

6 LAND AND SOIL

6.1 Introduction

This chapter provides a description of the land, soils and geology within and immediately surrounding the site of the Proposed Development, an assessment of the potential impacts of the Proposed Development on land, soils and geology and sets out any required mitigation measures where appropriate.

The principal objectives of this chapter are to identify:

- Land, soils, and geological characteristics of the receiving environment at the site.
- Potential impacts that the Proposed Development may have on land, soils and geology including “worst case” scenario assessment.
- Potential constraints that the environmental attributes may place on the Proposed Development.
- Required mitigation measures which may be necessary to minimise any adverse impacts related to the Proposed Development.
- Evaluate the significance of any residual impacts.

6.1.1 Quality Assurance and Competency of Experts

This chapter of the EIAR has been prepared by Gareth Carroll BA, BAI, MEnvSc, a Principal Consultant of Enviroguide with over 11 years’ experience of environmental assessment of brownfield and greenfield sites.

This chapter was reviewed by Patrick Higgins BSc, MSc, MEnvSc, CEnv who is Technical Director of the Contaminated Land and Hydrogeology Division of Enviroguide and has over 18 years’ experience in preparing environmental assessments for a range of project types and geological and hydrogeological site settings.

6.2 Study Methodology

6.2.1 Relevant Legislation and Guidance

The methodology adopted for the assessment will take cognisance of relevant guidelines, in particular the following:

- S.I. No. 92 of 2011- European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment including amendments S.I. No. 52 of 2014.
- S.I. No. 98 of 2008- European Parliament and of the Council on waste and repealing certain Directives.
- Environmental Protection Agency, May 2022. Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022).
- Institute of Geologists of Ireland Guidelines, 2002. Geology in Environmental Impact Statements, A Guide (IGI, 2002).
- Institute of Geologists of Ireland Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements (IGI, 2013).

- National Roads Authority, 2009. Guidelines on Procedures for the Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (NRA, 2009).
- Dún Laoghaire Rathdown County, 2022. Dún Laoghaire-Rathdown County Development Plan 2022-2028.

6.2.2 Phased Approach

A phased approach was adopted for this EIAR in accordance with the Environmental Protection Agency (EPA) and Institute of Geologists of Ireland (IGI) guidelines as set out above and is described in the following sections.

Element 1: An assessment and impact determination stage was carried out by Enviroguide to establish the project location, type and scale of the development, the baseline conditions, and the type of land, soils and geological environment, to establish the activities associated with the Proposed Development and to undertake an assessment and impact determination. This element of the assessment also included developing the Conceptual Site Model (CSM) for the Site and receiving environment.

The study area, for the purposes of assessing the baseline conditions for the Land, Soils and Geology Chapter of the EIAR, extends beyond the site boundaries and includes potential receptors with which there may be a pathway to/from the Proposed Development and receptors that may be indirectly impacted by the Proposed Development. The extent of the wider study area was based on the IGI, 2013 Guidelines which recommend a minimum distance of 2.0km from the Site.

The desk study involved collecting all the relevant data for the Proposed Development site and surrounding area including published information and details pertaining to the Proposed Development provided by the applicant and design team.

A site walkover survey to establish the environmental Site setting and baseline conditions at the Proposed Development Site relevant to the land, soil and geology environment was undertaken by Enviroguide on the 3rd of July 2024.

The Element 1 stage of the assessment was completed by Enviroguide and included the review of the following sources of information:

- Environmental Protection Agency (EPA) webmapping 2024 (EPA, 2024).
- Geological Survey of Ireland (GSI) Datasets Public Viewer and Groundwater webmapping, 2024 (GSI, 2024).
- Google Earth Mapping and Imagery, 2024 (Google Earth, 2024).
- Ordnance Survey Ireland (OSI) webmapping, 2024 (OSI, 2024).
- National Parks and Wildlife Services (NPWS) webmapping, 2024 (NPWS, 2024).
- Teagasc webmapping, 2024 (Teagasc, 2024).
- Information provided by the Applicant pertaining to the design proposals for the Proposed Development.

Element 2: Involves direct and indirect site investigation and studies stage where necessary to refine the CSM developed as part of Element 1 and evaluate the potential impacts associated with the Proposed Development. Site investigations (Site Investigations Ltd. (SIL), 2006, Ground Investigations Ireland (GII), 2010, GII, 2017 and GII, 2024 included in the Roger

Mullarkey & Associates, 2024a Engineering Infrastructure Report submitted with the planning application) included trial pitting and borehole drilling. The results of the site investigation were used to identify and assess the existing ground conditions and geological environmental at the site.

Element 3: Evaluation of mitigation measures, residual impacts and final impact assessment were based on the outcome of the information gathered in Element 1 and Element 2 of the assessment. Mitigation measures to address all identified adverse impacts that were identified in Element 1 and Element 2 of the assessment were considered in relation to the Construction and Phase and Operational Phase of the Proposed Development. These mitigation measures were then considered in the impact assessment to identify any residual impacts.

Element 4: Completion of the Land, Soil and Geology sections of the EIAR in this Chapter which includes all the associated figures and documents.

