combination with other plans or projects,

(b) the mitigation measures, which are included as part of the current proposal, and

(c) the conservation objectives for the European sites.

In completing the appropriate assessment, the Board accepted and adopted the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European sites, having regard to the sites' Conservation Objectives. In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' Conservation Objectives.

Environmental Impact Assessment:

The Board completed an environmental impact assessment of the proposed development, taking into account:

(a) The nature, scale and extent of the proposed development.

(b) The Environmental Impact Assessment Report and associated documentation submitted in support of the application.

(c) The submissions from the planning authority, the observers and prescribed bodies in the course of the application and the submissions of the applicant and observers during the oral hearing.

(e) The Inspector's report.

The Board agreed with the summary of the results of consultations and information gathered in the course of the environmental impact assessment, and the examination of the information contained in the Environmental Impact Assessment Report and the associated documentation submitted by the applicant and the submissions made in the course of the application as set out in the Inspector's report. The Board was satisfied that the Inspector's report sets out how these various environmental issues were addressed in the examination and recommendation and are incorporated into the Board's decision.

Reasoned Conclusions on the Significant Effects:

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, provided information which is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account current knowledge and methods of assessment. The Board is satisfied that the information contained in the Environmental Impact Assessment Report is up to date and complies with the provisions of EU Directive 2014/52/EU amending

Directive 2011/92/EU. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are those arising from the impacts listed below. A Construction Environmental Management Plan (CEMP) is the overarching general mitigation relevant to the project design and delivery for the construction stage. The Draft CEMP includes all mitigation measures arising from the Environmental Impact Assessment Report and is proposed to include any conditions specified by the Foreshore or Dumping at Sea permits. In addition, this Draft Plan is accompanied by a suite of draft plans including a Construction Traffic Management Plan, Invasive Alien species Management Plan, Construction Waste Management Plan, Dust and Odour Management Plan, Noise Management Plan, Marine Mammals Management Plan, Birds and Marine Ecology Management Plan, Archaeology and Cultural Heritage Management Plan, Water Quality Management Plan, Dredging Management Plan and Pollution Incident Response Plan.

The main significant effects, both positive and negative are:

- Significant positive long-term impacts on population and human health including increased employment, additional growth facilitated by greater imports and exports facilitated by the increased berth lengths for longer vessels, additional tax and increased tourism opportunities and the redevelopment of brownfield lands.

- Significant negative permanent impact on cultural heritage from the demolition of the Pier Head of the Eastern Breakwater to facilitate the construction of Berth 50A which it is anticipated will expose elements of the 19th century breakwater currently buried. While it is not proposed to mitigate the actual loss, it is proposed to develop a 3D record of the existing structure, archaeological monitoring is proposed of all ground disturbances with the proviso to resolve fully any archaeological material and it is also proposed to create a public realm visitor experience at the new eastern limit at the end of the proposed Greenway that includes the re-use of the granite blocks and related elements of the Eastern Breakwater Pier Head and the Breakwater Lighthouse and the former location of the pier head will be marked with inscribed commemorative text, to ensure that there is a permanent in situ record of its former presence.

- Direct and permanent impacts on cultural heritage from the proposed dredging of the previously un-dredged area to the south side of the channel which is considered an area of high archaeological potential and the recovery of shipping debris and/or shipwreck can be anticipated. Subject to mitigation including archaeological monitoring of all seabed disturbances, the potential to uncover and expose previously unrecorded archaeological material, and principally shipwreck, exists, and protocols are proposed to ensure that any new discoveries will be fully and properly resolved.

- Significant permanent impacts on Avian biodiversity in respect of the removal of several Black Guillemot nest sites in the quay walls and ro-ro ramps within OB3, OB4, Berths 50A and 52/53 directly affecting circa 9 birds. This impact will be mitigated by way of the timing of the removal and the provision of a number of custom-made nest boxes within adjacent areas for displaced birds with this species having readily nested in such structures to date.

- Potential significant impacts on biodiversity/coastal processes from ship movements in the area of Berth 53 and the potential for scour of the neighbouring South Dublin Bay and River Tolka Estuary Special Protection Area impacting the long-term stability of the dredged side slope at Berth 53 and potential effect on the bed levels and modifications of the position of the lowest astronomical tide across the winter foraging areas within the Tolka Estuary. With the provision of a wash protection structure to reduce scouring associated with manoeuvring vessels within the Berth 53 area, effectively reducing propeller and thruster jet velocities caused by manoeuvring ships, the predicted residual impact imperceptible.

- Significant negative temporary impacts on avian biodiversity during the construction and operations phases from disturbance to foraging on sand in shallow water to north of proposed Berth 53. Ceasing construction of this berth during low tide events during the construction stage and controlling access to this area of the greenway and heritage zone when operational during low tide to avoid

disturbance within this area by way of the provision of a controlled gate will ensure that there are no residual impacts.

- Moderate impacts on marine biodiversity arising from noise associated with piling, dredging and dumping during the construction phase with the implementation of mitigation measures and implementation of the NPWS Guidelines including the provision of a Marine Mammal Observer for works including piling, dredging and disposal, will not result in significant residual impacts.

- Permanent and slight negative effects on Benthic biodiversity/Land from the proposal to reclaim 2.18 hectares of benthic soft sediment with the infilling of Oil Berth 4 which comprises habitat common to the Port with a permanent, slight positive impact to biodiversity from the removal of the Pier Head at the Eastern Breakwater resulting in a gain of 0.28 hectares of subtidal soft benthos. A permanent, slight positive impact will arise from the proposal to place concrete mats on the sloping edges across a limited area of dredge areas to prevent slumping of sediment, which while resulting in the permanent loss of 1.9 hectares of soft sediment benthos, will introduce an equivalent area of hard-benthos associated with the placement of the concrete mattresses. Negative, temporary to short-term, slight impacts from the dredging of 10.33 hectares of soft sediment subtidal benthos with the habitat either plentiful within the area or rapidly recovering.

- Potential for short term negative impacts on water quality during the construction phase from increased suspended sediment levels due to the accidental release of sediment to the water column during demolition works, berth and associated construction works and capital dredging and sediment disposal operations. With mitigation measures to be employed during capital dredging and disposal operations including, in particular, the timing of such works the potential impact to receiving water environment will not have a significant residual impact.

The Board completed an environmental impact assessment in relation to the proposed development forming part of the overall proposed project and concluded that, subject to the implementation of the mitigation measures referred to above, including proposed monitoring as appropriate, and subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions set out in the Inspector's report.

Overall Conclusion:

The proposed development in the operational phase will give rise to impacts which are positive. It will facilitate the completion of a single unified Ro-Ro terminal and enhanced Lo-Lo facilities facilitating the removal of capacity constraints within Dublin Port, thereby enabling projected economic growth through increased capacity and improved Port infrastructure to facilitate larger vessels. Environmental impact assessment and appropriate assessment have been considered as set out in the sections above. It can, therefore, be concluded that the proposed development is in accordance with the proper planning and sustainable development of the area.

Proper Planning and Sustainable Development:

The Board considered that, subject to compliance with the conditions set out below, the proposed development would assist in meeting the economic growth projected for Dublin Port within the Dublin Port Masterplan 2040, which is supported by National and Local planning policy, by consolidating and improving the existing Port lands facilitating the berthing of larger ships and future proofing the use of infrastructure within the Port estate enabling Dublin Port. The proposed development complies with EU Directives, national and local policy and would be acceptable in terms of biodiversity, noise, landscape, cultural heritage and traffic. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

CONDITIONS

1. The proposed development shall be carried out and completed in accordance with the plans and particulars lodged with the application and the information contained in the Environmental Impact Assessment Report and the Natura Impact Statement and the further details submitted at the oral hearing, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the relevant planning authority, the developer shall agree such details in writing with the relevant planning authority prior to commencement of development. In default of agreement, the matter shall be referred to An Bord Pleanála for determination and the proposed development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. The period during which the proposed development hereby permitted may be carried out shall be fifteen years from the date of this order.

   Reason: Having regard to the nature and extent of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.

3. (a) All mitigation, environmental commitments and monitoring measures identified in the Environmental Impact Assessment Report (Chapter 19) shall be implemented in full as part of the proposed development, except as may be otherwise required to comply with the following conditions.

   (b) All mitigation and environmental commitments identified in the Natura Impact Statement (Section 5.7) shall be implemented in full as part of the proposed development, except as may be otherwise required to comply with the following conditions.

   Reason: In the interests of development control, public information and clarity.

[redacted]

4. (a) Prior to commencement of development, the developer shall submit for the written agreement of the planning authority a comprehensive document containing all mitigation and monitoring measures set out in the Environmental Impact Assessment Report, the Natura Impact Statement and other plans, and including the commitments given at the oral hearing. The document shall incorporate the monitoring and implementation proposals, as appropriate.

(b) Prior to commencement of development, a contract specific Construction and Environmental Management Plan (CEMP) shall be submitted to and agreed in writing with the planning authorities in respect of the proposed development. The CEMP shall detail and ensure Best Construction Practice and compliance with statutory obligations. This shall include a copy of the completed documents presented in Volume 3, Part 4 of the Environmental Impact Assessment Report as drafts (Appendix 19-1 to 19-12) and within the draft Construction Environmental Management Plan.

Reason: In the interests of development control, public information and clarity.

5. (a) All works shall be undertaken under the supervision of a suitably-qualified Ecological Clerk of Works.

(b) Prior to commencement of development, details of the location, design and operation of the proposed bird gates on the Greenway and in the vicinity of the Heritage Zone, shall be submitted to and agreed in writing with the planning authority.

(c) The developer shall make available a schedule of extreme low tides, timings of works in the vicinity of the proposed Unified Freight Terminal and Berths 52 and 53.

(d) Controls shall be put in place in advance of demolition of structures to prevent disturbance or injury to birds.

Reason: In the interest of the amenities of the area and the protection and restoration of biodiversity.

6. (a) Prior to commencement of development, the developer shall prepare a Construction Traffic Management Strategy for the Dublin Tunnel for the duration of the works which shall be submitted to and agreed with the planning authority in consultation with Transport Infrastructure Ireland and the operators of Dublin Tunnel.

(b) Proposals for maintaining public roadways free from debris arising from the proposed development.

(c) The developer shall provide details of the timing of the closures of the accesses and traffic management measures from East Wall Road to the planning authority prior to any implementation of new measures within the area.

(d) Prior to commencement of development, all works proposed on the public road, shall be subject to written agreement and approval from the Environment and Transportation Department. Any alterations to the public roads including footpaths, public lighting and all materials shall be agreed in writing with the Roads Maintenance Division of Dublin City Council prior to commencement of development. Any works to the existing public road and the public realm shall be carried out at the applicant's expense at no cost to Dublin City Council and to the detailed requirements of the Environment and Transportation Department.

(e) The developer shall be obliged to comply with the requirements set out in the Code of Practice.

Reason: In the interest of traffic safety, to ensure the continued efficient operation of the port, and to protect the environment and the amenities of the area.

7. The proposed development shall be operated and managed in accordance with a comprehensive Environmental Management System (EMS), a proposal for which shall be submitted by the developer to, and agreed in writing with, the planning authority prior to commencement of development. The annual audit report for the EMS shall be made publicly available in accordance with the requirements of the planning authority.

Reason: In order to safeguard local amenities and protect the environment.

8. The developer shall ensure that over-spilling at the surface of the dredger is avoided for all dredging activities within the inner Liffey channel.

Reason: To minimise the levels of suspended sediment in the River Liffey from the dredging operation.

9. (a) The construction noise levels arising from the proposed development shall not exceed the worst case predicted noise levels presented in Chapter 11 of Volume 2 (Part 2) of the Environmental Impact Assessment Report.

(b) A program of construction noise monitoring shall form part of the Construction and Environmental Management Plan and detailed proposals in this regard shall be submitted to and agreed with the planning authority prior to commencement of development.

(c) All sound measurements shall be carried out in accordance with ISO Recommendations R 1996, "Assessment of Noise with Respect to Community Response" as amended by ISO Recommendations R 1996/1, 2 and 3, "Description and Measurement of Environmental Noise", as appropriate.

Reason: In the interest of residential amenity.

10. (a) All of the measures contained in the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters as published by the Department of Arts, Heritage and the Gaeltacht shall be fully implemented including a 1,000 metre exclusion zone for piling and a 500 metre exclusion zone for dredging.

(b) Monitoring shall be carried out through the construction and dredging phases and for a period of two years post completion of all works associated with the proposed development. The monitoring methodology, including proposals to maintain a public record, shall be agreed in writing with the planning authority prior to commencement of development.

(c) The developer shall make provisions to ensure proposals for an adequate number of suitably qualified marine mammal observers for the duration of piling and dredging in order to ensure satisfactory monitoring.

(d) The developer shall deploy a minimum of four hydrophones in Dublin Bay to assist in the detection of marine mammals within the 1,000 metre and 500 metre exclusion zones for piling and dredging, which shall be used in combination with all of the measures referred to in (a) to (c) above.

(e) A minimum of two real time passive acoustic monitoring systems (PAMs) shall be deployed in Dublin Bay at the approaches to Dublin Port to provide information on the presence of marine mammals.

(f) A minimum of two static acoustic monitoring systems (SAMs) shall be deployed at the dump site to the west of the Burford Bank and within Dublin Bay to provide information on the presence of marine mammals.

Reason: In the interest of wildlife protection and to broaden scientific knowledge in relation to ecology in Dublin Bay.

11. The developer shall undertake monthly monitoring of seal haul out sites at the North Bull Island and adjacent areas before, during and after construction for a minimum of two years in line with international best practice. The proposed monitoring methodology, including proposals to maintain a public record, shall be agreed in writing with the planning authority prior to commencement of development. Monitoring for harbour and grey seals shall be further extended to include a survey of Dublin Bay within the zones of influence as defined in the environmental impact assessment report.

    Reason: In the interest of wildlife protection and to broaden scientific knowledge in relation to ecology in Dublin Bay.

12. The developer shall institute a programme to monitor the movement of winter wetland birds in the adjacent European Sites at the South Dublin Bay and River Tolka Estuary Special Protection Area. This monitoring programme shall continue throughout the construction phase and for a period of two years after the completion of such works, with monthly surveys from October to March. The results of this monitoring programme shall be submitted to the planning authority at 12-monthly intervals to maintain a public record.

    Reason: In the interest of wildlife protection and to broaden scientific knowledge in relation to ecology.

13. The developer shall institute a programme to monitor the movement of Black Guillemots in the Liffey Channel. This monitoring programme shall continue throughout the construction phase and for a period of two years after the completion of such works. The results of this monitoring programme shall be submitted to the planning authority at 12-monthly intervals to maintain a public record.

Reason: In the interest of wildlife protection and to broaden scientific knowledge in relation to ecology.

14. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the site. The areas requiring testing are outlined in the environmental impact assessment report. In this regard, the developer shall –

(a) Undertake a dive survey in relation to geophysical anomalies documented in the Archaeo-Geophysical Report included in the Environmental Impact Assessment Report (Appendix 14). The dive survey shall be carried out by a suitably qualified archaeologist and licensed under the National Monuments Acts 1930-2004.

(b) Notify the planning authority in writing at least four weeks prior to the commencement of any site operations, including hydrological and geotechnical investigations relating to the proposed development.

(c) Employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works.

(d) Provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the planning authority considers appropriate to remove.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the underwater archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

15. The developer shall enter into water and wastewater connection agreements with Irish Water, prior to commencement of development.

Reason: In the interest of public health.

16. The applicant shall implement the community gain proposal set out in the Planning Report (Section 7.7 and Appendix C) prepared by RPS which was submitted with the application, including the financial commitments set out therein, which are considered a community gain in accordance with section 37 (G)(7)(d) of the Planning and Development Act 2000, as amended. In default of agreement on any of these commitments, the matter shall be referred to An Bord Pleanála for determination.

Reason: To offset the impacts on the local community in the construction phase and to maximise the long-term benefits of the proposed facilities to local residents.

17. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement

of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

Schedule of Costs

In accordance with the provisions of section 37H(2)(c) of the Planning and Development Act 2000, as amended, the amount due to be paid by the applicant to the Board is **€2,345.**

A breakdown of the Board's costs is set out in the attached Appendix 1.

[redacted]

Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this 1st **day of** July **2020**

An Bord Pleanála

Board Order – Appendix 1 ABP-304888-19

Strategic Infrastructure Development

Cost of determining the Application

File Number: ABP-304888-19

Proposed Development: New Ro-Ro jetty and consolidation of Passenger Terminal Buildings, Dublin Port.

Costs incurred by An Bord Pleanála in determining the application

	An Bord Pleanála's Costs	€
(1)	Cost (calculated based on Inspector's time) Inspector 1 (pre-application) - €[redacted] Inspector 2 (application) - € 9[redacted]	[redacted]
(2)	Total chargeable costs	
(3)	Application Fee - €[redacted] Pre-application Consultation Fee - €[redacted]	
(4)	Observer fees paid	
(5)	Total Income	
(6)	Net amount due to be recouped from the Applicant	

Independent Environmental Consultant's
Request for Clarifications Number 2
Submitted to Dublin Port Company on the 21st December 2021

Dublin Port MP2 Project Application for Foreshore Consent FS006893

We have reviewed the information submitted with the application for Foreshore consent, file reference FS006893 Dublin Port MP2 Project and the clarification received on 9 December 2021. To complete our work as independent environmental consultant on this project, we require further clarification from the applicant on the following issue:

In response to a request for information from the EPA in relation to the Dumping at Sea Permit application for the MP2 Project, reference S0024-02, the Applicant submitted an update to the Natura Impact Statement, which had been submitted with that application. The amendment document was titled: *Dublin Port Company Dumping at Sea Permit Application S0024-02 MP2 Project: Response to Section 5(2) Request for Further Information.* A revised construction schedule was provided in Table 3-3 in Section 3.3 of this document. The impacts in each phase of the construction of the MP2 Project on the capacity of Ro-Ro, Lo-Lo and petroleum trade operations in Areas C, D and H (as designated in the Dublin Port Masterplan 2040) should be described and assessed. Any resulting impacts on the shipping operations in other parts of the Port should also be described and assessed.

Dublin Port Company's
Response to Request for Clarifications Number 2
Submitted to the Foreshore Unit on the 6th January 2022

DUBLIN PORT COMPANY
MP2 PROJECT
FORESHORE APPLICATION (FS006893)
RESPONSE TO ADDITIONAL CLARIFICATIONS ON FORESHORE APPLICATION

Introduction

The MP2 Project Planning Application was made directly by Dublin Port Company (DPC) to An Bord Pleanála (ABP) on 11th July 2019 following the determination of ABP on 9th August 2018 that the project constitutes a strategic infrastructure development under the Section 37 E of the Planning and Development Act 2000 as amended. The application was subject to an Oral Hearing on 16th December 2019 and granted permission by ABP on 1st July 2020.

