## Volume 1

# EIAR Non-Technical Summary

**FOR**

Balscadden GP3 Ltd

**AT**

Balscadden, Howth, Co. Dublin

March 2022

**ON BEHALF OF**

**Balscadden GP3 Limited**


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# 1 INTRODUCTION

This Environmental Impact Assessment Report (**EIAR**) has been commissioned by the applicant, Balscadden GP3 Ltd, in respect of an application for a Strategic Housing Development (SHD) Residential Development in Balscadden, Howth, Co. Dublin.

An 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 1 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."*

As the number of dwelling units proposed is less than 500, the Proposed Development does not require a mandatory EIA. In these circumstances, although a mandatory EIA is not triggered for the Proposed Development, if it is considered that there is potential to have a significant effect on the environment, having regard to the criteria set out in Schedule 7, an EIA will be required. The criteria set out in Schedule 7 require regard to be had to:

- The characteristics of the Proposed Development;
- The location of the Proposed Development; and
- The characteristics of potential impacts.

Having regard to those criteria and the matters more particularly set out in Schedule 7, and considering the features of this site, an EIAR has been prepared to accompany the Strategic Housing Development application to An Bord Pleanála.

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 that are proposed along with a list of any residual impacts that may occur from the Proposed Development after these mitigation measures have been implemented.

## 1.1 Planning and Policy

The planning and policy context gives an overview of the relevant legislation that supports the Proposed Development at a local, regional, and national level, and sets out the strategic and

statutory context governing the planning and development of the Proposed Development. Chapter 3 Planning and Policy describes how the Proposed Development complies with the stated and statutory requirements of Fingal County Council (FCC) with respect to planning and sustainable development. The relevant local planning policy with which the Proposed Development complies primarily comprises the Fingal County Development Plan 2017-2023.

# 2 OVERVIEW OF THE PROPOSED DEVELOPMENT

## 2.1 Construction Phase

The duration of the Construction Phase of the Proposed Development will be approximately 3 years, and it will take place in the following sequence of works (*Outline Construction Management Plan, Waterman Moylan, 2021*):

- **Site Preparation: Site Clearance, Demolition & Enabling Work (8 weeks)**
    - Demolition of the existing EDROS Building & former Baily Court Hotel.
    - Removal of site vegetation and installation of site set-up.
    - Installation of temporary silt trench to eastern boundary to protect SAC/pNHA (as required under the Preliminary Environmental Management Plan)
    - Provision of a temporary piling mat and berms between levels.
- **Construction: Piled Retaining Walls**
    - Secant piled walls installed to allow for the bulk excavation and reduced level dig.
- **Construction: Bulk Excavation (12 weeks)**
    - Temporary works installed to temporarily restrain the secant piled walls during excavation.
    - Basement battered open-cut excavation to the North and East boundaries with a safe angle of repose.
- **Construction: Building Foundations & Basement (78 weeks)**
    - Installation of the building raft foundation and basement retaining walls.
    - Tower crane installation for the construction of the building frame.
- **Construction: Building Superstructure Frame**
    - Bottom-up construction sequence of the floor slabs and vertical elements.
    - Elements of the building frame may be premanufactured off site in precast construction for speed of construction, less formworks and on-site waste.
- **Construction: Cladding & Fit-out Works (24 weeks)**
    - Temporary scaffolding may be required around each building during the construction of the building envelope.

- Elements of the building facade may be premanufactured off site using modular construction for speed of construction and less on-site waste.

## 2.2 Operational Phase

The Operational Phase of the Proposed Development will consist of the normal day-to-day operations necessary for the management of a residential development and a café/retail space, and the ongoing maintenance of the dwellings and units.

# 3 SITE DESCRIPTION

The Site of the Proposed Development occupies an area of approximately 1.43 hectares (ha) within Howth Village. The Site of the Proposed Development was originally three separate plots which have been consolidated into a single entity under one landowner.

The largest plot of land, on Balscadden Road, south of the Martello tower, was formerly the EDROS centre, comprising a community hall and tennis courts. The Site is currently undeveloped, overgrown, and fenced off. It offers no visual or physical amenity to Howth and provides a poor setting for the Martello Tower. It is a relatively flat site, surrounded on 3 sides by steep embankments. A right-of-way from Abbey Street to Balscadden Road exists along the bottom of the mound but this pathway is isolated from neighbouring properties. South of the Balscadden site are the 'Cluxton' lands, which are also overgrown with grass and shrubs. The site slopes steeply upwards to the Asgard Park estate on the southern boundary, c. 15m higher than the Balscadden plateau. The third plot of land is the former Baily Court Hotel, which has been closed since circa 2007. The rear of the hotel backs directly onto the Cluxton lands.

The Site of the Proposed Development is bounded to the east by the Balscadden Road, to the west by residential and commercial buildings fronting onto Main Street and Abbey Street, and to the north by Martello Tower and Tower Hill, and to the south by rear gardens to residential properties. Of particular importance with respect to the Site of the Proposed Development are:

- The protected Martello Tower & Tower Hill of historical importance
- Howth Head Special Area of Conservation (SAC)
- Howth Head proposed Natural Heritage Area (pNHA)
- Historical Howth Sewer Tunnel that runs under the site

# 4 ENVIRONMENTAL IMPACTS

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
- Microclimate
- Noise and Vibration
- Landscape and Visual Amenity
- Archaeology and Cultural Heritage
- Material Assets: Traffic, Waste and Utilities

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

## 4.1 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 Proposed Development site at Balscadden, Howth, Co. Dublin. 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 principal 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 March 2022. 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 positive effect on the economic activity of the area. The Proposed Development will generate economic activity in the locality during the construction period. There will be approximately 80-100 jobs created, with a maximum of 200-250 construction workers at the peak of the construction works, which is anticipated to extend over a period of approximately 3 years. Indirect employment will also be created as a result of the Proposed Development at nearby retail shops, cafes & restaurants, and service providers.

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 be a positive effect for the local area and

will provide a slight positive impact both directly and indirectly to the local economy and employment.

During the Construction Phase of this Proposed Development HSE guidelines will be adhered to in relation to COVID-19.

The impact from the construction works is considered to be negligible. If all COVID-19 safety protocols and hygiene measures are adhered to it is considered that the development poses no additional COVID-19 risk.

The Construction Phase of the development will potentially cause some additional noise, mobility of heavy vehicles, dust and the arrival and departure of construction workers into the area. This may have a direct impact on the surrounding population. 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 to ensure that any negative impacts identified be reduced or to prevented.

The Operational Phase of the Proposed Development will have a positive impact on population and human health. The increased population of the area is a positive and long-term impact, as it will bring significantly increased spending power into the local economy and create a stronger and more vibrant community in the centre of Howth village. Furthermore, viability of these amenities going forward will be strengthened from the increased accessibility, permeability and population of the area as a result of opening up and securing stronger, safer pedestrian/cyclist access between the Main Street and Balscadden Road. In addition, the proposal will create 1,470 square meters of public open space within the site, where none currently exists, as well as a further 700 square metres between formal play area and lawn games area. There will be approximately 50 workers directly employed during the Operational Phase of theProposed Development having both a direct and indirect positive impact on the Howth Electoral Division economy and employment. The Proposed Development will also create additional indirect employment for example at shops, cafes, fuel stations etc in the vicinity of the Proposed Development.

