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CONSULTING

Volume 1

EIAR Non-Technical Summary

FOR

Kilternan Village

Strategic Housing Development

AT

Wayside, Enniskerry Road and Glenamuck Road,
Kilternan, Dublin 18

June 2022

ON BEHALF OF

Liscove Limited

Prepared by
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1 INTRODUCTION

This Environmental Impact Assessment Report (**EIAR**) has been commissioned by the Applicant, Liscove Limited, in respect of an application for a Strategic Housing Development (SHD) at lands at Wayside, Enniskerry Road and Glenamuck Road, Kiltarnan, Dublin 18.

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 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:

10. Infrastructure projects

(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

(In this paragraph, “business district” means a district within a city or town in which the predominant land use is retail or commercial use)

The Proposed Development does constitute an “urban development” as it is a housing development with a commercial element. According to the Interpretation of Definitions of Project Categories of Annex I and II Document (European Commission, 2015), “*Housing developments, in particular, are frequently included in the ‘urban development projects’ category*”.

The development site area and drainage and roads works areas will provide a total application site area of c. 11.2 hectares with a developable site area of c 10.8 hectares. The Proposed Development is not within a “business district” as defined above. Therefore, the two-hectare threshold is not applicable in this case, and the ten-hectare threshold applies instead. As the total site area of the Proposed Development exceeds the 10-hectare threshold for a built-up area a mandatory EIAR is required

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.

2 OVERVIEW OF THE PROPOSED DEVELOPMENT

Liscove Limited intend to apply to An Bord Pleanála for permission for a Strategic Housing Development at lands at Wayside, Enniskerry Road and Glenamuck Road, Kiltarnan, Dublin 18, which include a derelict dwelling known as 'Rockville' and associated derelict outbuildings, Enniskerry Road, Kiltarnan, Dublin 18, D18 Y199.

The Proposed Development will consist of the demolition of 573.2 sq m of existing structures on site comprising a derelict dwelling known as 'Rockville' and associated derelict outbuildings; and the provision of a mixed use development on a developable site area of 10.8 hectares (Ha) consisting of 383 No. residential units (165 No. houses, 118 No. duplex units and 100 No. apartments) and a Neighbourhood Centre, which will provide a creche (439 sq m), office (317 sq m), medical (147 sq m), retail (857 sq m), convenience retail (431 sq m) and a community facility (321 sq m).

The 383 No. residential units will consist of:

- 27 No. 1 bedroom units (19 No. apartments and 8 No. duplexes)
- 128 No. 2 bedroom units (78 No. apartments and 50 No. duplexes)
- 171 No. 3 bedroom units (108 No. houses, 3 No. apartments and 60 No. duplexes) and
- 57 No. 4 bedroom units (57 No. houses).

The Proposed Development will range in height from 2 No. to 5 No. storeys (including podium/undercroft level in Apartment Blocks C and D and in the Neighbourhood Centre).

The Proposed Development also provides: pedestrian links from Enniskerry Road and within the site to the neighbouring "Rockville" development to the north-east and a pedestrian/cycle route through the Dingle Way from Enniskerry Road to the future Glenamuck Link Distributor Road; 678 No. car parking spaces (110 No. in the undercroft of Blocks C and D and the Neighbourhood Centre and 568 No. at surface level) including 16 No. mobility impaired spaces, 73 No. electric vehicle spaces, 1 No. car share space, 4 No. drop-off spaces/loading bays; motorcycle parking; bicycle parking; bin storage; the decommissioning of the existing telecommunications mast at ground level and provision of new telecommunications infrastructure at roof level of the Neighbourhood Centre including shrouds, antennas and microwave link dishes (18 No. antennas and 6 No. transmission dishes, all enclosed in 9 No. shrouds together with all associated equipment); private balconies, terraces and gardens; hard and soft landscaping; sedum roofs; solar panels; boundary treatments; lighting; substations; plant; and all other associated site works above and below ground. The Proposed Development has a gross floor space of 43,120 sq m in addition to undercroft levels (under Apartment Blocks C and D measuring 1,347 sq m and under the Neighbourhood Centre measuring 2,183 sq m, which includes parking spaces, external storage, bin storage, bike storage and plant).

Road works are also proposed to facilitate access to the Proposed Development from the Enniskerry Road; to the approved Part 8 Enniskerry Road/Glenamuck Road Junction Upgrade Scheme on Glenamuck Road (DLRCC Part 8 Ref PC/IC/01/17); and to the approved Glenamuck District Roads Scheme (GDRS) (ABP Ref: HA06D.303945) on the Glenamuck

Link Distributor Road (GLDR). Drainage and water works are also proposed to connect to services on the Glenamuck Road and Enniskerry Road.

At the Glenamuck Road access point, this will include works, inclusive of any necessary tie-ins, to the footpath and cycle track to create a side road access junction incorporating the provision of an uncontrolled pedestrian crossing across the side road junction on a raised table and the changing of the cycle track to a cycle lane at road level as the cycle facility passes the side road junction. Surface water and foul drainage infrastructure is proposed towards the north of the site into the drainage infrastructure to be constructed as part of the Part 8 scheme. Potable water is to be provided from the existing piped infrastructure adjacent to the site along Glenamuck Road. These interfacing works are proposed on an area measuring 0.05 Ha.

At the GLDR access point, this will include works, inclusive of any necessary tie-ins, to the footpath and cycle track to create a side road access junction incorporating the provision of short section of shared path and an uncontrolled shared pedestrian and cyclist crossing across the side road junction on a raised table. The works will also include the provision of a toucan crossing, inclusive of the necessary traffic signal equipment, immediately south of the access point to facilitate pedestrian and cyclist movement across the mainline road. All works at the GLDR access point will include the provision of the necessary tactile paving layouts and are provided on an area measuring 0.06 Ha.

At the Enniskerry Road, works are proposed to facilitate 3 No. new accesses for the Proposed Development along with modifications to Enniskerry Road. The 3 No. side road priority access junctions incorporate the provision of an uncontrolled pedestrian crossing across the side road junction on a raised table. The modifications to Enniskerry Road fronting the Proposed Development (circa 320 metres) includes the narrowing of the carriageway down to 6.5 metres (i.e. a 3.25 metre running lane in each direction) from the front of the kerb on western side of Enniskerry Road. The remaining former carriageway, which varies in width of c. 2 metres, will be reallocated for other road users and will include the introduction of a widened pedestrian footpath and landscaped buffer on the eastern side of the road adjoining the Proposed Development. The above works are inclusive of all necessary tie-in works such as new kerb along eastern side of Enniskerry Road, drainage details, road marking, signage and public lighting. Potable water is to be provided from the existing piped infrastructure adjacent to the site along the Enniskerry Road. The interface works on Enniskerry Road measures 0.19 Ha.