ABP granted DPC a 15 year planning permission to construct all elements of the MP2 Project including the specific planning aspects relating to dredging, works on the proposed berths, including works on the seabed and foreshore.

A Foreshore Application was subsequently made to the Department of Housing, Local Government & Heritage (DHLGH) on 5th July 2020 supported by the same EIAR and Appropriate Assessment Screening Report & NIS which supported the Planning Application.

The Foreshore Application was subject to a period of public consultation (25th November 2020 to 3rd February 2021) and DHLGH confirmed that no public submissions were received. Responses to all submissions received from Prescribed Bodies were completed by June 2021.

DHLGH subsequently appointed an Independent Environmental Consultant (IEC) to review the MP2 Project Foreshore Application. Four points of clarification were requested by the IEC which were forwarded by DHLGH to DPC on 25th November 2021. DPC's response to the four clarifications was issued to DHLGH on 9th December 2021.

The IEC has now raised an additional request for clarification which was issued by DHLGH on 21st December 2021 seeking a response from DPC and its Agents, RPS.

This document sets out DPC's response to this second round of clarifications.

Clarification

Potential impact of update to the MP2 Project construction programme

Requested Clarification

The clarification sought by the IEC is set out below:

In response to a request for information from the EPA in relation to the Dumping at Sea Permit application for the MP2 Project, reference S0024-02, the Applicant submitted an update to the Natura Impact Statement, which had been submitted with that application. The amendment document was titled: Dublin Port Company Dumping at Sea Permit Application S0024-02 MP2 Project: Response to Section 5(2) Request for Further Information. A revised construction schedule was provided in Table 3-3 in Section 3.3 of this document. The impacts in each phase of the construction of the MP2 Project on the capacity of Ro-Ro, Lo-Lo and petroleum trade operations in Areas C, D and H (as designated in the Dublin Port Masterplan 2040) should be described and assessed. Any resulting impacts on the shipping operations in other parts of the Port should also be described and assessed.

DPC Response

Background

DPC issued a Dumping at Sea Permit application to the EPA in accordance with the requirements of the Dumping at Sea Act 1996 as amended on 4th August 2020 seeking consent for the Loading and Dumping of marine sediments arising from capital dredging works required by the MP2 Project.

The EPA issued a Section 5(2) Notice to DPC on 30th July 2021 which included a request to update the proposed dates of dredging for the various aspects of the MP2 project.

DPC responded to the EPA's Section 5(2) Notice on 20th September 2021.

The EPA subsequently issued a second Section 5(2) Notice to DPC on 22nd September 2021 which included a request for a revised Natura Impact Statement (NIS). The revised NIS took account of the updates to the proposed dates of dredging for the various aspects of the MP2 project previously submitted to the EPA on 20th September 2021.

DPC issued the revised NIS to the EPA on 29th September 2021.

Construction Sequence Summary

The original key milestone dates for delivery of the MP2 Project within DPC's overall Masterplan development programme at the time of the initial planning application is summarized in Table 1 (derived from the Sequencing Programme presented in Chapter 3 of the MP2 Project EIAR, Figure 3-24).

Table 1 Original MP2 Project Construction Programme (July 2019) [Revised NIS Table 3-2]

Item	Works	Start	Finish	Duration
1	Berth 52	Q2 2022	Q4 2024	30 months
2	Berth 53	Q1 2025	Q4 2026	24 months
2a	B52/ B53 Landside works	Q2 2022	Q3 2028	76 months
3	Oil Berth 3 and infill of Oil Berth 4	Q3 2028	Q1 2031	32 months
4	Berth 50A	Q1 2031	Q2 2032	20 Months

DPC operates a Programme Management Office (PMO) which regularly reviews and updates the overall construction programme required to deliver the Dublin Port Masterplan 2040, reviewed 2018 taking into account the practical constraints of developing strategic infrastructure by redeveloping existing brownfield sites within a working port.

The PMO provided an update to the projected MP2 Project construction programme, required by the EPA, in September 2021 focused on the timescales currently envisaged for the Loading and Dumping of dredged material. The update to the construction programme for the MP2 Project was informed by Early Contractor Involvement (Roadbridge) who are advancing the detailed design.

The key programme change is based on the requirement to advance the construction of Berth 52 and Berth 53 ahead of the original programme in order to meet the post Brexit priority demands of national port infrastructure primarily on the Ro-Ro Trade.

The updated MP2 Project programme from that envisaged at the time of the application originally being made is presented in Table 2.

Table 2 Current MP2 Project Construction Programme (September 2021) [Revised NIS Table 3-2]

Item	Works	Start	Finish	Duration
1	Berth 52	Q1 2022 or Q3 2022	Q4 2027	63 months
1a	Channel Widening	Q1 2022 or Q3 2022	Q1 2024	24 months
2	Berth 53	Q1 2022 or Q3 2022	Q3 2025	36 months
2a	B52/ B53 Landside works	Q3 2022	Q4 2029	87 months
3	Oil Berth 3 and infill of Oil Berth 4	Q3 2028	Q1 2031	30 months
4	Berth 50A	Q1 2031	Q2 2032	18 Months

A comparison of Table 1 and Table 2 shows the following key changes:

- The changes to the construction programme relate to the Ro-Ro element of the MP2 Project only. Notably the commencement date for the construction of Berth 53 is being brought forward from Q1 2025 to Q1 / Q3 2022.
- No overall changes to the completion of the Landside elements of the Unified Ferry Terminal for Ro-Ro Trade are envisaged and may in fact take longer to complete than originally envisaged with a completion date now expected of Q4 2029 compared to that originally envisaged of Q3 2028.
- There are no significant construction programme changes to the Lo-Lo elements of the MP2 Project. Works are expected to commence in Q3 2028.

Notably there are no changes to the construction activities for each element of work of the MP2 Project as set out in Chapter 3 of the EIAR (Section 3.2). Furthermore, the temporal mitigation measures set out in Chapter 19 of the EIAR will still apply for the duration of each element of the MP2 Project including the following:

- The capital dredging works will be confined to the winter months only (October – March). This avoids any overlap with maintenance dredging which will confined to the period April to September each year.
- Piling of riverside berths will be prohibited between March and May each year to avoid the main smolt migration within the River Liffey.

Environmental Assessment

Lo-Lo Trade (Area D)

There are no significant construction programme changes to the Lo-Lo element of the MP2 Project. Works are expected to commence in Q3 2028.

Furthermore, there are no changes to the construction activities described in Chapter 3 of the EIAR. DPC confirm that all mitigation measures, set out in Chapter 19 of the EIAR will be applied to the construction phase including the temporal constraints set out above.

In conclusion, there will be no change to the environmental assessments as set out in the EIAR.

Petroleum Trade (Area H)

The MP2 Project relates to increasing the capacity of Lo-Lo Trade in Area D and Ro-Ro Trade in Area C. Whilst Area H lies within the MP2 Project Planning Boundary, no works are proposed that will significantly change the capacity of the Petroleum Trade at Dublin Port. The proposed permanent works are limited to the Eastern Oil Jetty (Oil Berths 3 & 4) and works at Jetty Road.

As set out in Chapter 2 of the EIAR (Project Rational) and Chapter 3 of the EIAR (Project Description) the proposed development will involve the removal of Oil Berth 4 and consolidating operations to Oil Berth 3. The berth will be designed as a multi-purpose structure, initially for oil tanker berthing, with a future potential use as a container vessel berth should Petroleum Trade reduce in the future. The basin at Oil Berth 4 will be infilled to provide an additional container freight terminal storage area.

In conclusion, there will be no change to the environmental assessments as set out in the EIAR.

Ro-Ro Trade (Area C)

The proposed key changes to the Ro-Ro construction programme are as follows:

- The commencement date for the construction of Berth 53 is being brought forward from Q1 2025 to Q1 / Q3 2022.
- No overall change to the completion of the Landside elements of the Unified Ferry Terminal for Ro-Ro Trade are envisaged and may in fact take longer to complete than originally envisaged with a completion date now expected of Q4 2029 compared to that originally envisaged of Q3 2028.

No changes will occur to the baseline Ro-Ro Trade throughputs as a result of the changes to the construction programme. Similarly no changes will occur to the projected Ro-Ro Trade throughputs envisaged by 2040 as set out in the Dublin Port Masterplan 2040. The projected interim capacity by 2032 were updated by DPC in September 2021 in accordance with the revised construction programme and issued to DHLGH as part of DPC's response to the first set of clarifications on 9th December 2021.

Furthermore, there are no changes to the construction activities described in Chapter 3 of the EIAR. DPC confirm that all mitigation measures, set out in Chapter 19 of the EIAR will be applied to the construction phase including the temporal constraints set out above.

In conclusion, there will be no change to the environmental assessments as set out in the EIAR.

Potential impact on other Port Facilities and users of the River Liffey

The impact of the MP2 Project on other Port Facilities and Users of the River Liffey is presented in Volume 2 of the EIAR, Chapter 3 and also detailed within the MP2 Project Foreshore Application Form. A consolidated account is provided in DPC's response to the IEC's Clarification No.1 which was issued to DHLGH on 9th December 2021.

Further to the Environmental Assessments set out below, there will be no change to the potential impact of the MP2 Project on other Port Facilities and users of the River Liffey.

The port operations in place, under the control of the Harbour Master, will ensure there will be no impact on other port facilities including the MTL container terminal within the South Port and leisure users of the River Liffey.

DPC's Concluding Remarks

The MP2 Project was granted a 15 year planning permission from An Bord Pleanála on 1st July 2020 (ABP-304888-19) to allow for changes in the construction programme as set out in Chapter 2 of the EIAR.

The following rationale for a 15 year grant of permission was accepted by An Bord Pleanála:

Given the Masterplan approach of redeveloping existing brownfield sites which are already in operation, constructing projects such as the MP2 Project is not straightforward. The areas in which construction work is proposed are in daily use and throughput volumes are growing.

DPC is currently constructing the ABR Project by way of discrete work packages designed to allow existing customers' growing businesses to continue with minimum disruption.

This same approach will be necessary with the MP2 Project and its construction will overlap with other projects which have already been consented including:

- ABR Project (PA0034)
- Dublin Port Roads Project (3084/16)
- Initial project at Dublin Inland Port (F18A/0139)

The experience of recent years suggests that there can be unforeseen circumstances which impact on the timing of planned project works in Dublin Port.

It is therefore very difficult to predict when individual works packages within the MP2 Project (such as the redevelopment of Berth 53) should commence.

Because of such uncertainties, DPC required a 15 year planning permission such that port capacity which is known to be required in the future can be delivered at the optimum time within that timeframe.

The vision of the Dublin Port Masterplan 2040 needs to be realised by about 2035 in order for there to be sufficient capacity in Dublin Port to handle a projected throughput of 77.2m gross tonnes by 2040.

DPC estimates that the total cost of implementing Masterplan 2040 will be in the order of €1.6 billion (2018 prices). In the nearer term, DPC has a €1 billion ten year capital expenditure programme from 2019 to 2028. By any standards, the scale of the infrastructural development challenge in Dublin Port is enormous.

In addition to the MP2 Project, the Masterplan development programme includes works to complete the already consented ABR Project, other projects such as the Roads Project and, most recently, the requirement to construct border control inspection facilities for State agencies as a result of Brexit.

In this dynamic environment, the construction timescales for individual projects within the overall Masterplan development programme are liable to change in response to circumstances. This is an inevitable consequence of DPC's preferred sustainable approach to the brownfield development of the existing Dublin Port estate rather than the less sustainable greenfield development at another location where construction timelines could be far shorter and more certain. DPC's choice of the brownfield approach rather than a greenfield approach is founded on DPC's commitment to the principles of proper planning and sustainable development.

In summary, the permission of 15 years is required for a number of reasons:

- The overriding imperative to ensure that Dublin Port continues to operate effectively during construction will require works to be staged in distinct phases.
- The works are to, a large extent, sequential and connected – one element cannot commence until an earlier related element is concluded.
- The works are all connected and need to be determined and assessed as a whole rather than be subject to separate applications.

- Construction experience in Dublin Port in recent years shows that programme changes are both inevitable and difficult to predict. DPC's best estimate currently is that the MP2 Project works could be completed by 2032 but experience suggests that the actual construction period could be longer. DPC believe that it is preferable to address this reality at the outset and conduct the assessment of the MP2 Project on this basis.

The framework of the Masterplan (including the 2018 review) and the related Strategic Environmental Assessment (SEA) and Natura Impact Statement (NIS) in conjunction with the Environmental Impact Assessment Report (EIAR) and the NIS at the project level of the MP2 Project provided a robust basis to complete all relevant environmental assessments to facilitate a grant of 15 years duration.

The MP2 Project represents a significant part of the overall development of Dublin Port envisaged in Masterplan 2040. In the absence of a major future-proofed expansion project in Dublin Port (equivalent to Rotterdam's Maasvlakte 2 or the Port of Barcelona Expansion Project), a 15 year consent period provides certainty that elements of the MP2 Project can be deferred, if required, as and when other Masterplan projects need to take priority because of market demand changes or other unforeseeable circumstances.

Having certainty on what can be constructed in Dublin Port over the next 15 years is a proxy for the certainty which ports such as Barcelona and Rotterdam have by virtue of the large greenfield port expansion projects they have completed including major infill works into the Mediterranean and North Sea respectively.

The environmental appraisals presented in this EIAR have taken into account the environmental implications of a 15-year permission and conclude that there is no environmental impediment to the granting of a 15-year permission. A summary is presented below:

- MP2 Project is the second Strategic Infrastructure Development (SID) project at Dublin Port from the Dublin Port Masterplan 2040, reviewed 2018. The environmental appraisals have been undertaken within the context of the Strategic Environmental Assessment (SEA) prepared for the Dublin Port Masterplan which is based on an assessment of incremental time periods from 2018 to 2040.
- In particular, the traffic and transportation appraisal considers a combination of port traffic growth and construction traffic volumes over a 15-year period. These combined traffic volumes have been used in the environmental appraisals for noise and air quality.
- The footprint of the MP2 Project lies entirely within the Dublin Port Estate together with localised widening of the navigation channel. There are no terrestrial habitats, flora & fauna of conservation value within the application boundary of the site. Prolonged construction activities over a 15-year period will therefore have no impact on terrestrial biodiversity, flora & fauna as no natural changes are expected within that period of time.
- The MP2 Project has been engineered to ensure that any potential impact on the surrounding Natura 2000 sites is at a *de minimis* level. The construction period of 15-years has been assessed in the biodiversity, flora & fauna appraisals.
- The location of the MP2 Project is remote from the nearest noise and air quality sensitive receptors due to the natural separation caused by the presence of the Tolka estuary and River Liffey. No prolonged nuisance to the local communities is therefore expected as a result of a 15-year construction period.

- The landscaping and planting associated with Greenway Project, which will be in place prior to the construction phase of the MP2 Project, will be maturing as the MP2 Project construction works advance over 15-years, thereby providing an enhanced visual buffer to the construction works over time.

Independent Environmental Consultant's
Request for Clarifications Number 3
Submitted to Dublin Port Company on the 17th January 2022

Dublin Port MP2 Project Application for Foreshore Consent FS006893

We have reviewed the information submitted with the application for Foreshore consent, file reference FS006893 Dublin Port MP2 Project and the clarifications received from the Applicant on 9 December 2021 and 6 January 2022. The clarification dated the 6 of January 2022 did not provide all of the information required.

Information has been provided in the application and clarifications on the port infrastructure and capacity of the Ro-Ro, Lo-Lo and petroleum trades in the base year 2018, on completion of construction in 2032, and in 2040. The purpose of the query of 21 December 2022 was to determine what impact the MP2 construction phases would have on the Ro-Ro trade in Area C, the Lo-Lo trade in Area D and the petroleum trade in Area H.

In view of the updated MP2 Project construction schedule, the Applicant is asked to clarify:

• What berths will be used and what is the expected Ro-Ro capacity of the Unified Ferry Terminal during the construction phase, while the new Berths 52 and 53 are under construction, the existing Berths 52 and 53 have been removed, and, possibly, Berth 49 will not be useable. This phase appears to extend from Q1 or Q3 of 2022 to Q4 of 2029.

• What is the expected Lo-Lo capacity of the DFT during the construction phase Q1 2031 to Q2 2032, while Berth 50A is being redeveloped and may not be useable, and redevelopment of Oil Berth 3 will have been completed.

Dublin Port Company's
Response to Request for Clarifications Number 3
Submitted to the Foreshore Unit on the 19th January 2022

DUBLIN PORT COMPANY
MP2 PROJECT
FORESHORE APPLICATION (FS006893)
RESPONSE TO THIRD SET OF CLARIFICATIONS ON FORESHORE APPLICATION

Introduction

The MP2 Project Planning Application was made directly by Dublin Port Company (DPC) to An Bord Pleanála (ABP) on 11th July 2019 following the determination of ABP on 9th August 2018 that the project constitutes a strategic infrastructure development under the Section 37 E of the Planning and Development Act 2000 as amended. The application was subject to an Oral Hearing on 16th December 2019 and granted permission by ABP on 1st July 2020.

ABP granted DPC a 15 year planning permission to construct all elements of the MP2 Project including the specific planning aspects relating to dredging, works on the proposed berths, including works on the seabed and foreshore.

A Foreshore Application was subsequently made to the Department of Housing, Local Government & Heritage (DHLGH) on 5th July 2020 supported by the same EIAR and Appropriate Assessment Screening Report & NIS which supported the Planning Application.

The Foreshore Application was subject to a period of public consultation (25th November 2020 to 3rd February 2021) and DHLGH confirmed that no public submissions were received. Responses to all submissions received from Prescribed Bodies were completed by June 2021.

DHLGH subsequently appointed an Independent Environmental Consultant (IEC) to review the MP2 Project Foreshore Application. Three sets of clarification requests have now been issued by the IEC,

The first set of clarifications were forwarded by DHLGH to DPC on 25th November 2021. DPC's response to the clarifications was issued to DHLGH on 9th December 2021.

The second set of clarifications were forwarded by DHLGH on 21st December 2021. DPC's response to the clarifications was issued to DHLGH on 6th January 2022.

A third set of clarifications were forwarded by DHLGH on 17th January 2022 seeking a response from DPC and its Agents, RPS.

This document sets out DPC's response to this third round of clarifications.

Requested Clarification No. 1

In view of the updated MP2 Project construction schedule, the Applicant is asked to clarify:

What berths will be used and what is the expected Ro-Ro capacity of the Unified Ferry Terminal during the construction phase, while the new Berths 52 and 53 are under construction, the existing Berths 52 and 53 have been removed, and, possibly, Berth 49 will not be useable. This phase appears to extend from Q1 or Q3 of 2022 to Q4 of 2029.

