Alexandra Basin Redevelopment 2

Bringing Dublin Port To 2040

Environmental Impact Assessment Report

Chapter 16 Material Assets – Services

Volume 2



CALAFORT ÁTHA CLIATH
DUBLIN PORT

TETRA TECH

16 Material Assets – Services

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16.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) comprises an appraisal of the existing and proposed services within the ABR2 Project study area and addresses the potential effects of the Project on Materials Assets – Services to ensure that the ABR2 Project does not adversely affect the availability of services. The service requirements of the ABR2 Project (water supply, wastewater and electricity supply) are also discussed to ensure the demand can be met and to ensure that there is no significant impact on other users or on the neighbouring communities.

The assessment is based on the description of works as noted in **Chapter 5 Project Description.** Where potential adverse impacts are identified, the assessment identifies mitigation measures that will be implemented to prevent, reduce or offset potential adverse effects, or enhance potential beneficial effects where possible.

16.1.1 Scope of the Assessment

The primary purpose of this EIAR chapter is to provide an assessment of the likely effects of the ABR2 Project during the construction and operational phases on Materials Assets – Services. In particular, this EIAR chapter:

- Presents the existing environmental baseline established from desk studies, relevant datasets and consultations;
- Identifies any limitations encountered in compiling the environmental information;
- Presents an assessment of the potential likely significant effects occurring to services from the Project, based on the information gathered and the analyses and assessments undertaken; and
- Identifies any required mitigation measures.

16.2 Assessment Methodology

This section describes the methodology which has been used in the assessment of Materials Assets – Services, which may impact or be impacted by the Project. The methodology and associated impact assessment had regard to the general guidance for the undertaking of an Environmental Impact Assessment (EIA), as presented in **Chapter 1 Introduction**, as there is no specific guidance for producing a Material Assets – Services Chapter in Ireland. Consideration has also been given to construction-specific guidance regarding working in the vicinity of existing services and infrastructure.

This chapter involved the identification of and assessment of existing services and infrastructure within the study area of the ABR2 Project and the appraisal of the potential for the construction and operational phases of the ABR2 Project to interact with existing services and infrastructure, and in respect of any additional services and infrastructure provision requirements of the ABR2 Project. Consideration has also been given to the potential impact of the ABR2 Project on services and infrastructure elsewhere, with the identification of any required mitigation measures, the assessment of any residual impacts and the demonstration that the ABR2 Project complies with national planning policy and guidance.

16.2.1 Guidance and Legislation

The Material Assets – Services Chapter of this EIAR follows the methodology set out in **Chapter 1 Introduction.** There is no specific guidance for producing a Material Assets – Services EIAR Chapter in Ireland; however, consideration has been given to the following guidance, legislation and information in the preparation of this chapter, and consideration has been given to construction-specific guidance regarding working in the vicinity of existing services and infrastructure.

The EIA Regulations 2018 (SI No. 296) require that EIARs include an examination, analysis and evaluation of the direct and indirect significant effects of the ABR2 Project on Material Assets. Material assets are defined as 'Resources that are valued and that are intrinsic to specific places, they may be either human or natural origin, and the value may arise for either economic or cultural reasons' (EPA, 2002). The Environmental Protection Agency (EPA) (2022) Guidelines on the information to be contained in Environmental Impact Assessment Reports notes that 'Material assets can now be taken to mean built services and infrastructure'. This chapter has been further informed by;

- Section 37D and 171A of the Planning and Development Act, 2000 (as amended);
- Section 94 and Schedule 6 of the Planning and Development Regulations, 2011 (as amended); and
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.

National planning policy for Ireland is contained within 'Project Ireland 2040: National Planning Framework' (Government of Ireland, 2025). The specific policies that are relevant to services and associated infrastructure are:

- National Policy Objective 57: Enhance water quality and resource management by integrating sustainable water management solutions, such as Sustainable Urban Drainage (SUDs), non-porous surfacing and green roofs, to create safe places.
- National Policy Objective 63: Ensure the efficient and sustainable use and development of water resources and water services infrastructure in order to manage and conserve water resources in a manner that supports a healthy society, economic development requirements and a cleaner environment.
- National Policy Objective 72b: When considering zoning lands for development purposes that require investment in service infrastructure, planning authorities will make a reasonable estimate of the full cost of delivery of the specified services and prepare a report detailing the estimated cost at draft and final plan stages.

The Dublin City Development Plan 2022-2028 is the statutory plan detailing the development objectives and policies of Dublin City Council (DCC), covering the application site. Information regarding the development of sustainable infrastructure is included within this development plan and relates to improving the sustainability of energy, water, waste management and resource efficiency, as well as ensuring that Dublin has greater energy security and efficiency and incorporates a nature-based approach to flood risk and surface water management.

16.2.2 Study Area

The study area for Material Assets – Services includes the ABR2 Project areas, as shown in **Figure 5-3**, as the locations are undergoing construction and operational activities throughout the Project. The assessment considers if construction or operational activities within these development areas have the potential for impacts on existing services and infrastructure within the area. As noted, from consultation feedback received from the EIA Scoping Report for the ABR2 Project, consideration has also been given to the Electricity Supply Board (ESB) Dublin Bay Power Plant (Ringsend Block) located within the South Estate of the Port regarding the cooling water intake in operation for the power plant. The power plant itself is not located within the study area boundaries; however, the cooling water intake obtains water from the River Liffey, which is part of the study area.

16.2.3 Baseline

The baseline environment relevant to this EIAR Chapter was informed by a desktop review of existing studies and datasets in relation to Material Assets – Services. No site-specific surveys were undertaken.

16.2.3.1 Desktop Study

Information on the baseline environment was collected through a desktop review of existing studies and datasets, including;

- Review of construction design plans and documents;
- ESB information regarding the electricity network information;
- EirGrid publications and data regarding substation information;
- OpenData Infrastructure Mapping regarding cable information, sewerage infrastructure and the electricity network;
- Uisce Éireann information on sewerage and water network connections;
- Gas Networks Ireland (GNI) information regarding the gas transmission pipeline and gas distribution network; and
- Commission for Communications Regulation information regarding telecommunications.

16.2.4 Consultation

Following completion of the EIA Scoping Report, consultation was undertaken to obtain opinions regarding the Project and its potential and scope for significant effects. Specific comments relating to Material Assets – Services are set out in **Table 16-1**. This includes responses from DCC, the Commissioners of Irish Lights, GNI, ESB, and Uisce Éireann, including where additional information in relation to issues can be found in the EIAR. No comments received objected to the proposed ABR2 Project.

Table 16-1: ABR2 EIA Scoping Report Comments relating to Material Assets – Services