6.2.3 Description of Importance of the Receiving Environment

The Transport Infrastructure Ireland (TII) criteria for rating of the importance of geological features at the site as documented in the National Roads Authority Guidelines (NRA, 2009), are summarised in Table 6-1.

Table 6-1. Criteria for Rating Site Importance of Geological Features

Importance	Criteria	Typical Example
Very High	Attribute has a high quality, significance, or value on a regional or national scale. Degree or extent of soil contamination is significant on a national or regional scale. Volume of peat and/or soft organic soil underlying route is significant on a national or regional scale.	Geological feature rare on a regional or national scale (NHA). Large existing quarry or pit. Proven economically extractable mineral resource.
High	Attribute has a high quality, significance, or value on a local scale. Degree or extent of soil contamination is significant on a local scale. Volume of peat and/or soft organic soil underlying route is significant on a local scale.	Contaminated soil on-site with previous heavy industrial usage. Large recent landfill site for mixed wastes. Geological feature of high value on a local scale (County Geological Site). Well drained and/or high fertility soils. Moderately sized existing quarry or pit. Marginally economic extractable mineral resource.
Medium	Attribute has a medium quality, significance, or value on a local scale. Degree or extent of soil contamination is moderate on a local scale. Volume of peat and/or soft organic soil underlying route is moderate on a local scale.	Contaminated soil on-site with previous light industrial usage. Small recent landfill site for mixed wastes. Moderately drained and/or moderate fertility soils. Small existing quarry or pit. Sub-economic extractable mineral resource.
Low	Attribute has a low quality, significance, or value on a local scale. Degree or extent of soil contamination is minor on a local scale. Volume of peat and/or soft organic soil underlying route is small on a local scale.	Large historical and/or recent site for construction and demolition wastes. Small historical and/or recent landfill site for construction and demolition wastes. Poorly drained and/or low fertility soils. Uneconomically extractable mineral resource.

6.2.4 Description and Assessment of Potential Impact

Impacts will vary in quality from negative, to neutral or positive. The effects of impacts will vary in significance on the receiving environment. Effects will also vary in duration. The terminology and methodology used for assessing the 'impact' significance and the corresponding 'effect' throughout this Chapter is described in Table 6-2 in accordance with EPA, 2022 guidelines on the information to be contained in EIARs.

Table 6-2. Assessment of Potential Terminology and Methodology

Type of Effect	Definition
Quality of Effects/ Impacts	Definition
Negative	A change which reduces the quality of the environment
Neutral	No effects or effects that are imperceptible, within the normal bounds of variation or within the margin of forecasting error.
Positive	A change that improves the quality of the environment
Significance of Effects / Impacts	Definition
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.
Duration of Effects / Impacts	Definition
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting one year or less
Short-term	Effects lasting one to seven years
Medium-term	Effects lasting seven to fifteen years
Long-term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years
Reversible	Effects that can be undone, for example through remediation or restoration
Brief	Effects lasting less than a day

6.3 The Existing and Receiving Environment (Baseline Situation)

6.3.1 Site Location and Surrounding Land Use

The site is located at Wayside, Enniskerry Road and Glenamuck Road, Kiltarnan, Dublin 18. A full description of the site location and surrounding land use is presented in Chapter 2 of this EIAR.

6.3.2 Current and Historical Land Use

The site comprises two parcels of largely undeveloped grasslands which will be separated by the future Glenamuck Distributer Link Road (GLDR), includes a derelict dwelling known as 'Rockville' and associated derelict outbuildings in the south and the former Kiltarnan Country Market in the north. The current site layout is presented in Figure 7-1.

The following land zoning and zoning objective, set out in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 is applicable to the Site:

- The lands across the majority of the site are zoned 'Objective A – to provide residential development and/or protect and improve residential amenity'.
- While the lands along the western boundary of the site are zoned 'Objective NC – to protect, provide for and/or improve mixed-use neighbourhood centre facilities'.

Therefore, the Proposed Development is considered to meet the zoning objectives of the Dún Laoghaire-Rathdown County Development Plan 2022-2028.

Historical mapping and aerial photography available from the Ordnance Survey of Ireland website (OSI, 2024) and Google Earth (Google Earth, 2024) were reviewed and key observations on-site and off-site are summarised in Table 6-3.

Table 6-3. Historical Land Use

Date	Information Source	Site Description
1837-1842	OSI map 6inch	On-site: The Proposed Development site is shown as open fields separated by field boundaries and hedgerows. There are two (2No.) buildings/structures identified in the southern corner of the Proposed Development site. Off-site: The surrounding lands are predominantly open fields divided by field boundaries with a number of one-off buildings/structures. There are two (2No.) historic quarries and four (4No.) historic gravel pits identified within a 2km radius of the Proposed Development site.
1888-1913	OSI map 25inch	On-site: There are some additional buildings/structures identified in the southern corner of the Proposed Development site. Off-site: There are a number of additional building structures identified in the lands to west / northwest of the Proposed Development site. The previously noted historic quarries are no longer identified and there are only three (3No.) historic gravel pits identified within 2km of the Proposed Development site.
1830-1930	OSI Cassini map 6inch	On-site: No significant changes. Off-site: No significant changes.
1995	OSI Aerial photography	On-site: There are a number of sports pitches located in the central and northern portion of the Proposed Development site. Overhead powerlines are identified in the eastern corner of the Proposed Development site. Off-site: The lands to the north, west and south have been significantly developed however the lands adjoining the east of the Proposed Development Site remain undeveloped.