The Proposed Development will provide 180 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. Furthermore, there is a high number of persons who are not in the workforce e.g. retirement age and cohort aged 70 years and over (18%) in the Howth Electoral Division who could significantly benefit from the Proposed Development and may welcome the opportunity to downsize to a smaller apartment in Howth Electoral Division area. This would relieve pressure on the market sector by opening up larger family dwellings for sale in the surrounding areas.

The Proposed Development has been designed to facilitate potential for future public use by incorporating landscaping and public realm improvements, particularly having regard to the replacing a dilapidated, derelict, non-aesthetic and cordoned off site with one that is publicly accessible with high-end residential values and new road infrastructure in addition to pathways for pedestrians and cyclists to utilise between the Main Street and Balscadden Road.

For the Operational Phase, no significant negative impacts have been identified for population and human health, accordingly no mitigation measures are required for the Operational Phase.

## 4.2 Biodiversity

This Chapter describes the Biodiversity of the Site of the Proposed Development and surrounding environs, with emphasis on habitats, flora, and fauna. It provides an assessment of the impacts of the Proposed Development on habitats and species, particularly those protected by national and international legislation, or considered to be of Conservation Importance; and proposes measures for the mitigation of these impacts, where appropriate.

A range of field surveys have been carried out at the Site of the Proposed Development to inform this Biodiversity Chapter including a habitat and flora survey, a non-volant mammal survey, bat surveys, a breeding bird survey and flightline bird surveys.

The main ecological value of the Development Site is the value of the semi natural habitats at the Site (dry meadows and grassy verges and scrub) to local passerine bird populations as nesting and foraging habitat and as foraging and commuting habitat for bat species. In addition, two fox dens were recorded at the Site, and the Site potentially has suitable habitat for the common lizard and small non-volant mammals. The Proposed Development is immediately adjacent to the boundary of Howth Head pNHA/SAC. There will be no direct loss or alteration of habitat within the pNHA/SAC as a result of the Proposed Development.

Four bat species were recorded at the Site. The Proposed Development Site is used as a foraging and commuting habitat for local bat populations. However, the level of bat activity recorded and the number of bat encounters does not indicate that the Proposed Development Site is an important area for local bat populations. No badger signs (setts, latrines, snuffle holes) were recorded at the Site. Common and widespread species are likely to occur at the Site including hedgehog, pygmy shrew, fox and the common lizard. All these species are protected under the Wildlife Act. Overall, the Proposed Development Site has been evaluated as of *Local value (lower value)* having regard for the conservation evaluation scheme (NRA 2009) as a site "*containing small areas of semi-natural habitat that are of some local importance to wildlife*".

Potential impacts arising from the Construction and/or Operational Phase of the Proposed Development, in the absence of mitigation, can be summarised as follows:

- Water quality impacts in designated sites and the marine environment arising from surface water run-off and potential groundwater flows during the Construction and Operational Phase,
- Dust emissions from the Proposed Development Site and construction vehicle traffic into designated sites during the Construction Phase,
- Spread of invasive alien flora during the construction phase into the Howth Head pNHA/SAC and Dublin Bay Biosphere during the Construction Phase,
- Semi-natural habitat loss

- Disturbance and/or mortality of fauna within the Site during the Construction Phase and Operational Phase
- Disturbance to bats within the Site and potential loss of foraging and/or commuting habitat during the Construction Phase and Operational Phase
- Disturbance and/or mortality of birds within the Site, temporary loss of potential nesting habitat during the Construction Phase

Potential impacts of the Proposed Development were predicted to range from neutral to significant at the local scale only and can be readily addressed with the mitigation measures proposed.

To address impacts on the marine environment and designated sites therein arising from surface water discharges, a range of mitigation measures to protect surface water quality (and therefore marine habitats and species) are provided**.** These surface water mitigation measures will treat the source (e.g., removal of silt from surface waters via silt fences, incorporation of SuDS into the project design) or remove the pathway (e.g., no release of wastewater generated on site into nearby drains or Balscadden Road during the Construction Phase).

To address impacts on designated sites as a result of dust emissions, a dust management plan will be implemented, which will treat/address the source of the impact (e.g., construction traffic, demolition) to ensure no impacts arise as a result of dust emissions.

The spread of invasive alien flora during the construction phase into the Howth Head pNHA/SAC and Dublin Bay Biosphere during the Construction Phase is addressed in the Biodiversity Chapter and ensures that the source of the impact (i.e., the invasive flora) is removed from the Site and that no pathway for transfer of invasive flora between the Site and the designated sites exists.

The loss of semi-natural habitat at the Site is addressed by retaining a portion of the Site for biodiversity and incorporating tree planting and wildflower meadows into the design.

Disturbance and/or mortality of local fauna within the Site (e.g., bats, non-volant mammals, common lizard and birds) is addressed in the Biodiversity Chapter. The mitigation measures outlined ensure that there will be no significant impact on local fauna at the Site. The mitigation measures address the source of impacts (e.g., night-time light pollution, dust, noise, vegetation clearance).

Provided all mitigation measures are implemented in full and remain effective throughout the lifetime of the Development, no significant residual negative impacts on the local ecology or on any designated nature conservation sites are expected from the Proposed Development.

## 4.3 Land and Soil

### Introduction

This chapter of the EIAR provides an assessment of the impact that the SHD in Howth, located between the Balscadden Road, Main Street and Abbey Street, will have on the surrounding soil and geology in the vicinity of the site. It also sets out mitigation and remedial measures and methods of monitoring once the development is operational.

A full description of the development can be found in Chapter 3: Description of Proposed Development of this EIAR.

This chapter was completed by Waterman Moylan Consulting Engineers.

**Study Methodology**

A desktop study was carried out to assess existing data from the Geological Survey of Ireland (GSI). This information was supplemented by a Geotechnical Report prepared by Byrne Looby and by site specific ground investigations carried out at the site by Site Investigations Ltd. in July 2021, November 2017 and July 2015, and by Ground Investigations Ireland in November 2017. These comprehensive ground investigations assessed the soil, rock, and groundwater conditions across the site.

**The Existing and Receiving Environment (Baseline Situation)**

The subject site is located in Howth, Co. Dublin. It is bounded to the east by the Balscadden Road and by residential properties, to the west by residential and commercial buildings fronting onto Main Street and Abbey Street, and to the north by lands around Martello Tower. The overall site is approximately 1.43 Hectares, with a former leisure centre building at the northern portion of the lands.

A topographical survey was carried out to determine the existing topography at the site. The site has two relatively flat areas, at the north and at the south, with a steep slope between the two, and with steep slopes around the boundary of the site. The northern portion of the site is at a level generally between c.20m and c.21m OD Malin, while the southern portion of the site is at a level generally between c.33m and c.34.5m OD Malin. Levels fall away at the east of the site towards the Balscadden Road, while levels at the south of the site continue to rise. The site is higher than the adjacent Main Street and Abbey Street to the west.