Organisation	Comment Response / Issue Raised	Response
DCC	DCC advises that the EIAR should take account of the policies and objectives of the Dublin City Development Plan 2022–2028. DCC also recommends consulting the EPA and EU EIA guidance when preparing the EIAR.	The Dublin City Development Plan outlines sustainable actions which should be taken with respect to sustainable use of resources, such as water, the minimisation of resource consumption and the availability of infrastructure, such as renewable electricity sources. EPA guidelines and European Commission guidance have been consulted in the formulation of the EIAR.
Commissioners of Irish Lights	Noted that at a minimum, two AtoN (Aids to Navigation) at berths 52/53 will need disestablishment and statutory consent (to comply with the provisions of S.I. No. 477/2011) will be required for any new/change/remove AtoN (including temporary) before works commence. With Dublin Port as the Local Lighthouse Authority (LLA), will need to conduct a review of AtoN requirements for the development. It is noted that any construction lighting or shore-based operational lighting must not obscure or affect existing AtoN conspicuity.	Comment from the Commissioners of Irish Lights passed to DPC for consideration.
Commissioners of Irish Lights	Any Appropriate Assessment undertaken should consider the potential impact of the deployment of surface marking buoys/associated moorings required under the Project.	Comment from the Commissioners of Irish Lights passed to DPC for consideration and to specialists undertaking Appropriate Assessment.
Commissioners of Irish Lights	Noted that the Commissioners of Irish Lights are available for meetings regarding any further information needed on AtoN.	Comment from the Commissioners of Irish Lights passed to DPC for consideration.
GNI	No formal submission made, however, an email from GNI on 27/11/25 stated concerns over possible interaction with transmission pipeline. Following a meeting with GNI and DPC on 01/12/25, it was confirmed that there are no issues.	Whilst no issues were noted following the meeting with GNI and DPC, for robust environmental assessment, data on the location of gas transmission pipelines and gas distribution networks in the vicinity of the ABR2 Project were considered within the assessment as outlined in **Section 16.3.4**.
ESB	Requested that the Dublin Bay Power Station be included within the assessment due to its strategic importance and the operational dependency of the power station on the Port's water resources.	Reference to the Dublin Bay Power Station has now been included within this Material Assets – Services assessment.
ESB	Requested that information regarding the location of sub-aqua cables be considered within the project's construction methodology and risk assessments	Reference to sub-aqua cables has been included within this Material Assets – Services assessment.
ESB	ESB supports the proposed treatment of contaminated dredge materials from Alexandra Basin West and reuse however notes that strict controls must be place to prevent accidental	As part of the dredging process, mitigation measures are in place to prevent the accidental release of contaminants as outlined in **Chapter 5 Project Description.**

Organisation	Comment Response / Issue Raised	Response
	release of untreated material or contaminated water.	
ESB	ESB notes that embedded mitigation measures must be adhered to and requests engagement regarding detailed method statements and CEMP to ensure alignment with operational requirements.	As part of the application process for planning permission, a draft CEMP will be submitted.
Uisce Éireann	EIA Scoping Report noted the need for water and wastewater supply during construction, unless the existing IE licence can allow for additional load, a pre-connection enquiry must be submitted to assess the feasibility of temporary connections.	For construction activities, no temporary connection is required as existing saltwater from Berths 52/53 basin and from the pumping station at North Wall Quay Extension will be used for the treatment process. Only potable water requirements will relate to site facilities such as welfare and offices.
Uisce Éireann	Uisce Éireann does not permit the build over of its assets with existing Uisce Éireann assets within the proposed infilled area, which must either be diverted or decommissioned. A diversion/build over enquiry must be submitted to Uisce Éireann Diversions Section prior to the lodgement of the planning application. Furthermore, separation distances are required between Uisce Éireann assets and public infrastructure.	A build over/diversion enquiry has been submitted to Uisce Éireann to facilitate the decommissioning of the existing water supply network affected by increasing ground levels by the proposed development.
Uisce Éireann	Protection of drinking water sources is required and where a development has the potential to impact, the measures must be detailed to be undertaken during construction, operation and decommissioning phases to ensure no negative effects.	A series of mitigation measures is proposed to prevent the release of contaminants, as noted in **Chapter 5 Project Description.**
Uisce Éireann	Identification of hydrological/hydrogeological pathways between the applicant's site and receiving waters is required as part of the EIAR and/or planning application.	**Chapter 9 Water Quality and Flood Risk Assessment** and **Chapter 8 Land. Soil, Geology and Hydrogeology** identify pathways between the study area and receiving waters.
Uisce Éireann	It is requested that information is provided on the breakdown of the chemical components of the proposed material and that details be provided on the best practice monitoring regime(s) to inform the protection of water abstractions.	Information regarding the contaminants present within the dredged material recovered from Alexandra Basin West is provided in **Chapter 5 Project Description.**
Uisce Éireann	Where developments discharge trade effluent, any upstream treatment or attenuation is required prior to discharge into the Uisce Éireann collection network.	No discharge of trade effluent is anticipated under the ABR2 Project as per **Chapter 5 Project Description.**
Uisce Éireann	Surface waters must be managed to prevent entry into the Uisce Éireann sewer network, as this is not permitted.	**Chapter 5 Project Description** provides details regarding the management of surface waters arising from the ABR2 Project.

Organisation	Comment Response / Issue Raised	Response
Uisce Éireann	Details on any physical impacts on Uisce Éireann assets are required.	No anticipated effects on Uisce Éireann assets as a result of the Project.
Uisce Éireann	Details on the location of public water services assets, and possible connection points from the applicant's site to the public network. Infrastructure may be identified through the presence of registered wayleave agreements, manholes, vent stacks, valve chambers, marker posts, etc.	A Pre-Connection Enquiry (Ref Number: CDS26002214) for a temporary potable water supply for the duration of the proposed works has been submitted, and Uisce Éireann has confirmed that the proposed water connection is feasible without the need for an infrastructure upgrade.
Uisce Éireann	Any potential impacts on the assimilative capacity of receiving waters in relation to Uisce Éireann discharge outfalls should be identified.	**Chapter 9 Water Quality and Flood Risk Assessment** identifies pathways between the study area and receiving waters.
Uisce Éireann	Any potential impact on the contributing catchment of water sources, either in terms of water abstraction for development or from the development impacting water quality abstracted by Uisce Éireann for public supply, should be identified.	**Chapter 5 Project Description** details that proposed water abstraction under the ABR2 Project will occur using either saltwater from the River Liffey through the pumping station at NWQ treatment or from saltwater taken from the basin of Berth 52/53. As detailed below in **Section 16.4.1.1,** a temporary connection for potable water may be required for site welfare facilities.
Uisce Éireann	Where a development is proposed to connect to an Uisce Éireann network which either abstracts or discharges to a protected or sensitive area, consideration should be given to whether or not the integrity / conservation objectives of the site would be compromised.	**Chapter 7** details the potential impacts of the ABR2 Project on sensitive areas, and an accompanying Natura Impact Statement has been prepared.
Uisce Éireann	Where an existing connection is in place, it may be a requirement for the applicant or developer to enter into a new or revised connection agreement with Uisce Éireann for the development.	A Pre-Connection Enquiry (Ref Number: CDS26002214) for a temporary potable water supply for the duration of the proposed works has been submitted, and Uisce Éireann has confirmed that the proposed water connection is feasible without the need for an infrastructure upgrade.
Uisce Éireann	Where new connection(s) are sought, the applicant shall enter into new connection agreements with Uisce Éireann for the development.	A Pre-Connection Enquiry (Ref Number: CDS26002214) for a temporary potable water supply for the duration of the proposed works has been submitted, and Uisce Éireann has confirmed that the proposed water connection is feasible without the need for an infrastructure upgrade.
Uisce Éireann	Any person discharging trade effluent to a sewer must have a Trade Effluent Licence issued pursuant to Section 16 of the Local Government (Water Pollution) Act, 1977 (as amended).	No discharge to sewers is envisioned under the ABR2 Project, with discharge from Wastewater Treatment Plants into the River Liffey under the existing IE licence.

16.2.5 Assessment Criteria and Assessment of Significance

Determining the significance of effects is a process that involves defining the magnitude of the impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity for Material Assets – Services for assessing impacts throughout this chapter are described below.

16.2.5.1 Magnitude Criteria

The criteria for defining impact magnitude are outlined in **Table 16-2**. The degree of magnitude in relation to services and associated infrastructure relates to how capacity and users of the services may be impacted.

Table 16-2: Material Assets – Services: Magnitude of an Impact Definition

Magnitude	Definition of Magnitude
No change	No change in the supply of services and assets.
Negligible	No measurable effect and within normal variability for the supply of services and assets.
Minor	Small changes from the baseline of services and assets, readily managed by routine procedures and will only slightly inconvenience users.
Moderate	Noticeable change from baseline of services and assets, with impacts and will require operational adjustments or temporary replacement services or alternative services to be supplied to users.
Major	Fundamental or long-term loss of services and/or assets, with potentially significant economic and user implications for restoration of services and/or assets.