Surface water and foul drainage infrastructure is proposed to connect into and through the existing/permitted Rockville developments (DLR Reg. Refs. D17A/0793, D18A/0566 and D20A/0015) on a total area measuring 0.09 Ha.

The combined developable site area, drainage and roads works areas provide a total application site area of 11.2 Ha.

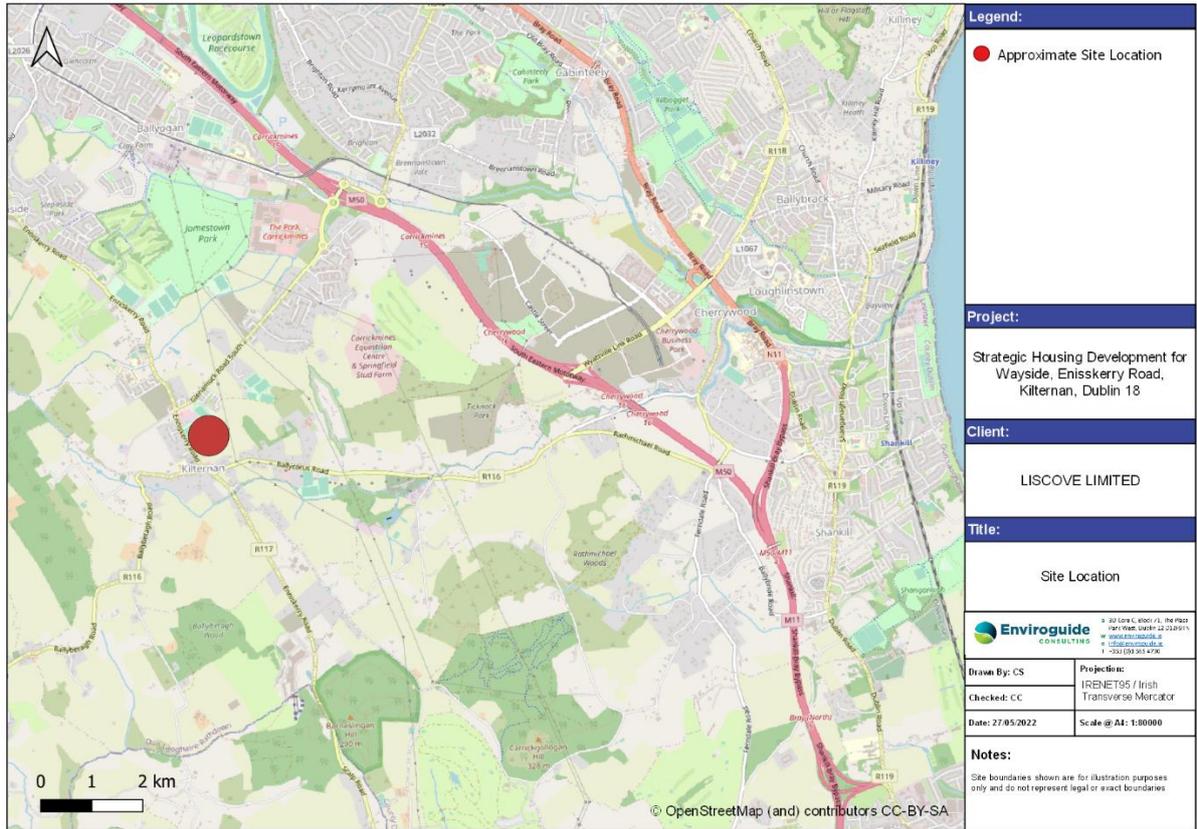


Figure 2-2-1: Site Location Map



Figure 2-2 Site Layout Plan

2.1 Construction Phase

The construction of the Proposed Development is intended to take place in five phases (Phase 1, 2, 3, 4 and 5) starting from the Central Western portion of the site moving in an anti-clockwise direction through Phase 2 to the East and Phase 3 to the North. The southern two sections of the site will be completed next, starting in the south-eastern corner of the site (Phase 4) and moving south westerly to Phase 5. The proposed sequence of construction outlined below is subject to confirmation once the building contract has been awarded and on completion of the Detailed Construction Management Plan for agreement with the relevant Local Authority. The overall duration of the project is estimated to be 5 no. years in total, with some phases overlapping.

The sequencing of the five phases of the Proposed Development is intended to proceed as follows:

- Phase 1 (18 months) – Central Western portion of the site consisting of 91 residential units (made up of houses and duplexes), all associated landscaping works and drainage, the Main Public Open Space, Central Green Way Link, Dingle Way, Off-Site Drainage through Southern Lands. Access to Glenamuck Link Distributor Road (GLDR) will also be formed in this phase if the GLDR is in place. Demolition works will take place in Phase 1.
- Phase 2 and Phase 2A (24 months) – Central Eastern portion of the site and the Neighbourhood Centre consisting of 126 residential units (73 in Phase 2 and 53 in Phase 2A) made up of houses, duplexes, and apartments along with all associated landscaping works. The main drainage for Phase 2 and the Neighbourhood Centre will be completed. Access to GLDR will be constructed if not completed in Phase 1.
- Phase 3 (12 months) – North-eastern portion of the site consisting of 59 residential units made up of apartments, with all associated landscaping works, along with the creation of a new access to Glenamuck Road and drainage for Phase 3.
- Phase 4 (18 months) – South-eastern portion of the site consisting of 97 residential units made up of apartments, with all associated landscaping works and drainage for Phase 4.
- Phase 5 (8 months) – South-western portion of the site consisting of 10 residential units made up of apartments, with all associated landscaping work and drainage for Phase 5.