Date	Information Source	Site Description
2000	OSI Aerial photography	On-site: No significant changes. Off-site: No significant changes.
2005-2012	OSI Aerial Photography	On-site: No significant changes. Off-site: No significant changes.
2011-2013	OSI Aerial Photography	On-site: No significant changes. Off-site: No significant changes.
2013-2018	OSI Aerial Photography	On-site: No significant changes. Off-site: No significant changes.
2024	Google Maps Photography	On-site: No significant changes. Off-site: No significant changes.

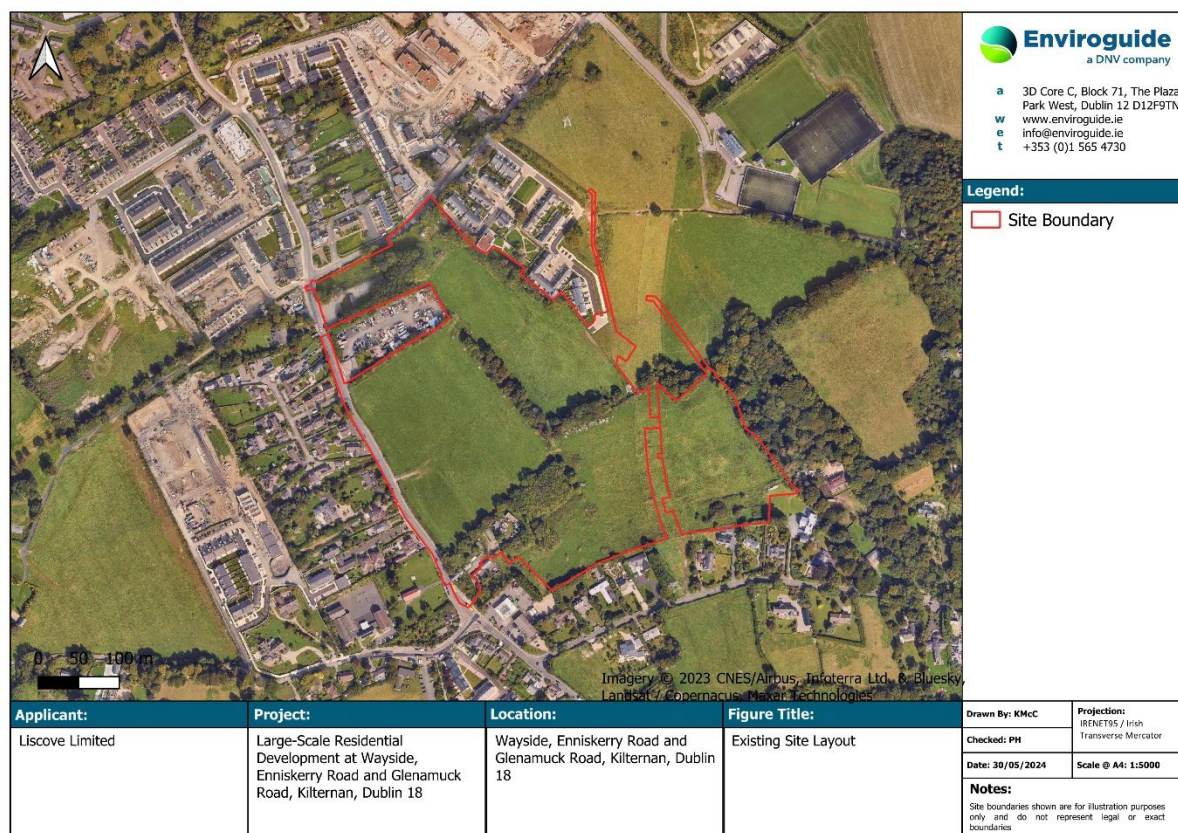


Figure 6-1. Current Site Layout

6.3.3 Topography

The topography surrounding the site of the Proposed Development is generally sloping toward the east and northeast towards the coast.

As documented in the Engineering Infrastructure Report (Roger Mullarkey & Associates, 2024. Engineering Infrastructure Report and Storm Water Impact Assessment for a Residential/Commercial project at Kiltarnan Village LRD, Kiltarnan, Dublin 18), the topography at the site generally sees a reduction in slope downwards from the Enniskerry Road along the western boundary in an easterly and north-easterly direction and falling off sharply towards the eastern boundary at a gradient of approximately 10%. Ground elevations at the site range from approximately 141.5 meters above Ordnance Datum (mOD) in the southwest to

6.3.4 Soils

Mapping of the soils beneath the site are presented in Figure 6-3.

