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Volume 1 EIAR Non-Technical Summary

PRESENTED TO

The Land Development Agency (LDA)
Proposed Development at Donore Avenue, Dublin 8

DATE

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Environmental Consultancy Services

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1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) has been commissioned by the Applicant, the Land Development Agency (LDA), in respect of a Proposed Development at a site located at the former St. Teresa's Gardens, Donore Avenue, Dublin 8 (the Proposed Development).

An Environmental Impact Assessment Report (EIAR) is an assessment and analysis of potential impacts on the receiving environment that may arise as a result of the Proposed Development. An EIAR is required to accompany a planning application for development of a class set out in Schedule 5, Part 2 of the Planning and Development Regulations which exceeds a limit, quantity or threshold set for that class of development.

Schedule 5, Part 2 of the Planning Regulations defines projects that are assessed on the basis of set mandatory thresholds for each of the project classes including:

> *"Schedule 5, Part 2 - Infrastructure projects*
>
> *10(b)(i) Construction of more than 500 dwelling units.*

The Proposed Development consists of 543 no. dwelling units. Therefore, an EIA is being prepared and will be submitted as part of this Large-Scale Residential Development (Mixed Use) application.

In assessing the environmental impacts, this EIAR will evaluate the existing situation and assess any potential impacts of the Proposed Development. Where potential impacts are identified, mitigation measures will be proposed. In addition, the in-combination effects of any other known plans or projects will be identified and assessed.

This Non-Technical Summary (NTS) describes the Proposed Development, the Environmental Impact Assessment (EIA) process and summarises the key environmental impacts arising from each of the environmental assessments carried out by a panel of experts in accordance with best practice. The environmental assessments involved desktop studies, site visits, surveys, and site-specific investigations. The NTS also outlines the mitigation and monitoring measures proposed along with a list of any residual impacts that may occur from the Proposed Development.

The potential Environmental Impacts of the Proposed Development during all phases of the Proposed Development are addressed in the EIAR under the following headings as prescribed under the EIA Directive:

- Population and Human Health
- Biodiversity
- Land and Soils
- Hydrology and Hydrogeology
- Air Quality and Climate
- Noise and Vibration
- Landscape and Visual Amenity
- Archaeology and Cultural Heritage

- Material Assets: Traffic, Waste and Utilities

2 DESCRIPTION OF PROPOSED DEVELOPMENT

2.1 Operational Phase

The Proposed Development will comprise residential and commercial use consistent with the permitted land use zoning for the area, Z14. The Operational Phase of the Proposed Development will consist of the normal day-to-day operations necessary for the management of a predominantly residential development, and the ongoing maintenance of the residential dwellings, retail unit, creche and public outdoor areas. Further detail on the potential impacts of the Operational Phase is provided in Chapters 4-12 of the EIAR.

2.2 Construction Phase

The Construction Phase of the Proposed Development will take place over a 35-month period, which will include site clearance and construction activities. A Construction and Environmental Management Plan (CEMP) has been prepared for the Proposed Development by Enviroguide Consulting (2022) and has been submitted with this application. The CEMP sets out the provisions for the Construction Phase of the Proposed Development.

There are a number of potential effects that may arise during the Construction Phase, which are subject to assessment in the relevant chapters of the EIAR and related application documentation. The CEMP includes a series of measures which will ensure that the potential effects from the Construction Phase are addressed. This list is non-exhaustive, but covers the major issues which are considered in the CEMP:

1. Traffic Management
2. Road Cleaning
3. Working Hours
4. Construction Methodology
5. Noise and Vibration
6. Sediment and Water Pollution Control Plan
7. Biodiversity Protection Measures
8. Surface Water Drainage Works

Construction activities will take place in two main phases. Phase 1 comprises the section of the Proposed Development as shown in green on Figure 2-3 Phasing Diagram. During Phase 1, site drainage will be installed during the enabling works and temporary construction haul roads will also be constructed. Phase 2 comprises the balance of the housing as shown in yellow in Figure 2-1.

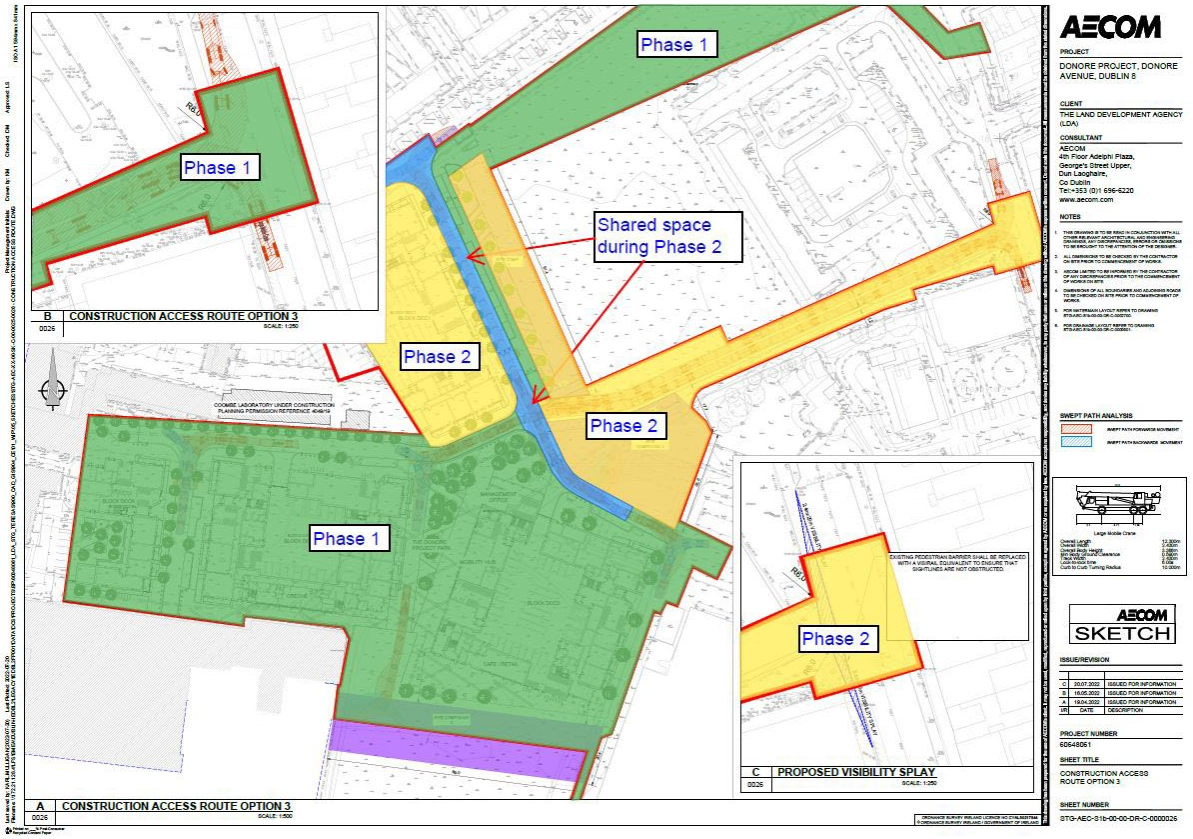

Figure 2-1: Phasing Diagram (AECOM, 2022)

The construction methodology that will be utilised on the site of the Proposed Development will have four main attributes to minimise the impact of the Construction Phase:

1. Protection of Adjacent Areas
2. Excavation and Rock Breaking
3. Material Hoisting
4. Waste Management

2.3 Site Description

The Proposed Development is located at a site on the former St. Teresa's Gardens, Donore Avenue, Dublin 8. The site is bound by Donore Avenue to the north-east, Margaret Kennedy Road to the north-west, The Coombe Women and Infants University Hospital to the west, the former Bailey Gibson factory buildings to the south-west, and the former Player Wills factory to the south-east. The Proposed Development will consist of the construction of a residential scheme of 543 no. apartments on an overall site area of 3.26 ha. with a net development area of 2.05 ha. The landholding comprises the site of the former St. Teresa's Gardens Flat Complex, which have since been demolished save for two blocks closest to Donore Avenue which are de-tenanted.