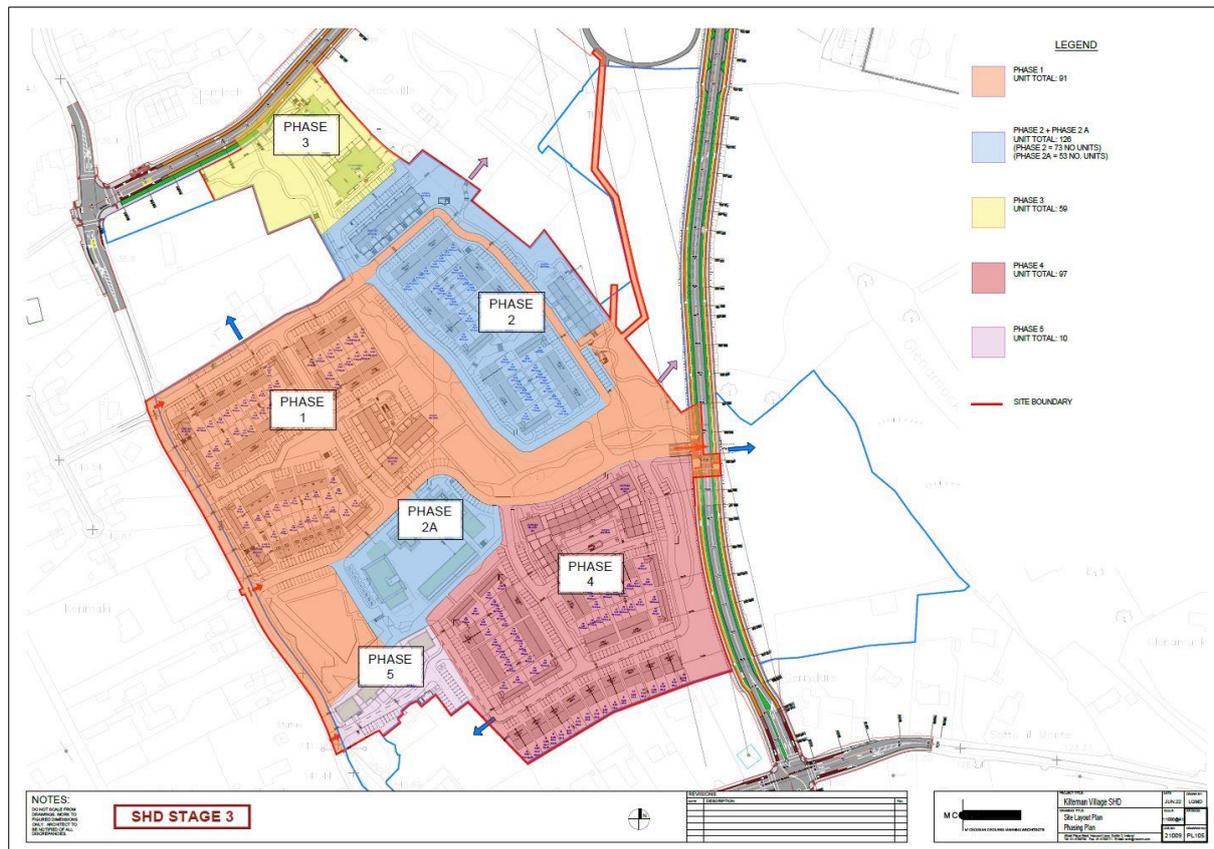


Figure 2-3 Construction Phasing Plan

For the duration of the proposed infrastructure works it is envisaged that the maximum working hours will be 07:00 to 19:00 Monday to Friday (excluding bank holidays) and 07:00 to 14:00 Saturdays, subject to the restrictions imposed by the local authorities. No working will be allowed on Sundays and Public Holidays.

2.2 Operational Phase

The Proposed Development will comprise residential and commercial uses consistent with the land use zoning for the area. The Operational Phase of the Proposed Development will consist of the normal day-to-day operations necessary for the management of a residential/commercial development, and the ongoing maintenance of the residential dwellings, a creche, retail units, medical unit, offices, community facility and public outdoor areas.

3 SITE DESCRIPTION

The site of the Proposed Development currently largely greenfield with hedgerows and treelines, and the surrounding area is predominantly residential and agricultural. The site is generally bounded by the Glenamuck Road to the north; Kilternan Country Market and the Sancta Maria property to the north and west; a recently constructed residential development named "Rockville" to the north-east; the Enniskerry Road to the south-west; dwellings to the south; and lands that will facilitate the future Glenamuck Link Distributor Road to the east. Part of the Site's frontage lies directly opposite Our Lady of the Wayside Church, Kilternan. The

lands are located in the village of Kiltarnan, Co. Dublin, approximately 1.9 km to the south-west of the M50 and Carrickmines Retail Park.

4 ENVIRONMENTAL IMPACTS

The potential Environmental Impacts of the Proposed Development during all phases of the Proposed Development are addressed in the EIA 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

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 application site at Wayside, Enniskerry Road and Glenamuck Road, Kiltarnan, Dublin 18. 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 June 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. The Proposed Development will generate economic activity in the locality during the construction period, which is anticipated to extend over a period of approximately 5 years. The Proposed Development will result in the creation of 100 jobs during the Construction Phase and approximately 63 jobs during the Operational Phase. 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.

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. The impact will 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, and it will ensure the continued viability of the public transport services, provision of services, local businesses such as shops, restaurants, services and retail. The Operational Phase will also have a positive impact on employment with direct employment being created by the inclusion of a retail / commercial units within the Proposed Development.

The Proposed Development will provide residential accommodation 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 significant positive impact to the overall economy of the local area through indirect socio-economic benefits to local services including local shops, service stations, cafes and restaurants.

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 attractive and high-quality public and communal open space provided, with vehicular accesses and new road infrastructure in addition to pathways for pedestrians and cyclists to utilise.

4.2 Biodiversity

The assessment considered the potential direct, indirect and cumulative impacts on biodiversity within the zone of influence of the Proposed Development. The assessment was undertaken in line with a number of guidance documents including the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018 as updated September 2019).

Baseline ecology surveys were undertaken at the proposed site between July 2021 and June 2022, which included habitat and flora surveys, terrestrial mammal surveys, bat surveys (including activity transect surveys, internal building inspections, automated detector deployment and PRF suitability checks), breeding bird surveys and wintering bird surveys. The following key ecological receptors were identified within or occurring within the zone of influence of the proposed development: foraging/commuting bats, breeding birds, otter,

badgers and other small mammals as well as the following habitat types; dry meadows and grassy verges, mixed broadleaf woodland and treelines.

In addition, the following designated sites were identified a key ecological receptor given the hydrological connectivity to the proposed development site via surface water drainage; Rockabill to Dalkey Island SAC, Dalkey Island SPA, Loughlinstown Wood pNHA and Dalkey Coastal Zone and Killiney Hill pNHA. An Appropriate Assessment (AA) Screening has been completed for the proposed development (Scott Cawley, 2022) which concluded that the potential impacts associated with the Proposed Development do not have the potential to affect the receiving environment and, consequently, do not have the potential to affect the conservation objectives supporting the qualifying interests or special conservation interests of any European sites.