DPC Response to Clarification No. 1

Ro-Ro Trade (Area C)

The proposed key changes to the Ro-Ro construction programme are as follows:

- The commencement date for the construction of Berth 53 is being brought forward from Q1 2025 to Q1 / Q3 2022.
- No overall change to the completion of the landside elements of the Unified Ferry Terminal for Ro-Ro Trade are envisaged and may in fact take longer to complete than originally envisaged with a completion date now expected of Q4 2029 compared to that originally envisaged of Q3 2028.

The following sequencing of the proposed MP2 Project construction works will be undertaken to enable Ro-Ro Trade within the Dublin Port Estate to continue to grow whilst new strategic infrastructure is developed within the working port environment.

- The existing Ro-Ro Trade at Berth 52 and Berth 53, currently operated by Seatruck, utilises two single ramps.
- DPC has constructed a new Ro-Ro Jetty with two new ramps as part of the Alexandra Basin Redevelopment (ABR) Project and has expanded Terminal 4 adjacent to the new ramps.
- Seatruck will relocate their operations from Berths 52/53 to the new Ro-Ro facility in Alexandra Basin West in Q2 2022.
- The current Ro-Ro operator at North Wall Quay Extension, P&O, uses a single ramp and will relocate its business to existing Berth 52.
- Existing Berth 53 will be closed, thereby allowing the construction of new riverside Berth 53 and the easterly section of new riverside Berth 52.
- Existing Berth 52 will be kept operational at all times whilst riverside Berth 53 is made operational.
- Once new riverside Berth 53 has been completed in Q3 2025, P&O will transfer its operations there from existing Berth 52. This will then allow the completion of the western end of new riverside Berth 52.

- Temporary mooring arrangements are incorporated in the construction of the new riverside Berth 52 / Berth 49 interface to allow continuing operation of Berth 49 during construction, Berth 49 and new riverside Berth 52 being structurally independent.
- Where construction activities mandate a limited closure of existing Berth 49, vessels will be accommodated on new riverside Berth 53.
- Planned completion of Berth 52 including the Berth 49 interface is Q4 2027.
- Landside works, including the infilling of the Berth 52/53 basin, will continue to Q4 2029. Within this period, elements of the Unified Ferry Terminal will continue to operate for accompanied and non-accompanied Ro-Ro Freight and Ferry Passengers. The Terminal 1 Building will continue to operate as normal throughout the MP2 Project construction works.

The safe passage of vessels to and from Area C during the construction phase will fall under the control of the Harbour Master.

No changes will occur to the baseline Ro-Ro Trade throughputs as a result of the changes to the construction programme. Similarly no changes will occur to the projected Ro-Ro Trade throughputs envisaged by 2040 as set out in the Dublin Port Masterplan 2040.

The projected interim capacity by 2032 were updated by DPC in September 2021 in accordance with the revised construction programme and issued to DHLGH as part of DPC's response to the first set of clarifications on 9th December 2021.

The key to making the construction of the MP2 Project viable whilst allowing Ro-Ro Trade to continue to grow is the movement of elements of Ro-Ro Trade to Alexandra Basin West to free up space for the construction of the MP2 Project. This movement of Ro-Ro Trade is assessed within the ABR Project Planning and Foreshore Applications (Planning Ref ABP 29N, PA0034; Foreshore File Ref 2016/01723). The cumulative impact of the MP2 Project with the ABR Project is also assessed in Chapter 18 of the MP2 Project EIAR.

Requested Clarification No. 2

In view of the updated MP2 Project construction schedule, the Applicant is asked to clarify:

What is the expected Lo-Lo capacity of the DFT during the construction phase Q1 2031 to Q2 2032, while Berth 50A is being redeveloped and may not be useable, and redevelopment of Oil Berth 3 will have been completed.

DPC Response to Clarification No. 2

Lo-Lo Trade (Area D)

There are no significant construction programme changes to the Lo-Lo element of the MP2 Project. Works are expected to commence in Q3 2028.

Furthermore, there are no changes to the construction activities described in Chapter 3 of the EIAR. DPC confirm that all mitigation measures as set out in Chapter 19 of the EIAR will be applied to the construction phase.

The DFT Lo-Lo Terminal is served by two existing Berths (Berth 50 and Berth 50A).

- No works are required to existing Berth 50 under the MP2 Project.
- No works, including capital dredging, are required to existing Berth 50A under the MP2 Project.

Minor disruption will occur at the western extremity of existing Berth 50A where the berth interfaces with the proposed extension to Berth 50A. However the existing Berth 50A will remain operational during the construction of the proposed extension to Berth 50A.

The safe passage of vessels to and from the existing Berth 50A during the construction phase will fall under the control of the Harbour Master.

Consequently there will be no significant disruption to the capacity of the DFT Lo-Lo Terminal during the construction phase of the MP2 Project.

The completion of the MP2 Project will provide an additional container freight terminal storage area for the DFT Lo-Lo Terminal and allow for ships of greater length to berth at the extended Berth 50A.

As set out in Chapter 2 of the EIAR (Project Rational) and Chapter 3 of the EIAR (Project Description) the redevelopment of Oil Berth 3 has been future proofed by being designed as a multi-purpose structure, initially for oil tanker berthing, with future potential use as a container vessel berth when Petroleum Trade reduces as a result of national policies to decarbonise the economy.

Given the above, there are no expected changes envisaged to the growth in Lo-Lo capacity as set out in DPC's first response to the IEC clarifications of 9th December 2021.

Petroleum Trade (Area H)

The MP2 Project relates to increasing the capacity of Lo-Lo Trade in Area D and Ro-Ro Trade in Area C. Whilst Area H lies within the MP2 Project Planning Boundary, no works are proposed that will significantly change the capacity of the Petroleum Trade at Dublin Port. The proposed permanent works are limited to the Eastern Oil Jetty (Oil Berths 3 & 4) and works at Jetty Road.

Whilst Oil Berth 3 is upgraded to a multi-functional berth, existing operations will be accommodated at Oil Berth 1 and Oil Berth 2.

There will be no significant disruption to the throughput of petroleum as Oil Berth 3 and Oil Berth 4 handle just 4% of Dublin Port's total petroleum imports.

Appendix 4 Request for Clarifications on Dredge Volumes and Applicants Response

Foreshore Unit
Request for Clarifications
Submitted to Dublin Port Company on the 10th of November 2021

[redacted]
Sent: Wednesday 10 November 2021 15:05
[redacted]
Subject: RE Foreshore Application Dublin Port Company MP2 project FS006893

Hi [redacted]

I refer to the above referenced application.

As part of the assessment by the Marine Advisors there appears to be anomaly regarding what is to be included in the dredging volume. The Department is seeking clarification and supporting information to assist us in our consideration of this project, if you could provide same.

If you have any queries in relation to the above please do not hesitate to contact me.

Regards

[redacted]

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta
Department of Housing, Local Government and Heritage

Bóthair an Bhaile Nua, Loch Garman, Y35 AP90
Newtown Road, Wexford, Y35 AP90

www.tithiocht.gov.ie
www.housing.gov.ie

Dublin Port Company's
Response to Request for Clarifications
Submitted to the Foreshore Unit on the 22nd November 2021

[redacted]
Sent: Monday 22 November 2021 11:47
[redacted]
Subject: FS006893 MP2 Project DPC Clarification of Dredge Volumes

Dear [redacted]

Further to your email of 10th November 2021 to [redacted], please see attached DPC's response.

Yours sincerely
For RPS

[redacted]
Senior Associate - Water Environment and Flood Risk Management
RPS | Consulting UK & Ireland
Elmwood House
74 Boucher Road, Belfast
Co. Antrim BT12 6RZ, United Kingdom
T +44 2890 667 914
[redacted]

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

Ionad an Chalafoirt, Bóthar Alexandra, Baile Átha Cliath 1
Port Centre, Alexandra Road, Dublin, D01 H4C6
T: +353 (0) 1 887 6000
F: +353 (0) 1 855 1241
R/E: info@dublinport.ie

www.dublinport.ie

[redacted]
Foreshore Consenting Unit
Department of Housing, Local Government and Heritage
Newtown Road
Wexford
Y35 AP90

22nd November 2021

FS006893 (MP2 Project), Clarification on Capital Dredging Requirements

Dear [redacted]

Further to your correspondence of 10th November 2021, we set out below Dublin Port Company's response to your request on clarifications to the MP2 Project Capital Dredging Requirements.

BACKGROUND

Dublin Port Masterplan 2040, reviewed 2018

The Dublin Port Masterplan 2040, reviewed 2018 identifies the land uses and development projects on port lands which will allow the Port to reach its ultimate capacity of 77.2m gross tonnes by 2040.

Dublin Port Company (DPC) envisages that this will be achieved by three Strategic Infrastructure Development (SID) projects:

- Alexandra Basin Redevelopment (ABR) Project (ABP Ref PA0034), which is under construction.
- MP2 Project, which was granted planning permission by An Bord Pleanala (ABP) (ABP-304888-19) on 1st July 2020 for which Foreshore and Dumping at Sea consent is currently being sought.
- A final project (3FM Project) to develop port lands on the Poolbeg peninsula including the development of the South Port Access Route (SPAR) to provide connectivity between the Dublin Port Tunnel and the south port lands. This project is current at the Pre-application stage with ABP.

MP2 Project

The MP2 Project complements the ABR Project in providing capacity for growth in the Ro-Ro and Lo-Lo modes on the north side of the Port and at its eastern end.

DPC applied for consent under the Foreshore Acts on 10th July 2020 to occupy an area of foreshore for the MP2 Project for the purpose of constructing the following:

- a new Ro-Ro Jetty (Berth 53);
- re-orientating the already consented Berth 52;
- lengthening of Berth 50A;

[redacted]

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

Ionad an Chalafoirt, Bóthar Alexandra, Baile Átha Cliath 1
Port Centre, Alexandra Road, Dublin, D01 H4C6
T: +353 (0) 1 887 6000
F: +353 (0) 1 855 1241
R/E: info@dublinport.ie

www.dublinport.ie

- redeveloping Oil Berth 3;
- constructing passenger terminal buildings and a heritage zone; and
- dredging and ancillary site works at Dublin Port.

CAPITAL DREDGING REQUIREMENTS

DPC needs to advance the construction of Berth 52, Berth 53 and the Unified Ferry Terminal ahead of programme in order to meet the post Brexit priority demands of national port infrastructure. In particular, DPC has witnessed a significant increase in Ro-Ro trade on routes between Ireland and other EU Member States.

The MP2 Project was advanced in the expectation that capital dredging at the riverside Berth 52 would be completed under the ABR Project for which Berth 52 and its associated capital dredging requirements were granted Foreshore consent.

However, in order to allow for an additional riverside Berth 53, the orientation of Berth 52 needed to be changed by 9% and this became subject to new consents under the MP2 Project. As a result the capital dredging element could not be completed under the ABR Project which has resulted in a shortfall.

To make up for this shortfall, DPC request an increase to the amount of material to be dredged under the MP2 Project of 243,673m^3. The overall volume to be dredged under the MP2 Project will therefore increase from 424,644m^3 to 668,317m^3. These volumes will be dredged from entirely within the proposed Section 10 MP2 Project Foreshore boundary.

DPC has also requested this additional volume to be applied to the current Dumping at Sea Permit application from the EPA. The EPA has requested additional assessments to be undertaken to ensure no significant environmental impact will arise from the dredging of this material. Notably the EPA requested the following additional information:

- Further sediment chemistry Sampling & Analysis; and

- Further plume dispersal modelling at the Loading Area

These surveys / studies have been completed and issued to the EPA.

ENVIRONMENTAL ASSESSMENT OF THE ADDITIONAL DREDGE VOLUME

DPC's environmental consultants, RPS, believe that the dredging of the requested additional material will have no significant environment impact for the following reasons:

- The total revised volume of capital dredging is 668,317m^3 and the maximum volume to be dredged in any one winter season is 515,263m^3. This volume is circa only 50% of the 1,000,000 m^3 permitted per annum for four years under the ABR Project. Extensive monitoring of the ABR Project capital dredging scheme, reported annually to the EPA through Annual Environmental Reports (AERs), has demonstrated that dredging at this rate over the winter months (October – March) has no

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

Ionad an Chalafoirt, Bóthar Alexandra, Baile Átha Cliath 1
Port Centre, Alexandra Road, Dublin, D01 H4C6
T: +353 (0) 1 887 6000
F: +353 (0) 1 855 1241
R/E: info@dublinport.ie

www.dublinport.ie

significant environment impact within the inner Liffey channel, Dublin Bay and the licenced offshore dump site located at the approaches to Dublin Bay to the west of the Burford Bank.

- The same mitigation measures applied to the ABR Project will also be applied to the MP2 Project as set out in the MP2 Project EIAR. Notably the rate of dredging is restricted to a maximum hopper capacity of 4,100 m^3 per trip and no overspill is permitted within the inner Liffey channel.

- No changes to the mitigation measures are proposed.

- The further sediment chemistry Sampling & Analysis undertaken has shown that the sediments are suitable for disposal at sea (see attachment)

- The further plume dispersal modelling undertaken has demonstrated no additional environmental impact (see attachment)

- In summary, the conclusions of the environmental assessments set out in the MP2 Project EIAR remain valid with no changes required to the suite of mitigation measures contained therein.

POTENTIAL IMPACT ON NATURA 2000 SITES

DPC understand that DHLGH are currently preparing an Appropriate Assessment Screening Report and are likely to request DPC to undertake a Stage 2 Appropriate Assessment which will be subject to a period of public consultation.

DPC would welcome the opportunity to include the revised dredge volume within the Natural Impact Statement and allow further scrutiny by all interested parties and members of the public.

We believe the impact of the revised dredge volume on the Natura 2000 sites will be *de minimus*.

We trust that DHLGH will give its earnest consideration to our request in a timely manner which will not unduly delay the decision making process.

Yours sincerely

[redacted]

For Dublin Port Company

[redacted]

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

MAKING COMPLEX EASY

DUBLIN PORT COMPANY

DUMPING AT SEA PERMIT APPLICATION S0024-02

MP2 Project – Further Material Sampling and Analysis
Response to Section 5(2) Notice issued by the EPA on 22nd Sept 2021

MP2 Project
Dumping at Sea Permit Application S0024-02

Further Material Sampling and Analysis

Final
11 November 2021

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
Draft for DPC Review	Further Material Sampling and Analysis	[redacted]			10/11/2021
Final	Further Material Sampling and Analysis				11/11/2021

Approval for issue

[redacted] [redacted] 11 November 2021

Prepared by:

RPS

[redacted]
Senior Associate - Water Environment and Flood Risk Management

Elmwood House
74 Boucher Road, Belfast
Co. Antrim BT12 6RZ

[redacted]

Prepared for:

Dublin Port Company

[redacted]
Port Engineer

Port Centre
Alexandra Road
Dublin 1, Ireland

Contents

Attachments

Declaration

I certify that the information given in this Section 5(2) response is truthful, accurate and complete.

I give consent to the EPA to copy this Section 5(2) response for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this Section 5(2) response itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by: [redacted] **Date:** 11th November 2021

(on behalf of the organisation)

Print signature name: [redacted]

Position in organisation: Port Engineer

1 INTRODUCTION

1.1 MP2 Project – Dumping at Sea Permit Supplement Application (S0024-02)

Dublin Port Company (DPC) submitted an application to the Environmental Protection Agency (EPA) for a permit under Section 5 of the Dumping at Sea Acts 1996 to 2010 on the 4th August 2020. The application is for the loading and dumping of dredged material arising from capital dredging within Dublin Harbour as part of the MP2 Project. The MP2 Project is the second Strategic Infrastructure Development Project to be brought forward for planning from Dublin Port's Masterplan 2040, reviewed 2018. An Bord Pleanála granted Planning Permission for the MP2 Project on 1st July 2020 (ABP-304888-19).

Dublin Port Company require a Supplement to increase both the Loading Area and Volume in the vicinity of the proposed riverside Berths 52 & 53. This change is required to advance the construction of Berth 52, Berth 53 and the Unified Ferry Terminal ahead of programme in order to meet the post Brexit priority demands of national port infrastructure.

The material to be dredged consists of a mixture of clay, silt, sand, gravel and cobbles. It is proposed to dispose of the dredged sediments at the existing licensed offshore disposal site located at the entrance to Dublin Bay to the west of the Burford Bank, (6.75 km from the lighthouse at the end of the Great South Wall). Dredging will be carried out by a trailer suction hopper dredger and/or a back-hoe dredger and support vessels. Dublin Port Company is seeking a 15 year consent aligned to the Planning Permission. This will enable the dredging operations to take place at intervals which tie in with the construction phase of the MP2 Project. All capital dredging activities will however be restricted to the winter months only (October to March) commencing in January 2022.

The requested change in permitted volume is set out in Table 1-1. The increase to the amount of material to be dredged under the Supplement is 243,673m^3. The overall volume to be dredged under the MP2 Project application is therefore increased from 424,644m^3 to 668,317m^3.

Table 1-1 Requested change to permitted Volume

Element of Work	Standard depth	Volume	Revised Volume	Difference
Berths 52 / 53	-10.0m CD	159,595m^3	403,268m^3	+243,673 m^3
Channel Widening	-10.0m CD	111,995m^3	111,995m^3	-
Oil Berth 3	-13.0m CD	83,414m^3	83,414m^3	-
Berth 50A	-11.0m CD	69,640m^3	69,640m^3	-
Total Volume to be dredged		**424,644m^3**	**668,317m^3**	**+243,673 m^3**

The increase to the Loading Area under the Supplement application is presented in Figure 1-1.