The Proposed Development site benefits from close access to a whole range of amenities in the general Dolphin's Barn/South Circular Road area. A Community and Social Infrastructure Audit (CSIA) Report has been prepared by John Spain Associates for the Proposed Development. The CSIA Report concludes that the Proposed Development site is accessible

to a range of leisure facilities including football / rugby / GAA clubs, a number of public parks, a number of education facilities and a substantial amount of community facilities located throughout the neighbourhood. As such the facilities that the local area currently offers is very good and will be able to support the Proposed Development.

3 PLANNING CONTEXT

The planning and policy context (Chapter 3) describes the Proposed Development within the context of the relevant planning policy as it relates to the environment. The Proposed Development is located in the Local Authority area of Dublin City Council (DCC). The Proposed Development is described in further detail in Chapter 2 (Description of the Proposed Development).

The national and regional policy context provides the clear policy link between national policies and Local Authority planning policies and decisions. The relevant documents include the National Planning Framework – Ireland 2040, the Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly, 3.2.3 Housing for All, A New Housing Plan for Ireland (2021). Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009), Sustainable Urban Housing: Design Standards for New Apartments 2020 - Guidelines for Planning Authorities, Transport Strategy for the Greater Dublin Area, the Draft Transport Strategy for the Greater Dublin Area 2022-2042, Urban Development and Building Heights Guidelines (2018), Design Manual for Urban Roads and Streets (DMURS) and the Guidelines for Planning Authorities on 'The Planning System and Flood Risk Management (November 2009).

This chapter sets out a summary of the National and Regional planning policy context together with the Local Planning and Development Context and the interaction of this policy context with the specialist chapters of this EIA report. Further detail is set out in the Planning Report.

The following sections describe how the Proposed Development complies with the stated and statutory requirements of Dublin City Council (DCC) with respect to planning and sustainable development. The relevant local planning policy with which the Proposed Development complies with is the recently adopted Dublin City Development Plan 2022-2028, which will become operational before the Board makes its decision on this application.

As part of the assessment of the impact of the Proposed Development, account has been taken of relevant developments that are currently permitted, or under construction and substantial projects for which planning has been submitted within the surrounding areas.

A summary of the most relevant planning permissions and applications pertaining to the Proposed Development site and surrounding area is provided.

The application site, which is currently undeveloped is zoned as a Strategic Development and Regeneration Area (Z14) development purposes within the Dublin City Development Plan. The proposed uses are permitted in principle on the site. Therefore, the Proposed Development is supported in principle by the land use zoning objective.

The Proposed Development is in accordance with the policies and objectives of the National Planning Framework, Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly, and the Dublin City Development Plan.

The development is an appropriate land use for the area and meets the requirements of the Dublin City Council zoning objectives. The development will minimise the potential environmental impacts as described in various chapters of the EIAR.

Additionally, risk management and interactions between environmental factors have been examined, and a programme of mitigation and monitoring measures has been set out.

4 POPULATION AND HUMAN HEALTH

'Population and Human Health' looks at the potential effects of the Proposed Development on human beings, living, working and visiting in the vicinity of the application site at the former St. Teresa's Gardens, Donore Avenue, Dublin 8.

This assessment focuses on the socio-economic impacts and is focused in particular on relevant issues such as residential amenity, economic activity, tourism and population levels. One of the principle concerns in any Proposed Development is that the local population experiences no reduction in the quality of life as a result of the development on either a permanent or temporary basis.

A desk-based study was undertaken in July 2022 where data from the Central Statistics Office (CSO) was reviewed in-depth to assess information regarding population, age structure, economic activity, employment, and unemployment within the vicinity of the Proposed Development. Relevant legislation and published documents were also assessed. The aim of the study was to assess the positive and negative impacts of the Proposed Development on the socio-economic environment.

The study finds that the Proposed Development will have a slight positive impact on economic activity. The Proposed Development will generate economic activity in the locality during the construction period, which is anticipated to extend over a period of approximately 35 months and employ approximately 200 people. It is proposed that approximately 50 people will be employed during the operational phase having a positive impact to the local economy and employment. Jobs will also be created in the creche, retail / café unit and management block. Employment and income are among the most significant determinants of long-term health. Therefore, the Proposed Development has the potential to provide health improvements due to the creation of additional employment which will provide a slight positive impact both directly and indirectly to the local economy and employment.

The Proposed Development will provide 543 no. residential accommodation units which will provide an enhanced choice of tenure in the area, affording greater flexibility to those who may be seeking to rent an apartment in the area or looking to purchase a dwelling. This will have a long-term positive impact on population due to the provision of a wide range of dwelling unit types and will cater for a wide cohort of persons. The Proposed Development will be a positive effect for the local area and will provide a positive impact to the overall economy of the local area through indirect socioeconomic benefits to local services including local shops, service stations, cafes and restaurants. The proposed creche facility of 851 sq.m. will provide approximately 80 childcare spaces along with the office units offering workspace provisions representing a positive impact on the provision of services in the area.

Community amenities such as education, childcare, health and wellbeing, sports and recreation, retail, religious and faith institutions have also been assessed as part of this planning application. There is sufficient capacity in the surrounding area to accommodate the future residents of the Proposed Development.

The Construction Phase of the Proposed Development will potentially cause some additional noise, mobility of heavy vehicles, dust and traffic in the form of the arrival and departure of construction workers into the area. The impacts of the construction phase will be short term and will only last for the duration of the construction works. Construction phase mitigation

measures will be put in place and no significant impacts have been identified in terms of population and human health. During the Operational Phase, there will be adequate capacity on the public transport system to support the Proposed Development and there will be no significant impact on human health as a result of operational traffic.

The assessment concludes that the Proposed Development will provide employment, accommodation and childcare facilities which will be a positive impact for the local area and the overall economy.

5 BIODIVERSITY

5.1 Introduction

The Biodiversity assessment has been undertaken by Altemar Limited. It assesses the biodiversity value of the Proposed Development area and the potential impacts of the development on the ecology of the surrounding area and within the potential zone of influence (ZOI). Standard construction and operational phase control measures, in addition to monitoring measures are proposed, to minimise potential impacts of the Proposed Development and to improve the biodiversity potential of the Proposed Development site post construction.

The programme of work in relation to biodiversity assessment was designed to identify and describe the existing ecology of the area and detail designated sites, habitats or species of conservation interest that could potentially be impacted by the Proposed Development. It also assesses the significance of the likely impacts of the scheme on the biodiversity elements, and designs mitigation measures to alleviate identified impacts.

5.2 Study Methodology

A pre-survey biodiversity data search was carried out in March 2021 and updated in August 2022. This included examining records and data from the National Parks and Wildlife Service (NPWS), National Biological Data Centre (NBDC) and the Environmental Protection Agency (EPA), in addition to aerial, 6-inch maps and satellite imagery. Two habitat surveys of the site were undertaken within the appropriate seasonal timeframe for terrestrial fieldwork. Field surveys were carried out as outlined in Table 5-1. All surveys were carried out in the appropriate seasons.