Potential impacts of the Proposed Development are considered to be: damage to habitats being retained, direct mortality/injury to potential roosting bats, nesting birds or local badger population during demolition/site clearance works. A comprehensive suite of mitigation measures is proposed for the Proposed Development. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect biodiversity and the receiving environment.

Considering the elements included within the design of the Proposed Development, the implementation of the mitigation measures and the associated planning application documents, to avoid or minimise the effects of the Proposed Development on the receiving environment, the proposed development will not result in significant effects on designated sites, or any long-term significant effects on habitats, bats, breeding birds and badger populations.

4.3 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 study and review of all relevant drawings and documents pertaining to the Proposed Development. The results of the assessment provided information on 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 to reduce any identified potential impact associated with the Proposed Development.

The Proposed Development will principally consist of: the demolition of 573.2 m² of existing structures on site comprising a derelict dwelling known as 'Rockville' and associated derelict outbuildings; and the provision of a mixed use development consisting of 383No. residential units (165No. houses, 118No. duplex units and 100No. apartments) and a Neighbourhood Centre, which will provide a creche (439m²), office (317 m²), medical (147m²), retail (857m²), convenience retail (431m²) and a community facility (321m²) including vehicular / pedestrian access, parking, landscaping and all associated utilities and infrastructure above and below ground.

It is estimated by Roger Mullarkey & Associates that the Proposed Development will involve the excavation of 72,500m³ of soils and bedrock for the construction of foundations, drainage

and other infrastructure to depths of 1.0m for foundations and 1.7m to 4.1mbGL for drainage and infrastructure.

It is estimated by Roger Mullarkey & Associates that 31,650m³ of soils and bedrock excavated during the Construction Phase will be reused on-site to be incorporated into the design of the Proposed Development for engineering fill and landscaping subject to assessment of the suitability for use in accordance with engineering and environmental specifications that will be determined as part of the detailed design. However, the remaining 40,850m³ of surplus soil and bedrock arising from groundworks will require off-site removal for reuse or recovery in accordance with appropriate statutory consents and approvals.

The importation of 35,600m³ of aggregate fill materials will also be required for the construction of the Proposed Development (e.g., granular material beneath road pavement, under floor slabs and for drainage and utility bedding / surrounds etc.).

An Outline Construction Management Plan (CMP) (Atkins Ireland, 2022), Outline Construction and Environmental Management Plan (CEMP) (Enviroguide Consulting, 2022b) and CDWMP (Enviroguide Consulting, 2022a) have been prepared as part of the planning application. The appointed Contractor will further develop the CMP, CEMP and CDWMP to provide detailed construction phasing and methods to manage and prevent any potential emissions to ground having the relevant industry standards (e.g., Guidance for Consultants and Contractors, CIRIA - C532', CIRIA, 2001).

The CMP, CEMP and CDWMP will be implemented for the duration of the Construction Phase, covering construction and waste management activities that will take place during the Construction Phase of the Proposed Development.

Mitigation measures will be adopted as part of the construction works on the Proposed Development Site. The measures will address the main activities of potential impact which include:

- Control and Management of Earthworks;
- Control and Management of Soils and Stockpiles;
- Management and Control Procedures for the Exportation of Surplus Soils and Bedrock;
- Management and Control Procedures for the Importation of Fill Materials;
- Control and Handling of Cementitious Materials;
- Control and Handling of Fuel and Hazardous Materials; and
- Accidental Release of Contaminants.

The Operational Phase of the Proposed Development consists of the typical activities in a residential area and with the exception localised gardening works by residents, there will be no bulk excavation of soils or bedrock or infilling of waste.

During the Operational Phase all trafficked areas will be connected to the surface water drainage network therefore in the unlikely scenario of an accidental spill from a vehicle there will be no discharge and potential impact to ground and the receiving land, soil and geology environment.

Chapter 7 of this EIAR, *Hydrology and Hydrogeology*, provides an assessment of the potential impacts of the Proposed Development on hydrology, water and hydrogeology, the detailed

drainage details incorporating SUDS drainage to control discharges from the Proposed Development Site and sets out any required mitigation measures where appropriate.

Overall, there will be no significant adverse impacts on, or associated with the land, soils and geology attributed to the Proposed Development.

There will be an unavoidable land take of 11.2Ha for the Construction of the Proposed Development with a loss of in-situ soil, subsoil and bedrock through excavation works to achieve the formation levels for foundations, roadways, parking, drainage infrastructure and landscaping. The potential impacts on the underlying soils are unavoidable, however the Proposed Development is permitted in principle under the current 'Objective A' and 'Objective NC' zoning objectives under the Dún Laoghaire-Rathdown County Development Plan 2022-2028 (Dún Laoghaire-Rathdown County, April 2022).

4.4 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 collected from a detailed desk study and review of all relevant drawings and documents pertaining to the Proposed Development. The results of the assessment provided information on 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 to reduce any identified potential impact associated with the Proposed Development.

The development will principally consist of: the demolition of 573.2 m² of existing structures on site comprising a derelict dwelling known as 'Rockville' and associated derelict outbuildings; and the provision of a mixed use development consisting of 383No. residential units (165No. houses, 118No. duplex units and 100No. apartments) and a Neighbourhood Centre, which will provide a creche (439m²), office (317 m²), medical (147m²), retail (857m²), convenience retail (431m²) and a community facility (321m²) including vehicular / pedestrian access, parking, landscaping and all associated utilities and infrastructure above and below ground.

As documented in the engineering infrastructure report (Roger Mullarkey & Associates, 2022a), the surface water drainage for 9.92Ha of the Proposed Development Site has been divided into two (2No.) catchment areas (Catchment 1 and Catchment 2) as described below. Surface water runoff from the site will be managed in accordance with the principles and objectives of Sustainable Drainage Systems (SuDS) and the Greater Dublin Sustainable Drainage System (GDSDS) to treat and attenuate water prior to the outfall points from the site (Roger Mullarkey & Associates, 2022a). The remaining areas of the site will be outside of these catchments and will continue to discharge to ground.

- Catchment 1:
 - It is proposed that attenuated surface water drainage from 9.63Ha of the Proposed Development will outfall to the existing 300mm Rockville sewer in the adjoining Rockville development (Planning Ref. D17A/0793, D18A/0566 and D20A/0015).