**Characteristics of the Proposed Development**

The Proposed Development will consist of the demolition of existing structures on site including the disused sports building (c. 604m2) on the Balscadden Road site and the Former Baily Court Hotel Buildings on Main Street (c. 2051m2) and the construction of a residential development set out in 4 no. residential blocks, ranging in height from 2 to 5 storeys to accommodate 180 no. apartments and duplexes with associated residential tenant amenity, and 3 no. commercial units. The development includes a basement car park.

The Proposed Development, with respect to soils and geology, includes the following characteristics: -

- Stripping of topsoil.
- Excavation of foundations and basements.
- Excavation of drainage sewers and utilities.
- Regrading and landscaping.
- Disposal of any surplus excavated soils including any contaminated material.
- Some areas of fill in the northern portion of the site.

**Potential Impact of the Proposed Development**

Unstable excavations and retention systems during the ground works may cause soil slippages and ground movement resulting in damage to nearby buildings and surrounding environment.

Ground works may cause damage to the existing Howth Sewer Tunnel that runs beneath the site and may cause damage to the adjacent Martello Tower of historic importance.

The proposed embedded retaining walls and foundations could create hydrogeological ground water cut-offs that could affect the hydrogeology in the surrounding environment and natural ground water paths. During excavation surface water runoff from the surface of the excavated areas may result in silt discharges to the public network.

Excavations for basements, foundations, roadworks, and services will result in a surplus of subsoil. Surplus subsoil will be used in fill areas where applicable.

Dust from the site and from soil spillages on the existing road network around the site may be problematic, especially during dry conditions. Accidental oil or diesel spillages from construction plant and equipment, in particular at refuelling areas, may result in oil contamination of the soils and underlying geological structures.

**Avoidance, Remedial & Mitigation Measures**

*Construction Phase*

A soil retention system has been designed to the site-specific ground conditions. This soil retention system, in conjunction with groundwater monitoring, will mitigate the risk of unstable soil conditions occurring during construction or ground movement causing damage to the surrounding environment.

Byrne Looby have carried out an assessment on the impact of the development to the underlying Sewer which shows there will only be a minor increase in stress at the location of the development that is considered appropriate with the existing form of construction.

A hydrological assessment of the proposed development has been undertaken by Minerex Environmental Limited. This hydrological assessment finds that the likelihood of the proposed embedded retaining walls and proposed foundations to disrupt the existing groundwater flow is low. This is further mitigated by the proposed piles, which allow gaps between the male and female pile to facilitate the passage of ground water.

To minimise ground borne vibrations occurring during the works, low vibration methods have been specified. A vibration monitoring regime is to be established around the site ahead of the works commencing with trigger limits outlined in the Byrne Looby report.

To reduce the quantity of soil to be removed from or imported into the site, the floor levels of the proposed buildings and roads are designed to match existing levels as closely as is feasible. The number of vehicle movements offsite will be minimised by this optimisation. However, given the prominent location of the site on a hill, given the steep slopes on the site, and given that there is a large basement proposed, it is anticipated that there will be a surplus

of soil to be removed from the site. It is currently estimated that there will be approximately 67,000m3 of excess soil to be excavated and removed from the site.

Any surplus subsoil and rock required to be removed from site will be deposited in approved fill areas or sent to an authorised waste recovery/disposal facility. Any contaminated soils that are encountered during the works will be excavated and disposed of off-site in accordance with the Waste Management Acts, 1996-2021, and associated regulations and guidance provided in Guidelines for the Management of Waste from National Road Construction Projects published by the National Roads Authority in 2008.

It is important that topsoil is kept completely separate from all other construction waste, as any cross-contamination of the topsoil can render it useless for reuse. Topsoil will be protected from vehicle damage and kept away from site-track, delivery vehicle turning areas and site plant and vehicle storage areas. Records of topsoil storage, movements and transfer from site will be kept by the Construction and Demolition Waste Manager.

Measures will be implemented throughout the construction stage to prevent contamination of the soil and adjacent watercourses from oil and petrol leakages. If groundwater is encountered during excavations, mechanical pumps will be required to remove the groundwater from sumps. Silt traps, silt fences and tailing ponds are required to be provided by the contractor where necessary to prevent silts and soils being washed away by heavy rains during the course of the construction stage.

After implementation of the above measures, the Proposed Development will not give rise to any significant long term adverse impact. Moderate negative impacts during the construction stage will be short term only in duration.

*Operational Phase*

On completion of the construction phase and following replacement of topsoil, a planting programme will commence to prevent soil erosion. The proposed Sustainable Drainage Systems (SuDS) will help to remove pollutants from rainwater runoff and will encourage infiltration of surface water to the ground.

**Residual Impacts**

With the protective measures noted above in place during excavation works, any potential impacts on soils and geology in the area will not have significant adverse impacts.

The Proposed Development will result in a surplus of excavated material, which may contain contaminants. Any contaminated material will be exported to an approved licensed waste facility.

No significant adverse impacts on the soils and geology of the subject lands are envisaged.

**Monitoring**

Monitoring during the construction phase will be carried out, including monitoring to ensure adequate protection of topsoil stockpiled for reuse, adequate protection from contamination of soils for removal, monitoring of surface water discharging to any existing watercourses, ditches and the public network, monitoring cleanliness of the adjoining road network, monitoring measures for prevention of oil and petrol spillages and dust control by dampening

down measures close to the boundaries of the site, when required due to unusually dry weather conditions.

During the operational phase, the surface water network (drains, gullies, manholes, AJs, SuDS devices, attenuation system) will be regularly maintained and where required cleaned out. A suitable maintenance regime of inspecting and cleaning will be incorporated into the safety file/maintenance manual for the development.

**Reinstatement**

Excavations and trenches opened during construction will be backfilled with subsoil to reinstate existing ground levels. Upon completion no impact is foreseen.

## 4.4 Water - Hydrology and Hydrogeology

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 pertaining to the Proposed Development including published data, site specific data from site surveys and assessments for the Site as well as the design drawings and documents Proposed Development. The results of the assessment provided information on the baseline conditions of the receiving water environment at the Proposed Development Site. A detailed assessment of the potential impacts on the receiving water environment was undertaken, and appropriate avoidance and mitigation measures were considered and identified to reduce any identified potential impact associated with the Proposed Development Site.

The Proposed Development will consist of the demolition of existing structures at the Site on the Balscadden Rd., Howth, Co. Dublin and the construction of a residential development to include:

- Construction of 4 No. residential buildings accommodating 180 no. apartments comprising 4 no. studios, 62 no. 1 bed units, 89 no. 2 bed units and 25 no. 3 bed units;
- Construction of non-residential units, comprising a retail unit in Block A at ground level, café/retail unit in Block C at ground and first floor and a café/retail unit in Block D;
- Excavation during the Construction Phase to reduce levels from approximately 34.5mOD to 19.975mOD locally under Block C and to 17.1mOD under Block B will require excavation of 67,000m3 of soil including made ground;
- Construction of a single storey basement under Block B;
- Connection of water supply to the Proposed Development Site to mains supply in accordance with a connection agreement from Irish Water per consent per Irish Water Confirmation of Feasibility (COF) letter for the Proposed Development (Ref.: CDS21002487) and the Irish Water Statement of Design Acceptance (Ref.: CDS21002487);
- Construction of new surface water drainage system that incorporates SUDs measures in accordance with the requirements of the Greater Dublin Strategic Drainage Study (GDSDS) to collect runoff from paved areas along roads and impermeable areas at the Proposed Development site with discharge by gravity to the existing surface water sewer in Main Street via by-pass petrol interceptor and attenuation.