16.2.5.2 Sensitivity Criteria

The criteria for defining sensitivity are outlined in **Table 16-3**. The degree of sensitivity in relation to services and associated infrastructure relates to how users of the services may be impacted in terms of convenience, economics or safety consequences.

Table 16-3: Material Assets – Services: Sensitivity Matrix Definitions

Sensitivity	Definition of Sensitivity
Negligible	Asset or service capacity remains unchanged or is expected to increase through a committed change in capacity.
Low	Assets or services of limited value or users can readily cope with temporary loss. Only minor inconvenience and low economic or safety consequences.
Medium	Assets or services are of importance; however, alternatives are available with a manageable level of disruption.
High	Assets or services are of high importance and are essential for normal functioning, and are not easily replaced with significant operational, economic or safety consequences.
Very High	Assets or services are of critical value, significant operational, economic or safety consequences with loss of service and high value and time replacement costs.

16.2.5.3 Significance of Effects

The significance of effects refers to the consequences of an impact. The significance of the effect upon Material Assets – Services receptors is determined by correlating the magnitude of the impact and the sensitivity of the receptor. A range of significance of effect is presented in **Table 16-4**. The final assessment of significance for each effect is based upon expert judgement of the peer-reviewed literature.

For the purposes of this assessment, any effects with a significance level of less than moderate have been concluded to be not significant in EIAR terms, as noted.

Table 16-4: Material Assets – Services: Matrix used for the Assessment of the Significance of the Effect

Magnitude of Impacts						
Sensitivity (or value) of Receptor		**No Change**	**Negligible**	**Minor**	**Moderate**	**Major**
	Very High	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

Once the effect threshold has been determined, **Table 16-5** provides how the Materials Assets – Services Topic Lead determines whether the environmental effects are potentially significant, or not. Where a threshold is 'slight/moderate', i.e. transcends the significant – or not – effect boundary, professional judgement has been used to determine a final outcome.

Table 16-5: Material Assets – Services: Determination of Overall Significance of Effect

Effect	Material Assets – Services
Neutral	Not Significant
Slight	
Moderate	Significant
Large	
Very Large	

16.3 Baseline Environment

This section provides a high-level overview of the baseline environment regarding Material Assets - Services based on a review of desktop data sources. The immediate surrounding area is predominantly port lands with some areas of housing located to the south across the River Liffey. As outlined in **Chapter 5 Project Description**, the construction and operational activities of the ABR2 Project will have a requirement for services, such as during the wastewater treatment process, treatment of dredged material and from associated site construction facilities required for construction workers, and may also impact existing services within the study area.

16.3.1 Water Supply

Potable water is supplied to Dublin Port Estate by Uisce Éireann for a variety of uses within the Port, including:

- Washing down facilities;
- Supply of water for administration buildings and passenger terminals; and
- Supply of water to vessels to restock their internal water tanks.

Water usage within Dublin Port Estate was 159,189m^3 in 2023, following significant improvements made by DPC regarding energy and water consumption in line with obligations under the Climate Action Framework. This usage equates to a population equivalent of c. 3,355 p.e based on a usage of 130 litres per day per capita (Uisce Éireann Consumption Research Project - CER Reg_PP_IW_TPD_008).

The water usage within Dublin Port by 2040 is predicted to be c. 350,000m^3 in line with the expected throughput of cargo; this therefore represents an increased population equivalent of c. 7,400 p.e. by 2040. In comparison, the 2022 Census shows that Dublin's population in 2022 was 1,458,154, indicating that the drawdown of potable water to Dublin Port Estate is insignificant.

It is recognised, however, that daily water demand for the construction of the ABR2 Project will not be constant, therefore an analysis has been undertaken regarding the water requirements of the Project as outlined below in **Section 16.4.1.1.1**.

16.3.2 Sewerage and Wastewater Infrastructure

Separate foul and stormwater drainage systems are in existence within the Dublin Port Estate.

16.3.2.1 Alexandra Basin West

The existing set-up will continue at Alexandra Basin West, where surface water is directed to a stormwater drainage system and discharged into the sea via stormwater outfalls. Wastewater is 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 Uisce Éireann. There are therefore no anticipated effects on the sewerage infrastructure at Alexandra Basin West as the existing set-up will remain.

An existing large sewerage pipeline is present in Dublin Bay, which conveys wastewater from Sutton to the wastewater treatment plant at Ringsend, which is located on the Poolbeg Peninsula and is operated by Uisce Éireann. This pipeline is in a trench at a depth of -15m CD. As the proposed capital dredging scheme is to a standard depth of -10m CD within Alexandra Basin West, the pipeline is located within the navigation channel outside the ABR2 study area, and as dredging works are confined to the area of the Alexandra Basin West only, there will be no anticipated effects on the existing sewerage pipeline.

16.3.2.2 Berths 52/53 Basin Area

The previously consented drainage proposals in the ABR Project outlined the extensions of existing outfalls within the existing basin to relocated outfalls at the new Riverside Berth. Under the ABR2 Project, infilling of the basin at Berths 52/53 with recovered sediments from Alexandra Basin West precludes the extension of pipework through the recovered infill, from both a constructability perspective and the risk of disturbing recovered sediments, which should remain in a monolithic state to maintain environmental performance.

The revised proposals to be implemented as part of these works are currently being designed (by an external company) and will be provided in due course. In any event, the revised stormwater drainage network will continue to be a closed system and discharge via new silt trap(s) and oil interceptor/separator(s) to the sea at Berth 52 via one or more flap valves (or similar) in the quay wall. An assessment regarding the effects of this is given below in **Section 16.4.1.2**.

16.3.2.3 Uisce Éireann Ringsend Wastewater Treatment Plant

Ringsend Wastewater Treatment Plant (WwTP) is located on the Poolbeg Peninsula and is operated by Uisce Éireann. The WwTP treats approximately 40% of public wastewater from Dublin City, Fingal, Dún Laoghaire-Rathdown, South Dublin and parts of Kildare and Meath. It is the largest WwTP in Ireland.

The WwTP has undergone a series of upgrades to increase its capacity for a population equivalent of 2.5 million. The Capacity Upgrade Contract (CUC) commenced in 2014 and was completed in February 2026. This upgrade represents the maximum capacity obtainable for the WwTP, as no further lands are available for additional expansion.

The WwTP has a storm overflow culvert located to the north-east of the existing storm water tanks, which currently discharges partially treated wastewater into the River Liffey during prolonged storm events in Dublin.

The WwTP's main outfall channel for discharge of treated wastewater is shared with the ESB's cooling water discharge from the Poolbeg ESB Generating Station, as noted below in **Section 16.3.3**. The maximum flow from WwTP is 11.4m^3/s, this is close to the maximum flow by which the hydraulic gradient allows the discharge from the WwTP to the outfall channel under gravity.

16.3.3 Electricity Supply, Network and Infrastructure

The electricity supply to Dublin Port Estate is provided by the ESB networks. Presently, a masterplan is being compiled between DPC and ESB to quantify the electrical load capacity of the overall Dublin Port Estate[1].

[1] https://www.eirgrid.ie/dublin

16.3.3.1 Power Stations

There are four generating stations located within the Dublin Port Estate. At the North Estate, the North Wall Temporary Emergency Generation (TEG) power plant is present. North Wall gas-fired Temporary Emergency Generation (TEG) power station has been constructed on the site of the former gas turbine powered ESB North Wall power plant located along Alexandra Road, with the TEG power station operating as a back-up power supply with six gas turbines and has a combined capacity of up to 200MW which can be fully operational and at full production capacity within 15 minutes to meet electricity demands across the port and ensure the security of the energy supply within Ireland. There is a series of 220kV power supply network cables originating from this station to supply various areas across Dublin. The station is located outside the boundaries of the study area and operates on a temporary emergency basis only; there are no anticipated effects arising from the ABR2 Project on the North Wall Temporary Emergency Generation power station.