- The attenuated surface water from the existing 300mm Rockville surface water sewer discharges to the existing roadside drainage channel located on Glenamuck Road. It is understood that this drainage channel flows approximately 1.4km downstream in a north-easterly direction along Glenamuck Road before discharging to the Glenamuck North Stream.
- The existing 300mm Rockville sewer will eventually be diverted into the regional attenuation pond for the surface water drainage network of the permitted Glenamuck District Roads Scheme (GDRS) project (ABP Ref: ABP-303945-19). Discussions with Dún Laoghaire Rathdown County Council (DLRCC) have confirmed that capacity to drain the Kiltarnan Village lands have been included in regional ponds (Roger Mullarkey & Associates, 2022a).
- Catchment 2:
 - It is proposed that treated and attenuated surface water drainage from 0.29Ha of the Proposed Development will outfall to the surface water drainage network of the permitted GDRS project at Glenamuck Road (ABP Ref: ABP-303945-19).
 - The GDRS project has been designed by DLRCC to facilitate the surface water drainage connection from the Site, subject to a successful grant of planning for the Proposed Development (Roger Mullarkey & Associates, 2022a).

Foul water from the Proposed Development will be managed within two separate drainage catchments and will ultimately discharge to Shanganagh Wastewater Treatment Plant (WWTP):

- The proposed foul outfall from 10.5Ha of the Site will be via the existing Rockville foul sewer in the adjoining Rockville development (Planning Ref. D17A/0793, D18A/0566 and D20A/0015). This existing Rockville foul sewer ultimately outfalls downstream into the Irish Water (IW) foul sewer on Glenamuck Road.
- The proposed foul outfall from 0.3Ha of the Site will outfall to the foul sewer network of the permitted GDRS project in Glenamuck Road (ABP Ref: ABP-303945-19). The GDRS project has been designed by Dún Laoghaire Rathdown County Council (DLRCC) to facilitate the foul drainage connection from the Site, subject to a successful grant of planning for the Proposed Development (Roger Mullarkey & Associates, 2022a).

Water supply to the Proposed Development will be from the two (2No.) existing IW water supply mains located on Enniskerry Road and on Glenamuck Road.

IW issued a Confirmation of Feasibility (COF) (Ref.CDS20006509 dated 30th May 2022) that both water supply and foul water connections from the Site are 'feasible without infrastructure upgrade by Irish Water'. Subsequently, a full design submission was made for the water and foul water infrastructure IW have issued the Statement of Design acceptance (SODA) letter (Ref.CDS20006509 issued on the 1st June 2022) (Roger Mullarkey & Associates, 2022a).

Temporary diversions of water courses are not required for the Construction Phase, however there may be a requirement for management of surface water (rainwater) and shallow groundwater, where encountered, during groundworks. Any surface water removed will be discharged into the public sewer in accordance with the necessary consent/licence issued under Section 16 of the Local Government (Water Pollution) Acts and Regulations which will be obtained from Irish Water (IW) / DLRCC.

An Outline Construction Management Plan (CMP) (Atkins Ireland, 2022), Outline Construction and Environmental Management Plan (CEMP) (Enviroguide Consulting, 2022b) and CDWMP (Enviroguide Consulting, 2022a) have been prepared as part of the planning application. The appointed Contractor will further develop the CMP, CEMP and CDWMP to provide detailed construction phasing and methods to manage and prevent any potential emissions to ground and surface water having the relevant industry standards (e.g., Guidance for Consultants and Contractors, CIRIA - C532', CIRIA, 2001).

The CMP, CEMP and CDWMP will be implemented for the duration of the Construction Phase, covering construction and waste management activities that will take place during the Construction Phase of the Proposed Development.

Mitigation measures will be adopted as part of the construction works on the Proposed Development Site. The measures will address the main activities of potential impact which include:

- Control and Management of Water and Surface Runoff;
- Management and control of imported soil and aggregates from off-site sources;
- Fuel and Chemical handling, transport, and storage; and
- Accidental release of contaminants – notify relevant statutory authorities.

During the Operational Phase surface water runoff from the Site will be managed in accordance with the principles and objectives of Sustainable Drainage Systems (SuDS) and the Greater Dublin Sustainable Drainage System (GDSDS) to treat and attenuate water prior to the outfall points from the Site. Ongoing regular maintenance of the proposed drainage including the SuDS measures in accordance with CIRIA SuDS Manual C753 will be incorporated into the overall management strategy for the Proposed Development.

As identified in the Hydrological and Hydrogeological Risk Assessment (Enviroguide Consulting, 2022), in the unmitigated worst-case source scenario, the discharge of surface water from Catchment 1 of the Proposed Development could result in a potential 'negative', 'significant' and short term' impact on the receiving water quality of the roadside drainage channel on Glenamuck Road, the Glenamuck North Stream and potentially within the Carrickmines Stream locally within the vicinity of the point of discharge to the Carrickmines Stream. It is considered that there would be no impact to water quality downstream where the Carrickmines Stream confluences with at the Shanganagh River taking account of the nature of the incident and the potential for assimilation within the receiving water bodies. There would also be no impact where the Shanganagh River discharges to the Irish Sea.

Surface water from Catchment 2 of the Proposed Development will be discharged to the mains drainage network within the GDRS scheme which has been designed to incorporate discharges from the Proposed Development site (Roger Mullarkey & Associates, 2022a). The EIAR (DBFL, March 2019) prepared for the GDRS identified that discharges from the GDRS incorporating connections from the Proposed Development will have no impact on the receiving water environment. Therefore, in the unmitigated worst-case source scenario, the discharge of surface water from Catchment 2 of the Proposed Development would be diluted, treated and attenuated within the GDRS surface water drainage network prior to discharge to receiving waters and there would be no impact on the receiving water quality.

The surface water management strategy includes a number of measures that will capture any potentially contaminating compounds (petroleum hydrocarbons, metals, and suspended

sediments) in surface water runoff from roads and the impermeable areas that could potentially otherwise discharge to groundwater or the receiving water courses.

Overall, there are no significant residual impacts on hydrology and hydrogeology anticipated and there will be no impact to the existing WFD Status of water bodies associated with the Proposed Development including the Glenamuck North Stream, the Carrickmines Stream, the Shanganagh River, Southwestern Irish Sea – Killiney Bay and the Wicklow GWB as a result of the Proposed Development taking account of design avoidance and mitigation measures where required.

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).

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 (PM₁₀) 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 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 north, northeast and south 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.