- Construction of new foul water drainage system with connection to the existing 300mm sewer on Abbey St with approximately 100m network extension required (ie. to upgrade the existing 225mm sewer in Main St that connects to the 300mm sewer in Abbey St.); as per Irish Water Confirmation of Feasibility letter for the Proposed Development (Ref.: CDS21002487) and the Irish Water statement of Design Acceptance (Ref.: CDS21002487).

All works during the Construction Phase of the Proposed Development will be undertaken in accordance with a detailed methodologies incorporated in the Construction Management Plan (CMP), Construction Environmental Management Plan (CEMP) and Construction Demolition Waste Management Plan (CDWMP) that will be prepared by the contractor in accordance with industry best practice standards including CIRIA - C532. The CEMP will include detailed measures to protect the receiving groundwater, surface water bodies and the associated coastal waterbody quality and associated ecological receptors. The measures will address the main activities of potential impact which include:

- Control and Management of Water including surface runoff;
- Control and management of earthworks;
- Fuel and Chemical handling, transport and storage; and
- Accidental release of contaminants.

The CEMP will outline measures for the control and treatment of water encountered during excavations at the Proposed Development and a methodology outlining the treatment of water prior to discharge from the Site.

There is no requirement for dewatering of groundwater during the Construction Phase.

There will be no unauthorised discharges to sewers or drains during the Construction Phase.

Management of surface runoff from works areas and rainwater in excavations will be undertaken by the contractor to ensure that there is no runoff from the Site to offsite areas in particular the adjoining Balscadden Road and Main Street/Abbey Street. These measures will include at a minimum:

- Straw bales or silt fences will be appropriately located around earthworks areas as appropriate to manage runoff in particular these measures will be incorporated along the site boundary with Balscadden Road.
- A buffer zone of 10m will be maintained round the Site boundary in particular adjoining Balscadden Road.
- Temporary hydrocarbon interceptor facilities will be installed and maintained where Site Works involve the discharge of drainage waters to nearby drains.

Emergency response procedures will be developed by the Contractor in advance of works commencing for the unlikely event of spillages of fuels or other chemicals and materials used during construction works. There will be no bulk storage of fuels and any required chemicals will be stored in accordance with EPA standards.

There is no flood risk identified for the Proposed Development or elsewhere and the proposed surface water drainage design takes account of climate change.

There will be no risk to any receiving water body water quality or quantity as a result of the Proposed Development.

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

## 4.5 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).

In order to account for a worst-case scenario, the Proposed Development can be considered moderate 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 50m from the Site. There are a number of high-sensitivity receptors (residential dwellings) located within 50m of the Site boundary; these are mainly situated to the southwest and west of the Proposed Development Site. There are also a small number of residential dwellings located to the northeast and southeast of the Proposed Development Site. 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.

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, $PM_{10}$ (inhalable particles, with diameters that are generally 10 micrometers and smaller) and $PM_{2.5}$ (inhalable particles, with diameters that are generally 2.5 micrometers and smaller) 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.

The Proposed Development aims to reduce energy usage and carbon emissions by exploring sustainable design options and energy efficient systems that are technically, environmentally, and economically feasible for the project. A Sustainability Report has been prepared by JV Tierney & Co Mechanical Electrical & Sustainable Engineers on behalf of Balscadden GP3 Limited for the Proposed Development. This report outlines the current building regulations framework and the requirement to achieve Nearly Zero-Energy Buildings (NZEB) standard for all new developments. The report describes how the NZEB standard is demonstrated using SEAI approved Dwelling Energy Assessment Procedure (DEAP) software. In developing the energy strategy for the Proposed Development, the incorporation of energy efficient strategies into the project deliverables will encourage the commitment to sustainable design at a very early stage, ensuring a 'best in class' development for the site.

NZEB means a building that has a very high energy performance and is designed to nearly zero or very low amount of energy required to be covered by energy from renewable sources produced on-site or nearby. The approach will seek to ensure that the buildings will meet the principles of the Government's 'National Climate Change Policy', Fingal County Development Plan 2017-2023 to reduce carbon emissions in line with Council objective En04 and the NZEB criteria as set out in the Part L Regulations 2021 and will maximise the reduction in CO2 emissions thus demonstrating the commitment to Climate Change.

## 4.6 Microclimate

### Introduction

A wind microclimate study has been carried out to consider the possible wind patterns formed under both mean and peak wind conditions typically occurring on the site area, accounting for a scenario where the Proposed Development is inserted in the existing environment (potential impact) and, for a scenario where the Proposed Development is analysed together with the existing environment and any permitted development (not constructed yet) that can be influenced by the wind patterns generated by the proposed one (cumulative impact).

The potential receptors include those areas, in the vicinity of the development, which can be exposed to potential risks generated by the elevated wind speed or building massing wind effects. Potential receptors for the wind assessment are all pedestrian circulation routes, building entrances and leisure open areas within the site and in neighbouring adjacent areas. The pedestrian level is considered at 1.5m above ground.
In addition to the roads and entrances, some sensitive receptors for this assessment are the "Public Open Space", "Communal Open Space", "Roof terraces at level 3 and 4 of Block B" which will be used by public for long term sittings and need to be particularly comfortable/safe. In particular, pedestrian activities will be occurring most of times in the following areas:

- POS4 The first being the provision of a new landscaped plaza (POS4), to the east of the site overlooking Balscadden bay. This area will be complete with public seating, art sculptures and information zones for pedestrians.

- POS3 provides the public with an new external space which services the cafe, complete with natural stone paving & external seating, which is available to the public and is not commercially private.

- POS2 is the provision of a new public pedestrian zone linking Abbey St to Balscadden St. This public space will be softly landscaped and lined with water features & sculptures.

- POS1 is a new public realm which services the cafe & retail unit to the facade facing Abbey St. This area is softly landscaped and provides a covered seating area for the public to meet / sit /shop along the Main St.

The acceptance criteria which define the acceptable wind velocities in relation to the perception of comfort level experienced while carrying out a specific pedestrian activity is known as the "Lawson Criteria for Pedestrian Comfort and Distress". Lawson Comfort and Distress Maps have been produced to identify where a specific pedestrian activity can be carried out comfortably during most of the time.

The assessment has been simulating the applicable wind conditions Computational Fluid Dynamics (CFD). The scope of the numerical study is to simulate the wind around the development to predict under which wind speeds pedestrians will be exposed and what level of comfort pedestrian will experience when carrying out a specific activity (i.e. walking, strolling, sitting).