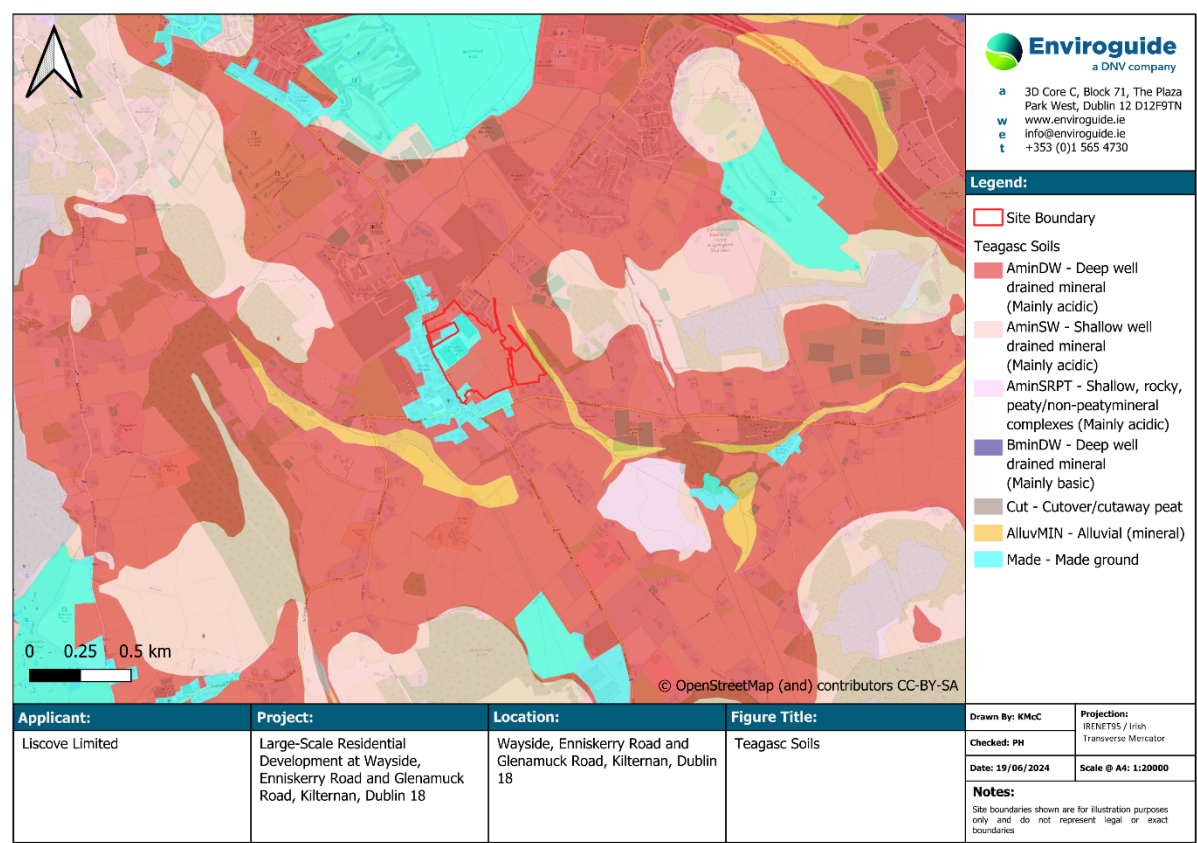


Figure 6-3. Teagasc Soils

6.3.5 Quaternary Soils

The subsoil or quaternary sediments beneath the majority of the site are mapped by the GSI (GSI, 2024) as till derived from granites (TGr). While the subsoil or quaternary sediments beneath the northern portion of the site and along a small section of the southern site boundary are mapped by the GSI (GSI, 2024) as bedrock outcrop or subcrop.

Mapping of the quaternary soils beneath the site is presented in Figure 6-4.