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, PM₁₀ 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 (CO₂) and Nitrous Oxide (N₂O) 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. An Energy Statement has been prepared on behalf of Liscove Limited for the Proposed Development. This report identifies the energy standards with which the Proposed Development will have to comply and also sets out the overall strategy that will be adopted to achieve these energy efficiency targets. The dwellings will be required to minimise overall energy use and to incorporate an adequate proportion of renewable energy in accordance with Building Regulations Part L 2019, Conservation of Energy & Fuel.

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

4.6 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:

- Extraction works, including site clearing and earthworks required to prepare the site for building foundations and installing utility services;
- Development construction works;
- Trucks entering and exiting the facility.

The Proposed Development is located at Wayside, Enniskerry Road and Glenamuck Road, Kilternan, Dublin 18, a southern suburb of Dublin. Nearby areas include Carrickmines, Stepside and Glencullen. 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 5-year programme.

The nearest noise sensitive locations are residential properties which are located approximately 30m 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.

4.7 Landscape and Visual

The purpose of the landscape assessment is to evaluate the existing landscape character of the site and surroundings, to assess the landscape and visual impact of the Proposed Development and to identify landscape designations and planning policies that may concern the subject site and its environs.

This Chapter has related the Landscape Impact Assessment (LIA) and the Visual Impact Assessment (VIA) in respect of a Strategic Housing Development at this c. 10.8 Hectare site at lands at Wayside, Enniskerry Road and Glenamuck Road, Kiltiernan, Dublin 18.

The site is currently predominately greenfield and includes a c.0.35Ha derelict farmyard area. The Proposed Development site is surrounded by a fragmented pattern of low density-built fabric comprising low-rise housing and cottages against the backdrop of the Dublin mountains. Hedgerows were identified on the north and south borders of the property, with the most important hedgerow being located in the centre of the site. The western and eastern limits of the site have no tree or shrub vegetation, with only some spontaneous shrub-vegetation along the western wall.

The site of the Proposed Development was considered to have a Medium Landscape Value, a Medium Landscape Susceptibility, a Medium to High-Medium Landscape Sensitivity and that the Proposed Development changes to landscape characteristics are Medium. In terms of the LIA some significant changes will occur on the landscape of the site, mainly with the removal of trees and hedgerows and general construction activity to the implementation of the proposed buildings, but these changes will also be counterbalanced with the implementation of the new green structure and maintenance of some of the most important hedgerows.

In what refers to the VIA, 20 viewpoints were assessed, chosen by sensitivity of the views through site visits and viewsheds analysis. The visual impacts of the Proposed Development are very limited to the viewpoints in closer areas of the site that didn't have a natural or physical barrier in the existing situation – namely the western front. The typology of buildings blends in on the existing environment given the chosen typology, colours and low-heights buildings. The new plantings planned for the peripheral zones of the Proposed Development and the creation of amenities zones in central spaces of the site will manage to mitigate the identified visual impacts in the medium-term.

4.8 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 46 No. recorded Monuments and Places within the 2km study area. These comprise 7 Enclosures (DU026-021----, DU026-043----, DU026-041----, DU026-038---, DU026-072----, DU026-037----, DU026-035----), 1 Font DU026-020003-, 2 Churches (DU026-020001-, DU026-004001-) 1 Cross-slab (DU026-020005-), 2 Graveyards (DU026-020002-, DU026-004002-), 3 Ringforts (DU026-020004-, DU026-045001-, DU026-039003-) 1 Megalithic tomb – portal tomb (DU026-019----), 3 Redundant records (DU025-032----, DU026-044002-, DU026-128----), 2 Designed landscape – tree-rings (DU026-017----, DU026-016----), 1 Cist (DU026-015----), 1 Mining Complex (DU026-117----), 1 Castle – tower house (DU026-044001-), 1 Field system (DU026-045002-), 2 Cairns (DU026-039001-, DU025-047003-), 3

Hut sites (DU026-039002-, DU025-047006-, DU025-047004-), 2 Standing stones (DU026-042002-, DU025-047002-), 1 Field system (DU025-047005-), 1 Well (DU025-047007-), 1 Barrow (DU025-047001-) 1 Linear earthwork (DU026-122----), 2 Crosses (DU026-018----, DU026-004004-), 3 Fulacht fia (DU026-135----, DU026-150----, DU026-136----), 1 Graveslab (DU023-015006-), 1 Ritual site – holy well (DU026-004003-, DU026-003----), 1 Habitation site (DU026-156----). A search in the topographical files in the National Museum of Ireland produced no results for the development lands and surrounding areas. There are no features of architectural interest in the area of development.

It is possible that excavation works associated with the Proposed Development may have an adverse impact on small or isolated previously unrecorded archaeological feature 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. However, as the closest RMP site is located 0.03km from the Site, it is predicted that the Construction Phase of the development will not cause any significant impact on the Archaeology and Cultural Heritage of the area.

The nearest protected structures in the vicinity of the Proposed Development site are Our Lady of the Wayside Church, RPS No. 1802 (known locally as the ‘Blue Church’) and Rockville House, RPS No. 1790. The Proposed Development will have no archaeological impact on either Our Lady of the Wayside Church or Rockville House.

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.

4.9 Material Assets: Traffic

Introduction

This chapter details the Traffic and Transportation Assessment associated with the proposed mixed-use development at lands at Wayside, Kiltiernan Dublin 18. The Proposed Development principally consists of the demolition of c. 573.2 sq m of existing structures on site comprising a derelict dwelling known as ‘Rockville’ and associated derelict outbuildings; and the provision of a mixed-use development consisting of 383 No. residential units and a Neighbourhood Centre.

The lands will be developed in accordance with National, Regional and Local polices including the Kiltiernan Glenamuck Local Area Plan (LAP). The development will be delivered in five phases that will integrate with the delivery of the transport infrastructure and public transport services delivered as part of the Glenamuck District Roads Scheme (GDRS) and Glenamuck / Enniskerry Road Part 8 Junction Upgrade Scheme that will be delivered by Dun Laoghaire Rathdown County Council (DLRCC). From correspondence with DLRCC we understand the GDRS will be delivered by third quarter (Q3) of 2024.

Collaborative Approach to Design

The transport planning aspects of the proposed site have been developed in close consultation between the Applicant, the Design Team and stakeholders including DLRCC and ABP.

The development presents as a sustainable development from a transport perspective. The scheme is fully integrated in to the existing and planned walking, cycling, public transport, and road network in the surrounding area.