Table 5-1: Field Surveys

Area	Surveyors	Survey Dates
Terrestrial Ecology/	Bryan Deegan (MCIEEM)	14th April 2021, 27th August 2021, 7th July 2022
Mammal Survey	Bryan Deegan (MCIEEM)	14th April 2021, 7th July 2022
Wintering Bird/Flightline Assessment	Hugh Delaney	29th March 2022
Bat Fauna	Bryan Deegan (MCIEEM)	27th August 2021, 7th July 2022

5.3 The Existing and Receiving Environment (Baseline Situation)

5.3.1 5.3.1 Zone of Influence

The potential ZOI of the Proposed Development was deemed to be the site within the site outline with potential for downstream impacts to the marine environment via the proposed foul and surface water drainage strategy.

5.3.2 5.3.2 Designated sites

It should be noted that the Site is not within a designated conservation site. The closest Natura 2000 site is South Dublin Bay and River Tolka Estuary SPA, which is 4.4 km from the proposed Project. The nearest SAC to the Site is the South Dublin Bay SAC which is located 4.6 km from the Site. There are no designated Natural Heritage Areas (NHA) within a 15km radius, however the nearest Proposed NHA (Grand Canal) is 175m from the Site. There is no direct hydrological connection to any designated conservation sites. There is an indirect hydrological pathway to designated conservation sites located within Dublin Bay via foul wastewater drainage to Ringsend Wastewater Treatment Plant (WwTP) and surface wate drainage to a surface water network that ultimately outfalls to the Poddle Stream, which in turn outfalls to the River Liffey.

5.3.3 5.3.3 Species data

It should be noted that no species of conservation importance were noted on site, based on NPWS and NBDC records as fine resolution.

Evaluation of Habitats

The Proposed Development site consists of build land, recolonising bare ground, bare ground, scrub and grassland habitat that is succumbing to scrub encroachment. No habitats of conservation importance were noted on site.

Evaluation of Species

No rare or plant species of conservation value were noted during the field assessment. No protected terrestrial mammals were noted on site or in the immediate vicinity of the site. The common frog (*Rana temporaria*), common lizard (*Zootoca vivipara*), or smooth newt (*Lissotriton vulgaris*) were not observed on site. There are no features within the site boundary that could be important to frogs. Foraging activity of two bat species (soprano pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted along the southern side of the site No foraging was noted in other areas of the site. No buildings are on site. No trees of bat roosting potential are noted on site. No roosting bats were noted on site. However, to the south of the site (outside the Proposed Development site), a single (soprano pipistrelle (*Pipistrellus pygmaeus*) was noted emerging from ivy in 2021. No bats were noted emerging from the ivy in 2022. The following bird species were noted on site: Herring Gull, Lesser black-backed Gull, Starling, Linnet, Goldfinch, Greenfinch, Dunnock, Wren, Feral Pigeon, Woodpigeon, Blue Tit, Great Tit, Goldcrest, Blackbird, Song Thrush, House Sparrow, Grey Wagtail, Meadow Pipit, Hooded Crow, Magpie, Jackdaw. Herring Gulls were noted regularly flying over and around the site, but were not noted foraging on-site, with the birds landing onto the old flats occasionally only. Maximum counts of 22 noted at 10.10hrs moving around the site and 16 at 11.30hrs. Occasional Lesser black-backed Gull also noted in smaller

numbers, with maximum count of 4 at 09.40hrs, also not foraging on-site but occasionally landing onto roof of old flats. No additional bird species were noted during the Altemar surveys.

5.4 Potential Impact of the Proposed Development

The Proposed Development will involve the removal of the existing terrestrial habitats on site, demolition, re-profiling, excavations and the construction of residential units.

5.4.1 Construction Phase (in the absence of mitigation)

The construction of the Proposed Development would potentially impact on the existing ecology of the site and the surrounding area. These potential construction impacts would include impacts that may arise during the site clearance, demolition, re-profiling of the site and the building phases of the Proposed Development.

Construction phase mitigation measures are required on site particularly as significant reprofiling of the site is proposed which will remove all existing terrestrial habitats and can lead to silt laden and contaminated runoff to proximate surface water drainage networks. In the absence of mitigation measures, there is the potential for contaminated surface water runoff to enter proximate surface water drainage networks with the potential for downstream impacts on the Poddle Stream and designated conservation sites located within Dublin Bay. Mitigation is needed to prevent impacts on the surface water network and downstream designated sites.

5.4.2 Operational Phase (in the absence of mitigation)

Once constructed all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS. The biodiversity value of the site would be expected to improve as the landscaping matures. It would be expected that the ecological impacts in the long term would be positive once landscaping has established due to the implementation of a landscape strategy with a strong biodiversity element. Given that it is proposed to discharge surface water drainage to a surface water network that ultimately outfalls to the Poddle Stream, in the absence of mitigation, there is the potential for downstream impacts on designated sites via contaminated surface water runoff during operation. Standard mitigation in relation to surface water is required.

5.5 Mitigation Measures

Mitigation measures will be incorporated into the proposed Project to minimise the potential negative impacts on the ecology and downstream conservation sites. These measures are outlined in the EIAR. Mitigation measures are primarily relating to storm water management including silt control, compliance with lighting regulations, and having ecological supervision on site.

5.6 Residual Impacts

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on the sensitive receptors through the application the standard construction and operational phase controls. The overall impact on the ecology of the Proposed Development will result in a long term slight adverse, negative but not significant residual impact on the ecology of the area and locality overall. This is primarily as a result of the loss of terrestrial habitats on site, supported by the creation of additional

landscape features and habitat complexity, standard construction and operational controls and a sensitive native landscaping strategy.

6 LAND AND SOIL

An assessment of the potential impact on the existing land, soils and geological environment was carried out by Enviroguide Consulting for the Proposed Development Site.

The assessment was carried out taking cognisance of appropriate national guidelines and standards for Environmental Impact Assessment using data collected from a detailed desk-based studies including a review of all relevant design details pertaining to the Proposed Development, site-specific intrusive site investigation and assessment results (including trial pit excavations, borehole drilling, soil sampling, laboratory analysis of soil), This information was assessed to describe and assess the baseline conditions at the Proposed Development Site. A detailed assessment of the potential impacts was undertaken, and appropriate avoidance and mitigation measures were identified where necessary to reduce any identified potential impact associated with the Proposed Development.

The Site of the Proposed Development is currently unused but previously developed brownfield land that will be developed for residential use in accordance with the zoning objective for "Strategic Development and Regeneration Area" under the Dublin City Council Development Plan for the period of 2022 to 2028 (DCC, 2022).

The Proposed Development will involve site clearance, demolition of a boundary wall along Margaret Kennedy Road as well as the bulk excavation of soil during the Construction Phase to depths of up to 1.2 meters below ground level (mbGL) and will involve piling for foundations to a maximum depth of 9mbGL to construct the foundations and the undercroft levels beneath Blocks DCC1 (FFL 19.10mOD), DCC3 and DCC5 (FFL 20.20mOD). There will be no anticipated requirement for excavation of bedrock at the Site.

It is expected that a total volume of 19,209m^3 will be excavated during the construction works.