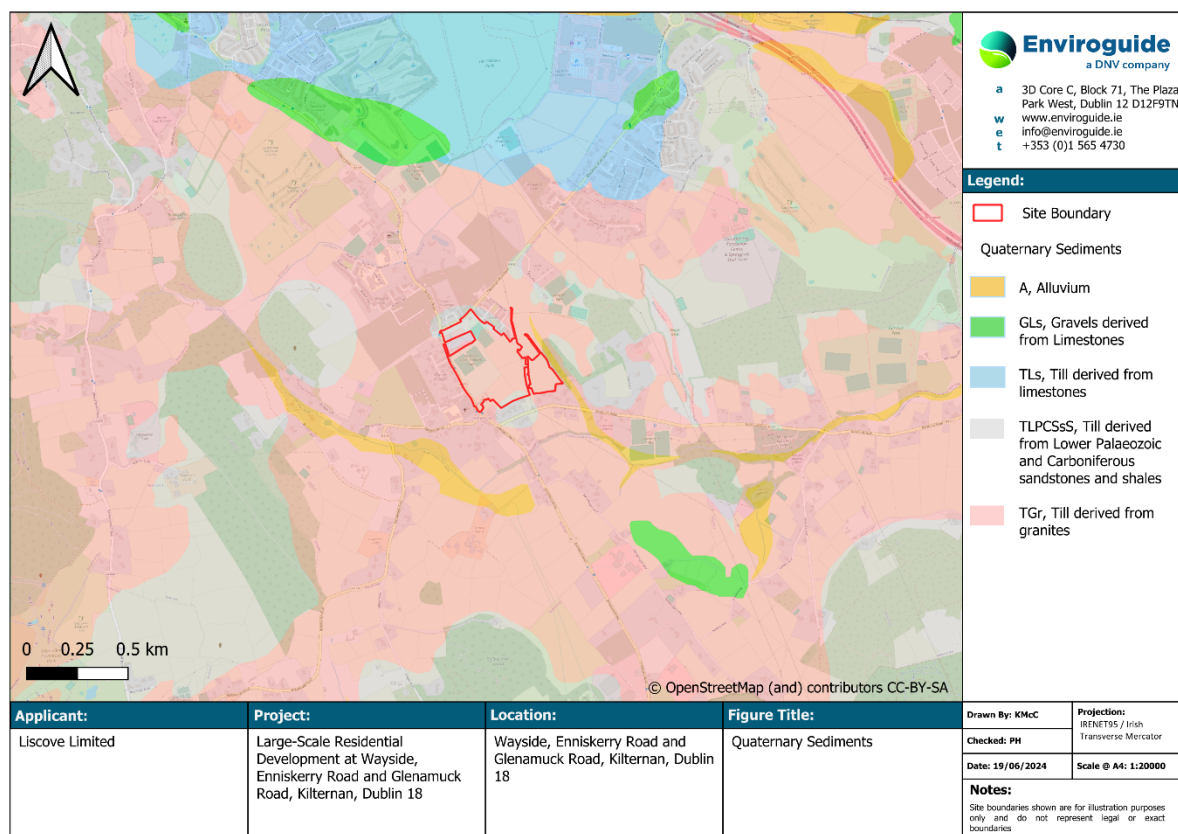


Figure 6-4. Quaternary Soils

6.3.6 Quaternary Geomorphology

Two (2No.) undifferentiated meltwater channels are identified approximately 0.01km and 0.62km east of the eastern boundary of the site. The meltwater channels are orientated in a southeast direction (GSI, 2024).

There is also a deglacial hummocky sand and gravel landform identified approximately 0.92km southeast of the site (GSI, 2024).

6.3.7 Bedrock Geology

The bedrock beneath the site is mapped by the GSI (GSI, 2024) as Type 3 Muscovite Porphyritic (New Code: IDNLGR3) described as granites with muscovite phenocrysts. While no bedrock outcrops are mapped within the site boundary, a cluster of bedrock outcrops is located approximately 0.04 km from the southeast corner of the site (GSI, 2024).

Mapping of the bedrock geology beneath the site is presented in Figure 6-5.