Methodology

The chapter details the methodology used to understand the impact of the development. The traffic and transport assessment methodology are in accordance with all relevant best practice policy and guidance.

Receiving Environment

The existing and future environment is described in detail in the chapter. A significant number of transport infrastructure and transport services are planning in the area that will greatly enhance the sustainable travel characteristics of the site and when combined with the proposed measures that will be delivered by the Applicant will ensure that future residents will be able to avail of a wider range of sustainable travel options for work, education, and leisure travel within, to and from the site.

Potential Impact

The potential impact of the Proposed Development is considered for both the construction and Operational Phase of the development on the transport infrastructure surrounding the development

Construction Impacts

The traffic that would be generated during construction of the development is predicted based on an outline construction programme and activity schedule for the Proposed Development. For Phase1 it is anticipated that the GDRS is not available, and that construction traffic will route through the Glenamuck / Enniskerry Road (Golden Ball) junction. For later phases (2 to 5) it is anticipate that the GDRS is available, and all construction traffic will route along this and access / egress the site from direct access to the GDRS via a connection onto the Glenamuck Link Distributor Road (GLDR) thus avoiding lower hierarchy roads. Therefore, the assessment of impact focuses the Glenamuck / Enniskerry Road (Golden Ball) junction. It is demonstrated that construction traffic impact at the (Golden Ball) junction is low with a max impact 0.8% AM peak. This is well below the TII Transport Assessment Guidelines Table 2.1 Traffic Management Guidelines Thresholds for Transport Assessments of 5% on sensitive roads and 10% on non-sensitive roads. Therefore, in accordance with TII guidance regarding thresholds it is considered that the construction impact will therefore be negligible and temporary in nature.

Operational Impacts

The operational impacts of the development were assessed for active travel, public transport, and general traffic. The Proposed Development will bring about changes to the transport network for all modes. The development will result in improvements to the pedestrian and cyclist network both within the development and via external connections to the GDRS and improvements to the urban realm along Enniskerry Road. The development will facilitate

greater pedestrian and cycle permeability across the local area. The development will therefore deliver significant permanent benefits impacts for active travel. An assessment of public transport (bus and Luas) patronage and capacity has been undertaken in the chapter. This includes a survey of capacity on local bus services in Kiltarnan adjacent the site and at Ballyogan Wood Luas Stop. The assessment indicates that demand for public transport trips in AM and PM peak period from the development can be accommodated on existing services and would not adversely impact on capacity of existing bus or Luas services.

The traffic impact from the development on key junctions and links surrounding the site has been undertaken in accordance with TII Transport Assessment Guidelines. For opening year of 2024, two scenarios have been assumed. One “with GDRS” and one “without GDRS” in place to ensure a robust worst-case assessment. For future year assessments in line with TII guidance of opening year +5 (2029) and opening year +15 (2039) we have assumed the GDRS is operational. The key junction and results are:

Enniskerry / Glenamuck Road Junction

In the AM peak opening year “without GDRS” the junction experiences some capacity issues. This is predominately due to background traffic growth and trips associated with the committed developments. The impact of the additional trips due to the Proposed Development is very small with Practical Reserve Capacity deteriorating from -8.5% in the with committed development AM Peak scenario to -9.0%. In the PM peak the junction performs within capacity. In the “with GDRS” scenario the junction performs well within capacity. Overall, the junction was found to be operating over the capacity in “Without GDRS” AM Peak scenario and for all other scenarios, the junction was found to be within the capacity. The impact of the development trips was observed to be very small.

Enniskerry / R116 Junction

Overall, the junction was found to be operating just at the capacity in Opening year “without GDRS” AM Peak scenario with Level Of Service C. However, it is due to background growth and committed development trips. The impact of the Proposed Development trips was very small. For the remaining scenarios, the junction was operating within the capacity with the impact of the Proposed Development trips being negligible to very small.

Enniskerry Road / Ballycorus Road Junction

Across all the scenarios, the junction was found to be well within the capacity. The modelling outputs shown that in both the AM and PM peak periods this junction experiences very small changes in queue lengths, delay, and degree of saturation.

Access Junctions

All five proposed access junctions (three on Enniskerry Road and one each on Glenamuck Road and GLDR) were found to be operating with design parameters with no adverse impacts to traffic flows.

Conclusion

In overall terms the mixed-use development is master planned in the context of a holistic plan through an integrated land use and transport strategy. The development proposes to tie into planned infrastructure improvements such as the GDRS that will optimise connectivity, permeability and mobility choices for the development and other transport users. The analysis

shows that the construction and operational impact of the development on the transport network will be modest and well within carrying capacity of existing and future infrastructure.

4.10 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 the physical resources in the environment, including built services and infrastructure comprising electricity, gas supply, information and communications technology (ICT), surface water/stormwater drainage, water supply, the foul water network and waste management infrastructure.

Electricity Supply

Construction related activities will require temporary connection to the local electrical supply network for lighting and construction activities. The power demand during the Construction Phase may also be supplemented with on-site diesel generators. Connecting a new multi-unit housing development to the electricity distribution system must be carried out in accordance with ESB Networks' specifications. 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 as the statutory undertaker and in accordance with standard protocols. 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 impact from the Operational Phase on the electricity supply network is likely to be neutral, long term and not significant.

Gas Supply

Connecting a new multi-unit housing development to the gas network system must be carried out in accordance with Gas Networks Ireland's specifications. The developer must employ the services of a registered mechanical installer or plumber and select and register with a natural gas supplier. A temporary suspension of the network locally to facilitate the connection works may be required during the Construction Phase. These temporary suspensions will be controlled by Gas Networks Ireland as the statutory undertaker and in accordance with standard protocols. The potential impact from the Construction Phase of the Proposed Development on the local gas supply network is likely to be negative, slight, and short-term. Gas boilers will be used to provide space heating for the houses. The potential impact from the Operational Phase on the gas supply network is likely to be neutral and not significant in the long term.

Information and Communications Technology (ICT)

A specific Telecommunications Assessment has been conducted for the Proposed Development and has identified microwave links and radio frequency links which will be impacted by the height of the Proposed Development. It is proposed in the Telecommunications Report to decommission the existing telecommunications mast at ground level and to provide new telecommunications infrastructure at roof level of the Neighbourhood Centre. The Site of the Proposed Development is partially located within an area where high speed broadband is available. Due to the temporary and phased nature of the Construction

Phase the potential impact of the Construction Phase on the local telecoms network is considered negative and not-significant, while the impact from the Operational Phase on the local telecoms network is likely to be neutral and not-significant in the long term.