On the South Estate, across the River Liffey and outside the boundary of the study area, the Poolbeg Peninsula has two blocks present containing generation sites; the Poolbeg Block and the Ringsend Block. Within the Poolbeg Block, there are two existing generating stations present, which include a thermal station, which no longer operates, and a combined cycle gas station. Cooling water is taken from the River Liffey (located opposite the due to be constructed new Riverside Berth) before being discharged via the open channel and discharge weir used by the Ringsend WwTP. Within the Ringsend Block, there is one existing generating station of a combined cycle gas station, which is operated by Synergen Dublin Bay Power. The cooling water intake is located opposite Berth 50a. This intake waters from the River Liffey, which is discharged and combines with cooling water from the Encyclis Waste to Energy Plant, prior to discharge into the Liffey. The Encyclis Facility is located on Poolbeg Peninsula and also draws cooling water from the River Liffey.

The generating stations located at the Ringsend and Poolbeg Blocks are connected via a series of 220kV power network cables to supply various areas across Dublin. The Poolbeg Block is also connected to the North Wall power plant via 220kV cables. An assessment of the effects of the Project on the power plants within the Poolbeg and Ringsend Blocks is discussed below in **Section 16.4.1.3.2** with respect to dredging.

16.3.3.2 Terminal 5 Substation

Within the area of berth 52/53, there is the existing Terminal 5 electrical substation, which has the potential to be impacted by the development of the ABR2 Project through the activity of raising existing ground levels and is assessed below in **Section 16.4.1.3.3**. It is noted that this substation is due to be demolished under the MP2 Project and may therefore be demolished before construction of the ABR2 Project commences.

16.3.3.3 Cables

The Poolbeg to North Wall 220kV submarine cable crosses under the River Liffey between the Poolbeg Marina and the North Wall Quay Extension, running for a length of 4.6km and includes fibre optic and 10kV cables within the same submarine pipeline. A 38kV Ringsend to North Wall submarine cable also runs under the River Liffey. These cables are located at a depth of 10m below the current seabed level.

EirGrid is presently proposing plans to modernise and upgrade Dublin's electrical infrastructure through the 'Powering up Dublin' Programme with the Dublin Replacement Underground Cable Programme, aiming to replace and upgrade the Poolbeg to North Wall 220kV submarine cable[2]. This cable replacement is part of the overall Finglas to Poolbeg upgrade. The section of cable replacement from Finglas to North Wall is an exempted development and does not require planning permission; however, the section from North Wall to Poolbeg requires planning permission and a Maritime Area Consent (MAC). Contractor appointment and construction are anticipated to commence in late 2026[3]. The proposed route is within the study area, with the cable crossing the area around Terminal 1 at the existing Berth 49 area before travelling northwards along the western edge of the existing Berths 52/53 basin due to be infilled under the ABR2 Project. It then continues along Terminal Road South before travelling westwards along Alexandra Road to the North Wall Power Station. The overall upgrades to the underground cables across Dublin are due to be completed by 2029. Presently under the MP2 Project, the closure of the Berths 52/53 basin is not expected to occur until Q1 2029. Under the ABR2 Project, this will then allow for subaqueous infilling occurring until Q2 2031. There may therefore be potential for interaction between the upgrade cabling works within the North Wall to Poolbeg section, depending upon timing and the ABR2 Project, as discussed below in **Section 16.4.1.3.4**.

16.3.4 Gas Network

There are currently no underground gas pipelines present within the study area, and there is no requirement for connection to the gas network as part of the ABR2 Project. There are no anticipated effects on the gas network from the Project.

16.3.5 Telecommunications

16.3.5.1 Mobile Masts

There is one mobile mast located within the study area, which is located at Berth 49 operated by Eircom (EIR DN 3482). Four further mobile masts are located within the vicinity of the study area, with one located near the Port Centre operated by Eircom (EIR DN 1047), with three further masts located near 1 Branch Road South of THR DU1043 operated by Three, VOD DN522 operated by Vodafone, and EIR DN 1009 operated by Eircom.

16.3.5.2 Fixed Links

Fixed links are used in telecommunications to provide network infrastructure and customer access across a wide range of frequency bands and may operate on either a temporary or permanent basis. There are four fixed links within the study area operated by Eircom, Leesom and Vodafone telecommunications, with c.30 within the wider Port area.

16.3.5.3 Broadband Connections

The Irish Government established National Broadband Ireland to facilitate the roll-out of broadband across the Country to improve access, particularly across rural communities of Ireland, through the National Broadband

[2] https://www.eirgrid.ie/dublin
[3] https://cms.eirgrid.ie/sites/default/files/publications/Powering-Up-Dublin-Information-November-2025-Finglas-Poolbeg.pdf

Plan[4]. As part of this, National Broadband Ireland has an interactive map indicating the progress of the implementation of the rollout. The Dublin area is noted as having high-speed broadband available for users.

The potential impacts of the ABR2 Project on telecommunications are discussed below in **Section 16.4.1.5**.

16.3.6 Discharge from Commercial 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 commercial vessels at the Port, and there are no plans for the same as part of the ABR2 Project.

16.3.7 Proposed Services consented under the MP2 Project

Under the MP2 Project, Terminal 5 and the Unified Ferry Terminal (UFT) will be delivered within the area of Berth 52/53 to be infilled, and this area, with the immediate landside areas to the east and west, with levels raised 1.4m above existing ground levels under the ABR2 Project, the utilities associated with this are consented under the MP2 Project. The MP2 Project does not make significant adjustments to the existing utilities and drainage, with individual changes required. The works will involve the installation of below-ground watermains, storm sewers, cabling, and ducting for communication and electrical infrastructure. Works will involve excavation of relevant areas, installation of infrastructure, and reinstatement of ground to the required level and surface material. The existing watermain network will be extended to serve the new Riverside Berth. Facilities will be provided for freshwater bunkering at these berths. Regarding 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 increase in the peak wastewater discharge to the public sewer as a result of the development. Regarding stormwater drainage, there is limited additional hardstanding area proposed within the UFT to that already in place and as to be consented under the ABR2 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. It is proposed to provide a new substation to the Southeast 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 Berths 52/53 to provide the 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 the harbour's electric grid and the vessel's electric system. The substation will link to a power outlet at the new Riverside Berth to facilitate a connection to berthed vessels. It is proposed to

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install ducting to link the areas back to the existing communications network within the port. Under the ABR2 Project to ensure the delivery of the services and utilities infrastructure required, the infilling of the void space of Berths 52/53 must have consideration for the final surface levels required under the MP2 Project to avoid the requirement for future excavation of the infilled material for utility construction following the completion of the ABR2 Project. Furthermore, the volumes of clean imported material and, where suitable, treated remediated material being used for raising levels within this area should be determined, and the placement location should be considered to avoid the future excavation of the filled material for utility construction.

The potential impact of the ABR2 Project on the services and utilities proposed for construction for the UFT under the MP2 Project is discussed below in **Section 16.4.1.7**.

16.4 Description of Likely Significant Effects

16.4.1 Assessment of Construction Effects

16.4.1.1 Water Supply and Demand

16.4.1.1.1 Site Construction Facilities

Construction activities and associated site offices, welfare facilities, canteens and laboratories will create a demand for water supply to the site in the ABR2 Project. The requirements for water supply may also fluctuate during the ABR2 Project, depending on the activities being undertaken at any one time. It is presently assumed that there may be up to 30 workers on-site at any one time during the construction phase. Typical demand assumptions for potable water are given below in **Table 16-6** for site welfare facilities.

Table 16-6: Potable Water Requirements for Site Welfare Facilities for Construction of the Project.