The bulk excavation works will include the removal of made ground including contaminated soils in accordance with EPA guidelines which will result in overall improvement of the underlying soil quality at the Site.

Suitable excavated soil will be retained and re-used at the Site for fill and landscaping for the Proposed Development in accordance with design proposals and current standards and regulations. The importation of aggregate fill materials will be required to construct the Proposed Development.

Surplus soil arising from groundworks will require off-site removal for reuse or recovery in accordance with appropriate statutory consents and approvals.

A detailed Construction Environmental Management Plan (CEMP) and Construction and Demolition Waste Management Plan (CDWMP) have been prepared to provide detailed construction phasing and methods to manage and prevent any potential emissions to ground with regard to the relevant industry standards (e.g., Guidance for Consultants and Contractors, CIRIA-C532', CIRIA, 2001) during the works. All works during the Construction Phase of the Proposed Development will be undertaken in accordance with the requirements of the CEMP and CDWMP.

Emergency procedures will be developed by the appointed Contractor in advance of works commencing and spillage kits will be available on-site including in vehicles operating on-site. Construction staff will be familiar with emergency procedures for in the event of accidental fuel

spillages. Remedial action will be immediately implemented to address any potential impacts in accordance with industry standards and legislative requirements.

There will be no excavation of soil or bedrock during the Operational Phase of the Proposed Development.

The Proposed Development will have an overall ‘positive’, ‘slight’ and ‘permanent’ impact on the soil quality associated with the excavation of made ground and shallow soils and their removal offsite during the Construction Phase of the Proposed Development.

There will be no significant, adverse, long-term impacts on, or associated with the land, soils and geology attributed to the Proposed Development.

7 HYDROLOGY

An assessment of the potential impact on the existing hydrological (surface water) and hydrogeological (groundwater) environment was carried out by Enviroguide Consulting for the Proposed Development Site.

The assessment was carried out taking cognisance of appropriate national guidelines and standards for Environmental Impact Assessment using data collected from a detailed desk-based studies including a review of all relevant design details pertaining to the Proposed Development, site-specific intrusive site investigation and assessment results (including trial pit excavations, borehole drilling, soil sampling, laboratory analysis of soil), This information was assessed to describe and assess the baseline conditions at the Proposed Development Site. A detailed assessment of the potential impacts was undertaken, and appropriate avoidance and mitigation measures were identified where necessary to reduce any identified potential impact associated with the Proposed Development.

The Proposed Development will include water supply connection through the existing watermains supply at the Site and the construction of new surface water drainage network at the Site and construction of foul drainage to include the diversion of the existing combined sewer 225mm foul sewer located at Margaret Kennedy Road and the construction of new foul drainage at the Site

The Proposed Development will involve the bulk excavation of soil during the Construction Phase to depths of up to 1.2 meters below ground level (mbGL) and will involve piling for foundations to a maximum depth of 9mbGL to construct the foundations and the undercroft levels beneath Blocks DCC1 (FFL 19.10mOD), DCC3 and DCC5 (FFL 20.20mOD).

The excavation of made ground, including identified contaminated soils, will result in overall site betterment and remove any potential ongoing risk to the quality of the receiving water environment associated with the current brownfield site condition.

There will be no requirement for large-scale dewatering however, there may be a requirement for temporary localised dewatering where surface water or perched water within shallow soil is encountered during within excavations and for the construction of the attenuation tank where the base of the tank may intersect groundwater based on measured groundwater levels.

There will be no unauthorised discharge of water (groundwater or surface water runoff) to ground, drains or water courses during the Construction Phase of the Proposed Development and all water arising from construction works will be managed in accordance with appropriate consents from Irish Water and Dublin City Council.

A detailed Construction Environmental Management Plan (CEMP) and Construction and Demolition Waste Management Plan (CDWMP) have been prepared to provide detailed construction phasing and methods to manage and prevent any potential emissions to ground with regard to the relevant industry standards (e.g., Guidance for Consultants and Contractors, CIRIA-C532', CIRIA, 2001) during the works. All works during the Construction Phase of the Proposed Development will be undertaken in accordance with the requirements of the CEMP and CDWMP.

Emergency procedures will be developed by the appointed Contractor in advance of works commencing and spillage kits will be available on-site including in vehicles operating on-site.

Construction staff will be familiar with emergency procedures in the event of accidental fuel spillages. Remedial action will be immediately implemented to address any potential impacts in accordance with industry standards and legislative requirements.

The surface water drainage for the Proposed Development has been designed in accordance with the 'Greater Dublin Strategic Drainage Study (GDSDS) Regional Drainage Policies Technical Document – Volume 2, New Developments, 2005' and the 'Greater Dublin Regional Code of Practice for Drainage Works, V6.0 2005'. CIRIA Design Manuals C753, C697 and C609 as specified in the Application Infrastructure Report (AECOM, 2022a).

The surface water drainage network incorporates appropriate SuDS (sustainable drainage systems) measures that will result in treatment and attenuation of water to ensure that contaminants are removed from any surface water prior to discharge from the Site.

The foul drainage during the Operational Phase of the Proposed Development will include foul water connections from the residential apartments, commercial spaces and undercroft car parking to an existing 1,020mm culvert located on Donore Avenue (AECOM Drawing reference: STG-AEC-S1b-00-00-DRC-0000500) which will ultimately discharge via the Irish Water network to Ringsend WWTP (Waste Water Discharge Licence ref.: D0034-01).

Water supply for the Proposed Development will be from the existing Irish Water mains water supply infrastructure at the Site by agreement with Irish Water and will be operated in accordance with appropriate statutory consents.

The Proposed Development will have an overall 'neutral', 'imperceptible' and 'permanent' impact on the receiving hydrological and hydrogeological environment and the removal of identified contaminated soils will result in overall site betterment and remove any potential ongoing risk for to quality of the receiving water environment.

Overall, there will be no significant adverse impacts as a result of the Proposed Development on the receiving groundwater and surface water environment.

8 AIR QUALITY AND CLIMATE

This chapter examines the potential for the Proposed Development to impact upon air quality and climate within the vicinity of the Proposed Site. This chapter also describes and assesses the impact of the Proposed Development on local climate and on global climate in a wider context.

The primary sources of dust identified during the Construction Phase of the Proposed Development include soil excavation works, demolition, bulk material transportation, loading and unloading, stockpiling materials, cutting and filling, and vehicular movements (HGVs and on-site machinery).

According to Transport Infrastructure Ireland guidelines (TII, 2011), it is difficult to accurately quantify dust emissions arising from construction activities. Therefore, it is not possible to easily predict changes to dust soiling rates or particulate matter (PM_{10}) concentrations. TII recommend a semi-quantitative approach to determine the likelihood of significant impact in this instance. This should also be combined with an assessment of the proposed mitigation measures. In order to account for a worst-case scenario, the Proposed Development can be considered major in scale due to the size of the Site and the duration of construction activities. Therefore, it can be assumed that there is potential for significant dust soiling 100m from the Site. There are a number of high-sensitivity receptors located within 100m of the Site boundary. Therefore, in the absence of mitigation, it is considered that there is potential for dust impacts to occur at these locations. Appropriate mitigation measures have been recommended and will be implemented at the Site in order to minimise the risk of dust emissions arising during the Construction Phase, provided such measures are adhered to, it is not considered that significant air quality impacts will occur. Furthermore, the monitoring of construction dust during the Construction Phase of the Proposed Development will be carried out to ensure that impacts are not experienced beyond the site boundary.