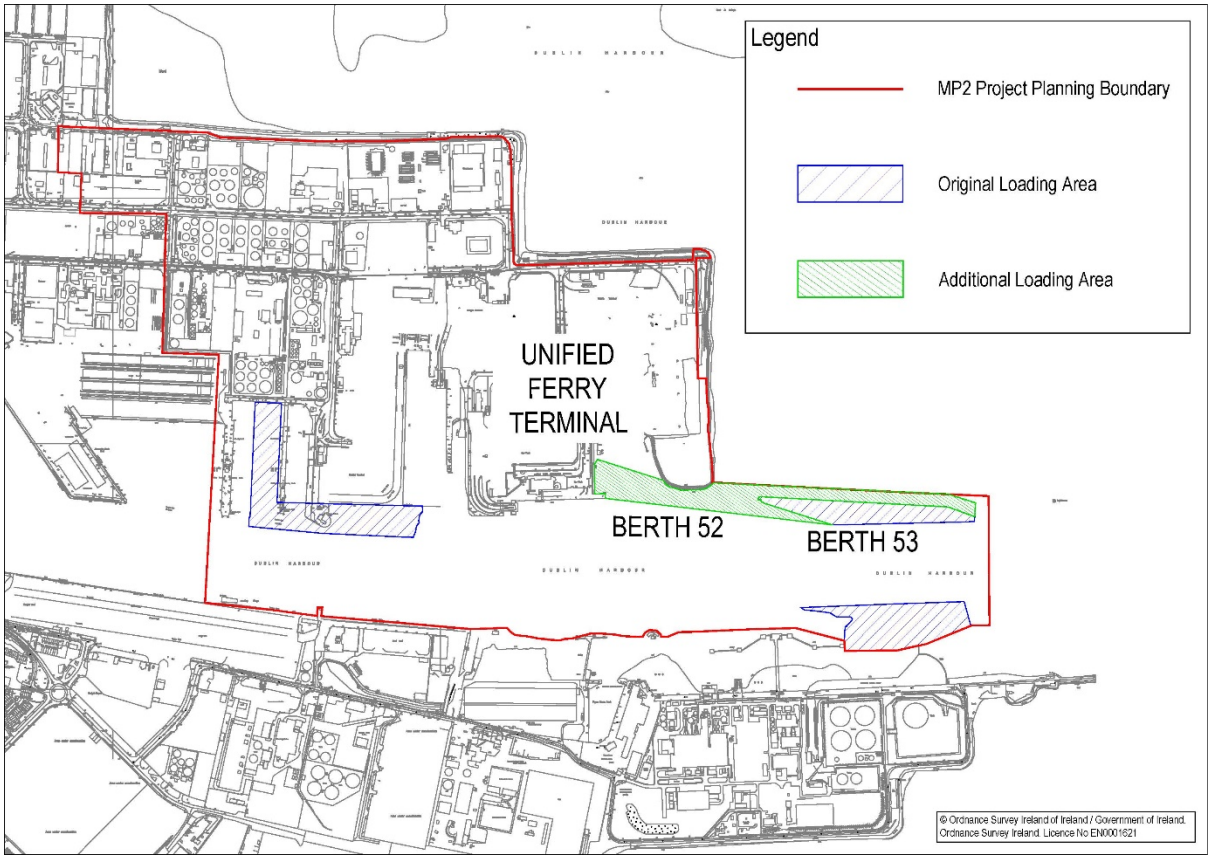

Figure 1-1 Proposed increase to the Loading Area under the Supplement application

1.2 Section 5(2) Notice: Request for Further Information

The EPA issued a Section 5(2) Notice: Request for Further Information to DPC on 22nd September 2021. A response was requested by 22nd October 2021.

The Section 5(2) Notice included a requirement for further granulometry and chemical analysis of sediments in the loading area which DPC is seeking to extend.

DPC asked for an extension of time until 22nd October 2021 to provide a response due to time constraints in taking samples within the working port and the time required to analysis and report the results. This time extension was granted by the EPA.

Section 2 of this document sets out the results of the further granulometry and chemical analysis of sediments in accordance with Section B – Material Analysis of the Dumping at Sea Application Form.

The material analysis results are also submitted in Excel Format using the Material Analysis Form on the EPA Website.

2 FURTHER MATERIAL SAMPLING & ANALYSIS

2.1 Material Sampling and Analysis September 2021

Further granulometry and chemical analysis of sediments within the loading and dredging areas were undertaken according to a Sampling and Analysis Plan (SAP) received from the Marine Institute on 17th September 2021. The SAP comprised sampling at 9 locations at the surface of the seabed as presented in Figure 2-1.

DPC appointed Ger Morgan, Aquatic Services Unit, UCC to undertake the sampling and analysis programme. The Samples were collected on 21st September 2021.

The sediment samples were sent to Socotec Laboratory in the UK for sediment chemistry analysis.

The results are reported next in accordance with Section B – Material Analysis of the Dumping at Sea Application Form.

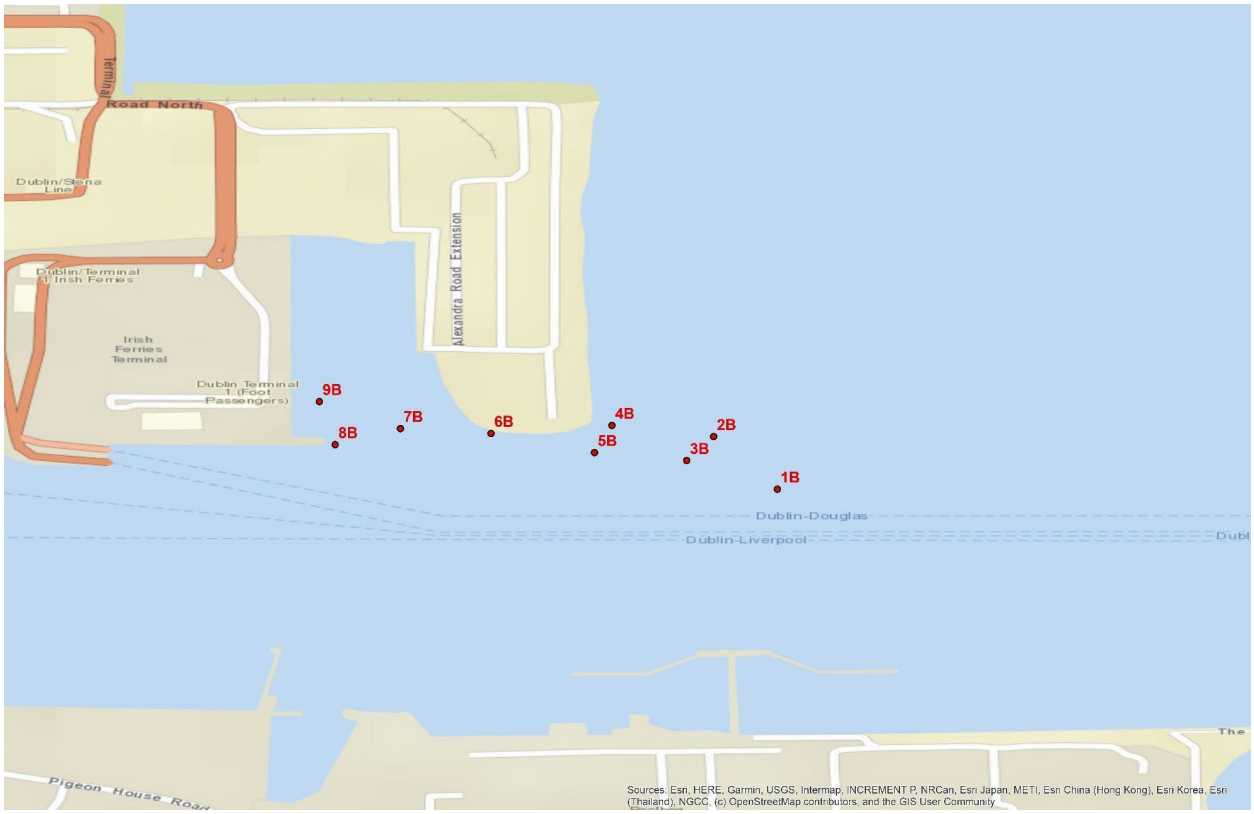

Figure 2-1 Marine Sediment Sampling locations (SAP September 2021)

2.1.1 B1: Sediment Chemistry Results

The results of the sediment sampling effort in September 2021 are presented in the following Attachments of this report:

Attachment B.1(I)	Results provided in Dumping at Sea Material Analysis Reporting Form
Attachment B.1(II)	Original laboratory results

The marine sediments were classified by comparing the sediment chemistry results against the upper and lower action limits set in the *Marine Institute Guidelines for the Assessment of Dredge Material for Disposal in Irish Waters (2006)* - Refer to Table 2-1 and Table 2-2. The lower action levels for Arsenic and Nickel have recently been changed by the Marine Institute to take account of the natural background concentrations of these elements in Irish marine sediments. The most up to date lower action limits have been used in the analysis.

The sediment chemistry results compared to upper and lower Irish action limits are provided in Table 2-3.

Table 2-1 Sediment Quality Classification (Marine Institute 2006)

Class	Description
Class 1	Contaminant concentration less than the Level 1 Lower Level Values Uncontaminated: no biological effects likely
Class 2	Contaminant concentrations between Level 1 and Level 2 Values Marginally contaminated; Further sampling & analysis necessary to delineate problem area, if possible
Class 3	Heavily contaminated; Very likely to cause biological effects / toxicity to marine organisms. Alternative management options to be considered

Table 2-2 Parameters and proposed guidance values for sediment quality (Marine Institute 2006)

Parameter	Units (Dry Wt)	Action Level 1 (Lower Level Value)	Action Level 2 (Upper Level Value)
Arsenic	mg kg^{-1}	20*	70
Cadmium	mg kg^{-1}	0.7	4.2
Chromium	mg kg^{-1}	120	370
Copper	mg kg^{-1}	40	110
Lead	mg kg^{-1}	60	218
Mercury	mg kg^{-1}	0.2	0.7
Nickel	mg kg^{-1}	40*	60
Zinc	mg kg^{-1}	160	410
Σ (TBT + DBT)	mg kg-1	0.1	0.5
g-HCH (Lindane)	µg kg^{-1}	0.3	1
PCB (individual congenerof ICES 7)	µg kg^{-1}	1	180
Σ (7 PCBs)	µg kg^{-1}	7	1260
Hexachlorobenzine	µg kg^{-1}	0.3	1
Σ (16 PAH)	µg kg^{-1}	4000	-
Total Extractable Hydrocarbons (TEH)	g kg^{-1}	1	

Note: * Revised Lower limits for Arsenic and Nickel
Class 1 Sediments – Contaminant concentrations below the Level 1 Lower Level Values
Class 2 Sediments – Contaminant concentrations between the Lower and Upper Level Values
Class 3 Sediments – Contaminant concentrations above the Level 2 Upper Level Values

Table 2-3 Results compared against Irish Guidelines

Parameter	Units (Dry Wt)	Sediment Sampling - September 2021					Guideline Values	
		1B Surface	2B Surface	3B Surface	4B Surface	5B Surface	Lower Level	Upper Level
Arsenic	mg kg^{-1}	19.9	19.7	20.2	19.0	19.0	20	70
Cadmium	mg kg^{-1}	0.4	0.4	0.4	0.4	0.4	0.7	4.2
Chromium	mg kg^{-1}	55.9	55.6	53.9	49.1	53.8	120	370
Copper	mg kg^{-1}	30.2	27.3	28.0	23.5	30.4	40	110
Lead	mg kg^{-1}	29.2	28.4	30.8	27.3	32.4	60	218
Mercury	mg kg^{-1}	0.06	0.05	0.05	0.06	0.08	0.2	0.7
Nickel	mg kg^{-1}	27.0	25.6	26.3	23.9	26.6	40	60
Zinc	mg kg^{-1}	118	115	118	104	129	160	410
(TBT + DBT)	mg kg^{-1}	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	0.5
g-HCH (Lindane)	ug kg^{-1}	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	1
PCB 028	ug kg^{-1}	0.39	0.57	0.55	0.49	0.59	1	180
PCB 052	ug kg^{-1}	0.3	0.34	0.41	0.33	0.49	1	180
PCB 101	ug kg^{-1}	0.19	0.24	0.34	0.31	0.52	1	180
PCB 118	ug kg^{-1}	0.31	0.36	0.45	0.41	0.54	1	180
PCB 138	ug kg^{-1}	0.11	0.28	0.52	0.33	0.6	1	180
PCB 153	ug kg^{-1}	0.3	0.25	0.32	0.31	0.55	1	180
PCB 180	ug kg^{-1}	0.15	0.17	0.17	0.21	0.22	1	180
Σ (7 PCBs)	ug kg^{-1}	1.75	2.21	2.76	2.39	3.51	7	1260
Hexachlorobenzine	ug kg^{-1}	<0.1	0.13	<0.1	<0.1	<0.1	0.3	1
Acenaphthene	ug kg^{-1}	4.17	51.1	9.13	6.03	9.89	-	-
Acenaphthylene	ug kg^{-1}	12.2	20	27.5	24.7	25.7	-	-
Anthracene	ug kg^{-1}	19.3	78.2	43.4	34.1	52.8	-	-
Benzo (a) anthracene	ug kg^{-1}	76.7	274	164	144	154	-	-
Benzo (a) pyrene	ug kg^{-1}	95.3	304	206	164	184	-	-
Benzo (b) fluoranthene	ug kg^{-1}	96.2	259	152	155	164	-	-
Benzo (ghi) perylene	ug kg^{-1}	74.7	192	117	115	133	-	-
Benzo (k) fluoranthene	ug kg^{-1}	51.8	105	98	90.2	85.6	-	-
Chrysene	ug kg^{-1}	90.7	313	153	163	172	-	-
Dibenz (a,h) anthracene	ug kg^{-1}	16.2	45.5	26.8	25.9	30.3	-	-
Flourene	ug kg^{-1}	11.3	49.3	22.2	19.5	24	-	-
Fluoranthene	ug kg^{-1}	109	588	195	216	230	-	-
Indeno (1,2,3–cd)	ug kg^{-1}	78.4	195	116	124	140	-	-
Naphthalene	ug kg^{-1}	15.4	22.3	17.8	20.8	21	-	-
Phenanthrene	ug kg^{-1}	42	317	73.2	81.8	70.7	-	-
Pyrene	ug kg^{-1}	146	634	426	266	326	-	-
Σ (16 PAH)	ug kg^{-1}	939	3447	1847	1650	1823	4000	-
Total Extractable Hydrocarbons	g kg^{-1}	0.2630	0.2450	0.1920	0.2590	0.3120	1	

Table 3 Results compared against Irish Guidelines (continued)

Parameter	Units (Dry Wt)					Guideline Values	
		6B Surface	7B Surface	8B Surface	9B Surface	Lower Level	Upper Level
Arsenic	mg kg^{-1}	17.9	20.2	20.4	21.3	20	70
Cadmium	mg kg^{-1}	0.4	0.5	0.4	0.4	0.7	4.2
Chromium	mg kg^{-1}	47.2	58.4	51.3	50.8	120	370
Copper	mg kg^{-1}	24.0	31.6	24.7	24.3	40	110
Lead	mg kg^{-1}	26.3	34.0	35.0	36.0	60	218
Mercury	mg kg^{-1}	0.05	0.07	0.07	0.07	0.2	0.7
Nickel	mg kg^{-1}	22.9	29.0	26.1	25.7	40	60
Zinc	mg kg^{-1}	103	132	114	110	160	410
(TBT + DBT)	mg kg^{-1}	<0.01	<0.01	<0.01	<0.01	0.1	0.5
g-HCH (Lindane)	ug kg^{-1}	<0.1	<0.1	<0.1	<0.1	0.3	1
PCB 028	ug kg^{-1}	0.45	0.56	0.6	0.49	1	180
PCB 052	ug kg^{-1}	0.33	0.38	0.39	0.31	1	180
PCB 101	ug kg^{-1}	0.38	0.25	0.37	0.2	1	180
PCB 118	ug kg^{-1}	0.48	0.33	0.29	0.3	1	180
PCB 138	ug kg^{-1}	0.46	0.29	0.32	0.29	1	180
PCB 153	ug kg^{-1}	0.38	0.27	0.28	0.25	1	180
PCB 180	ug kg^{-1}	0.16	0.21	0.19	0.12	1	180
Σ (7 PCBs)	ug kg^{-1}	2.64	2.29	2.44	1.96	7	1260
Hexachlorobenzine	ug kg^{-1}	<0.1	<0.1	<0.1	<0.1	0.3	1
Acenaphthene	ug kg^{-1}	5.61	3.75	8.08	3.36	-	-
Acenaphthylene	ug kg^{-1}	48.2	9.73	20.1	10.5	-	-
Anthracene	ug kg^{-1}	48	19.7	30.9	16.5	-	-
Benzo (a) anthracene	ug kg^{-1}	189	56.5	85.9	55.3	-	-
Benzo (a) pyrene	ug kg^{-1}	221	76.4	122	74.2	-	-
Benzo (b) fluoranthene	ug kg^{-1}	154	74.9	111	78.8	-	-
Benzo (ghi) perylene	ug kg^{-1}	136	62	94.5	61.1	-	-
Benzo (k) fluoranthene	ug kg^{-1}	112	33.7	60.6	33.4	-	-
Chrysene	ug kg^{-1}	150	68.5	99.2	67.2	-	-
Dibenz (a,h) anthracene	ug kg^{-1}	33.5	13.6	20.9	13.7	-	-
Flourene	ug kg^{-1}	26.2	10.9	21.8	10.9	-	-
Fluoranthene	ug kg^{-1}	228	78.4	126	78.2	-	-
Indeno (1,2,3–cd)	ug kg^{-1}	141	56.6	98.3	65.2	-	-
Naphthalene	ug kg^{-1}	18.2	16.5	18	14.4	-	-
Phenanthrene	ug kg^{-1}	44.6	37.3	53.1	33	-	-
Pyrene	ug kg^{-1}	327	111	182	104	-	-
Σ (16 PAH)	ug kg^{-1}	1882	729	1152	720	4000	-
Total Extractable Hydrocarbons	g kg^{-1}	0.2350	0.3070	0.2740	0.2690	1	

2.1.2 B1: Appraisal of Results

An appraisal of the sediment chemistry results is provided below.

Nine samples were taken within the area to be dredged (1B – 9B).

- All nine samples returned contaminant concentrations below Action Level 1 for all contaminants except for Arsenic.
- Samples 3B, 7B, 8B and 9B returned an Arsenic concentration marginally above the Lower Action Level.
- None of the nine samples returned concentrations above the Upper Action Level.

Overall, there is no significant difference between the sediment chemistry results taken within the original loading area and the proposed extension to the loading area.

2.1.3 B2: Characteristics and Composition of the Substance or Material for Disposal

There are no changes to Section B2 – Material Analysis of the Dumping at Sea Application Form as a result of the September 2021 sampling effort.

The characteristics and composition of the material within the extended loading area are similar to the material within the original loading area.

Attachment B.1(i)

Results of Sediment Chemistry Analysis in Marine Institute Format

1. General Information	Applicant (company name)	Dublin Port
	Location (port/harbour)	Dublin Port
	Dredge Quantity (tonnes)	
	Permit Application Reg. No. (to be assigned by EPA)	
2. Survey Information	Survey Company	Aquatic Services Unit
	Sampling Date	21/09/2021
	Analysing Laboratory	SOCOTEC
	Sub Contract Lab	
	Analysis Date	27/09/2021,
3. Methods Information	Fraction analysed	<2mm
	Water content of sample (reported as %)	%
	Are results reported as wet weight or dry weight?	Dry Weight
	Granulometry method	Gravimetric Holmes and McIntyre
	TEH method	Solvent extraction and clean up followed by GC-FID analysis.
	Organic carbon (OC) method	Carbonate removal and sulphurous acid/combustion at 800°C/NDIR.
	Metals (incl. mercury & arsenic) extraction type	HF/Boric extraction followed by ICP analysis.
	Methods of detection (metals, incl. mercury & arsenic)	
	Organics extraction types	Solvent extraction and clean up followed by GC-MS-MS analysis.
	Methods of detection (PCBs / PAHs / TBT / DBT)	Solvent extraction and clean up followed by GC-MS-MS analysis.