Facility Type	Litre/Person/Day	Construction Requirements Per Day (assumed 30 workers on-site)
Welfare cabins/site offices	20-40	600-1,200
Toilet Facilities	32-48	960-1,440
Shower Facilities	30-50	900-1,500
Canteen Facilities	5-10	150-300
Total Potable Water Requirements	87-148	2,610-4,440

Chapter 5 Project Description has indicated that it is expected that a water supply of 4.5m^3 per day will be sought with Uisce Éireann, with construction due from approximately July 2028. A Pre-Connection Enquiry (Ref Number: CDS26002214) for a temporary potable water supply for the duration of the proposed works has been submitted, and Uisce Éireann has confirmed that the proposed water connection is feasible without the need for an infrastructure upgrade. A temporary connection agreement will be entered into with Uisce Éireann in advance of the works. It should be further noted that the overall potable water requirements of the Project are low relative to the overall usage of potable water by the Port of 159,189m^3 in 2023, therefore the temporary connection to the mains is likely to have a neutral impact.

16.4.1.1.2 Treatment of Dredged Material

As noted in **Chapter 5 Project Description**, during Phase 1 of the ABR Project, the previous S/S process undertaken for dredged sediments required 38.3m^3 of water per 1,000m^3 of dredged material treated. It is proposed that treatment of sediments in Phase 2 will not exceed peak daily dredge rates generating material for treatment, and it is estimated that on average 95.8m^3 of water will be required for treatment per day. To promote the re-use of resources where possible the treatment process of dredged material will be undertaken using industrial wastewater effluent, which is to be sourced from the proposed on-site wastewater treatment plant to be installed to manage wastewater arising from the dredge treatment operations.

Mains water supply within the Port cannot facilitate treatment works at Berth 49 or Berth 52 West due to the volume of water required during the treatment of the dredged sediment, therefore the use of industrial wastewater effluent is proposed to be supplemented from the water displaced from the proposed infilling area of the Berth 52/53 basin. This avoids the need for connection to the mains network and proposes the re-use of water which would have been otherwise discharged into the River Liffey. Where additional water supplies are required for treatment operations occurring at the North Wall Quay Extension alongside the industrial wastewater effluent, this will be facilitated by connection to existing saltwater supplies which are operated by Dublin Port in the vicinity of the North Wall Quay Extension. This saltwater supply is also used in emergency circumstances for fire-fighting within the Port, should the need arise. Dublin Fire Brigade had established a fire-fighting strategy within Dublin Port during the ABR Project, which involved the use of a single hydrant on Alexandra Road, where water pressure can be increased if required; saltwater sources remain available for use as well should the need arise during an emergency situation. This may, however, result in the suspension of treatment at North Wall Quay Extension on a temporary basis during a fire-fighting event should the need for saltwater supplementary sources arise with neutral to slight impacts.

However, should these options fail to be possible, there is potential that the Project will require connection to the mains network to facilitate treatment operations. Given that the present infrastructure within the Port cannot accommodate mains connection for this volume of water this would involve moderate impacts on the existing network and Port users to facilitate upgrades. Furthermore, the required daily water supply is c. 27,959m^3 per year, representing approximately 5% of the Port's water usage in 2023, with potential for slight effects upon other users.

16.4.1.2 Wastewater and Drainage

16.4.1.2.1 Wastewater Management

The existing IE licence under Schedule B covers discharge from up to two WwTPs into the Liffey Estuary Lower with a maximum total combined of 6.9 litres/second. With the proposed increased rate of dredging and increased rate of treatment to up to 2,500m^3/day, there is potential for the total volume of discharge of wastewater from the works to exceed the current licensed limit. As outlined in **Chapter 5 Project Description**, should an increased rate of discharge be required, any increase in volumes will be offset by a corresponding reduction in contaminant concentrations to retain the equivalent mass balance (subject to a review of the IE licence as outlined in **Section 5.6.2**). A water treatment plant will comprise a single lane treatment process to remove

suspended solids, product and contaminants (if present) from the wastewater produced from the dredging, dewatering and treatment processes. The volume of water to be treated will be determined by the amount of water to be removed prior to the treatment process.

Flocculants may be required as part of the dewatering and wastewater treatment processes. Water arising from the dewatering process will be removed by pumping and treated in a water treatment plant before being discharged via the designated discharge point in accordance with appropriate consents. As the wastewater management process for the construction of the ABR2 Project, with respect to the treatment of dredged sediments, allows discharge into the River Liffey channel, therefore neutral effects are anticipated on the wastewater network.

16.4.1.2.2 Stormwater Drainage

The previously consented drainage proposals in the MP2 Project outlined the extensions of existing outfalls within the existing basin to relocated outfalls at the new Riverside Berth.

Infilling of the basin at Berths 52/53 with recovered sediments from Alexandra Basin West precludes the extension of pipework through the recovered infill, from both a constructability perspective and risk of disturbing recovered sediments which should remain in a monolithic state to maintain environmental performance.

The revised proposals to be implemented as part of these works are currently being designed (by an external company) and will be provided in due course as part of a separate application. It has been noted within **Chapter 5 Project Description** that the revised stormwater drainage network will likely continue to be a closed system and discharge via new silt trap(s) and oil interceptor/separator(s) to the sea at Berth 52 via one or more flap valves (or similar) in the quay wall. Therefore, the assessment assumes that appropriate stormwater drainage proposals will be put in place and the assessment is based upon the above information being supplied and confirmed for the ABR2 Project.

16.4.1.2.3 Sewerage Network

There are no envisaged additional wastewater discharges to public sewers as a result of the Project and therefore, there will be neutral effects on the sewerage network.

16.4.1.3 Electricity Network

16.4.1.3.1 Electricity Supply

Construction-related activities associated with the ABR2 Project, namely the requirement for wastewater treatment plants, S/S treatment plants and soil washing plants, will require electricity during their use. This will require a temporary connection to the local electrical supply network. This will also include powering any associated temporary modular buildings used for site facilities such as welfare, site offices, canteen and laboratory requirements. The size of the supply will be calculated to ensure that it can sufficiently power both the site compounds and construction activities taking place without adversely impacting the existing network and its requirements. Depending upon the specific construction activities taking place within the Project, the use of mobile diesel-powered generators on-site may also be required during the construction phase. The potential

impact from the construction phase on the local electricity supply network is likely to be minor, slight and short-term.

16.4.1.3.2 Power Stations

Whilst located on the South Estate across the River Liffey and outside the boundary of the study area, the Poolbeg Block and the Ringsend Block use cooling water intakes from the River Liffey for operations. The Encyclis Facility also draws cooling water from the River Liffey as well. For the Poolbeg Block, cooling water is taken from the River Liffey (located opposite the due to be constructed new Riverside Berth) before being discharged via the open channel and discharge weir used by the Ringsend WwTP. Within the Ringsend Block and Encyclis Facility, the cooling water intake is located opposite Berth 50a. The Ringsend Block cooling water is combined with cooling water from the Encyclis Waste to Energy Plant prior to being discharged into the Liffey. There is potential for dredging operations within Alexandra Basin West to generate sediment, which could potentially lead to moderate effects upon the cooling water intakes and the operation of the power stations should this sediment disperse into the River Liffey and associated cooling water intakes. However, as the cooling water intake is located c. 1km away from dredging operations which are confined to Alexandra Basin West, there is no pathway for potential impacts.

16.4.1.3.3 Terminal 5 Substation

Post-consolidation, the area of Berths 52/53 will be raised approximately 1.4m above existing ground levels. Where the existing Terminal 5 substation has not yet been demolished in advance of infilling operations (as consented under the MP2 Project) existing surface levels will be retained around the substation to avoid any impact on the building or cables. A buffer zone will be provided around the perimeter of the building, and a slope will be formed around the extremities to meet the surrounding raised levels. An up-stand wall will be provided along the top of the slopes, and an access ramp will be provided to retain vehicular access to the substation. Presently, information is outstanding regarding the proposed stormwater and sewerage drainage network to be installed within the area. Consideration must be given to prevent flooding within the existing Terminal 5 electrical substation, as this will remain at a lower point than the surrounding area by approximately 1.4m and may represent a potential accumulation point for surface water during the construction process, until its demolition. Should flooding occur at the substation, this may lead to operational failures of the substation and moderate effects on the electricity supply within the Port Estate. However, the assessment assumes that appropriate stormwater drainage proposals will be put in place and the assessment is based upon the above information being supplied and confirmed for the ABR2 Project, therefore with neutral effects on the Terminal 5 substation (which is also due to be demolished).