Construction vehicles and machinery during this phase will temporarily and intermittently generate exhaust fumes and consequently potential emissions of volatile organic compounds, nitrogen oxides, sulphur oxides, and particulate matter (dust). Dust emissions associated with vehicular movements are largely due to the resuspension of particulate materials from ground disturbance. According to the Institute of Air Quality Management (IAQM, 2014), experience from the assessment of exhaust emissions from on-site machinery and Site traffic suggests that they are unlikely to make a significant impact on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed. Air pollutants may increase marginally due to construction-related traffic and machinery from the Proposed Development; however, any such increase is not considered significant and will be well within relevant ambient air quality standards. According to TII (2011), the significance of impacts due to vehicle emissions during the Construction Phase will be dependent on the number of additional vehicle movements, the proportion of HGVs and the proximity of sensitive receptors to Site access routes. If construction traffic would lead to a significant change (> 10%) in Annual Average Daily Traffic (AADT) flows near to sensitive receptors, then concentrations of nitrogen dioxide, PM_{10} and $PM_{2.5}$ should be predicted in line with the methodology as outlined within TII guidance. Construction traffic is not expected to result in a significant change (>

10%) in AADT flows near to sensitive receptors. Therefore, a detailed air quality assessment is not required.

There is the potential for combustion emissions from onsite machinery and traffic derived pollutants of Carbon Dioxide (CO_2) and Nitrous Oxide (N_2O) to be emitted during the Construction Phase of the development. However, due to the size and duration of the Construction Phase, and the mitigation measures proposed, the effect on national greenhouse gas (GHG) emissions will be insignificant in terms of Ireland's obligations under the Kyoto Protocol and therefore will have no considerable impact on climate. Overall, climatic impacts are considered to be short-term and imperceptible.

Operational traffic will use local roads to access the facility with potential increases of traffic flow on some roads and subsequent associated emissions of Volatile Organic Compounds (VOCs), nitrogen oxides, sulphur dioxides and increased particulate matter concentrations. Predicted levels of operational traffic as a result of the Proposed Development do not meet the indicative criteria for requiring an air quality assessment; it is therefore considered unlikely for significant air quality impacts to occur as a result of increased traffic flow, and an associated air quality assessment is not required.

A Flood Risk Assessment (FRA) report was also prepared for the Proposed Development. This FRA was undertaken by AECOM. The assessment concluded that the Site is suitable for development and has an overall low risk of being affected by flooding.

9 NOISE AND VIBRATION

This section summarises the assessment of the potential noise and vibration impacts and related effects arising from both the construction and long-term operational phases of the Proposed Development on existing and future receptors.

9.1 Methodology

The methodology adopted in the identification of the receiving environment and in the assessment of impacts and effects is in accordance with best scientific practice. The overall approach and the relevant standards, guidelines and guidance used is listed in detail in the EIAR chapter.

9.2 Receiving Environment

The site of the Proposed Development is located within an urban city environment. However, due to its enclosed nature and set-back from major roads and associated road traffic noise, it is quieter than expected for a city location. Road traffic noise is audible as a distant source punctuated by occasional sources such as ambulance sirens. A small area of the site directly on the western boundary of the Coombe Women and Infants University Hospital is locally impacted by fixed plant noise associated with a laboratory in this area. In the long term, this laboratory will be refurbished and the plant removed.

Based on the monitoring undertaken, and desk-based review, the site of the Proposed Development can be classified as negligible to low risk for future residential transportation noise risk exposure. Overall, a conservative low risk rating is applied.

The closest existing noise sensitive locations (NSLs) include residential receptors on Margaret Kennedy Road and the Coombe Women and Infants University Hospital facades that face into the site and are thus similarly located in a relatively quiet existing environment. Other NSLs in the Zone of Influence (ZoI), relating to potential short-term construction and long-term traffic noise include residential receptors along Donore Avenue where traffic noise predominates

There are no potential sources of vibration affecting the site. The laboratories located directly on the western site boundary associated with the Coombe Women and Infants University Hospital may contain equipment sensitive to vibration impact during construction.

9.3 Impact Assessment and Mitigation

An assessment of the short-term site development and construction noise and vibration impacts has been conducted in accordance with BS5228:2009+A1:2014 Parts 1 and 2 and also takes account of the UK LA111 Noise and Vibration Standard for Highways. The assessment takes account of noise and vibration associated with the use of heavy earthmoving equipment and piling of foundations as a conservative estimate. Continuous Flight Auger (CFA) piling is proposed which is one of the quieter forms of piling. Overlap between phases within the construction programme and the potential cumulative impact with other permitted developments which may be under construction concurrently has been assessed.

The following threshold values have been set based on the existing receiving environment for NSLs:

- 65 dB $L_{Aeq,1hr,}$ Mon-Fri (07.00 – 19.00hrs) and Sat (07.00 – 13.00 hrs), and,
- 70 dB $L_{Aeq,1hr,}$ Mon-Fri (07.00 – 19.00hrs) and Sat (07.00 – 13.00 hrs for commercial and residential receptors with no set back or screening on Donore Avenue.

The construction noise impact assessment notes that there is potential for exceedance of the threshold value proposed for the NSLs directly bordering and facing into the site. The impact magnitude rating ranges from moderate to major. As the recommended duration is also likely to be exceeded, the effect is rated as likely significant short-term negative without mitigation.

Construction traffic on Donore Avenue and on the internal haul route has also been assessed. The impact magnitude rating on NSLs on Donore Avenue is minor. Therefore, the effect is likely not significant. An existing NSL is located within 20m of the haul route, therefore, taking account of the existing baseline noise level, the impact magnitude pre-mitigation for this one location is rated as major. Based on duration of the works, the effect is therefore deemed to be likely significant short-term negative. However, mitigation measures as outlined in the EIAR chapter including screening, timing of plant use etc. will be applied to ensure that construction noise levels are maintained below the threshold values. Therefore, the effects will likely be short-term negative non-significant. Similarly, cumulative noise impacts with other construction sites will be maintained below the threshold values through management measures including monitoring and liaison of Site Representatives.

CFA piling is noted as generally giving rise to minimal vibration. Taking account of the distances from proposed piling to the nearest Vibration Sensitive Locations (VSLs), notwithstanding ground conditions present, it is not anticipated that the vibration criteria as outlined in the EIAR chapter will be exceeded. Nevertheless, precautionary vibration monitoring is proposed to ensure compliance with the limits or threshold values outlined and will be included in the CEMP as a preventative measure.

In the long term, additional traffic arising on the surrounding road network, principally Donore Avenue and Margaret Kennedy Road has been assessed. The impact on Donore Avenue will be <1 decibel and therefore constitutes a negligible long-term impact magnitude rating which corresponds to a likely non-significant effect.

The predicted impact magnitude on Margaret Kennedy Road is major based on peak hour flows as there is currently little to no traffic on this route. However, the following should be noted in terms of the context of the impact:

- The location is city-centre and the surrounding areas were previously developed. The current baseline is therefore a temporary scenario.
- Outside of peak hours, traffic flows are likely to be much lower.
- The area directly to the south-east will be developed as amenity and sporting facilities.

Therefore, taking context into account, the effect is not likely to be significant.

The Proposed Development incorporates enclosed plant equipment at ground floor level of each block. Food preparation areas associated with the creche in Block DCC5 and the retail/café in DCC3 may also have associated air handling/refrigeration units. Based on the location of this equipment and distance to the nearest existing NSLs no potential negative impacts are anticipated.