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 3. Results

Sample ID code	Company Name	Location	Sampling date (dd/mm/yyyy)	Sampling Location ID	Position Latitude (dd mm.mmm)	Position Longitude (dd mm.mmm)	Sampling depth m	Lab Report ID	Sample appearance (e.g. colour, texture, signs of life)	% Moisture
DP-01A	*<example> Dublin Port Co.*	*Dublin Port*	*23/08/2010*	*DP-01*	*53d 20.670m*	*06d 13.167m*	*0.2*	*20024124-1*	*Grey-black silty mud, no visible signs of life*	*56.95*
1B	Dublin Port Co.	Dublin Port	21/09/2021	D1	53d 20.670m	6d 11.159m	0.2	MAR01149	Grey/Black Sandy Mud	51.10
2B	Dublin Port Co.	Dublin Port	21/09/2021	D2	53d 20.726m	6d 11.221m	0.2	MAR01149	Grey/Black Sandy Mud	51.20
3B	Dublin Port Co.	Dublin Port	21/09/2021	D3	53d 20.690m	6d 11.249m	0.2	MAR01149	Grey/Black Sandy Mud	44.10
4B	Dublin Port Co.	Dublin Port	21/09/2021	D4	53d 20.719m	6d 11.310m	0.2	MAR01149	Grey/Black Sandy Mud	51.60
5B	Dublin Port Co.	Dublin Port	21/09/2021	D5	53d 20.703m	6d 11.330m	0.2	MAR01149	Gray/Black Sandy Mud	54.00
6B	Dublin Port Co.	Dublin Port	21/09/2021	D6	53d 20.710m	6d 11.419m	0.2	MAR01149	Gray/Black Sandy Mud	44.70
7B	Dublin Port Co.	Dublin Port	21/09/2021	D7	53d 20.723m	6d 11.506m	0.2	MAR01149	Grey/Black Muddy Sand	55.00
8B	Dublin Port Co.	Dublin Port	21/09/2021	D8	53d 20.745m	6d 11.587m	0.2	MAR01149	Grey/Black Muddy Sand	56.30
9B	Dublin Port Co.	Dublin Port	21/09/2021	D9	53d 20.744m	6d 11.571m	0.2	MAR01149	Brown Grey Muddy Sand	53.90

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 3. Results

Sample ID code	Particle size >2mm %	Particle size <2mm >63um %	Particle size <63um %	OC %	Carbonate %	TEH g kg^{-1}	Cu mg kg^{-1}	Zn mg kg^{-1}	Cd mg kg^{-1}	Hg mg kg^{-1}	Pb mg kg^{-1}	As mg kg^{-1}	Cr mg kg^{-1}	Mn mg kg^{-1}	Ni mg kg^{-1}	Li mg kg^{-1}
DP-01A	*24.8*	*12.7*	*62.5*	*1.23*		*0.0653*	*62.5*	*167*	*0.307*	*0.104*	*43*	*16.5*	*47.4*	*322*	*18.9*	*37.7*
1B	0.0%	26.7%	73.3%	1.80	10.80	0.2630	30.2	118	0.40	0.06	29.2	19.9	55.9		27.0	40.6
2B	0.0%	34.7%	65.3%	1.47	10.60	0.2450	27.3	115	0.40	0.05	28.4	19.7	55.6		25.6	37.1
3B	0.0%	33.0%	67.0%	1.58	10.30	0.1920	28.0	118	0.40	0.05	30.8	20.2	53.9		26.3	38.3
4B	0.0%	23.7%	76.3%	1.49	11.00	0.2590	23.5	104	0.40	0.06	27.3	19.0	49.1		23.9	42.3
5B	0.0%	28.0%	72.0%	1.83	11.30	0.3120	30.4	129	0.40	0.08	32.4	19.0	53.8		26.6	43.9
6B	0.0%	40.8%	59.2%	1.37	12.00	0.2350	24.0	103	0.40	0.05	26.3	17.9	47.2		22.9	39.3
7B	0.6%	33.7%	65.7%	1.75	12.20	0.3070	31.6	132	0.50	0.07	34.0	20.2	58.4		29.0	40.5
8B	0.0%	28.0%	72.0%	1.54	12.20	0.2740	24.7	114	0.40	0.07	35.0	20.4	51.3		26.1	42.6
9B	0.0%	36.3%	63.7%	1.56	12.00	0.2690	24.3	110	0.40	0.07	36.0	21.3	50.8		25.7	40.7

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 3. Results

Sample ID code	Al mg kg^{-1}	DBT mg kg^{-1}	TBT mg kg^{-1}	Σ TBT + DBT mg kg^{-1}	PCB 028 ug kg^{-1}	PCB 052 ug kg^{-1}	PCB 101 ug kg^{-1}	PCB 138 ug kg^{-1}	PCB 153 ug kg^{-1}	PCB 180 ug kg^{-1}	PCB 118 ug kg^{-1}	PCB Σ7 PCB ug kg^{-1}	PAH Acenaphthene ug kg^{-1}	PAH Acenaphthylene ug kg^{-1}
DP-01A	*27000*	*0.02*	*0.06*	*0.08*	*< 0.100*	*< 0.100*	*< 0.100*	*< 0.100*	*< 0.100*	*< 0.100*	*< 0.100*	*< 0.700*	*15.6*	*43.2*
1B	37200	<0.005	<0.005	<0.01	0.39	0.3	0.19	0.11	0.3	0.15	0.31	1.75	4.17	12.2
2B	34300	<0.005	<0.005	<0.01	0.57	0.34	0.24	0.28	0.25	0.17	0.36	2.21	51.1	20
3B	34500	<0.005	<0.005	<0.01	0.55	0.41	0.34	0.52	0.32	0.17	0.45	2.76	9.13	27.5
4B	37500	<0.005	<0.005	<0.01	0.49	0.33	0.31	0.33	0.31	0.21	0.41	2.39	6.03	24.7
5B	38400	<0.005	<0.005	<0.01	0.59	0.49	0.52	0.6	0.55	0.22	0.54	3.51	9.89	25.7
6B	35100	<0.005	<0.005	<0.01	0.45	0.33	0.38	0.46	0.38	0.16	0.48	2.64	5.61	48.2
7B	35500	<0.005	<0.005	<0.01	0.56	0.38	0.25	0.29	0.27	0.21	0.33	2.29	3.75	9.73
8B	37000	<0.005	<0.005	<0.01	0.6	0.39	0.37	0.32	0.28	0.19	0.29	2.44	8.08	20.1
9B	36000	<0.005	<0.005	<0.01	0.49	0.31	0.2	0.29	0.25	0.12	0.3	1.96	3.36	10.5

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 3. Results

Sample ID code	PAH Anthracene ug kg^{-1}	PAH Benzo (a) anthracene ug kg^{-1}	PAH Benzo (a) pyrene ug kg^{-1}	PAH Benzo (b) fluoranthene ug kg^{-1}	PAH Benzo (ghi) perylene ug kg^{-1}	PAH Benzo (k) fluoranthene ug kg^{-1}	PAH Chrysene ug kg^{-1}	PAH Dibenz (a,h) anthracene ug kg^{-1}	PAH Flourene ug kg^{-1}	PAH Fluoranthene ug kg^{-1}
DP-01A	*47.6*	*167*	*185*	*245*	*186*	*99.3*	*203*	*38.4*	*121*	*274*
1B	19.3	76.7	95.3	96.2	74.7	51.8	90.7	16.2	11.3	109
2B	78.2	274	304	259	192	105	313	45.5	49.3	588
3B	43.4	164	206	152	117	98	153	26.8	22.2	195
4B	34.1	144	164	155	115	90.2	163	25.9	19.5	216
5B	52.8	154	184	164	133	85.6	172	30.3	24	230
6B	48	189	221	154	136	112	150	33.5	26.2	228
7B	19.7	56.5	76.4	74.9	62	33.7	68.5	13.6	10.9	78.4
8B	30.9	85.9	122	111	94.5	60.6	99.2	20.9	21.8	126
9B	16.5	55.3	74.2	78.8	61.1	33.4	67.2	13.7	10.9	78.2

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 3. Results

Sample ID code	PAH Indeno (1,2,3–cd) pyrene ug kg^{-1}	PAH Naphthalene ug kg^{-1}	PAH Phenanthrene ug kg^{-1}	PAH Pyrene ug kg^{-1}	PAH Σ 16 ug kg^{-1}	γ–HCH (Lindane) ug kg^{-1}	HCB ug kg^{-1}	Particle Density (mg/m3)	DDD ug kg^{-1}	DDE ug kg^{-1}	DDT ug kg-1
DP-01A	*209*	*188*	*195*	*258*	*2475*	*0.1*	*0.6*				
1B	78.4	15.4	42	146	939	<0.1	<0.1	2.64	0.6	0.3	<0.1
2B	195	22.3	317	634	3447	<0.1	0.13	2.71	0.6	0.5	<0.1
3B	116	17.8	73.2	426	1847	<0.1	<0.1	2.69	0.7	0.4	0.2
4B	124	20.8	81.8	266	1650	<0.1	<0.1	2.68	0.7	0.4	0.2
5B	140	21	70.7	326	1823	<0.1	<0.1	2.65	0.6	0.4	0.2
6B	141	18.2	44.6	327	1882	<0.1	<0.1	2.68	0.5	0.3	<0.1
7B	56.6	16.5	37.3	111	729	<0.1	<0.1	2.67	0.4	0.5	<0.1
8B	98.3	18	53.1	182	1152	<0.1	<0.1	2.67	0.7	0.5	0.3
9B	65.2	14.4	33	104	720	<0.1	<0.1	2.68	0.6	0.4	<0.1

Sample ID code	Dieldrin ug kg^{-1}	Notes / comments:
DP-01A		
1B	<0.1	
2B	0.19	
3B	0.55	
4B	0.31	
5B	0.25	
6B	0.17	
7B	0.10	
8B	0.33	
9B	0.25	

EPA Dumping at Sea Permit Application - Material Analysis Reporting Form (Version 1.0)
Sheet 4. QA

Reference Type	Reference Material	OC %	TEH g kg^{-1}	Cu mg kg^{-1}	Zn mg kg^{-1}	Cd mg kg^{-1}	Hg mg kg^{-1}	Pb mg kg^{-1}	As mg kg^{-1}	Cr mg kg^{-1}	Mn mg kg^{-1}	Ni mg kg^{-1}	Li mg kg^{-1}	Al mg kg^{-1}	DBT mg kg^{-1}	TBT mg kg^{-1}
MESS-4 CRM (meas)				34	161		0.06	28.8	28.2	93.4		43.9	72.2	76500	0.188	0.152
MESS-4 CRM plus SOPH-1 (certified value)				32.9 (+/-1.8)	147(+/-6)		0.08(+/-0.06)	21.5(+/-1.2)	21.7(+/-2.8)	94.3(+/-1.8)		42.8(+/-1.6)	65.3(+/-6.8)	79100 +/-(2000)	0.445 (+/-0.025)	0.343 (+/-0.019)
Blank	Blank															
CRM IAEA159 (meas)																
CRM IAEA159 (certified value)																

Reference Type	Σ TBT + DBT mg kg^{-1}	PCB 028 ug kg^{-1}	PCB 052 ug kg^{-1}	PCB 101 ug kg^{-1}	PCB 138 ug kg^{-1}	PCB 153 ug kg^{-1}	PCB 180 ug kg^{-1}	PCB 118 ug kg^{-1}	PCB Σ7 PCB ug kg^{-1}	PAH Acenaphthene ug kg^{-1}	PAH Acenaphthylene ug kg^{-1}	PAH Anthracene ug kg^{-1}
MESS-4 CRM (meas)												
MESS-4 CRM plus SOPH-1 (certified value)												
Blank												
CRM IAEA159 (meas)		0.33	0.58	0.52	0.59	0.59	0.19	0.59		8.35	5.38	14.7
CRM IAEA159 (certified value)		0.57(+/-0.28)	0.67(+/-0.25)	0.52(+/-0.16)	0.6(+/-0.31)	0.56(+/-0.09)	0.26(+/-0.1)	0.52.7(+/-0.21)		6(+/-4)	6.4(+/-5.4)	11(+/-5.1)

Reference Type	PAH Benzo (a) anthracene ug kg^{-1}	PAH Benzo (a) pyrene ug kg^{-1}	PAH Benzo (b) fluoranthene ug kg^{-1}	PAH Benzo (ghi) perylene ug kg^{-1}	PAH Benzo (k) fluoranthene ug kg^{-1}	PAH Chrysene ug kg^{-1}	PAH Dibenz (a,h) anthracene ug kg^{-1}	PAH Flourene ug kg^{-1}	PAH Fluoranthene ug kg^{-1}
MESS-4 CRM (meas)									
MESS-4 CRM plus SOPH-1 (certified value)									
Blank									
CRM IAEA159 (meas)	52.5	66.1	106	130	49.9	67.7	26.8	12.8	102
CRM IAEA159 (certified value)	54(+/-20)	58(+/-26)	100(+/-42)	95(+/-45)	49(+/-14)	58(+/-26)	25(+/-14)	13(+/-7.7)	110(+/-32)

Reference Type	PAH Indeno (1,2,3–cd) pyrene ug kg^{-1}	PAH Naphthalene ug kg^{-1}	PAH Phenanthrene ug kg^{-1}	PAH Pyrene ug kg^{-1}	PAH Σ 16 ug kg^{-1}	γ–HCH (Lindane) ug kg^{-1}	HCB ug kg^{-1}	Notes / comments:
MESS-4 CRM (meas)								
MESS-4 CRM plus SOPH-1 (certified value)								
Blank								
CRM IAEA159 (meas)	143	29.7	69	96.7		0.13	0.13	
CRM IAEA159 (certified value)	1204(+/-34)	23(+/-13)	59(+/-29)	100(+/-38)		0.21(+/-0.18)	0.17(+/-0.15)	

Attachment B.1(ii)

Results of Sediment Chemistry Analysis from Analysing Laboratory

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	**MAR01149**
Issue Version	1
Customer	Aquatic Services Unit, Environmental Research Institute, Lee Road, Cork, Ireland
Customer Reference	Dublin Port Marine Institute Analysis
Date Sampled	21-Sep-21
Date Received	27-Sep-21
Date Reported	09-Nov-21
Condition of samples	Ambient Satisfactory

This is a revised report containing updated results for Cadmium following re-extraction and analysis and replaces all previously issued versions.

[redacted]

Authorised by: [redacted]

Position: Laboratory Manager

Any additional opinions or interpretations found in this report, are outside the scope of UKAS accreditation.

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	%	%	Mg/m3	% M/M	% M/M
		Method No	ASC/SOP/303	ASC/SOP/303	SOCOTEC Doncaster*	SOCOTEC Env Chem*	SOCOTEC Env Chem*
		Limit of Detection	0.2	0.2	N/A	0.02	0.12
		Accreditation	UKAS	UKAS	N	UKAS	No
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Total Moisture @ 120°C**	**Total Solids**	**Particle Density**	**TOC**	**Carbonate Equivalent (%CO3)**
1B	MAR01149.001	Sediment	51.1	48.9	2.64	1.80	10.8
2B	MAR01149.002	Sediment	51.2	48.8	2.71	1.47	10.6
3B	MAR01149.003	Sediment	44.1	55.9	2.69	1.58	10.3
4B	MAR01149.004	Sediment	51.6	48.4	2.68	1.49	11.0
5B	MAR01149.005	Sediment	54.0	46.0	2.65	1.83	11.3
6B	MAR01149.006	Sediment	44.7	55.3	2.68	1.37	12.0
7B	MAR01149.007	Sediment	55.0	45.0	2.67	1.75	12.2
8B	MAR01149.008	Sediment	56.3	43.7	2.67	1.54	12.2
9B	MAR01149.009	Sediment	53.9	46.1	2.68	1.56	12.0
		Reference Material (% Recovery)	NA	NA	NA	111	102
		QC Blank	NA	NA	NA	<0.02	<0.12

* See Report Notes

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*
		Limit of Detection	1	0.2	0.5	2	2	0.5	3
		Accreditation	UKAS	UKAS	No	UKAS	UKAS	No	No
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Arsenic as As**	**Cadmium as Cd***	**Chromium as Cr**	**Copper as Cu**	**Lead as Pb**	**Nickel as Ni**	**Zinc as Zn**
1B	MAR01149.001	Sediment	19.9	0.4	55.9	30.2	29.2	27.0	118
2B	MAR01149.002	Sediment	19.7	0.4	55.6	27.3	28.4	25.6	115
3B	MAR01149.003	Sediment	20.2	0.4	53.9	28.0	30.8	26.3	118
4B	MAR01149.004	Sediment	19.0	0.4	49.1	23.5	27.3	23.9	104
5B	MAR01149.005	Sediment	19.0	0.4	53.8	30.4	32.4	26.6	129
6B	MAR01149.006	Sediment	17.9	0.4	47.2	24.0	26.3	22.9	103
7B	MAR01149.007	Sediment	20.2	0.5	58.4	31.6	34.0	29.0	132
8B	MAR01149.008	Sediment	20.4	0.4	51.3	24.7	35.0	26.1	114
9B	MAR01149.009	Sediment	21.3	0.4	50.8	24.3	36.0	25.7	110
CRM1	MAR01149.010	Sediment	28.2	–	93.4	34.0	28.8	43.9	161
Certified Reference Material 2702 (Measured Value)			40.3	0.63	315	95.4	118	72.2	462
Certified Reference Material 2702 (Certified Value)			45.3	0.817	352	117.7	132.8	75.4	485.3
Certified Reference Material 2702 (% Recovery)			102	93	101~	108	99	99~	98~
QC Blank			<1	<0.2	<0.5	<2	<2	<0.5	<3

* See Report Notes
~ Indicates result is for an In-house Reference Material

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR01149
Issue Version	1
Customer Reference	Dublin Port Marine Institute Analysis

		Units	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)	mg/Kg (Dry Weight)
		Method No	SOCOTEC Env Chem*	SOCOTEC Env Chem*	SOCOTEC Env Chem*
		Limit of Detection	0.01	10	0.5
		Accreditation	No	UKAS	No
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Mercury as Hg**	**Aluminium as Al**	**Lithium as Li**
1B	MAR01149.001	Sediment	0.06	37200	40.6
2B	MAR01149.002	Sediment	0.05	34300	37.1
3B	MAR01149.003	Sediment	0.05	34500	38.3
4B	MAR01149.004	Sediment	0.06	37500	42.3
5B	MAR01149.005	Sediment	0.08	38400	43.9
6B	MAR01149.006	Sediment	0.05	35100	39.3
7B	MAR01149.007	Sediment	0.07	35500	40.5
8B	MAR01149.008	Sediment	0.07	37000	42.6
9B	MAR01149.009	Sediment	0.07	36000	40.7
CRM1	MAR01149.010	Sediment	0.06	76500	72.2
		Certified Reference Material 2702 (Measured Value)	0.03	82103	85.8
		Certified Reference Material 2702 (Certified Value)	0.04	84000	78.2
		Certified Reference Material 2702 (% Recovery)	104~	101	122
		QC Blank	<0.01	<10	<0.5