16.4.1.3.4 Cables

The existing submarine cables are located within the navigation channel at a depth of 10m below the current seabed level. As the proposed capital dredging scheme is to a standard depth of -10m CD within Alexandra Basin West, the existing submarine cables will not be impacted as the depth of the existing submarine cables relative to dredging, and their locations, prevent any potential effects arising from the construction phase of the Project on these.

As noted above in **Section 16.3.3.3**, EirGrid is presently undertaking a scheme to upgrade the Poolbeg to North Wall 220kV submarine cable, which is located within the Terminal 1 area. The upgrade cable route is within the study area of the existing Berth 49 area before travelling northwards along the western edge of the existing Berths 52/53 basin, due to be infilled under the ABR2 Project, before continuing northwards along Terminal Road South, before travelling westwards along Alexandra Road to the North Wall Power Station. Presently, it is noted that construction on this overall section of cable upgrades works from Finglas to North Wall is due to commence in 2026 with overall completion of the cable upgrade programme across Dublin in 2029.

The cable upgrade programme of EirGrid is in close proximity of activities under the ABR2 Project as cable installation works may coincide temporally with the area proposed for treatment works occurring within the Berth 49 or Berth 52 West areas. It is presently uncertain whether this will occur as no information is available regarding the completion date of the cable upgrade within the Poolbeg to North Wall section and may lead to potentially moderate effects on either construction activity.

16.4.1.4 Gas Network

There are currently no underground gas pipelines present within the study area, and there is no requirement for connection to the gas network as part of the ABR2 Project. The ABR2 Project will therefore have no impact on the gas supply to tenants within the Dublin Port Estate or on neighbouring communities.

16.4.1.5 Telecommunications

16.4.1.5.1 Mobile Masts

There is one mobile mast located within the study area, which is located at Berth 49, operated by Eircom (EIR DN 3482). Four further mobile masts are located within the vicinity of the study area, with one located near the Port Centre operated by Eircom (EIR DN 1047), with three further masts located near 1 Branch Road South of THR DU1043 operated by Three, VOD DN522 operated by Vodafone, and EIR DN 1009 operated by Eircom, however these are unlikely to be affected by the ABR2 Project as these are located beyond the immediate study area. The mobile mast located at Berth 49 may potentially be impacted by the ABR2 Project with regard to the Eircom operator accessing the mast for maintenance and/or repair activities, depending upon the ABR2 activities occurring, should treatment of dredged material occur at this location, which may lead to neutral effects upon telecommunications.

16.4.1.5.2 Fixed Links

There are four fixed links within the study area operated by Eircom, Leesom and Vodafone telecommunications, with c.30 within the wider Port area. The fixed links located within the wider Port area are unlikely to be affected by the ABR2 Project; however, the four fixed links may potentially be impacted by the ABR2 Project with regard to the operators accessing these for maintenance and/or repair activities, depending upon the ABR2 Project construction activities occurring, which may lead to neutral effects upon telecommunications

16.4.1.5.3 Broadband Connections

The Dublin area has been noted as having high-speed broadband available, and under National Broadband Ireland, there are presently no upgrade plans noted under the National Broadband Plan for Dublin. An existing fibre optic cable is present within the study area, located within the same submarine pipeline as the existing Poolbeg to North Wall 220kV submarine cable, located at a depth of 10m below the current seabed level within the navigation channel of the River Liffey. As the proposed capital dredging scheme is to a standard depth of -10m CD within Alexandra Basin West, there will be neutral effects on the existing fibre optic cable as it will not be impacted by the ABR2 Project.

16.4.1.6 Discharge from Commercial Vessels

There are currently no pump-out facilities for commercial vessels at the Port, and there are no plans for the same as part of the ABR2 Project; therefore, there are no neutral effects arising from the ABR2 Project.

16.4.1.7 Proposed Services consented under the MP2 Project

Under the ABR2 Project to ensure the delivery of the services and utilities infrastructure required as permitted under the MP2 Project to facilitate the UFT, the infilling of the void space of Berths 52/53 must have consideration for the final surface levels required under the MP2 Project to avoid the requirement for future excavation of the infilled material for utility construction following the completion of the ABR2 Project. Furthermore, the volumes of clean imported material and, where suitable, treated remediated material being used for raising levels within this area should be determined, and the placement location should be considered to avoid the future excavation of the filled material for utility construction.

To address this issue, the construction process had noted the potential for future uncontrolled disturbance of the placed and recovered monolith structure of the dredged sediments treated by S/S through the excavation and installation of services. This would potentially risk amending the internal structure of the treated dredged sediments, which could risk unintended mobilisation of contaminants and associated negative human health effects. To avoid this issue, the infilling process will only use S/S treated sediments for infill within the basin area of the existing Berths 52/53. This area will be installed with an impermeable barrier layer and a minimum of 1.4m coverage of clean material to avoid any future disturbance. For the raising of existing ground levels across the remaining area to deliver the UFT, this will be undertaken using sediments recovered through alternative physico-chemical processes, such as soil washing, where the efficacy of treatment is unaffected by any future potential disturbance activities, or using clean imported materials, which will be unaffected by any future potential disturbance activities. Therefore, the installation of any services or utilities within these areas will be unaffected by potential contaminants and there will be neutral effects arising from the ABR2 Project.

16.4.2 Assessment of Operational Effects

16.4.2.1 Terminal 5 Substation

As noted above in **Section 16.4.1.3.3**, where the existing Terminal 5 electrical substation has not yet been demolished (as consented under the MP2 Project), this will remain at the previous ground levels prior to the

construction of the ABR2 Project and delivery of the UFT under the MP2 Project. This will be approximately 1.4m below the ground levels of the newly raised area. Presently, information is outstanding regarding the proposed stormwater and sewerage drainage network to be installed within the area, consideration must be given to prevent flooding within the existing Terminal 5 electrical substation as this will remain at a lower point than the surrounding area and may represent a potential accumulation point for surface water, post-construction. Should flooding occur of the substation this may lead to operational failures of the substation and moderate effects regarding electricity supply within the Port Estate. However, the assessment conclusions assumes that appropriate stormwater drainage proposals will be put in place and the assessment is based upon the above information being supplied and confirmed for the ABR2 Project, therefore with neutral effects on the Terminal 5 substation (which is due to be demolished).

16.4.2.2 Services consented under the MP2 Project

As noted above in **Section 16.4.1.7**, the delivery of the UFT will involve the installation of services and utilities within the areas where ground levels are due to be raised, this will involve the use of sediments which have been treated by alternative measures where the efficacy of treatment is unaffected by excavation activities. There may be potential for the installed services and utilities to require excavation for maintenance or upgrading activities, as these will be located within areas of infilled material for ground level raising which have not been subjected to solidification/stabilisation treatment, there is no risk of contamination occurring at this point and there are neutral effects arising from the ABR2 Project.

16.5 Inter-relationships

Effects on Material Assets – Services also have the potential to have secondary effects with other receptors, which are considered in relevant topic-specific chapters. These receptors and effects are:

- Risk of Major Accidents and Disasters (Considered in **Chapter 6 Risk of Major Accidents and Disasters)**
  - Effect of temporary disruption to services and utilities during temporary connection requirement works being undertaken, which may impact firefighting capabilities on a short-term temporary basis.
- Traffic and Transportation (Considered in **Chapter 15 Material Assets – Traffic and Transportation**)
  - Effect of temporary movement of water and electrical plant during installation of temporary connections, or should the usage of bowsers or generators be implemented, these will require delivery via HGV vehicle movements.
- Population and Human Health (Considered in **Chapter 19 Population and Human Health)**
  - Effect of temporary disruption to services and utilities during temporary connection requirement works being undertaken or should emergency issues arise with loss of services and utilities, impacting local populations.