**Methodology**

The method for the study of wind microclimate combines the use of CFD to predict wind velocities and wind flow patterns, with the use of wind data from suitable meteorological station and the recommended comfort and safety standards (Lawson Criteria). The effect of the geometry, height and massing of the Proposed Development and existing surroundings including topography, ground roughness and landscaping of the site, on local wind speed and direction is considered as well as the pedestrian activity to be expected (sitting, standing, strolling and fast walking).
The results of the assessment are presented in the form of contours map of the Lawson criteria at pedestrian level.
"Lawson Comfort and Distress Criteria " has been adopted for wind microclimate studies as a means of assessing the long term suitability of urban areas for walking or sitting, accounting for both microclimatic wind effects (i.e. site location and prevailing winds) and microclimatic air movement associated with wind forces influenced by the localised built environment forms and landscaping effects.

- Topography of the site with buildings (proposed and adjacent existing/permitted developments massing, depending on the scenario assessed "*baseline, proposed or cumulative*") have been modelled using CFD OpenFOAM Software.

- Suitable wind conditions have been determined based on historic wind data. Criteria and selected wind scenarios included means and peaks wind conditions that need to be assessed in relation to the Lawson Criteria.
- CFD has been used to simulate the local wind environment for the required scenarios ('baseline, proposed, cumulative").
- The impact of the proposed development massing on the local wind environment has been determined (showing the wind flows obtained at pedestrian level).
- Potential receptors (pedestrian areas) have been assessed through review of external amenity/public areas (generating the Lawson Comfort and Distress Map).
- Potential mitigation strategies for any building related discomfort conditions (where necessary) have been explored and their effect introduced in the CFD model produced.

The significance of on-site measurement locations are defined by comparing the wind comfort/safety levels with the intended pedestrian activity at each location, using the table provided by the Lawson Comfort and Distress Criteria.
The significance of off-site measurement locations are defined by comparing the wind comfort/safety levels with the intended pedestrian activity at each location, prior and after the introduction of the proposed development.

**Impacts of Proposed Development**

The analysis carried out have shown that of the wind patterns in between the blocks B and C create a minor funnelling effect. This can be noted near the South-West side of the development which receives the prevailing South-West and South-East winds at approximately 5m/s. However, considering that the baseline wind speed is ranging from 3.9ms/ to 6m/s, throughout the area, the wind is not accelerating to significant values and wind is also decelerated respect the undisturbed wind speed in some area due to the presence of the proposed development.
The assessment of the conditions on the roof terraces has shown that no area is unsafe, and no conditions of distress are created by the proposed development and the terraces are usable during the appropriate period of the year.
The wind microclimate of the Proposed Development is comfortable and usable for pedestrians. As the result of the Proposed Development construction, the wind on the surrounding urban context is also mitigated when compared with the baseline situation (existing scenario). In this sense the Proposed Development has a beneficial effect on the surrounding wind microclimate and can create comfortable pedestrian areas and public spaces.

**Residual Impacts**
Wind cannot be eliminated or totally mitigated as it depends on weather conditions which could vary. The data of the historical wind conditions collected and reported in the previous sections, show that the wind speeds likely to occur on the site are below critical values, and that pleasant and comfortable microclimate can be maintained for most of the time and under the most frequent wind scenarios.
Gusts and storms can still occur however, and they can create unpleasant and sometimes unsafe conditions. The pedestrian activities concerning the Lawson Comfort and Distress Criteria are not in general carried out during those weather conditions.

Having considered the above, no further changes to the development design and further increasing of the landscaping is suggested, as safety and pedestrian comfort is maintained in accordance with Lawson Comfort and Distress Criteria.

## 4.7 Noise and Vibration

The likely noise and vibration impacts associated with the Proposed Development have been evaluated, and changes that are likely to impact the surrounding environs have been considered.

The noise and vibration generating activities associated with the current Site are as follows:

- Site clearance, including demolition works of the existing EDROS Building & Former Baily Court Hotel;
- Building construction works;
- Trucks entering and exiting the Site;
- Traffic along local road network;
- Operational plant noise used to serve the ancillary elements within the apartment buildings, creche and nursing home;
- Installation of the secant pile wall.

The BS 5228 – 1:2009+a1:2014 *Code of practice for noise and vibration control on construction and open sites – Noise* document suggests an absolute construction noise limits depending on the receiving environment. The documents states:

"Noise from construction and demolition sites should not exceed the level at which conversations in the nearest building would be difficult with windows shut…. Noise levels between 07:00 and 19:00hrs, outside the nearest window of the occupied room closest to the site boundary should not exceed:

- 70dB in rural, suburban and urban areas away from main road traffic and industrial noise;
- 75dB in urban areas near main roads in heavy industrial areas."

The Proposed Development is located in Howth, a northern suburb of Dublin. Nearby areas include Sutton, Kilbarrack, Baldoyle and Donaghmede. Given the suburban context, a limit value of 70dB LAeq,T for construction is considered to be reasonable.

The Construction Phase is intended to be a 3-year programme. The operational hours for the site shall be 08:00 to 19:00 Mondays to Fridays and 08:00 to 13:00 Saturdays. No work is permitted on Sundays or public holidays.

The nearest noise sensitive locations are residential properties which are located approximately 20m from the Proposed Development Site Boundary. Noise prediction calculations have been completed for noise from the use of onsite plant up to 250m from the source using the inverse square law. According to the inverse square law, for each doubling of distance from a point source, the sound pressure level decreases by approximately 6 dB.

There is the potential for the adopted criteria (70dB LAeq,T) to be exceeded by some of the equipment both during construction and demolition works at the nearest sensitive receptors. However, there are hedgerows on the intervening lands between the Site Boundary and the residential dwellings. It is important to recognise that the sound intensity from a point source will obey the inverse square law if there are no reflections or reverberation. If there are barriers

between the source and the point of measurement, the actual intensity is likely to be less than what the inverse square law predicts. Therefore, when taking account of local terrain, predicted noise levels at the closest residential noise sensitive locations are expected to be lower. Mitigation measures will be implemented to reduce any potential impacts. It is not envisaged for any excessively noisy activities to be carried out over extended periods of time during the construction stage.

During the works the contractor will comply with the requirements of Safety, Health and Welfare at work (construction) Regulations 2006 to 2013, Safety, Health and Welfare at Work Act 2005, BS 6187:2011 - Code of Practice for full and partial demolition, BS 5228:2009+A1:2014 Parts 1 & 2 - Code of Practice for noise and vibration control on construction and open sites – Vibration, Environmental Protection Agency Act 1992 Sections 106-108, including all Local Authority specific requirements for this specific site.

No traffic routes are predicted to experience increases of more than 25% in total traffic flows during the operational phase and therefore no detailed assessment is required as per the Design Manual for Roads and Bridges (DMRB) Guidelines.

## 4.8 Landscape and Visual

### Introduction

The Landscape and Visual Impact Assessment chapter report describes the landscape/townscape and visual context of the Proposed Development and assesses the likely impacts of the scheme on the receiving environment, in terms of both landscape/townscape character and visual amenity. Landscape Impact Assessment relates to changes in the physical environment brought about by a proposed development, which may alter its composition and character. Visual Impact Assessment relates to changes in views experienced by people resident in different places and/or engaged in particular activities, which influences their sensitivity to such changes.