* See Report Notes

~ Indicates result is for an In-house Reference Material

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR01149
Issue Version	1
Customer Reference	Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	
		Method No	ASC/SOP/301	
		Limit of Detection	1	1
		Accreditation	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**Dibutyltin (DBT)**	**Tributyltin (TBT)**
1B	MAR01149.001	Sediment	<5	<5
2B	MAR01149.002	Sediment	<5	<5
3B	MAR01149.003	Sediment	<5	<5
4B	MAR01149.004	Sediment	<5	<5
5B	MAR01149.005	Sediment	<5	<5
6B	MAR01149.006	Sediment	<5	<5
7B	MAR01149.007	Sediment	<5	<5
8B	MAR01149.008	Sediment	<5	<5
9B	MAR01149.009	Sediment	<5	<5
CRM3	MAR01149.012	Sediment	188	152
Certified Reference Material QSP076MS (Measured Value)			34.5	11.6
Certified Reference Material QSP076MS (Certified Value)			31.8	14.8
Certified Reference Material QSP076MS (% Recovery)			109	79
QC Blank			<1	<1

* See Report Notes

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**ACENAPTH**	**ACENAPHY**	**ANTHRACN**	**BAA**	**BAP**	**BBF**
1B	MAR01149.001	Sediment	4.17	12.2	19.3	76.7	95.3	96.2
2B	MAR01149.002	Sediment	51.1	20.0	78.2	274	304	259
3B	MAR01149.003	Sediment	9.13	27.5	43.4	164	206	152
4B	MAR01149.004	Sediment	6.03	24.7	34.1	144	164	155
5B	MAR01149.005	Sediment	9.89	25.7	52.8	154	184	164
6B	MAR01149.006	Sediment	5.61	48.2	48.0	189	221	154
7B	MAR01149.007	Sediment	3.75	9.73	19.7	56.5	76.4	74.9
8B	MAR01149.008	Sediment	8.08	20.1	30.9	85.9	122	111
9B	MAR01149.009	Sediment	3.36	10.5	16.5	55.3	74.2	78.8
CRM2	MAR01149.011	Sediment	8.35	5.38	14.7	52.5	66.1	106
Certified Reference Material QPH103MS (Measured Value)			2.33	2.33	4.30	19.1	27.8	84.6
Certified Reference Material QPH103MS (Certified Value)			2.28	2.02	4.32	22.1	26.2	98.4
Certified Reference Material QPH103MS (% Recovery)			102	115	100	86	106	86
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304
		Limit of Detection	1	1	1	1	1	1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**BENZGHIP**	**BKF**	**CHRYSENE**	**DBENZAH**	**FLUORANT**	**FLUORENE**
1B	MAR01149.001	Sediment	74.7	51.8	90.7	16.2	109	11.3
2B	MAR01149.002	Sediment	192	105	313	45.5	588	49.3
3B	MAR01149.003	Sediment	117	98.0	153	26.8	195	22.2
4B	MAR01149.004	Sediment	115	90.2	163	25.9	216	19.5
5B	MAR01149.005	Sediment	133	85.6	172	30.3	230	24.0
6B	MAR01149.006	Sediment	136	112	150	33.5	228	26.2
7B	MAR01149.007	Sediment	62.0	33.7	68.5	13.6	78.4	10.9
8B	MAR01149.008	Sediment	94.5	60.6	99.2	20.9	126	21.8
9B	MAR01149.009	Sediment	61.1	33.4	67.2	13.7	78.2	10.9
CRM2	MAR01149.011	Sediment	130	49.9	67.7	26.8	102	12.8
Certified Reference Material QPH103MS (Measured Value)			109	32.9	29.4	19.5	36.0	6.20
Certified Reference Material QPH103MS (Certified Value)			91.0	37.6	30.7	17.0	43.3	5.87
Certified Reference Material QPH103MS (% Recovery)			120	88	96	114	83	106
QC Blank			<1	<1	<1	<1	<1	<1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/304	ASC/SOP/303/306
		Limit of Detection	1	1	1	1	100
		Accreditation	UKAS	UKAS	UKAS	UKAS	N
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**INDPYR**	**NAPTH**	**PHENANT**	**PYRENE**	**THC**
1B	MAR01149.001	Sediment	78.4	15.4	42.0	146	263000
2B	MAR01149.002	Sediment	195	22.3	317	634	245000
3B	MAR01149.003	Sediment	116	17.8	73.2	426	192000
4B	MAR01149.004	Sediment	124	20.8	81.8	266	259000
5B	MAR01149.005	Sediment	140	21.0	70.7	326	312000
6B	MAR01149.006	Sediment	141	18.2	44.6	327	235000
7B	MAR01149.007	Sediment	56.6	16.5	37.3	111	307000
8B	MAR01149.008	Sediment	98.3	18.0	53.1	182	274000
9B	MAR01149.009	Sediment	65.2	14.4	33.0	104	269000
CRM2	MAR01149.011	Sediment	143	29.7	69.0	96.7	NA
Certified Reference Material QPH103MS (Measured Value)			132	18.2	42.3	30.7	NA
Certified Reference Material QPH103MS (Certified Value)			115	20.1	45.4	34.0	NA
Certified Reference Material QPH103MS (% Recovery)			115	91	93	90	88~
QC Blank			<1	<1	<1	<1	<100

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
As the method uses surrogate standards to correct for losses, the RM results are reported as percentage trueness, not recovery.

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.08	0.08	0.08	0.08	0.08	0.08	0.08
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**PCB28**	**PCB52**	**PCB101**	**PCB118**	**PCB138**	**PCB153**	**PCB180**
1B	MAR01149.001	Sediment	0.39	0.30	0.19	0.31	0.11	0.30	0.15
2B	MAR01149.002	Sediment	0.57	0.34	0.24	0.36	0.28	0.25	0.17
3B	MAR01149.003	Sediment	0.55	0.41	0.34	0.45	0.52	0.32	0.17
4B	MAR01149.004	Sediment	0.49	0.33	0.31	0.41	0.33	0.31	0.21
5B	MAR01149.005	Sediment	0.59	0.49	0.52	0.54	0.60	0.55	0.22
6B	MAR01149.006	Sediment	0.45	0.33	0.38	0.48	0.46	0.38	0.16
7B	MAR01149.007	Sediment	0.56	0.38	0.25	0.33	0.29	0.27	0.21
8B	MAR01149.008	Sediment	0.60	0.39	0.37	0.29	0.32	0.28	0.19
9B	MAR01149.009	Sediment	0.49	0.31	0.20	0.30	0.29	0.25	0.12
CRM2	MAR01149.011	Sediment	0.33	0.58	0.52	0.59	0.59	0.59	0.19
Certified Reference Material QOR147 MS (Measured Value)			1.24	1.23	1.70	1.14	1.82	2.23	1.26
Certified Reference Material QOR147MS (Certified Value)			1.37	1.38	1.72	1.04	1.89	2.47	1.26
Certified Reference Material QOR147MS (% Recovery)			91	89	99	109	96	90	100
QC Blank			<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
* See Report Notes

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

		Units	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)	µg/Kg (Dry Weight)
		Method No	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302	ASC/SOP/302
		Limit of Detection	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
		Accreditation	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS	UKAS
Client Reference:	**SOCOTEC Ref:**	**Matrix**	**AHCH**	**BHCH**	**GHCH**	**DIELDRIN**	**HCB**	**DDE**	**DDT**	**DDD**
1B	MAR01149.001	Sediment	<0.1	<0.1	<0.1	<0.1	<0.1	0.34	<0.1	0.56
2B	MAR01149.002	Sediment	<0.1	<0.1	<0.1	0.19	0.13	0.47	<0.1	0.61
3B	MAR01149.003	Sediment	<0.1	<0.1	<0.1	0.55	<0.1	0.39	0.15	0.66
4B	MAR01149.004	Sediment	<0.1	<0.1	<0.1	0.31	<0.1	0.41	0.20	0.68
5B	MAR01149.005	Sediment	<0.1	<0.1	<0.1	0.25	<0.1	0.42	0.17	0.64
6B	MAR01149.006	Sediment	<0.1	<0.1	<0.1	0.17	<0.1	0.32	<0.1	0.47
7B	MAR01149.007	Sediment	<0.1	<0.1	<0.1	0.10	<0.1	0.45	<0.1	0.43
8B	MAR01149.008	Sediment	<0.1	<0.1	<0.1	0.33	<0.1	0.45	0.32	0.73
9B	MAR01149.009	Sediment	<0.1	<0.1	<0.1	0.25	<0.1	0.43	<0.1	0.55
CRM2	MAR01149.011	Sediment	<0.1	<0.1	0.13	0.21	0.13	0.77	<0.1	1.18
Certified Reference Material QOR147 MS (Measured Value)			0.02	0.02	0.03	0.63	1.29	0.35	0.08	0.21
Certified Reference Material QOR147MS (Certified Value)			NA	NA	NA	0.69	1.29	0.42	NA	0.30
Certified Reference Material QOR147MS (% Recovery)			104~	91~	108~	92	100	84	98~	71
QC Blank			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

For full analyte name see method summaries
~ Indicates result is for an In-house Reference Material as no Certified Reference Materials are avaliable.
* See Report Notes

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID MAR01149
Issue Version 1
Customer Reference Dublin Port Marine Institute Analysis

REPORT NOTES

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
SOCOTEC Env Chem*	MAR011149.001-009	Analysis was conducted by an internal SOCOTEC laboratory. UKAS accredited analysis by this laboratory is under UKAS number 1252.
SOCOTEC Env Chem*	MAR011149.001-009	Cadmium was re extracted and analysed using the microwave assisted HF/Boric digest.
SOCOTEC Doncaster*	MAR011149.001-009	Analysis was conducted by an internal SOCOTEC laboratory.
ASC/SOP/301	MAR011149.001-009	The matrix of this sample has been found to interfere with the result for this test. The sample has therefore been diluted, but in doing so, the detection limit for this test has been elevated.
ASC/SOP/303/304	MAR011149.001-009	Chrysene is known to coelute with Triphenylene and these peaks can not be resolved. It is believed Triphenylene is present in these samples therefore it is suggested that the Chrysene results should be taken as a Chrysene (inc. Triphenylene).This should be taken into consideration when utilising the data.

DEVIATING SAMPLE STATEMENT

Deviation Code	Deviation Definition	Sample ID	Deviation Details. The following information should be taken into consideration when using the data contained within this report
D1	Holding Time Exceeded	N/A	N/A
D2	Handling Time Exceeded	N/A	N/A
D3	Sample Contaminated through Damaged Packaging	N/A	N/A
D4	Sample Contaminated through Sampling	N/A	N/A
D5	Inappropriate Container/Packaging	N/A	N/A
D6	Damaged in Transit	N/A	N/A
D7	Insufficient Quantity of Sample	N/A	N/A
D8	Inappropriate Headspace	N/A	N/A
D9	Retained at Incorrect Temperature	N/A	N/A
D10	Lack of Date & Time of Sampling	N/A	N/A
D11	Insufficient Sample Details	N/A	N/A
D12	Sample integrity compromised or not suitable for analysis	N/A	N/A

Certificate of Analysis

Issuing Laboratory SOCOTEC, Marine Department, Specialist Chemistry, Etwall House, Bretby Business Park, Ashby Road, Bretby, Burton-upon-Trent DE15 0YZ

Test Report ID	MAR01149
Issue Version	1
Customer Reference	Dublin Port Marine Institute Analysis

Method	Sample and Fraction Size	Method Summary
Total Solids	Wet Sediment	Calculation (100%-Moisture Content).Moisture content determined by drying a portion of the sample at 120°C to constant weight.
Total Organic Carbon (TOC)	Air dried and seived to <2mm	Carbonate removal and sulphurous acid/combustion at 1600°C/NDIR.
Carbonate	Air dried and seived to <2mm	Quantitative digestion with Hydrochloric Acid back titration with 1M Sodium Hydroxide to pH 7
Metals	Air dried and seived to <2mm	HF/Boric extraction followed by ICP analysis.
Organotins	Wet Sediment	Solvent extraction and derivatisation followed by GC-MS analysis.
Polyaromatic Hydrocarbons (PAH)	Wet Sediment	Solvent extraction and clean up followed by GC-MS analysis.
Total Hydrocarbon Content (THC)	Wet Sediment	Solvent extraction and clean up followed by GC-FID analysis.
Polychlorinated Biphenyls (PCBs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.
Organochlorine Pesticides (OCPs)	Air dried and seived to <2mm	Solvent extraction and clean up followed by GC-MS-MS analysis.

Analyte Definitions					
Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name	Analyte Abbreviation	Full Analyte name
ACENAPTH	Acenaphthene	C2N	C2-naphthalenes	THC	Total Hydrocarbon Content
ACENAPHY	Acenaphthylene	C3N	C3-naphthalenes	AHCH	alpha-Hexachlorcyclohexane
ANTHRACN	Anthracene	CHRYSENE	Chrysene	BHCH	beta-Hexachlorcyclohexane
BAA	Benzo[a]anthracene	DBENZAH	Dibenzo[ah]anthracene	GHCH	gamma-Hexachlorcyclohexane
BAP	Benzo[a]pyrene	FLUORANT	Fluoranthene	DIELDRIN	Dieldrin
BBF	Benzo[b]fluoranthene	FLUORENE	Fluorene	HCB	Hexachlorobenzene
BEP	Benzo[e]pyrene	INDPYR	Indeno[1,2,3-cd]pyrene	DDD	p,p'-Dichlorodiphenyldichloroethane
BENZGHIP	Benzo[ghi]perylene	NAPTH	Naphthalene	DDE	p,p'-Dichlorodiphenyldichloroethylene
BKF	Benzo[k]fluoranthene	PERYLENE	Perylene	DDT	p,p'-Dichlorodiphenyltrichloroethane
C1N	C1-naphthalenes	PHENANT	Phenanthrene		
C1PHEN	C1-phenanthrene	PYRENE	Pyrene		

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

MAKING COMPLEX EASY

DUBLIN PORT COMPANY

MP2 PROJECT DUMPING AT SEA PERMIT APPLICATION (S0024-02)

Response to Section 5(2) Notice: Additional Sediment Plume Modelling

MP2 Project
Dumping at Sea Permit
Application S0024-02

Response to Section 5(2)
Notice – Additional Sediment
Plume Modelling

Final
08 November 2021

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
Draft for DPC Review	Response to Section 5(2) Notice	[redacted]			05/11/21
Final	Response to Section 5(2) Notice				08/11/21

Approval for issue

[redacted] 8 November 2021

Prepared by:

RPS

[redacted]
Associate - Water Environment and Flood Risk Management
Elmwood House
74 Boucher Road, Belfast
Co. Antrim BT12 6RZ
[redacted]

Prepared for:

Dublin Port Company

Port Engineer
Port Centre
Alexandra Road
Dublin 1, Ireland

Declaration

I certify that the information given in this Section 5(2) response is truthful, accurate and complete.

I give consent to the EPA to copy this Section 5(2) response for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this Section 5(2) response itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by: [redacted] **Date:** 8th November 2021

(on behalf of the organisation)

Print signature name: [redacted]

Position in organisation: Port Engineer

Contents

1 INTRODUCTION

1.1 MP2 Project Dumping at Sea Permit Supplement Application (S0024-02)

Dublin Port Company (DPC) submitted an application to the Environmental Protection Agency (EPA) for a permit under Section 5 of the Dumping at Sea Acts 1996 to 2010 on the 4th August 2020. The application is for the loading and dumping of dredged material arising from capital dredging within Dublin Harbour as part of the MP2 Project. The MP2 Project is the second Strategic Infrastructure Development Project to be brought forward for planning from Dublin Port's Masterplan 2040, reviewed 2018. An Bord Pleanála granted Planning Permission for the MP2 Project on 1st July 2020 (ABP-304888-19).

Dublin Port Company require a Supplement to increase both the Loading Area and Volume in the vicinity of the proposed riverside Berths 52 & 53. This change is required to advance the construction of Berth 52, Berth 53 and the Unified Ferry Terminal ahead of programme in order to meet the post Brexit priority demands of national port infrastructure.

The material to be dredged consists of a mixture of clay, silt, sand, gravel and cobbles. It is proposed to dispose of the dredged sediments at the existing licensed offshore disposal site located at the entrance to Dublin Bay to the west of the Burford Bank, (6.75 km from the lighthouse at the end of the Great South Wall). Dredging will be carried out by a trailer suction hopper dredger and/or a back-hoe dredger and support vessels. Dublin Port Company is seeking a 15 year consent aligned to the Planning Permission. This will enable the dredging operations to take place at intervals which tie in with the construction phase of the MP2 Project. All capital dredging activities will however be restricted to the winter months only (October to March) commencing in January 2022.

The requested change in permitted volume is set out in Table 1-1. The increase to the amount of material to be dredged under the Supplement is 243,673m^3. The overall volume to be dredged under the MP2 Project application is therefore increased from 424,644m^3 to 668,317m^3.

Table 1-1 Requested change to permitted Volume

Element of Work	Standard depth	Volume	Revised Volume	Difference
Berths 52 / 53	-10.0m CD	159,595m^3	403,268m^3	+243,673 m^3
Channel Widening	-10.0m CD	111,995m^3	111,995m^3	-
Oil Berth 3	-13.0m CD	83,414m^3	83,414m^3	-
Berth 50A	-11.0m CD	69,640m^3	69,640m^3	-
Total Volume to be dredged		**424,644m^3**	**668,317m^3**	**+243,673 m^3**

The increase to the Loading Area under the Supplement application is presented in Figure 1-1 overleaf.