16.6 Mitigation and Monitoring

16.6.1 Mitigation

Mitigation measures are recommended for the construction and operational phases to avoid, minimise, reduce or offset any specific risks identified arising in relation to Material Assets – Services as a result of the ABR2 Project.

16.6.1.1 Construction Phase

16.6.1.1.1 Water Network

Regarding the existing water network, the following mitigation measures will be taken:

- Early engagement with water asset owners: Obtain statements of capacity and any written requirements from the water utility authority prior to construction works commencing. This can include confirmation of allowable abstraction rates and pressure thresholds for the temporary requirements for site offices and welfare facilities.
- Supply Strategy: Preparation of a water supply plan for both temporary requirements for site offices and welfare facilities, and during the construction process. This will prioritise the use of on-site water sources where feasible, such as the reuse of effluent water from the waste treatment and recovery processes following suitable settlement/treatment or the use of harvested rainwater for dust suppression.
- Provision of a back-up supply: Consideration should be given to ensure that water requirements for both potable water and non-potable water include a back-up supply, either through the use of suitable storage tanks on site for several days' worth of supply or through provisions available for the importation of water on-site using bowsers.
- Implement a Phased Demand Management: Schedule any high-demand activities to avoid coinciding with known peak local demands. This may involve the implementation of demand-management controls and daily water use monitoring.
- Protection of existing buried assets: Carry out utility surveys to mark and protect existing mains/sewerage networks. Provision of an Emergency Response Plan should pipe strikes occur, such as the provision of isolation valves and standby repair crews.
- Water quality controls: Installation of silt traps, settlement tanks and appropriate discharge controls for processing of dewatered dredged waters and infilled waters to prevent pollution of nearby surface waters.

With regard to the treatment of dredged material, the existing IE licence includes Condition 9 whereby should local wells indicate that the construction works are having a significant adverse impact on the quantity or quality of water supply, that this shall be considered as an emergency with a requirement for the licensee to provide an alternative source of water for those affected, this will ensure that no adverse effects arise as a result of the construction process on other users. The wastewater generated during the treatment of dredge material is also subject to further conditions under the existing IE licence, whereby sampling points will be included within the

pipeline system to allow for the collection of water samples from the emission point as per the IE licence. The sampling and testing schedule will be in accordance with Schedule C of the IE licence, and this will ensure that no adverse effects arise regarding the water discharges from the wastewater process to the River Liffey. Should this indicate issues, steps to address this must be made with a cessation of discharge until it is rectified.

16.6.1.1.2 Electricity Network

Regarding the existing electricity network, the following mitigation measures should be taken;

- Early engagement with electricity network owners: Obtain connection requirements and approval from electricity network operators (ESB networks) and agree on routing, protection and metering for temporary requirements for site offices and welfare facilities. For treatment process requirements, a submission should be made for a temporary works application and connection to the network.
- Design of temporary connection: The temporary supply should be designed with the appropriate capacity margin and use of suitable protective devices. Use of back-up generators should be available to avoid electrical failures should an outage occur. Ensure that the design of any electrical supply meets national safety standards, such as earthing.
- Implement a Phased Demand Management: Schedule any high-demand activities to avoid coinciding with known peak local demands. This may involve the implementation of demand-management controls and advance notice of other users.

During the connection process for the site construction facilities and for the wastewater treatment plants, further mitigation measures may be implemented to prevent disruption to other users, this may include the use of back-up generators to ensure that power supply continues, ensure advance notice is giving should shut off be required of the main network or the possibility of implementing the temporary connection process during the night-time to minimise effects upon other users.

As noted above in **Section 16.4.1.3.4**, there is potential for the cable upgrading work on the Poolbeg to North Wall section to coincide with construction activities taking place under the ABR2 Project; this can be avoided through careful co-ordination between DPC and EirGrid to minimise effects to slight/none.

As noted above in **Section 16.4.1.3.2**, dredging within Alexandra Basin West has been considered in respect of the cooling water intakes used by the Ringsend and Poolbeg Blocks (and Encyclis) should dredging activities compromise water quality or flow conditions within these intakes. Turbidity, suspended sediments and contaminants must be suitably mitigated and monitored to prevent operational impacts upon the power stations, however as the dredging is confined within Alexandra Basin West and the basin is located c.1km away from the cooling water intake, there is no potential pathway for effects. As noted in **Chapter 5 Project Description**, a series of mitigation measures is in place regarding dredging, including the following;

- Usage of a backhoe dredger with an environmental bucket to minimise sediment losses;
- Installation of a silt curtain around the dredger;
- No overtopping of barges is permitted, and spill plates must be implemented for the transportation of dredged materials; and

- Deployment of a silt/bubble curtain across Alexandra Basin West should a sediment contamination event occur to contain sediment within the basin.

The above mitigation measures aim to minimise the potential for sediment contamination occurring downstream of the dredging area. Should a contamination event occur, shutdown of dredging operations is recommended.

16.6.1.1.3 Telecommunications

Access shall be maintained to facilitate the operation of the infrastructure, and consideration should be given to any guidance published by the operators regarding working in the vicinity of such infrastructure.

16.6.1.1.4 Services consented under the MP2 Project

To mitigate against the potential for future excavation works required within the infilled area of Berths 52/53 to deliver the services and utilities infrastructure consented under the MP2 Project, during construction the use of mitigation by avoidance through the use of detailed design information on the dredge amounts and void infilling calculations has been undertaken to ensure that the void infilling considers the space required in respect to the finished surface levels of the MP2 Project to accommodate the required services and utilities. Furthermore, as noted above in **Section 16.3.7**, areas where the installation of services and utilities is proposed to occur for delivery of the UFT, these areas will only include either clean imported material or material which has been subject to a treatment process whereby the efficacy of this is unaffected by future excavation works to prevent the release of contaminants.

Should the volume of treated dredge material exceed the void space at the Berths 52/53 basin, export to an external facility for reuse or disposal may be required to ensure that available space below the finished surface levels of Terminal 5 can accommodate the services and utilities consented under the MP2 Project.

16.6.1.2 Operation Phase

Mitigation by avoidance through the use of detailed design information on the dredge amounts and void infilling calculations is required to ensure that the void infilling process has considered the space required with respect to the finished surface levels of the MP2 Project to accommodate the services and utilities and to prevent future excavation of the infilled area of Berths 52/53 being required following completion of construction works of the ABR2 Project. Where excess material has been identified, this will be removed to another site for landfill within Ireland.

Once the ABR2 Project has been constructed, there are no anticipated requirements for water/electricity needs, as these connections are on a temporary basis for the facilitation of construction works and for the use of site offices and welfare facilities.

16.6.2 Monitoring

As part of the monitoring process, during the construction phase, the following monitoring is recommended:

- Water Network Monitoring Plan: Include daily/weekly monitoring logs of water use, mains pressure checks at agreed monitoring points and records of any supply interruptions for water networks. All incidents and any corrective actions taken will be recorded in the project environmental log and reported to the planning authority as required.
- Electrical Network Monitoring Plan: Include daily/weekly monitoring logs of electrical use, electrical load monitoring and records of any supply interruptions for electricity networks. All incidents and any corrective actions taken will be recorded in the project environmental log and reported to the planning authority as required.
- Monitoring of water quality parameters; Monitoring of turbidity, suspended solids and contaminants during dredging and barging operations to ensure that no contamination events occur, which could potentially compromise the cooling water intakes of the Poolbeg and Ringsend Blocks.
- Establishment of Monitoring Thresholds: Monitoring thresholds established regarding factors such as drops in mains pressure, water usage exceedance or voltage/frequency anomalies with defined actions established should thresholds be breached, e.g. reduction in water usage, activation of back-up power generation or suspension of particular activities.

During the operational phase, there are no anticipated impacts on services or utilities regarding water and electricity usage, therefore, no monitoring recommendations are made.