### Methodology

Production of this Landscape and Visual Impact Assessment involved desk studies and fieldwork to establish the nature of the receiving environment and determine relevant planning policies in the Fingal County Development Plan 2017-2023. The assessment of the significance of both landscape and visual impacts of the proposed development is determined by weighing the sensitivity of the landscape / visual receptor against the magnitude (scale and nature) of the impact. The ‘quality’ of the effect is also assessed in terms of whether the potential landscape/townscape and visual changes are deemed positive, neutral or negative relative to the existing baseline scenario.

The assessment was undertaken in accordance with;

- Environmental Protection Agency publication ‘Guidelines on the Information to be contained in Environmental Impact Statements (Draft 2017) and the accompanying Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (Draft 2015).
- The Institute of Environmental Management and Assessment (IEMA) and Landscape Institute (UK) ‘Guidelines for Landscape and Visual Impact Assessment’ (GLVIA-2013).

### Description of Existing Baseline Environment

The site of the Proposed Development is 1.43 hectares in size and is located between Balscadden Road, Asgard Park, Main Street and the Martello Tower, in Howth village. The site is made up of three main areas: the former Baily Court Hotel and associated buildings/yard on Main Street, in the southwest corner of the site; a greenfield area in the south of the site that includes a glacial esker that backs on to the residences at Asgard Park residential *cul de sac*; thirdly, the derelict and dilapidated Edros sports building and tennis courts in the north of the site.

In terms of the wide site context, the site is south of the Howth Martello Tower and within 50m east is Balscadden Bay. However, immediately southwest and west of the site is the Howth village centre, where it aligns the Main street. Howth Village has approximately 8000 residents. Several thousand more residents live across the peninsula, mostly between detached and semi-detached housing, with a small concentration of apartment living along the peninsula's north coast.

**Potential Landscape Impacts of the Proposed Development**

Landscape sensitivity

In terms of the site, it is a modified, anthropocentric landscape with three distinct areas. Thus, it is not cohesive in its identity or character, and there are no rare or notable trees or other vegetation present within the site, nor buildings of heritage and/or architectural merit. Overall, the landscape sensitivity of the site and its immediate context is deemed to be 'Medium-low.'

It is considered that the landscape contained within the wider study area has a relatively high degree of uniqueness and sensitivity that more readily accords with the sensitivity designation for this general area within the Fingal County Development Plan. On balance, the landscape sensitivity is judged to be 'High-medium' for the wider study area.

Construction Phase Landscape Impacts

This will include the demolition and clearance of existing, derelict structures; movement of heavy vehicles to and from the site, stockpiling of materials and the presence of tower cranes within the site. There will also be a gradual emergence of partially completed buildings. Overall significance of landscape impact effect is deemed to be 'Moderate' and having a 'Negative' quality of effect.

Operational Phase Landscape Impacts

While the Proposed Development will result in a distinct increase in the scale and intensity of development within the application site, and its immediate surrounds, such a development is to be expected in a residential, ever-evolving locale as this. While the most notable landscape/townscape impacts of the application site will result from the proposed 4 no. residential blocks, ranging in height from 2 to 5 storeys, the increased accessibility and permeability of the site will also impact the character of movement in the wider village, opening up and securing stronger, safer pedestrian/cyclist access between the Main Street and Balscadden Road. In addition, the proposal will create a generously dimensioned public open space within the site, where none currently exists. Overall significance of landscape impact effect is deemed to be 'Slight' and having a 'Positive' quality of effect.

**Potential Visual Impacts of the Proposed Development**

Visual Receptor Sensitivity

There are multiple protected views within the study area, particularly within 600-700m of the site, including those bounding the site's eastern and northern boundaries. The most apparent variations in the nature of views and those availing of those views, in this instance, relates to a sense of place, in combination with any of the relevant (i.e., to visual sensitivity) designations associated with the study area. Accordingly, the resulting visual receptor sensitivity of the 22 viewpoints range from 'Medium-low' to 'High-Medium.'

Significance of Visual Effect

The highest level of visual impact significance is deemed to be mid-level. This 'Moderate' visual impact significance is recorded at four viewpoints, all of which are within 40m of the site and all of which recorded 'Medium' or 'High-medium' visual receptor sensitivity. A 'Moderate-slight' visual impact significance is the most common assessment in this section, with it representing eight different viewpoints. Either a 'Slight' or a 'Slight-imperceptible' visual impact significance is observed in a further six viewpoints. Lastly, four viewpoints will experience an 'imperceptible' significance of visual effect.

In light of the marginally elevated nature of the site, the number of viewpoints that are likely to have visibility of the proposal, the nature of the proposed 2-5 storey blocks, as well as some higher end visual receptor sensitivity across the viewpoints, this is a particularly modest degree of likely visual impact generated as a result of the proposed development.

Quality of Visual Effect

The quality of visual effect is deemed to be 'Positive' in seven viewpoints, and 'neutral' in a further seven. A 'Neutral-negative' quality of effect occurs in five viewpoints and a 'Negative' quality of effect is recorded at three viewpoints.

**Potential Cumulative Visual Impacts**

Overall, it is considered that the Proposed Development will contribute to an emerging trend for higher density living in this area, but one that is integrating sustainably with existing residential patterns to generate diversity of residential development rather than dominating it or replacing it. Consequently, the Proposed Development is not considered to contribute to significant cumulative impacts in-combination with any other existing or permitted developments in the vicinity.

**Overall Significance of Impact**

Overall, it is considered that the Proposed Development is an appropriate contribution to the built fabric of this locality that will not result in any significant landscape/townscape or visual impacts.

## 4.9 Archaeology and Cultural Heritage

An assessment of the baseline Archaeological, Architectural and Cultural Heritage conditions of the surrounding environment for the Proposed Development was completed, in order to determine any significant impacts that may arise as a result of the development and highlight any potential effects this may have on these resources.

The assessment involved a desktop study / paper survey which considered all available archaeological, architectural, historical and cartographic sources. This information was used

in order to assess any potential impact on the receiving environment and to identify measures to ensure the conservation of any monuments or features.

There are no records of any recorded monuments within the Site boundary of the Proposed Development. There are 25 No. recorded Monuments and Places within the 2km study area. These comprise 1 Tower, (DU016-002002-), 1 Castle – motte (DU016-002001-), 1 House – medieval (DU015-138----), 1 Tomb – effigal (DU015-029003-), 1 House – fortified house (DU015-030----), 1 Building (DU015-094----), 2 Graveyard (DU015-029006-, DU015-031003-), 2 Graveslab (DU015-029005-, DU015-029004-), 2 Church (DU015-029001-, DU015-031002-), 1 Ritual site – holy well (DU015-029002-), 1 Cist (DU015-028001), 1 Burial ground (DU015-042----), 1 Chapel (DU015-026----), 1 Armorial plaque (present location) (DU015-027003-), 1 Gatehouse (DU015-027002-), 1 Castle – tower house (DU015-027001-), 1 Megalithic tomb - portal tomb (DU015-032----), 1 Barrow – mound barrow (DU019-004003-), 3 Cairn – unclassified (DU019-004001-, DU019-006----, DU016-007----), 1 Ecclesiastical enclosure (DU015-031001-). A search in the topographical files in the National Museum of Ireland produced no results for the Proposed Development lands and surrounding areas. The closest recorded topographical files to the Proposed Development is a “Animal Bone” on Ireland’s Eye (2.1km north of the Site)- Name 2004:145.