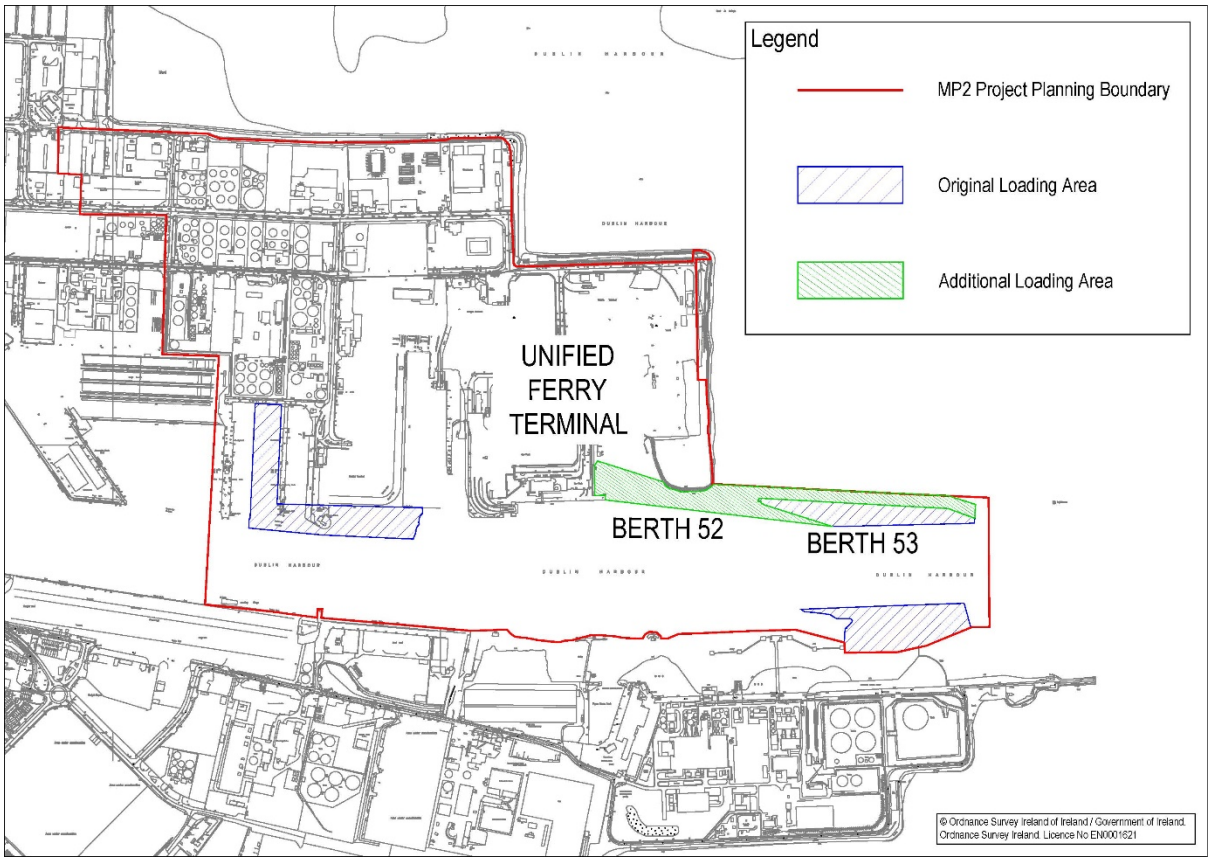

Figure 1-1 Proposed increase to the Loading Area under the Supplement application

1.2 Section 5(2) Notice: Request for Further Information

The EPA issued a Section 5(2) Notice: Request for Further Information to DPC on 13th October 2021. A response was requested by 13st November 2021.

This report addresses Issue 2 of the Section 5(2) Notice.

Issue 2

It is noted that the dumping at sea application submitted on 4th August 2020 refers to sediment plume modelling carried out to assess the impact of the activities on the receiving environment. The models will need to be updated with reference to the extended loading area in the vicinity of the proposed riverside Berths 52 and 53.

Section 2 of this document sets out DPC's Response to Issue 2 of the Section 5(2) Notice.

2 ADDITIONAL SEDIMENT PLUME MODELLING

2.1 Background

Using the same methodology described in the MP2 Project EIAR, Chapter 12 Coastal Processes, RPS undertook additional sediment plume modelling to assess and quantify the potential impact of capital dredging to be undertaken within the extended loading area in the vicinity of the proposed riverside Berths 52 and 53.

2.2 Methodology

Particle Size Analysis described in Section 12.2.3 of the MP2 Project EIAR indicated that the material to be dredged as part of the MP2 Project is comprised of three discrete fractions with mean diameters of 200µm, 20µm and 3µm, with each fraction constituting approximately 1/3 of the total volume of sediment to be dredged.

Extensive water quality monitoring using real time turbidity measurements during previous dredging campaigns (reported in Annual Environmental Reports issued to the EPA for 2017, 2018, 2019 and 2020) has shown that during disposal of dredged fine sands at the licensed disposal site, the fine sand falls rapidly to the bottom and any sediment plume is short lived and is not dispersed widely. However, sediments to be dredged in the MP2 Project are finer and contain a substantial silt fraction. Therefore, this additional plume modelling was undertaken for the silt fractions with silt losses of 1% at the dredger head being introduced as a sediment source in the bottom layer of the model.

As the Liffey channel in Dublin Port is influenced by a number of fresh water river inflows and by thermal inputs from three power station cooling water systems, stratification of the water column occurs under certain tidal conditions in the Liffey channel particularly in the central section of the harbour. Therefore, the plume modelling simulations were undertaken using a three-dimensional Hydrodynamic model described in Section 12.2.3 of the MP2 Project EIAR. This model was coupled with the Sediment Transport module and included temperature and salinity effects. The Liffey, Tolka and Dodder river flows were taken as the winter average flows. The power station flow and temperature characteristics used in the model are presented in Table 2–1.

Table 2–1 Power Station discharge and temperature characteristics, Dublin Harbour

Source	Discharge m^3/s	ΔT degree C	Outlet	Intake
North Wall	3.9	10	Surface layer	Mid depth
Synergen	7.6	6.6	Surface layer	Mid depth
Poolbeg	18.7	7.1	Surface layer	Surface layer

Additional simulations were run to simulate the dredging operations at Berths 52 & 53. These simulations were run for two months to represent the full dredging operation in this area. The key parameters relating to the additional dredging simulations is set out in Table 2–2. The output from the simulations are presented in the following Sections of this document.

Table 2–2 Previous and updated dredging input parameters for the Berth 52 & 53 simulations

Parameter	Original EIAR value	Updated RFI value
Trailer Suction Hopper Dredger capacity	4,100 m³	
Total dredge volume	159,595m³	403,268m³
Ratio of sediment/entrained water during loading	0.3	
Average density of material inside hopper	1.65 t/m³	
Average Trip Frequency between Dublin Port and Disposal site	3.0 hours	
Average Time to Fill Dredger Hopper	1.5 hours	
Time to release load	90 seconds	
Overspill Trailer Suction Hopper Dredger head	0%	
Sediment loss at Trailer Suction Hopper Dredger head	1% of silts	

In line with the current Dredging Management Plan developed for the ABR Project and as set out in *Alexandra Basin Redevelopment Project Construction Environmental Management Plan (CEMP) Rev. F August 2018*, no over-spill from the dredger's hopper was included in the additional model simulations.

2.3 Updated Sediment Plume Modelling Results

The dispersion of silts during the ongoing dredging of Berth 52 and the side slopes of Berth 53 based on the updated dredged volumes is illustrated by a series of plume diagrams. These diagrams show the suspended sediment concentration of silt in the water column resulting from the dredging operations.

The figures presented in Sections 2.3.1 and 2.3.2 represent the dispersion of silt material at times of high water, mid ebb, low water and mid flood when the dredger is active. It is during these conditions when the suspended sediment concentrations may be expected to be at their highest values.

2.3.1 Sediment Plumes produced by dredging at Berth 52

Figure 2-1 to Figure 2-4 show that the suspended sediment concentration plumes are confined to the northern half of the navigation channel at all times. The sediment concentrations of the plumes are generally less than 25 mg/l beyond the immediate dredge area except when dredging the western most corner of Berth 52 during periods of high tide and mid flood tide conditions. During these conditions, sediment concentrations beyond the immediate dredge area can reach 75 mg/l. However, these conditions only persist for a very short period of time (<1.5 hours) when the dredger is operating along the boundary of the dredge area and sediment plumes remain confined to the northern half of the navigation channel.

In almost all instances, the lateral extent of the 10mg/l plume envelope is generally less than 750m under most tidal conditions.

Monitoring of the Liffey and Tolka Estuaries between East Link Bridge and the entrance to the Port at Poolbeg Lighthouse has been undertaken by the ABR Project (see ABR Project EIS Chapter 9, Section 9.1.2.7). Measurements of turbidity at the North Bank Light (adjacent to the Tolka Estuary) over the period 2017 – 2018 have ranged from 0 to 39.5 NTU with a mean of 2.6 NTU (n=17,533). This equates to a suspended solids range of 0 to 98 mg/l with a mean of 6.4 mg/l.

Thus whilst there is a relatively small and very local predicted increase in suspended solids due to dredging at Berth 53, this falls within the background range measured close to this location during normal Port operations.

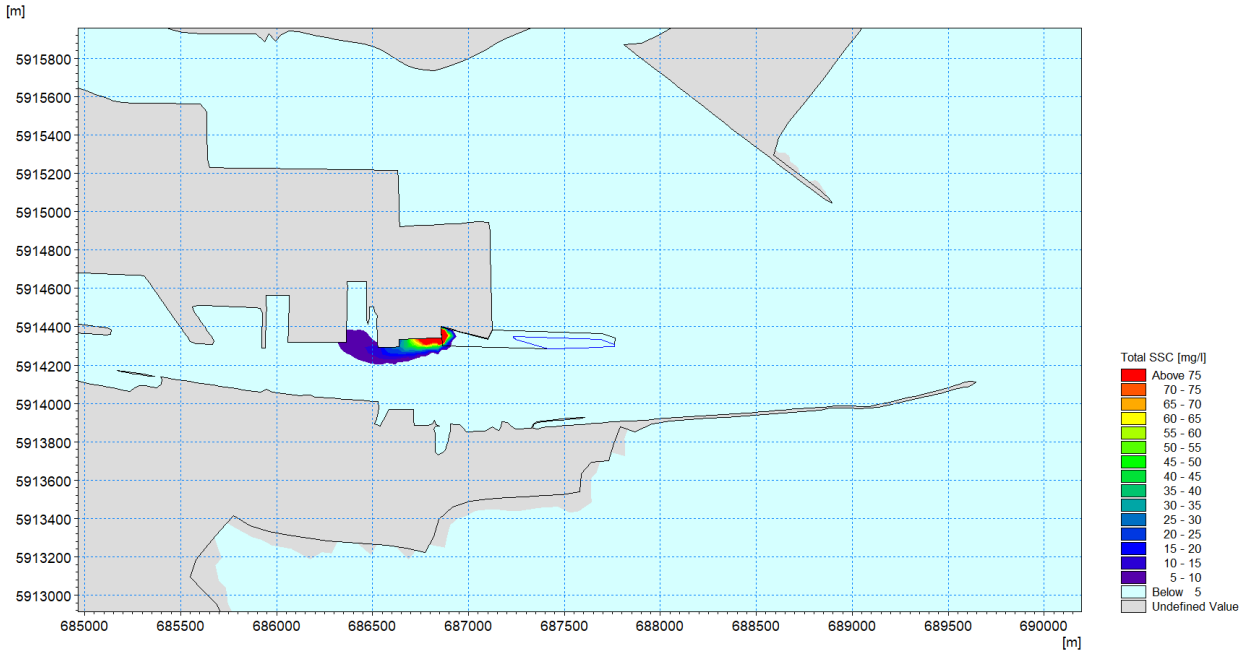

Figure 2-1 Suspended sediment concentration plume in the bottom layer near a typical high water phase of a spring tidal cycle whilst dredging Berth 52

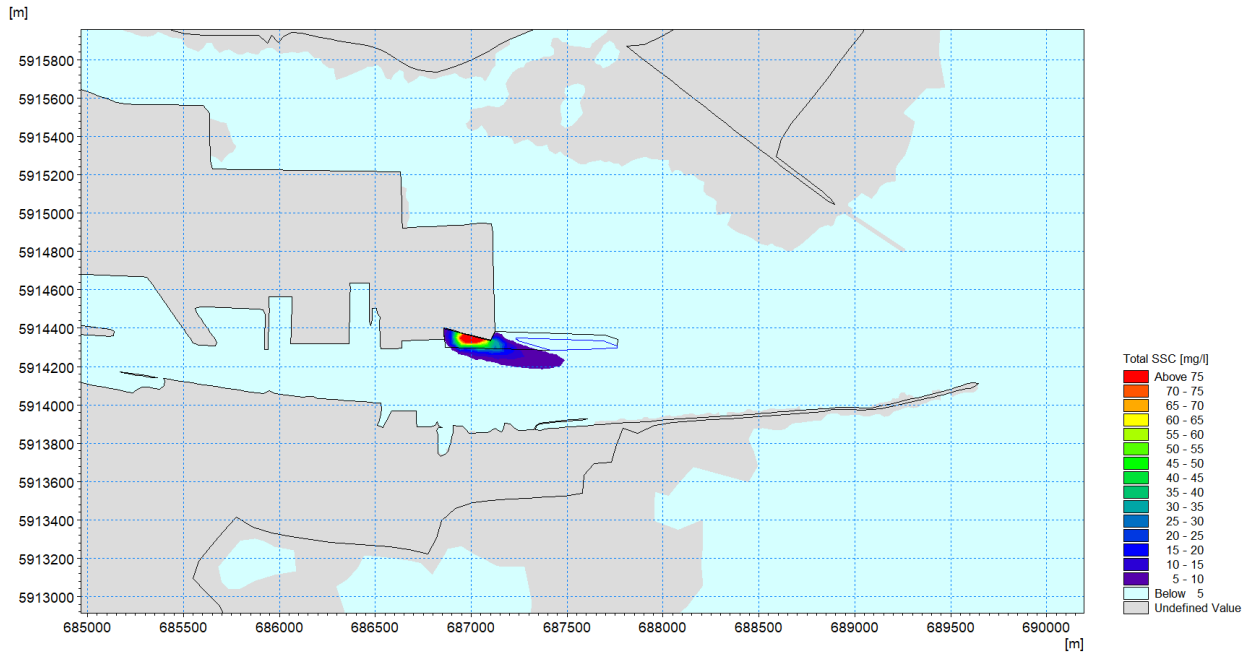

Figure 2-2 Suspended sediment concentration plume in the bottom layer near a typical mid ebb phase of a spring tidal cycle whilst dredging Berth 52

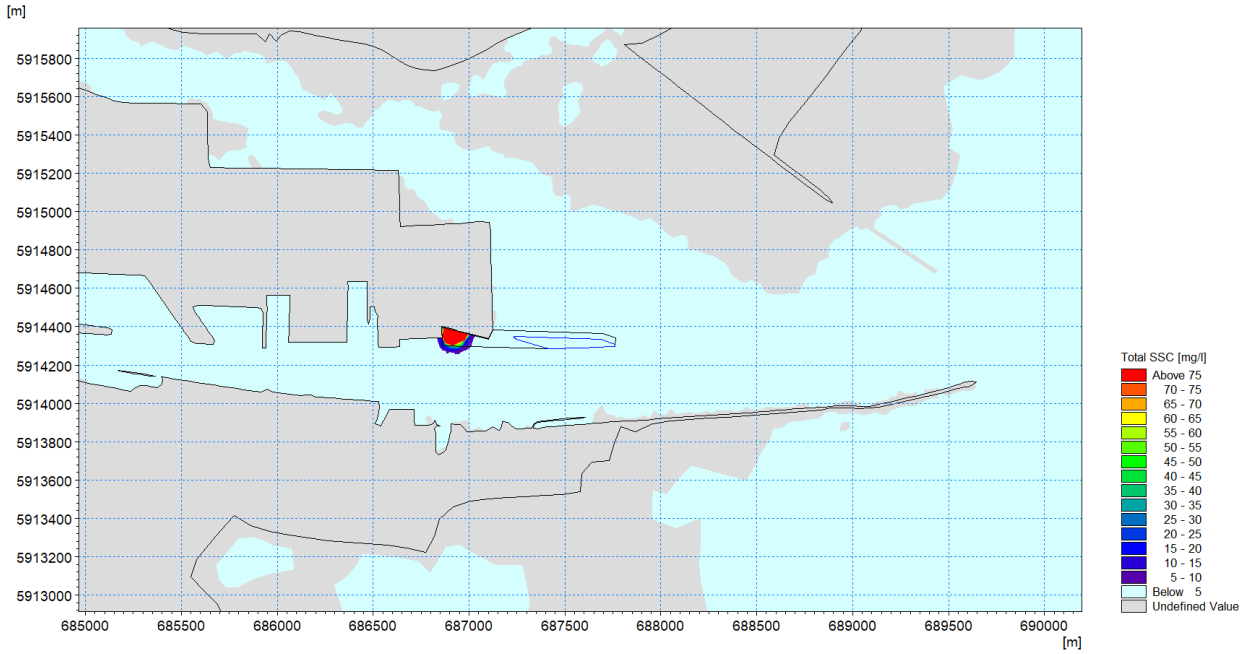

Figure 2-3 Suspended sediment concentration plume in the bottom layer near a typical low water phase of a spring tidal cycle whilst dredging Berth 52

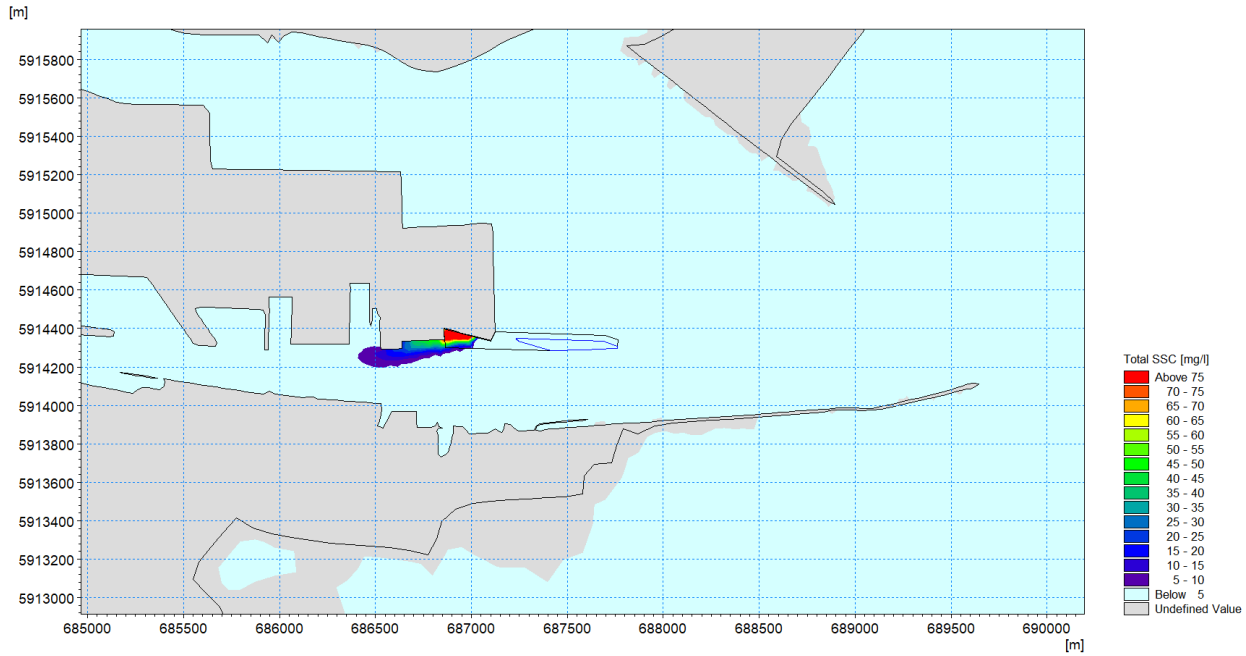

Figure 2-4 Suspended sediment concentration plume in the bottom layer near a typical mid flood phase of a spring tidal cycle whilst dredging Berth 52

2.3.2 Sediment Plumes produced by dredging along the side slopes at Berth 53

In respect to the additional dredging requirements along the side slopes of Berth 53, Figure 2-5 to Figure 2-8 show that the suspended sediment concentration plumes are again confined to the northern half of the navigation channel at all times.