With regards to noise exposure risk for future residents and good acoustic design, the following is noted:

- The site is considered to be low risk at most in terms of future residential exposure to transportation noise.
- The criteria for good external amenity and internal conditions with open or partially open windows will be achieved taking account of transportation noise.
- Regardless of the above but without over-specifying sound insulation, an adequate level of sound insulation in glazing such as double glazing, will be provided within the Proposed Development.
- The public space will be enhanced with tree planting. Softer as opposed to hard surfaces, however minor, may help reduce the impact of any reflected noise from traffic in a green space.
- The provision of planted areas in urban or suburban settings can *qualitatively* improve the soundscape for local residents and enjoyment of the proposed amenity areas. Natural features have been shown to improve perceived tranquillity and are provided in the landscape strategy.
- Access to the public spaces provide additional optional external amenity to residents.

10 TOWNSCAPE AND VISUAL

10.1 Introduction

The objective of the Townscape and Visual Impact Assessment process is to identify and evaluate the likely significant effects on the townscape character and the visual amenity arising from the Proposed Development. The assessment identifies the residual effects arising from the finalised design considering townscape mitigation measures and their development over time. The assessment describes townscape and visual effects which are a result of the impact of the Proposed Development. Townscape effects are the result of physical changes to the fabric of the townscape. Visual effects relate closely to townscape effects but concern changes in views.

The Proposed Development is intended to facilitate the future delivery of the residential development on a 1.74 hectares site which forms part of a larger 3.26 hectare area incorporating the adjacent Bailey Gibson and Player Wills lands, the subject of a future residential development within a Strategic Development Regeneration Area.

The townscape and visual impact assessment is accompanied by 9 photomontages taken at representative viewpoints. The views and accompanying photomontages capture a range of views at different distances and provide cumulative images to consider the combined effects of the Bailey Gibson 1 (Planning Ref. ABP 307221-20) and the Bailey Gibson 2 (Planning Ref: ABP-311959-21) applications, and the Player Wills application sites.

Figure 10-1: SDRA 11 Site Boundaries

10.2 Proposed Development / Baseline Overview

The Proposed Development site incorporates approximately an overall area of 1.74 hectares of primarily brownfield lands located in the central urban area of Dublin, less than 3 km from O'Connell Street. The site is currently awaiting development following the demolition of St. Teresa's Gardens. The site is positioned at the centre of three main routes, Cork Street to the Northwest, Donore Avenue to the Northeast and the South Circular Road to the South. Thus, the site is strategically positioned inside the Grand Canal and South Circular Road, well served by all modes of public transport, and has access to high quality public open space. These characteristics, along with the site's large scale and its history of residential use contribute to its suitability for strategic high-density residential development.

Figure 10-2: Proposed Donore Application – Viewpoint Location Plan

The site is identified as part of the Strategic Development and Regeneration Area (SDRA 11) in the Dublin City Development Plan 2022-2028 (DDCDP) and lies at the centre of a number of DCC sites to connect other projects together and open up this new neighbourhood to its surrounding context. The DCC lands comprise of 3 no. land parcels, DCC lands, Players Wills and the full extent of the Bailey Gibson land with a total area of 10.3 hectares. The Coombe Women & Infants University Hospital lands (2.32 hectares) to the west of the site form part of SDRA 11 designation.

10.3 Townscape Context

The Proposed Development site is located at the centre portion of the SDRA 11 lands. The demolished St. Teresa's flats complex, a previously defining element of the local townscape character. The site is largely enclosed to the south by substantial planned and permitted compact developments and is located adjacent to The Coombe Women & Infants University Hospital Campus. To the east, Institutional lands comprise of a parish centre, community centre and St. Teresa's church, a notable protected structure and beyond this, a belt of Victorian dwellings. The site's notable separation from urban thoroughfares and its unusual shape limits the opportunity of views from the wider public realm.

10.4 Visual Effects

Significant visual effects will be experienced in open and partial views from up to 200-500m from the development boundary and in particular from Donore Ave and adjoining residences facing the Proposed Development site. Open views are restricted to Donore Ave. However, partial views will also be possible from the R110 and the heavily trafficked South Circular Road. The proposal will

add a new and prominent building quarter and landmark north of the Grand Canal. It will provide structure and introduce a new urban quality to a current brownfield site.

Visual effects beyond approximately 500m and up to 1km will reduce quickly and visibility of the Proposed Development will concentrate on the upper sections of the buildings due to intervening screening vegetation and other existing built structures. The Proposed Development will still be a new point of focus in available open views, particularly in views south from beyond the canal, but it will be one component of several in these views.

Long-distance views beyond 1km will be hard to achieve due to the buildings in the immediate surroundings quickly screen the Proposed Development from view. Vantage points are possible in elevated locations; however, the Proposed Development will be seen as a new part of the overall south Dublin city townscape and as an urban quarter with panoramic views.

10.5 Cumulative Effects

Cumulative townscape and visual effects will arise from the intensification of the residential / mixed-use development pattern of this part of Dublin City centre. The existing permitted and proposed cumulative scenario's and demand for compact development will introduce large scale development types into an existing urban area.

Cumulative effects will be significant in available open views as the Proposed Development will improve the legibility of the townscape character as it links together the Bailey Gibson and Player Wills developments. Considering the Proposed Development with the permitted and / or proposed developments, the proposal will integrate with these developments and create a significant new urban quarter. The visibility of these developments in combination completes the transformation of this area within the south Dublin city core into a new part of the city, north of the Grand Canal.

10.6 Residual Effects

The Proposed Development will contribute to the diversity of the character in the new urban townscape. Cumulative townscape and visual effects will arise from the intensification of the residential / mixed-use development pattern of this part of Dublin City centre.

Cumulative effects will occur with a building of height, the addition of height and mass to the skyline in the inner city location is not uncharacteristic.

The composition with the Proposed Development, the Player Wills proposal and Bailey Gibson 1 proposal contributes to the visual densification at this location and identifies a destination of scale in the townscape. The visibility of these developments in combination completes the transformation of this area within the south Dublin city core into a new rejuvenated part of the city,

The composition with the Proposed Development the Player Wills proposal and lower, less present Bailey Gibson 2 proposal in available open views will improve legibility of the townscape character.

Considering the Proposed Development with the permitted and / or proposed developments, the proposal will integrate with these developments and create a significant new urban quarter.

The visibility of these developments in combination completes the transformation of this area within the south Dublin city core into a new part of the city, north of the Grand Canal.

11 ARCHAEOLOGY AND CULTURAL HERITAGE

11.1 Introduction

The Archaeology and Cultural Heritage Assessment describes the potential impacts and resultant effects upon the archaeological and cultural heritage resource of the Proposed Development at Donore Avenue, Dublin 8 in accordance with the requirements of the relevant EIAR legislation and guidance. It defines the study area, the methodology used for developing the baseline and impact assessment, provides a description of the baseline environment in relation to cultural heritage and presents the findings of the impact assessment.

A study area which extends 500m from the Proposed Development site boundary is employed to include all known archaeological heritage assets. The extent of the archaeological study area follows that determined in a previous Archaeological Impact Assessment (AIA) prepared in 2013 by Archaeology Plan and is considered adequate and representative. Given the urban nature of the surrounding area, a study area of 300m was employed for architectural heritage. The baseline also considers the setting of these heritage assets, which can be described as the surroundings in which the heritage assets are experienced and appreciated.