The Proposed Development has been designed in such a way that ensures that there is minimal impact on the Martello Tower, the ACA and other elements of architectural heritage in the vicinity. There are 61 buildings of architectural significance located within 2km of the Proposed Development Site, a number of which a close proximity of the Site boundary (less than 0.5km), however, they are outside the zone of sensitivity caused by basement excavation works. A vibration monitoring regime will be established along this boundary to ensure the proposed works do not cause slippages. All ground works will involve low-vibration methods of construction as outlined in the Geotechnical Report, the report also provides recommendations for the remedial works in order to prevent any potential future slips occurring.

It is possible that excavation works associated with the Proposed Development may have an adverse impact on small or isolated previously unrecorded archaeological features or deposits that have the potential to survive beneath the current ground level. If any archaeological remains are discovered during this project, all works will cease, and an expert archaeologist will be brought to Site, and all future works will be carried out under the supervision of the archaeologist. As the Proposed Development has been designed in such a way that ensures that there is minimal impact on any elements of architectural heritage in the vicinity, it is predicted that the Construction Phase of the Proposed Development will not cause any significant impact on the Archaeology and Cultural Heritage of the area.

There will be no effects on the archaeological, architectural or cultural heritage of the area through development activities that may occur during the Operational Phase.

## 4.10 Material Assets: Traffic

### Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) provides an assessment of the impact of the Proposed Development will have on traffic and transportation.

### Location

The subject Site is located in Howth, bounded to the east by the Balscadden Road and by residential properties, to the west by residential and commercial buildings fronting onto Main Street and Abbey Street, to the north by greenfield lands, and to south by residential properties. The overall site is.1.43 Hectares, with a former leisure centre building at the northern portion of the lands.

**Receiving Environment**

The site is bounded to the east by the Balscadden Road, to the west by residential and commercial buildings fronting onto Main Street and Abbey Street. The subject site is currently accessed from east via Balscadden Road. A new site access is proposed at the west of the Site via Main Street (R105). Balscadden Road is a one-way south-east bound road, continuing east towards the Howth cliffs. It connects with the southbound Kilrock Road, which continues to the Nashville Road to connect back with the R105. To the west of the site, Harbour Road, Abbey Street and Main Street are all sections of the R105 – a regional road which travels from Dublin City Centre and forms a loop through Howth. Figure 12.3 illustrates the R105 loop of Howth; to the southeast direction, R105 continues uphill as Thormanby Road, then becomes Carrickbrack Road from the section between Balkhill Road and Strand Road, which from that point, becomes Greenfield Road (R105) and finally connects back to itself at the signalised junction with R106.

Currently, there are no cycle lanes in the immediate area surrounding the site. Cyclists can benefit from the provision of dedicated cycle lanes (even within Bus Lane) from Howth Railway Station heading west, which links up into an off-road cycle trail along Howth Road and Clontarf Road leading to Fairview.

The surrounding area is a well-established city centre with a high provision of public transport including bus and rail services.

**Description of the Proposed Development**

The Proposed Development will consist of the demolition of existing structures on site including the disused sports building (c. 604m2) on the Balscadden Road site and the Former Baily Court Hotel Buildings on Main Street (c. 2051m2) and the construction of a residential development set out in 4 no. residential blocks, ranging in height from 2 to 5 storeys to accommodate 180 no. apartments and duplexes with associated residential tenant amenity, and 3 no. commercial units.

The 3 no. commercial units include a c.106.4m2 retail unit in Block A at ground level, a c.142.7m2 café/retail unit in Block C at ground and first floor level and a c.187.7m2 café/retail unit in Block D, giving a cumulative commercial area of c.436.8m2.

The site will accommodate a total of 139 no. car parking spaces and 410 no. bicycle parking spaces. Landscaping will include a new linear plaza which will create a new pedestrian link between Main St and Balscadden Rd to include the creation of an additional 2 no. new public plazas and also maintains and upgrades the pedestrian link from Abbey Street to Balscadden Road below the Martello Tower. The Proposed Development will include a single level basement under Block B, containing the 139 car spaces, cycle parking spaces, plant, storage areas, waste storage areas and other associated facilities. Additional visitor cycle spaces are provided for at ground level.

The scheme provides for a new linear plaza which will create a new pedestrian link between Main Street and Balscadden Road, includes the creation of an additional 2 no. new public plazas and also maintains and upgrades the existing pedestrian link from Abbey Street to Balscadden Road below the Martello Tower.

The Proposed Development site currently benefits from an existing vehicular access point to the east off Balscadden Road. As part of the Proposed Development, the existing access junction is proposed to be upgraded and a new vehicular access to the site is proposed from west via Main Street (R105), which, via an internal road, will connect to the existing site entrance on Balscadden Road and will provide access to the apartment blocks.

**Committed Developments**

In order to undertake a robust and complete assessment of the analysed junctions, the under-construction mixed-use development at the former Techrete site has also been assessed with regards to trip generation and distribution (Ref. ABP-306102-19).

The permission provided for the construction of 512 no. apartments and a total of 2,873 sqm of area of retail, commercial and creche space.

This site is located west of the Proposed Development, approximately 1.2km away from the Proposed Development along R105.

**Timescale**

It is expected that construction of the Proposed Development will commence in 2022 for completion in 2025.

**Traffic Impact**

There is potential for construction traffic to impact from a noise and dust perspective in relation to the surrounding road network. Deliveries to and from the site by heavy good vehicles will impact on noise levels, whilst dust may result from vehicles travelling along gravel roads and from general earthwork activities. There is also potential for traffic congestion, due to increased heavy good vehicles on the road network which may also perform turning movements, unloading, etc., in areas that impact on traffic. The potential for inappropriate parking whilst waiting for access to the site, may also impact local road users. It has been estimated that approximately 67,000$m^3$ of material comprising gravel, sand, stones, clay and made ground will need to be excavated during the Construction Phase of the Proposed Development. This traffic impact has been assessed in the Traffic and Transport Chapter of the EIAR and these movements represent some 2% of the existing traffic flow of 300 to 450 vehicles per hour each way on Main Street during the same period.

The Proposed Development will generate a number of trips by various modes of travel including vehicular, pedestrian, cycle and public transport. These trips may have an impact on the surrounding road network and could contribute to increased congestion.

Traffic count data was obtained for the purposes of the planning application. The data surveyed is expected to reflect the peak traffic conditions on the local road network. An estimation of the traffic generation and distribution of the Proposed Development has been set out in the Traffic and Transport Chapter. This will be compared to the background traffic counts in order to ascertain the impact the Proposed Development will have on the local road network.

**Mitigation Measures**

Traffic and other movements on the road network during the Construction Stage will be managed under the Construction Traffic Management Plan and by carrying out the works in a number of stages to a sequence to be prepared in conjunction with Dublin City Council and implemented by the main Contractor.

During the Operational Stage, transportation movements will be managed by the Travel Plan promoting best practise mobility management and travel planning to provide for the necessary mobility via sustainable transport modes.