The concentration of the sediment plumes produced when dredging the side slopes of Berth 53 are generally less than 25 mg/l beyond the immediate dredge area. However, as with the dredging operations at Berth 52, sediment concentrations beyond the immediate dredge area can temporarily reach 75 mg/l under certain conditions. As before, these conditions only persist for a very short period of time (<1.5 hours) when the dredger is operating along the boundary of the dredge area and sediment plumes remain confined to the northern half of the navigation channel.

Importantly, the increase in suspended sediment concentrations as a result of the requested change in permitted dredge volume remains within the background range of 0 to 98 mg/l measured close to this location during normal Port operations.

In almost all instances, the lateral extent of the 10mg/l plume envelope is generally less than 750m under most tidal conditions.

Owing to the fact that the dredging rates, sediment losses and all other dredging parameters remain unchanged except for the ***dredging quantity***, the concentrations and spatial extent of sediment plumes produced by the requested change in permitted dredge volume remains virtually identical to those presented in the original MP2 Project EIAR.

Therefore, based on the findings of additional modelling simulations, it can be concluded that the requested change in permitted dredge volumes at Berths 52 and 53 will have no additional impact on **sediment plumes** above or beyond those described in the original MP2 Project EIAR.

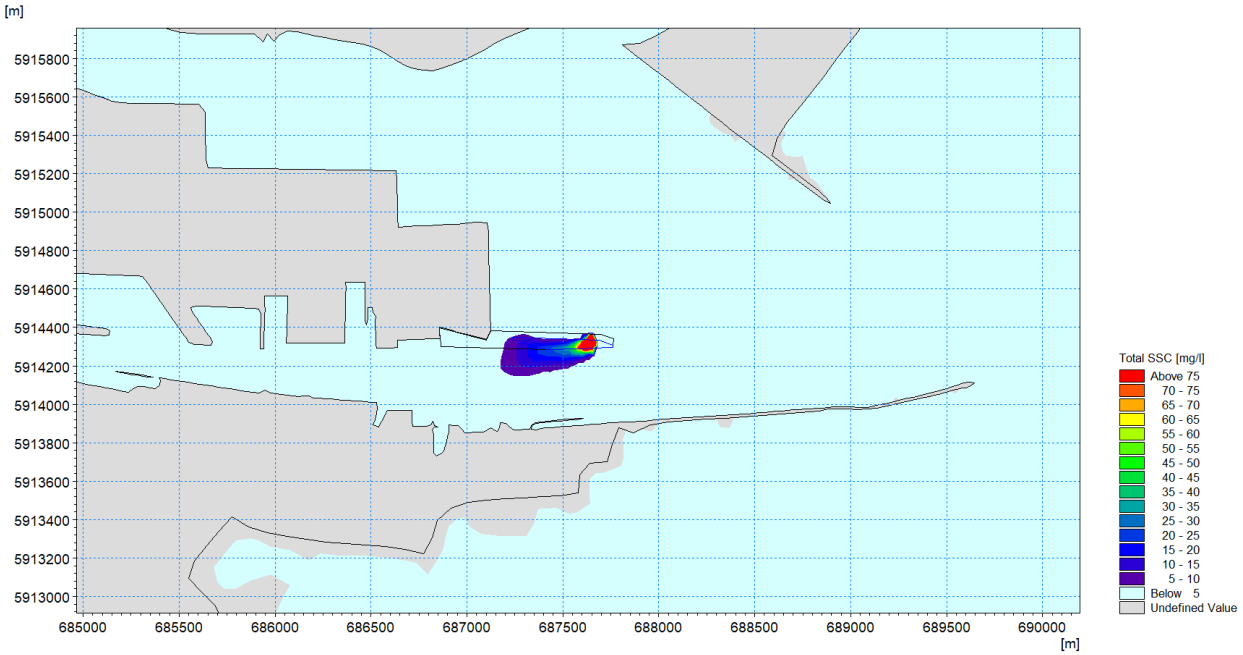

Figure 2-5 Suspended sediment concentration plume in the bottom layer near a typical high water phase of a spring tidal cycle whilst dredging the side slopes of Berth 53

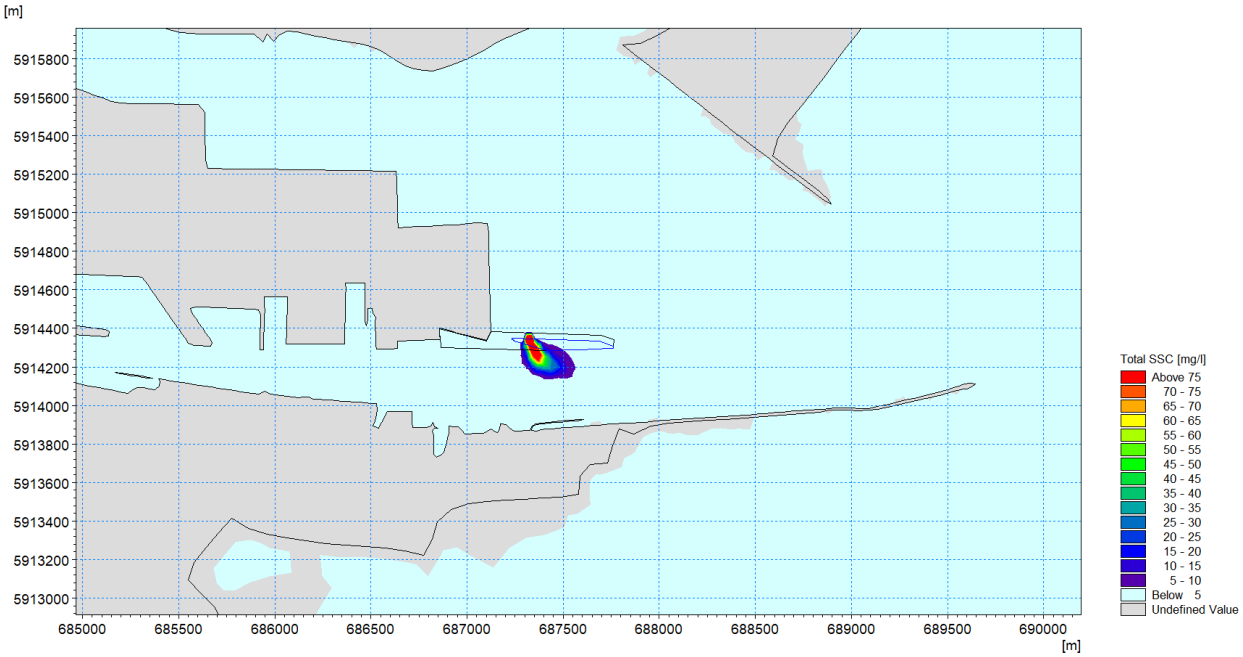

Figure 2-6 Suspended sediment concentration plume in the bottom layer near a typical mid ebb phase of a spring tidal cycle whilst dredging the side slopes of Berth 53

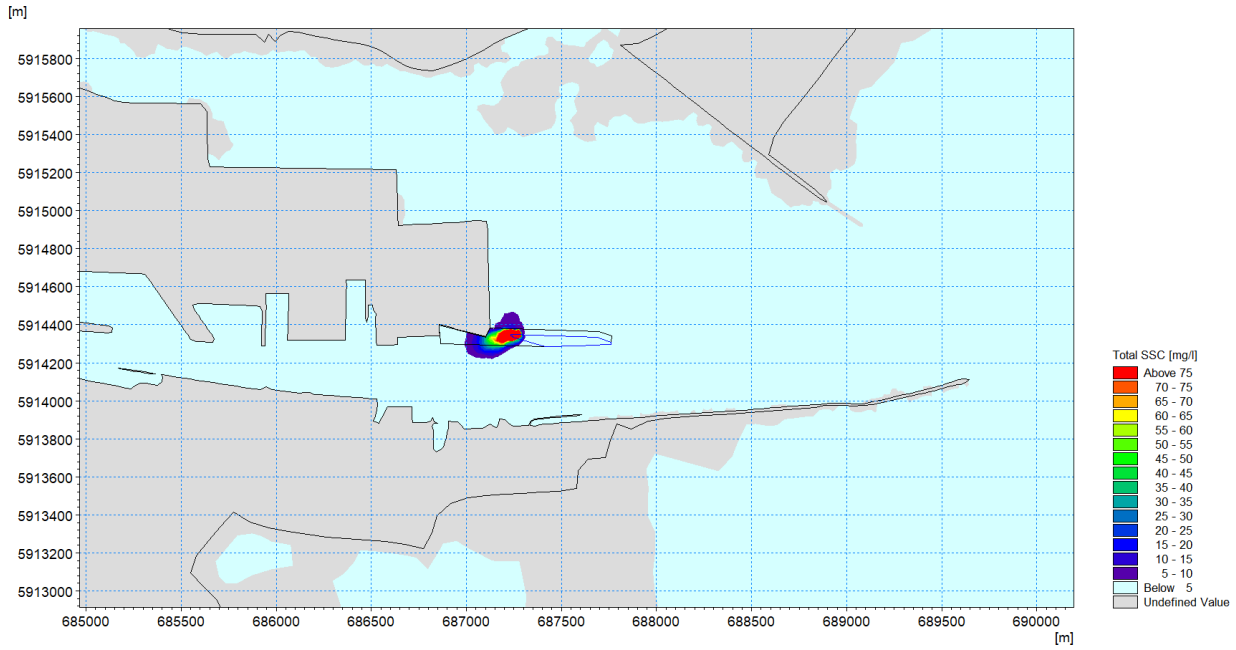

Figure 2-7 Suspended sediment concentration plume in the bottom layer near a typical low water phase of a spring tidal cycle whilst dredging the side slopes of Berth 53

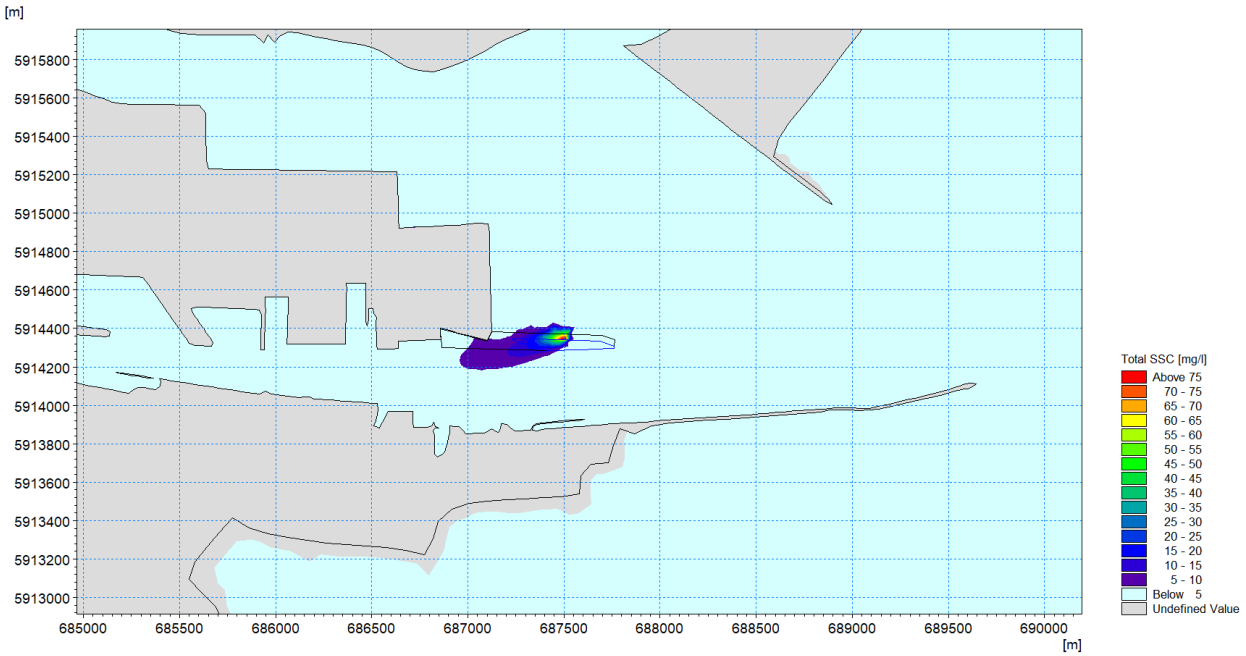

Figure 2-8 Suspended sediment concentration plume in the bottom layer near a typical mid flood phase of a spring tidal cycle whilst dredging the side slopes of Berth 53

2.3.3 Sediment Deposition

The predicted deposition of the silt fractions lost to the water column during the dredging of Berth 52 & 53 at the end of a simulated dredging campaign is presented in Figure 2-9. This Figure shows that the volume of material deposited outside of the dredge area is generally less than 0.50g/m^2 and that the deposition of sediment is generally confined to within the immediate area of the dredging operation. It should be noted that dredging proceeds until the specified design depth is reached and any material deposited within the dredge area will be removed by the dredger until the specification is met.

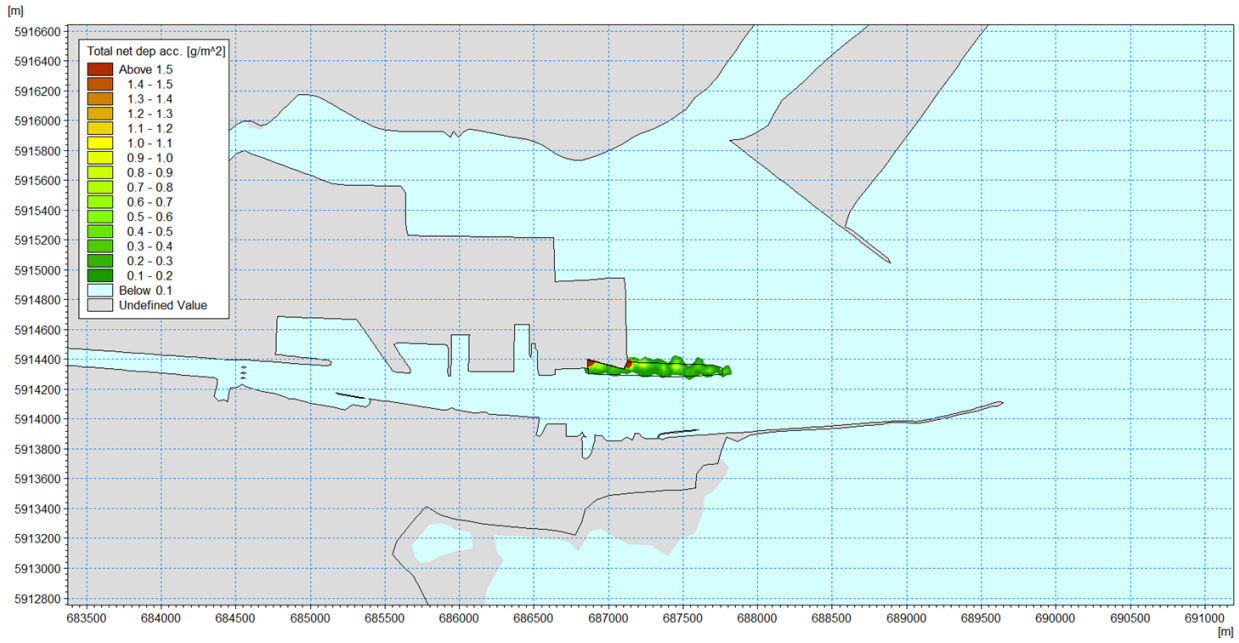

Figure 2-9 Deposition of sediment following the dredging operations at Berth 53

The estimated natural sediment load from the upstream Liffey catchment is estimated at about 200,000 tonnes per annum (DPC Maintenance Dredge AER 2017, Dumping at Sea Permit S0004-01). If dispersed over the Port area between East Link and Poolbeg Light and the Tolka Estuary this is roughly equivalent to a natural sediment load of 30 kg/m^2 in any year. The small level of deposition predicted as a result of dredging at Berth 52 & 53 is therefore highly unlikely to pose any risk through siltation.

It can, therefore, be concluded that the requested changed in permitted dredge volume at Berths 52 & 53 will not result in any significant impact on **sediment deposition** above or beyond that reported and assessed in the original MP2 Project EIAR.

This assessment found that the proposed dredging would not result in any significant impact to either the water quality in terms of suspended sediments, or the nearby environmentally designated areas in terms of sediment deposition.

Marine Advisor (Engineer)
Confirmation to Foreshore Unit that Applicant's Response to Request for Clarifications deemed not significant 23rd of November 2021

[redacted]
Sent: Tuesday 23 November 2021 10:09
[redacted]
Subject: RE: FS006893 MP2 Project DPC Clarification of Dredge Volumes

Hi[redacted]

Having assessed the information submitted by RPS on the 22/11/2021 on behalf of Dublin Port Company, I can confirm that the clarification in relation to dredge volumes is **not significant** from an engineering or estate management perspective. Accordingly, my report of the 14/05/2021 remains valid.

Kind regards,

[redacted]
Marine Advisor/Inspector
National & Regional Planning Policy,

An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta
Department of Housing, Local Government and Heritage

Newtown Road, Carricklawn, Wexford, Y35 AP90

[redacted]

www.tithiocht.gov.ie
www.housing.gov.ie

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

Marine Advisor (Environment)
Confirmation to Foreshore Unit that Applicant's Response to Request for Clarifications deemed not significant 23rd of November 2021

[redacted]
Sent: Tuesday 23 November 2021 10:29
[redacted]
Subject: RE: FS006893 MP2 Project DPC Clarification of Dredge Volumes

Good morning [redacted]

I have reviewed the attached documents submitted by the Dublin Port Company in regards to the increased dredge volumes and I am happy that there are no environmental issues in relation to this increase.
The revised Natura Impact Statement incorporating the increased dredge volume should be submitted by the applicant and forwarded to the IEC in order to complete their environmental assessment of this application.

Take care,

[redacted]

Marine Advisor
Department of Housing, Local Government and Heritage
[redacted]