11.2 Project / Baseline Overview

The Proposed Development comprises of the construction of a residential scheme of 543 no. apartments on an overall site of 3.26 ha. with a net development area of 53,227 sqm ha. The landholding comprises the site of the former St. Teresa's Gardens Flat Complex, which have since been demolished save for two blocks closest to Donore Avenue.

A review of the Record of Monument and Places (RMP) dataset identified 25 sites within 500m of the Proposed Development site. One of these, a watercourse (DU018-04304) that was part of the course of the 12th/13th century Abbey Stream, crosses the Proposed Development site. Archaeology Plan (2013) identified through cartographic evidence that the course of the stream crosses through the former St. Teresa's Gardens; this was corroborated during the archaeological monitoring of engineering test pits within the site in June 2014. Further archaeological testing was conducted in August 2021 in order to confirm if the sub-surface line of the Abbey Stream continues within the Proposed Development site. The results of the archaeological testing show that the Abbey Stream is not located within the boundaries of the Proposed Development.

While the archaeological testing in 2021 found no evidence for the watercourse (DU018-04304), features of possible archaeological significance were noted in two areas – Archaeological Areas 1 and 2 (AA1-2). AA1 was located within the northern extent of the Proposed Development site, encompassing Trenches 1-3 and the northern extent of Trench 4. The second area, AA2, was located within Trench 8 and comprised a linear feature (C24) orientated northwest to southeast. This feature (C24) could not be fully investigated due to the depth of overburden from modern levelling materials. All features uncovered had been disturbed by subsequent construction works within the Proposed Development site.

The northeast extent of the Proposed Development site onto Donore Avenue is located within the Zone of Archaeological Interest for Dublin City (DU018-020). The Zone of Archaeological Interest for Dublin City (DU018-020) incorporates Donore Avenue, Cork Street and Dolphin's Barn Street.

11.3 Impacts to Heritage Assets

The Project consists of a residential development which will be constructed on land that was previously occupied by the St. Teresa's Gardens housing development in the north and a sports ground in the south. Prior to this, the land was largely located outside the city limits of Dublin until the 18th century and remained as open ground until the 1950s.

While there are no officially recorded Cultural Heritage assets within the Proposed Development site, cartographic evidence has revealed one archaeological feature which crosses its northeast extent. This is the former line of a watercourse (DU018-04304) which was part of the course of the 12th/13th century Abbey Stream. Additionally, the northeast extent of the Proposed Development site is located within the Zone of Archaeological Potential associated with Dublin City (DU018-020) on Donore Avenue. While evidence for these will have been disturbed by subsequent construction works, archaeological monitoring of ground investigation works in 2014 revealed evidence for the former Abbey Stream and other water courses, while archaeological testing within the Proposed Development site in 2021 noted subsoil cut linear features of possible archaeological significance surviving under the modern disturbance within investigation areas AA1 and AA2. There are no above ground visible features associated with these subsoil cut linear features, which remain in situ within the Proposed Development site beneath modern infill material. The survival of these remains also demonstrates the potential for further archaeological features to be present within the parts of the Development site which were not accessible for trenching in 2021.

Given the recorded archaeological remains uncovered during previous works within the vicinity, any such archaeological features are likely to be of local interest and of low importance. Groundworks associated with the construction of the Proposed Development would severely impact upon any such archaeological remains should they exist and would alter the special interests or qualities of the asset. The magnitude of this impact would be very high leading to a significant effect.

Construction of the Proposed Development has the potential to impact the settings of heritage assets within the study area which take the form of architectural heritage set within the surrounding urban environment. The closest is the Player Wills Factory (NIAH 50080768) to the immediate southeast, while other assets within the area include the Church of Saint Theresa of the Child Jesus (NIAH 50080781), Saint Catherine's National School (NIAH 50080794) on Donore Avenue, and the Church of Our Lady of Dolours (NIAH 50080748) on South Circular Road. These assets are all considered of Regional importance.

There is the possibility of negative impact to the settings of these buildings due to the construction of the Proposed Development. While the surrounding terrain is urban, it is likely that the Proposed Development will be visible in views of these and the other heritage assets within the study area. Despite this, the presence of the Proposed Development will not impact the ability to understand or appreciate these buildings.

There is the possibility of temporary negative impact to the setting of the heritage assets from noise, dust and vibration from construction related traffic and activities. This would diminish the importance of these assets over the short-term. The surrounding urban landscape will assist in partially mitigating the potential impacts from noise, dust and vibration, while it should be noted that the heritage assets are already subject to noise, dust and vibration from road traffic, especially on Cork Street and South Circular Road. The change to setting during the construction phase would be such that the special interests or qualities of the heritage assets would be slightly affected, without a noticeable change, leading to a magnitude of impact of low, leading to a significance of effect of slight. The slight significance of effect would be short-term and adverse.

Potential Impacts during the Operation Phase

Significant effects for the operation of the Proposed Development would derive from changes to the setting of heritage assets. These largely mirror the effects assessed for the permanent presence of the Proposed Development, as detailed above in the assessment of the construction phase. The change to setting due to the permanent presence of the Proposed Development during the operational phase would be such that the special interests or qualities of the heritage assets would be slightly affected, without a noticeable change, leading to a magnitude of impact of low, leading to a significance of effect of slight. The slight significance of effect would be adverse.

11.4 Mitigation Measures

Impacts to known and unknown heritage assets within the Proposed Development will be mitigated by appropriate archaeological mitigation works carried out at the pre-construction phase in areas where the Project has the potential to impact upon heritage assets and archaeological remains.

The potential archaeological features uncovered in AA1 and AA2 should be resolved through archaeological excavation. It is also proposed that the areas of the Proposed Development site that remain untested are subject to archaeological testing at pre-construction phase. This testing would most likely take the form of test trenching. Any archaeological features uncovered should be resolved through archaeological excavation.

Appropriate measures will have been implemented at construction phase to avoid or reduce adverse impacts. No further adverse effects on heritage assets are predicted for the operational phase. Therefore, no further mitigation should be required at Operation phase.

11.5 Residual Cumulative Impacts From the Proposed Development

The archaeological remains present within previous archaeological investigation areas AAP1 and AAP2 are of local interest and therefore low importance. They will experience a significant impact from the Proposed Development. This will not change after mitigation and the magnitude of this impact would remain as very high, leading to a significance of effect of significant. The residual effect after mitigation is therefore assessed to be a local significant, adverse (of local impact only) and long-term.

Potential currently unrecorded archaeological deposits which could be present within the Proposed Development site would experience a very high impact. Mitigation has been proposed in the form of archaeological testing and excavation, if appropriate, to determine the presence/absence of such features and to preserve them by record. Based on the results of the baseline report, it is assessed that previously unrecorded archaeological assets within the Proposed Development site are likely to be of local value. The residual effect after mitigation is therefore assessed to be moderate, adverse and long-term.

12 MATERIAL ASSETS : TRAFFIC , WASTE AND UTILITIES

12.1 Traffic

The existing road and traffic conditions in the vicinity of the Proposed Development site were reviewed and traffic surveys were carried out at critical road links and junctions that covered the morning and evening periods from which the existing AM and PM peak periods could be identified. A review of existing and proposed public transport in the vicinity of the application site was also undertaken.

It is expected that this Proposed Development would be complete by 2026. A public transport capacity assessment was completed which indicated the level of spare capacity on the public bus and Luas network on services that stopped within walking distance of the Proposed Development.