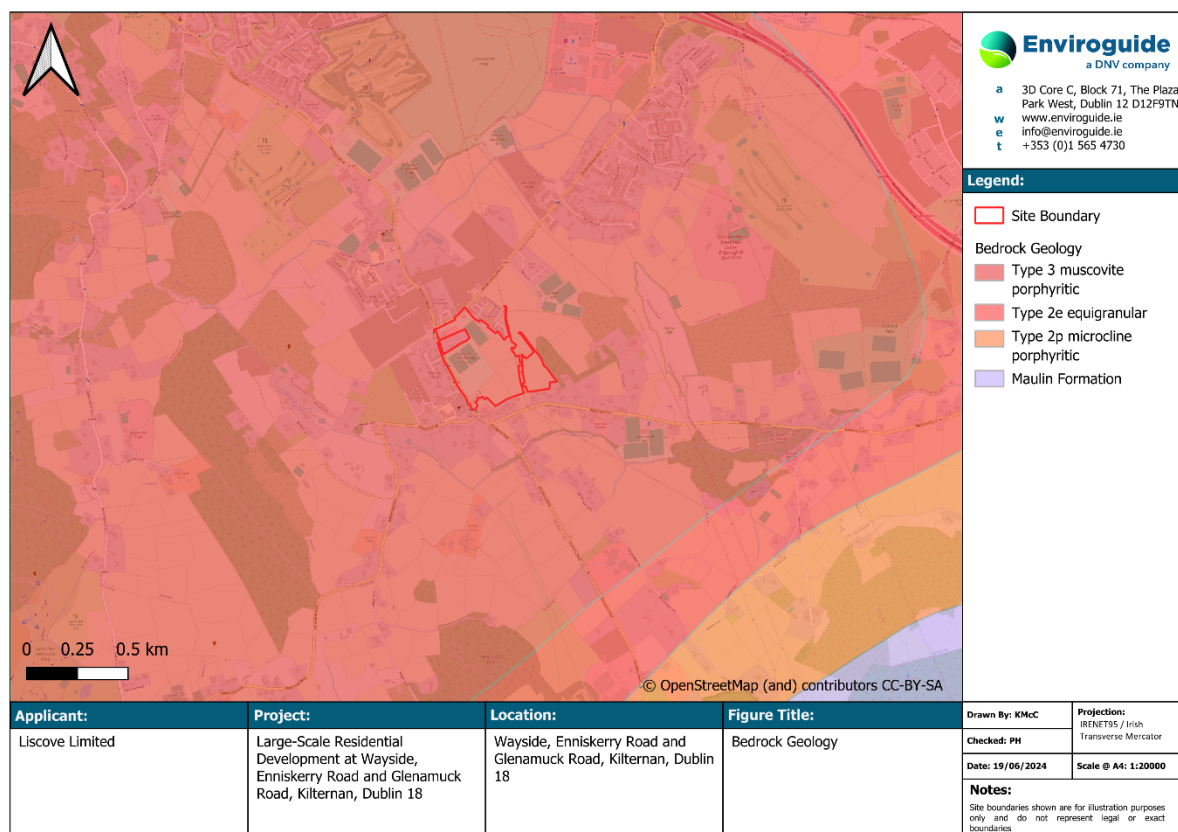


Figure 6-5. Bedrock Geology

6.3.8 Previous Site Investigation Results

The soils and geology encountered during the previous site investigations (Site Investigations Ltd. (SIL), 2006, Ground Investigations Ireland (GII), 2010, GII, 2017 and GII, 2024 included in the Roger Mullarkey & Associates, 2024a Engineering Infrastructure Report submitted with the planning application) are summarised as follows:

- Topsoil (engineers' description) was encountered at all site investigation locations from ground level to depths ranging between 0.2 meters below ground level (mbGL) and 0.3mbGL.
- Brown slightly gravelly sandy CLAY and light yellowish brown slightly gravelly sandy SILT (described as possible weathered bedrock) was encountered below the topsoil to depths ranging between 0.9mbGL and 3.0mbGL.
- Yellowish brown weathered granite was encountered below to CLAY / SILT unit at depths between 0.9 mbGL to 2.4mbGL.

The geophysical data (Apex Geoservices Ltd., 2008 appended to the GII, 2010 report) identifies the following three layers within the granite bedrock:

- An upper layer of completely to highly weathered granite that has an average thickness of 1.6mbGL across the site.
- An underlying layer of highly to moderately weathered granite with corestones of unweathered rock that has an average thickness of 2.5mbGL across the site.
- An underlying slightly weathered to fresh granite bedrock at depths ranging from 2.0mbGL to 6.9mbGL.

Groundwater strikes were recorded during drilling of boreholes at the site (SIL, 2006 included in the Roger Mullarkey & Associates, 2024 Engineering Infrastructure Report submitted with the planning application). The groundwater strikes were recorded at depths ranging from 2.5mBGL to 2.9mBGL and typically within the sandy gravelly clays/silts above the granite bedrock. Groundwater is assessed in Chapter 7 of this EIAR.

6.3.9 Geochemical Domain

The GSI along with the EPA have developed geochemically appropriate levels (GALs) for soil recovery facilities across Ireland specifically in relation to metals and metalloids in uncontaminated soil and stone (GSI, 2024). There are a total of seven defined domains across the country. The GSI (GSI, 2024) defined Geochemical Domains map indicates that the Site of the Proposed Development is located within Domain 6 which is characterised as 'granite rocks'.

A summary of the metals values for Domain 6 are presented below in Table 6-4.

Table 6-4: Geochemically Appropriate Levels for Domain 6

Element	Units	Value
Arsenic	mg/kg	85.80
Cadmium	mg/kg	2.38
Chromium	mg/kg	54.00
Copper	mg/kg	40.00
Mercury	mg/kg	0.53
Nickel	mg/kg	28.20
Lead	mg/kg	108.00
Zinc	mg/kg	168.00

6.3.10 Radon

The Radon Risk Map of Ireland (EPA, 2024) shows a prediction of the number of the houses in any one area that are likely to have high radon levels. The map is based on an analysis of indoor radon measurements plus geological information including, bedrock type, quaternary geology, soil permeability and aquifer type.

The site of the Proposed Development is mapped by the EPA (EPA, 2024) as being in an area where 'about 1 in 5 homes in this area is likely to have high radon levels'.

The EPA cite the reference level for radon as 200 Bq/m³ and a High Radon Area where more than 10% of homes may have more than the reference level of radioactivity. As more than 10% of the houses in the area are mapped by the EPA as being over this reference level it indicates that the site is considered a High Radon Area (EPA, 2024). It is noted that a high radon level can be found in any home, in any part of the country, but these homes are more likely to be located in High Radon Areas.

6.3.11 Geohazards

The GSI (GSI, 2024) records for karst features indicate that there are no karst features within 2km of the Proposed Development site or within the granite bedrock formation beneath the

Proposed Development site. It is noted that karstification primarily occurs in limestone bedrock units across Ireland.

The site of the Proposed Development and surrounding lands are located within an area with a 'low' landslide susceptibility (GSI, 2024). There are no recorded landslides recorded on the GSI database at the site (GSI, 2022) and the closest, which were associated with a series of rock falls on steep slopes of glacial outflow, are recorded approximately 1.99km south of the site.

In Ireland, seismic activity is recorded by the Irish National Seismic Network operated by Dublin Institute for Advanced Studies (DIAS) which has been recording seismic events in Ireland since 1978. There are six permanent broadband seismic recording stations in Ireland operated by DIAS. Records since 2010 show that the majority of recorded seismic events were associated with quarry blasts and no recent events have been recorded within 2km of the site or the Greater Dublin Area.