16.7 Potential Cumulative Effects

Chapter 21 Cumulative Effects and Environmental Interactions outlines the methodology used to complete the assessment of cumulative effects, which may arise from adjacent or nearby development, together with those predicted for the ABR2 Project. The projects which have been considered within the assessment of cumulative effects are outlined in **Chapter 21 Cumulative Effects and Environmental Interactions**.

Although the proposed dredging and infilling works are contained wholly within the Dublin Port Estate boundary, a cumulative effects search is warranted for Services because the Project is functionally linked to shared port infrastructure and utility networks that extend beyond the immediate works area. The Project may interact with the port's internal water supply, drainage, electrical supply, access routes, operational areas, and other third-party services relied upon by port users. Accordingly, the potential for cumulative effects cannot be assessed solely on the basis of land-take within the estate boundary; it must also consider other existing, permitted, and reasonably foreseeable developments within the port estate that may place additional demand on, or be affected by, the same assets and services.

This is especially relevant where several projects may occur concurrently or in close succession, as cumulative pressure on shared services could lead to temporary capacity constraints, service disruption, altered maintenance requirements, or increased risk of conflict during construction. For this reason, the cumulative effects search for Services has been scoped to include relevant developments within the Dublin Port Estate boundary that could interact with the proposed works through shared infrastructure, operational dependencies, or construction-phase resource demand (including the Southern Port as EIA Scoping Consultation and response received from ESB networks proposed information on Dublin Bay Power Station to be included as outlined in **Section 16.2.4** above).

Where possible, the construction activities will be coordinated with other major works occurring within the area to avoid overlapping high-demand periods on services in terms of water and electrical networks. The cumulative risk remains low to moderate if proper coordination is implemented; should proper coordination fail to occur, there is potential for the significance of effects to increase due to simultaneous parallel demands on the water and electrical networks.

There is potential for cumulative effects with the EirGrid Underground Cable Programme which aims to replace and upgrade five 220kV cables circuits on Material Assets – Services as there is potential for the upgrade works being undertaken to replace the Poolbeg to North Wall 220kV cable to coincide with the construction works occurring within the vicinity of the area proposed to be infilled under the ABR2 Project, this may lead to delays or issues regarding users accessing services and utilities infrastructure. However, through the application of mitigation

16.8 Residual Impacts

In circumstances where the mitigation measures are fully implemented during the construction and operational phases, as outlined in **Section 16.6**, the Residual Impacts of the ABR2 Project on the Material Assets – Services would consist of residual impacts on the water network being negligible and of short duration (days and weeks), with any residual risk controlled through the monitoring of supply pressure and daily usage logs regarding water. Regarding residual electrical network impacts, with appropriate engagement with the electrical network operation, residual impacts are expected to be negligible through electricity use monitoring and the provision of back-up generators. The implementation of dredging mitigation measures and suitable water quality parameter monitoring and spatial separation between the dredging area and the cooling water intakes will reduce the potential impacts upon the cooling water intake of the Poolbeg and Ringsend Blocks to none. Through appropriate engagement and co-ordination between DPC and ESB, the EirGrid cable replacement programme residual effects are reduced to none.

The assessment has assumed that an appropriately designed stormwater drainage plan will be developed for the ABR2 Project to prevent potential flooding regarding the Terminal 5 substation (noting that this structure is due to be demolished under the MP2 Project), thus reducing the residual effects to none.

16.9 Summary of Effects and Conclusions

The ABR2 Project meets the National Policy Objective 40, whereby the strategic development requirements are addressed as part of the Regional Spatial and Economic Strategies. The ABR2 Project is crucial to ensure that Dublin Port can meet expected growth capacity and continue to function effectively. A summary of the impact assessment is provided in **Table 16-7**.

Table 16-7: Summary of Effects relating to Material Assets – Services

Potential Effect and Receptor	Phase[5]		Magnitude of Effects	Sensitivity of Receptor	Significance of Effect	Significant/Not Significant	Mitigation Measures	Residual Effects
	C	O						
Potable Water Requirements for Construction Site Facilities – Other users of the Potable Water network	✓		C: Minor	C: Low	C: Neutral or slight	C: Not Significant	Engagement with Uisce Éireann for temporary connection, preparation of a water supply strategy, provision of a back-up supply, and ensure protection of existing assets.	Negligible
Non-Potable Water Requirements for Treatment of Dredged Material – Other users of the saltwater network	✓		C: Minor	C: Low	C: Neutral or slight	C: Not Significant	Provision of a back-up supply, e.g. use of storage tanks on-site for several days' worth. Usage of the importation of water on-site using bowsers.	Negligible
Wastewater Management – Wastewater network	✓		C: Negligible	C: Low	C: Neutral	C: Not Significant	The IE licence prevents the discharge of wastewater into the existing network, discharge occurs into the River Liffey.	None
Stormwater Drainage – Stormwater network	✓*		C: Moderate	C: Medium	C: Moderate	C: Not Significant	It is assumed that an appropriately designed stormwater drainage plan will be developed for the ABR2 Project to prevent potential flooding.	Negligible
Electricity Supply Temporary Connection – Other	✓		C: Minor	C: Low	C: Neutral or slight	C: Not Significant	Engagement with ESB networks regarding temporary connection and suitable design, implementation of phased demand management for high	Negligible

[5] C: Construction Phase; O: Operational Phase

Potential Effect and Receptor	Phase[5]		Magnitude of Effects	Sensitivity of Receptor	Significance of Effect	Significant/Not Significant	Mitigation Measures	Residual Effects
	C	O						
users of the electricity network							power activities, provision of back-up generators to ensure no loss of power supply.	
Existing Power Stations – Other users of the electricity network	✓		C: Moderate	C: Medium	C: Moderate	C: Not Significant	Implementation of dredge management mitigation measures during dredging and sediment transportation, including the use of a dredger with an environmental bucket, installation of a silt curtain around the dredger, no overtopping of barges and use of spill plates in material transport and deployment of a silt/bubble curtain across the entrance to Alexandra Basin West in the event of a breach. Monitoring of water quality parameters and spatial separation between Alexandra Basin West and the cooling water intakes means there is no pathway for effects.	Negligible
Terminal 5 Substation – Users of Terminal 5 substation	✓	✓	C: Minor O: Moderate	C: Low O: Medium	C: Neutral O: Moderate	C: Not Significant O: Not Significant	It is assumed that an appropriately designed stormwater drainage plan will be developed for the ABR2 Project to prevent potential flooding, furthermore this structure is due to be demolished under the consented MP2 Project.	Negligible
Existing Cables – EirGrid Replacement Programme	✓		C: Minor	C: Medium	C: Moderate	C: Not Significant	Co-ordination and engagement between DPC and ESB will ensure activities in a close spatial area can occur within no adverse impacts.	Negligible

Potential Effect and Receptor	Phase[5]		Magnitude of Effects	Sensitivity of Receptor	Significance of Effect	Significant/Not Significant	Mitigation Measures	Residual Effects
	C	O						
Telecommunications – Other users of telecommunications	✓		C: Negligible	C: Low	C: Neutral	C: Not Significant	Co-ordination and communication with operators of telecommunication infrastructure and adherence to guidance on working within the vicinity of telecommunication infrastructure.	None
Proposed Services of MP2 Project – Users reliant on services for UFT	✓	✓	C: Negligible O: Negligible	C: Negligible O: Negligible	C: Negligible O: Negligible	C: Not Significant O: Not Significant	The infilling of Berths 52/53 basin has considered the volumes of material to be used, where excess is present, this can be exported to an external licensed facility. Where future services and utilities are to be installed within the area forming the UFT under the MP2 Project, only clean materials will be used, negating the risk of contamination during future excavation.	None

16.10 Limitations of Assessment

The known limitations to the assessment presented in this chapter of the EIAR include the availability of estimates of electricity usage, water supply estimates and the requirement for continued engagement and coordination between DPC and operators (ESB) within the Dublin Port Estate.