A comparative assessment of the traffic associated with the Proposed Development at St Teresa's Gardens and the proposed regeneration area was undertaken and included in the analysis.

Capacity assessments were undertaken at critical junctions in the vicinity of the application site at future years including traffic growth on the adjacent road network and development traffic. The results indicate that these junctions can operate within capacity and can accommodate the traffic associated with the Proposed Development and possible future developments.

In addition, considering the development's proximity to efficient public transport links and the limited traffic associated with the Proposed Development it is evident that the proposed regeneration development would have a negligible impact on surrounding junctions.

Comment was also provided in relation to the likely construction traffic and haul routes associated with the Proposed Development. It has been identified within this TIA that the level of impact the Proposed Development is likely to have on the adjacent road network would be negligible.

12.2 Material Assets : Wastes and Utilities

This chapter of the EIAR provides an assessment of the potential impacts of the Proposed Development on Materials Assets or physical resources in the environment, including built services and infrastructure comprising local settlements, electricity, gas supply, telecommunications/ICT, surface water/stormwater drainage, water supply, the foul water network and waste management infrastructure.

The Construction Phase will take place over a 35-month period, which will include site clearance and construction activities. Construction activities will take place in two main phases. Phase 1 comprises the construction of apartment blocks DCC3, DCC5 and DCC6. During Phase 1, site drainage will be installed during the enabling works and temporary construction haul roads will also be constructed. Phase 2 comprises the balance of the housing in block DCC1.

The Operational Phase of the Proposed Development will consist of the normal day-to-day operations necessary for the management of a predominantly residential development, and the ongoing maintenance of the residential dwellings, retail unit, creche and public outdoor areas.

The Operational Phase of the Proposed Development will create a permanent increase in demand on the national electricity supply network and on the gas supply network. However, the likely effect of the potential impact from the Operational Phase on the power supply networks is likely to be neutral and not significant in the long term.

The impact of the Operational Phase of the Proposed Development on the telecoms network is likely to be a marginal increase in demand. As the site of the Proposed Development is well located within an area where high speed broadband is available from multiple providers, the effect of the impact from the Operational Phase on the telecoms network is likely to be neutral and not significant in the long term.

During the Operational Phase of the Proposed Development there will be an increase in demand for water from the public water supply. The mains water supply is operated in accordance with relevant existing statutory consents. A centralised domestic cold-water storage and distribution system has been identified as the preferred option for the Proposed Development and all plant and riser space has been planned for the purpose of installing centralised storage and distribution systems (AECOM, M&E Report, 2022). The basis of the calculations for the water demand for the Proposed Development are set out in the Infrastructure Report (AECOM, 2022), and are calculated as per Section 3.7.2 of the Irish Water Code of Practice for Water Infrastructure.

Irish Water have confirmed that, based on a desk top analysis of the capacity currently available in the network(s) as assessed by IW, the proposed demand can be facilitated. Excess usage is the consumption of water services above the threshold amount stipulated in the Water Services Act (2017). Water use above the annual household allowance (213m^3) is considered to be excessive use and IW customers may be liable for charges on the amount above this level.

In accordance with best practice, water conservation appliances will be incorporated as part of the Proposed Development to reduce the water demand, including devices such as water saving tap valves, eco-flush toilet system and A-rated water saving appliances. The likely effect of the increase in mains water demand will be neutral, not significant, and long-term on mains water supply.

All waste materials generated during the Construction Phase and Operational Phase of the Proposed Development will be managed in accordance with the Construction and Demolition Waste Management Plan (CDWMP) and the Operational Waste Management & Recycling Strategy (OWMRS), respectively. All waste will be segregated at source and will be sent for recycling, recovery, or disposal to a suitably licensed or permitted waste facility, with a focus on diversion of waste from landfill wherever possible. In the absence of mitigation, the potential impact from the Operational Phase on municipal waste disposal is likely to be long-term, negative and moderate.

The implementation of the Construction Environmental Management Plan, the CDWMP and the OWMRS in conjunction with best environmental practice and appropriate management of

the Proposed Development, will ensure that there are no significant adverse impacts to Material Assets as a result of the Proposed Development.

13 RISK MANAGEMENT

13.1 Introduction

The purpose of this chapter is to identify and evaluate the potential risk to the project and the surrounding environment during construction and subsequent operation. The assessment identifies the risks associated with construction activities and evaluates the significance of the risk.

13.2 Methodology

Information relating to the Proposed Development in relation to construction issues and impact on the adjacent infrastructure was assessed using the design information prepared for the planning stage and publicly available datasets in relation to ground information, topography, safety information and compliance with statutory legislation. A risk register was developed detailing the main risks identified with the life cycle of the Proposed Development. Risk register workshop was held with all members of the design team to discuss and develop site specific strategies

13.3 Potential Impacts

The potential risks to human life were assessed based on review of Proposed Development, interaction with the surrounding structures, ground conditions and location and nature of existing services.

The site is not in an area prone to natural disasters, nor significant geological influences. The proposed works do not exhibit abnormal, significant or unusual risks that would not be unknown to a competent contractor.

13.4 Mitigation Measures.

The project will be carried out in accordance with the Safety Health and Welfare at Work (Construction) Regulations 2013 and subsequent amendments. The design team will consider the mitigation risks for both the construction risks and ‘in use’ risks. Risk reviews will be carried out throughout design to ensure that the General Principles of Prevention are applied. Any residual risks will be documented in the Safety File issued on completion of project.

A competent contractor / Project Supervisor for the Design Process (PSDP) will be appointed to ensure that the necessary control measures are implemented to mitigate risks during construction. The Construction Management Plan as well as good housekeeping practices will help limit the risk of accidents during construction.

In addition, there will be specific management plans prepared for design elements of the project, such as Traffic and Environmental, which will define methodologies and requirements for the management of risk to workers and the public.

13.5 Residual Impacts

Through the preparation of detailed RAMS (Risk Assessment, Method Statement) and the implementation of suitable and sufficient mitigation measures, there are no identified incidents or examples of major accidents and or natural disasters that present a sufficient combination of risk and consequence that would lead to significant residual impacts or environmental effects.

14 INTERACTIONS

Interrelationships between various environmental aspects must be considered when assessing the impact of the Proposed Development, as well as individual significant impacts. The significant impacts of the Proposed Development and the proposed mitigation measures have been detailed in the relevant chapters of this report. However, as with all developments that poses potential environmental impacts, there also exists potential for interactions/interrelationships between the impacts of different environmental aspects. The results may exacerbate or ameliorate the magnitude of impacts. The EIAR addresses in detail the interactions between the various environmental factors of the Proposed Development.

When considering interactions, the assessor has been vigilant in assessing pathways – direct and indirect – that can magnify effects through the interaction. In practice many impacts have slight or subtle interactions with other disciplines. However, the EIAR concludes that most inter-relationships are neutral in impact when the mitigation measures proposed are incorporated into the operation of the Proposed Development.

15 MITIGATION AND MONITORING

This EIAR has assessed the impacts and effects likely to occur as a result of the Proposed Development on the various aspects of the receiving environment.

The Proposed Development will be operated in a manner that will ensure that the potential impacts on the receiving environment are avoided where possible. In cases where impacts or potential impacts have been identified, mitigation measures have been proposed to reduce the significance of specific impacts. These mitigation recommendations are contained within each chapter exploring specific environmental aspects.

The mitigation and monitoring chapter of the EIAR collates and summarises the mitigation commitments made in Chapter 4 to Chapter 13.

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