6.3.12 Geological Heritage Sites

There are no geological heritage sites mapped by the GSI (GSI, 2024) at the site. However, there are three (3No.) geological heritage sites located within 2km radius of the site including the Ballybetagh Bog (Site Code DLR001), the Scalp (Site Code: DLR010) described as a deep channel formed by meltwater erosion and Carrickgollogan (Site Code: DLR004) described as a small but prominent hill located approximately 1.42km southwest, 1.5km south and 2.0km southeast of the site respectively.

6.3.13 Economic Geology

The lands beneath the site are mapped by the GSI (GSI, 2023) to have no mapped granular aggregate potential.

The bedrock beneath the site has been identified by the GSI (GSI, 2023) as having a high potential for crushed rock aggregate.

6.3.14 Importance of Baseline Environment

The site is primarily undeveloped grasslands with a derelict dwelling in the south and the former Kiltarnan Country Market in the north. The subsoils are not mapped as containing a mineral resource and the bedrock underlying the site would be rated as an attribute of 'high' geological importance considering the bedrock is mapped as having a high potential for crushed rock. However, it is considered that the economic extraction of crushed rock aggregate at the site will not be feasible.

Therefore, in accordance with the TII Guidance as documented by the NRA (NRA, 2009) and as outlined in Table 6-1, the soil underlying the site of the Proposed Development would be rated as an overall attribute of 'medium' geological importance.

6.4 Characteristics of the Proposed Development

The Applicant intends to apply for permission for a Large-Scale Residential Development on 2No. sites, measuring approximately 14.2 hectares (Ha), which will be separated by the future Glenamuck Distributer Link Road (GLDR).

The full description of the Proposed Development is outlined in Chapter 2 of this EIAR.

6.4.1 Construction Phase

The construction phase of the proposed development will include:

- The demolition of approximately 740m² of existing structures onsite.
- Foundation design will consist of pad and strip foundations with no requirement for piling.
- The stripping of existing topsoil at the site.
- Excavation of soil and subsoil for the construction of building foundations, drainage and other infrastructure to depths of between 0.6m and 3.0m for foundations and 1.5m to 3.0mbGL for drainage and infrastructure with excavation of 95,250m³ of soils. It is anticipated that there will be no requirement for the excavation of bedrock during the construction phase of the proposed development.
- Where possible, it is intended to reuse suitable excavated soil and subsoil for landscaping and engineering use. However, it is anticipated that up to 66,400m³ of surplus materials will require removal offsite in accordance with all statutory legislation.
- It is anticipated that excavations for foundations will be above groundwater however, locally groundwater may be encountered during deeper excavations for drainage.
- The importation of 77,750m³ of aggregate fill materials will 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.).

6.4.2 Operational Phase

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

The land-use at the site will be changed from undeveloped grasslands to a mixed use residential and retail / commercial land use.

There will be no requirement for bulk storage of petroleum hydrocarbon-based fuels during the operational phase of the Proposed Development.

All proposed solutions for both heating and renewable energy systems for the Proposed Development provide low carbon, low energy heating solutions. A cost benefit analysis of all energy technology solutions will be assessed during the detailed design stage of the Proposed Development to determine the correct balance between the efficient building envelope and the most appropriate combination of technology and renewable energy systems (Waterman Moylan 2024). Further details are provided in Chapter 12 of this EIAR.

6.5 Potential Impact of the Proposed Development

The procedure for determination of potential impacts on the receiving land, soils and geology is to identify potential receptors within the Proposed Development site boundary and surrounding environment and use the information gathered during the desk study and site walkover to assess the degree to which these receptors will be impacted upon in the absence of mitigation. Impacts are described in terms of quality, significance, duration and type as detailed in Table 6-2.

6.5.1 Construction Phase

6.5.1.1 Land Take and Land Use

The Proposed Development will require land take of approximately 14.2 hectares (HA) and will change from undeveloped grasslands mixed use residential and retail/commercial land use. The lands across the majority of the site are zoned 'Objective A – to provide residential development and/or protect and improve residential amenity'. While the lands along the western boundary of the site are zoned 'Objective NC – to protect, provide for and/or improve mixed-use neighbourhood centre facilities.'). Therefore, the change in land use is in accordance with the zoning objectives as set out in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 in order to ensure sustainable use of zoned lands in the Village Core and it is considered that there will be an unavoidable land take with loss of undeveloped land and soil with a 'negative', 'significant' and 'permanent' impact taking account of the surrounding land and zoning objectives.

6.5.1.2 Excavation and Removal of Soil and Subsoil

There will be unavoidable loss of in-situ soils and subsoils from the site as result of landscape development and to achieve formation levels for the Proposed Development. It is proposed that excavated soil will be used to build up the site to achieve the required ground levels for the Proposed Development. Excavation of bedrock is not anticipated.

The construction of the Proposed Development will require the excavation of 95,250m³ of topsoil and subsoil to depths of up to 3.0mbGL to achieve formation levels, for building foundations and for drainage and infrastructure. It is intended to reuse suitable excavated soil and subsoil for landscaping and engineering use. However, it is anticipated that up to 66,400m³ of surplus materials will require removal offsite. The soils underlying the site are considered to be of 'medium' importance (refer to Section 6.3.14). Accordingly, there will be a 'negative' 'moderate' and 'permanent' impact on the underlying soils at the site.