Water Environment – Hydrology and Surface Water Drainage

It is noted that specific issues relating to Hydrology associated with the Proposed Development are set out in Chapter 7 of this EIAR. A full Stormwater Impact Assessment and a Site-Specific Flood Risk Assessment have been completed for the Proposed Development. Construction Phase activities at the Proposed Development Site that could potentially impact on water quality are detailed in the Hydrology Chapter of this EIAR and control measures for potential emissions to surface water, groundwater and soil are detailed in the Construction Environmental Management Plan. Once operational, the surface water drainage infrastructure for the Proposed Development will replicate natural characteristics. The overall surface water outfall rate from the Proposed Development has been restricted to the greenfield run off rate for the drained area. Given the design of the surface water management strategy for the Proposed Development and the implementation of SuDS features, it is considered that there be an overall neutral, imperceptible, long-term impact on the receiving surface water quality of the Shanganagh River.

Water Supply and Demand

Commencement of construction activities will create a demand for water supply to the site. A temporary connection is required to facilitate on-site works for housing and commercial developments. The Proposed Development will be connected to the existing mains water supply adjacent to the site. Irish Water have confirmed that connection to the existing mains water supply network is feasible subject to upgrades of the existing infrastructure. Some local diversions may be required to water supplies to accommodate the construction works which may require temporary outages. Additionally, new connection works may cause water supply disruptions during the Construction Phase. These disruptions will be controlled by Irish Water and DLRCC in accordance with standard protocols. Due to the nature of the works during the Construction Phase, the likely impacts on the local mains water supply will be negative, but not significant and only temporary. During the Operational Phase of the Proposed Development there will be a demand for water from the public water supply, however, in accordance with best practice, water conservation appliances are to be incorporated as part of the Proposed Development to reduce the overall water demand. The mains water supply is operated in accordance with relevant existing statutory consents and Irish Water have confirmed that, based on a desk top analysis of the capacity currently available in the Irish Water network(s) as assessed by Irish Water, the proposed demand can be facilitated. The likely impact of the increase in mains water demand will be neutral and not significant on mains water supply in the long-term.

Wastewater Management

A temporary connection is required to facilitate on-site works for housing and commercial developments. It will be the Main Contractor's responsibility to apply to Irish Water for connections to the existing foul water network, and all connections to the foul water network will be constructed strictly in accordance with Irish Water's requirements. Foul water sewer connections will be constructed strictly in accordance with Irish Water requirements and drains will be laid to comply with the requirements of the latest Building Regulations, and in

accordance with the recommendations contained in the Technical Guidance Document H. The new connection works may cause disruptions to the foul water network during the Construction Phase. These disruptions will be controlled by Irish Water and DLRC 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. The majority of the Proposed Development's wastewater drainage system (10.5 Ha of development land) will connect into the existing piped infrastructure in the Rockville Phase 2b development (DLR Reg. Ref. D18A/1191), which currently outfalls c. 430 metres downstream into the Irish Water drainage infrastructure on Glenamuck Road. Additionally, c.0.3 Ha of development land (apartment Blocks C & D) will outfall into the piped infrastructure to be constructed as part of the Glenamuck District Roads Scheme (GDRS) on Glenamuck Road along the northern boundary of the site of the Proposed Development. Capacity within the existing foul sewer network has been confirmed by Irish Water. The foul water from the Proposed Development will ultimately be treated at Shanganagh Wastewater Treatment Works. The 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.

Waste Management

A Construction and Demolition Waste Management Plan (CDWMP) has been prepared for the Construction Phase of the Proposed Development (Enviroguide Consulting, 2022). All waste generated during construction and demolition activities will be segregated onsite to enable ease in re-use and recycling, wherever appropriate. In general, the priority of the CDWMP shall be to promote recycling, reuse and recovery of waste and diversion from landfill wherever possible. After in-situ reuse and recycling options have been fully considered, all residual waste streams will be collected by appropriately authorised waste collection contractors and will be managed using suitably permitted/licensed waste disposal or materials recovery facilities. Due to the use of permitted/licensed waste collection/waste management facilities, it is not predicted that the production of waste will cause any likely significant effects on the environment. It is the responsibility of the Main Contractor to ensure that waste collection contractors are legally permitted to carry the waste, and that the facility they bring the waste to is licensed to handle that type of waste as outlined in the Waste Management Acts 1996-2005.

An Operational Waste Management Plan (OWMP) has been prepared for the Proposed Development by Enviroguide Consulting (2022). The OWMP contains full details of the types and quantities of waste that may arise at the Proposed Development. The typical wastes that will be generated during the Operational Phase of the Proposed Development will include the following:

- Dry Mixed Recyclables (DMR)
- Organic waste
- Glass
- Mixed Non-Recyclable (MNR) / General Waste

In addition to the typical waste materials that will be generated on a daily basis, there will be some additional waste types generated in small quantities that will need to be managed separately including:

- Bulky wastes – including furniture, carpets, mattresses

- Waste electrical and electronic equipment (WEEE)
- Batteries
- Textiles – clothes or soft furnishings
- Light bulbs or fluorescent tubes
- Chemicals – old medicines, paints, detergents, and
- Waste oil.

The Commercial Units (creche, office, medical, retail) and the Community Area will generate similar waste types to domestic waste types with some additional commercial “office” type wastes such as paper and printer ink, batteries, and waste electrical and electronic equipment (WEEE). An additional lockable, colour coded, hazardous waste storage area will be provided for medical waste from the medical unit which will be managed and accessed by medical personnel only. By implementing the actions outlined in the OWMP, a high level of recycling, reuse and recovery will be achieved at the development in line with national and European targets.

In the absence of mitigation, the potential impact from the Construction and Operational Phases on waste disposal has the potential to be negative and moderate in the long term. Provided the mitigation measures detailed in the CEMP (Enviroguide Consulting, 2022), the CDWMP (Enviroguide Consulting, 2022) and the OWMP (Enviroguide Consulting, 2022) are implemented, and a high rate of reuse, recycling and recovery is achieved, the likely overall effect of the Construction and Operational Phases on Material Assets will be neutral and imperceptible in the long term.

4.11 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 Phases. 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 Wayside, Enniskerry Road and Glenamuck Road, Kiltarnan, Dublin 18, 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.

4.12 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.

4.13 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.

No major difficulties were encountered when preparing the EIAR.