**Residual Impact**

The residual impact of the Construction Stage on the transportation environment in the area of the subject site is predicted to be temporary, short-term, slight, and negative.

The residual impact of the Operational Stage on the transportation environment in the area of the subject site is predicted to be permanent, long-term, slight, and positive.

## 4.11 Material Assets: Utilities and Waste

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 electricity, telecommunications, gas, water supply infrastructure, sewerage, and waste management.

A temporary suspension of the network locally to facilitate the connection works may be required during the Construction Phase, and an additional temporary suspension will also occur when power is provided to the Site of the Proposed Development. These temporary suspensions will be controlled by ESB Networks and the potential impact from the Construction Phase of the Proposed Development on the local electrical supply network is likely to be negative, slight, and short-term. The impact of the Operational Phase of the Proposed Development on the electricity supply network is likely to be to increase demand to the existing supply. The potential impact from the Operational Phase on the electricity supply network is likely to be neutral, long term and moderate.

Connections may be required to the existing telecommunications network during the Construction Phase of the Proposed Development. New connections will be controlled by the network provider in accordance with standard protocols. Due to the temporary nature of the Construction Phase, the likely effect of the Construction Phase on the local telecoms network will be neutral, imperceptible, and temporary. The building height will not obstruct microwave transmission links and as the Site of the Proposed Development is located within a high-speed broadband are with good mobile communication coverage, the likely effect of the Operational Phase on the local telecoms network will be neutral and imperceptible in the long term.

The Construction and Operational Phases of the Proposed Development will have a neutral, imperceptible effect on the local and national gas supply in the long term as no gas supply is required for the and there will be no connections made to the natural gas network as part of the Proposed Development.

A temporary connection is required to facilitate on-site works for all housing developments. Commencement of construction will therefore result in a net increase in the water demand for

and new connection works may cause water supply disruptions during the Construction Phase. These disruptions will be controlled by Irish Water and Fingal County Council in accordance with standard protocols. Due to the nature of the works during the Construction Phase, the likely effect will be negative, non-significant and temporary. Irish Water have confirmed that connection to the existing mains water supply network is feasible without any upgrades to the existing infrastructure and the proposed increase in demand can be facilitated. The likely effect of the increase in mains water demand will be neutral, non-significant, and long-term on mains water supply.

The likely effect of the surface water drainage strategy incorporating the Sustainable Urban Drainage System proposals for the Proposed Development will result in a neutral, imperceptible, long-term impact on receiving surface water quality.

A temporary connection is required to the foul water network in order to service the site toilets and canteen facilities during the Construction Phase. Irish Water issued a Confirmation of Feasibility letter noting that connection to the existing wastewater network is feasible subject to upgrade works. Upgrade works and new connection works may cause disruptions to the foul water network during the Construction Phase. These disruptions will be controlled by Irish Water and Fingal County Council in accordance with standard protocols. Due to the nature of the works during the Construction Phase, the likely effect will be negative, non-significant and temporary. Capacity within the existing foul sewer network has been confirmed by Irish Water (Waterman Moylan, 2022). The foul water from the Proposed Development will ultimately be treated at Ringsend WwTP that operates under existing statutory consents. This increase in wastewater being discharged to the public sewer will have a neutral, non-significant, and long-term impact on the capacity of the sewer.

All waste materials generated during the Construction Phase and Operational Phase of the Proposed Development will be managed in accordance with the respective Waste Management Plans. There will be waste materials generated from the demolition of the existing buildings, and it has been estimated that approximately 67,000m$^3$ of material will need to be excavated to facilitate the construction of new foundations and site formation levels. During construction, there may be a surplus of building materials, such as timber off-cuts, broken concrete blocks, cladding, plastics, metals and tiles generated, and waste will be generated by construction workers. If the correct classification and segregation of the C&D waste, in particular Asbestos Containing Material (ACM), and excavated material is not carried out to ensure that any hazardous and potentially contaminated materials are identified and handled in a way that this could impact negatively on human health, water and soil, both on and off-site, and on the final treatment of the excavated material.

The likely effect of the impact, in the absence of mitigation, is significant and negative in the short term. The Construction Phase of the Proposed Development will result in an increase in demand for waste collections and waste treatment in the area, the likely effect of which will be significant and negative in the short term. During the Operational Phase of the Proposed Development the main impact is the increased demand for waste collection services in the area as a result of increased residents, retail and non-retail uses. The likely effect of the impact, in the absence of mitigation, is significant and negative in the long term. Additionally, improper collection, transport or disposal of waste could lead to the improper management of waste at end destinations, the likely effect of which is significant and negative in the short-term.

The cumulative effects of Proposed Development on Material Assets have been assessed taking other planned, existing, and permitted developments in the surrounding area into account. All planning permission applications that have been granted and developed have been incorporated into the baseline assessment of this application. The assessment concluded that the likely cumulative impact of the Proposed Development with other developments in the area on built services and waste management during both the Construction and Operational Phases will be neutral and imperceptible in the long term.

Provided the mitigation measures detailed in the Outline Construction & Demolition Management Plan (Waterman Moylan, 2022) and the Operational Waste Management Plan (AWN Consulting Ltd, 2022) are implemented and a high rate of reuse, recycling and recovery is achieved, the likely effect of the Construction and Operational Phase on the environment will be neutral and imperceptible in the long term.

The monitoring of construction and demolition waste during the Construction Phase of the Proposed Development is recommended to ensure that impacts are not experienced beyond the Site boundary. The Main Contractor will be responsible for monitoring and record keeping in respect of waste leaving the facility and that these records will be maintained onsite.

The building management company, tenants and residents will be required to maintain the resident bins and storage areas in good condition as required by the FCC Waste Bye-Laws. The waste strategy presented in the OWMP will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated areas for waste storage will provide sufficient room for the required receptacles in accordance with the details of this strategy. The areas will be fitted with CCTV for monitoring.

The implementation of the Construction Management Plan, the Construction Environmental Management Plan, the CDWMP and the OWMP, in conjunction with best environmental practice and appropriate management of the Proposed Development, will ensure that there are no significant adverse impacts to built services and waste management as a result of the Proposed Development.

## 4.12 Risk Management

Risk is one of the most important elements to be considered as part of a development. It is critical that any project is screened against potential risks which it might encounter and/or impose on the nearby environment during its construction and operational phase. An assessment of the vulnerability of the Site of the Proposed Development to risks of major accidents and/or disasters was completed.

The assessment reviewed:

- The vulnerability of the project to major accidents or disasters.
- The potential for the project to cause risks to human health, cultural heritage and the environment, as a result of that identified vulnerability.

A methodology was used including the following phases:

- Phase 1 – assessing the hazards
- Phase 2 – screening the hazards
- Phase 3 – mitigating the hazards and evaluating the residual hazards

The risk assessment conducted for the Proposed Development at Balscadden, Howth, Co. Dublin concludes that the vulnerability of the Proposed Development to major accidents and/or disasters is not considered significant; and the potential for the project to cause risks to human health, cultural heritage, and the environment, is not considered significant.

## 4.13 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. This chapter of the EIAR addresses 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 in line with the Waste Facility Permit for the site.

## 4.14 Mitigation and Monitoring Measures

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.