The removal of surplus soil offsite will be undertaken in accordance with applicable statutory requirements. This may include where suitable, removal as by-products that meet the legislative requirements of Article 27 of the European Communities (Waste Directive) Regulations, 2011. The potential impact with removal offsite of surplus soil and other material as wastes is assessed in Chapter 12 of this EIAR.

6.5.1.3 Soil Quality and Contamination

The reuse of up to 28,850m³ of excavated soils at the site for engineering fill and landscaping will have a 'neutral', 'imperceptible' and 'permanent' impact given that it will have undergone testing for contaminants, invasive species and other anthropogenic inclusions and assessment of the suitability for use in accordance with engineering and environmental specifications for the Proposed Development.

There is a potential risk associated with the use of cementitious materials during construction of subsurface structures (such as foundations) on the underlying soil and geology at the Proposed Development. It is considered that this may result in a 'negative', 'moderate' and 'long-term' impact on existing quality of soil within a localised area underlying the site.

The potential accidental release of deleterious materials including fuels and other materials being used onsite, through the failure of secondary containment or a materials' handling accident on the Proposed Development could potentially result in a 'negative', 'moderate to

significant', 'long-term' impact on the receiving soil and geology depending on the nature of the incident.

6.5.1.4 Dust Generation

There is a potential for creation of windblown dust generation from the temporary stockpiling of materials onsite. There will be some exhaust emissions generated from use of excavators, HGVs (heavy goods vehicles) and vibrating rollers during the construction phase of the Proposed Development. An assessment of the potential impact of the Proposed Development with regard to the generation of dust is addressed in Chapter 8 of this EIAR.

6.5.1.5 Soil Structure

The excavation and re-use of soil at the site will result in the exposure of the materials to various elements including weather and construction traffic. The temporary stockpiling of soils and subsoils pending reuse onsite will have a potential 'negative,' slight' and 'long term' impact on the natural strength of the materials.

6.5.1.6 Importation of Fill Materials

The importation of 77,750m³ of aggregate fill materials will 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).

The Proposed Development will require the importation of 77,750m³ of aggregate fill materials for use as granular material beneath road pavements, under floor slabs and for drainage and utility bedding / surrounds. The potential impacts may include loss of attribute and changes in the geological regime at the source site. It is anticipated that the required aggregates identified for importation onsite will be 'indirect' and have a 'neutral,' 'imperceptible' and 'permanent' impact on the source site taking account of the fact that the statutory consent process would have required the necessary environmental impacts to be assessed and mitigated as appropriate at the source site.

6.5.1.7 Geological Hazards

Earthquakes are not likely to occur in the vicinity of the Proposed Development site at a sufficient intensity to pose a risk for the Proposed Development. The GSI database indicates that the Proposed Development site is located within an area of low susceptibility to landslides. Furthermore, there are no potential ground stability hazards identified for the site.

The site is not located within an area associated with karst geology due to the nature of the underlying granite bedrock and therefore there are no identified risks associated with karst features.

The previous site investigation reports (SII, 2006, GII, 2010, GII, 2017 and GII, 2024 included in the Roger Mullarkey & Associates, 2024 Engineering Infrastructure Report submitted with the planning application) did not reference any issues associated with pyrite. All aggregates imported to the site for use in the Proposed Development will be subject to strict quality control procedures in accordance with the design specification and relevant Building Regulations therefore avoiding any potential issues with pyrite in aggregates.

The site is identified as being located within a High Radon Area. The design and specification for all buildings will be in accordance with current Building Regulations and therefore any potential issues associated with radon will be addressed and avoided.

6.5.2 Operational Phase

During the Operational Phase of the Proposed Development there is a limited potential for any direct adverse impact on the receiving land, soil and geological environment taking account of the proposed design measures.

The design and construction of the Proposed Development in accordance with current Building regulations will ensure that the site will be suitable for use for Operational Phase as a residential development taking account of the geological site setting.

6.5.3 Potential Cumulative Impacts

Cumulative Impacts can be defined as “impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project”. Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor. Such effects are not caused or controlled by the project developer.

As part of this assessment, other offsite developments and proposed offsite developments as detailed in Chapter 2 of this EIAR were reviewed and considered for possible cumulative effects with the Proposed Development.

6.5.3.1 Excavation and Removal of Soil and Subsoil

Excavated soil and subsoil during the construction phase of the Proposed Development could potentially be directed to the same receiving waste facilities for recovery / disposal as excavated materials from other developments detailed in Chapter 2 of this EIAR and within the Greater Dublin Area. All surplus soils and subsoils from the site will be removed offsite in accordance with all statutory legislation. Accordingly, it is considered that any cumulative impact on lands, soils and geology associated with the Proposed Development will be ‘neutral’, ‘imperceptible’ and ‘permanent’.

6.5.3.2 Import of Aggregates and Materials

The importation of aggregates to the Proposed Development may be sourced from the same borrow site as other permitted developments detailed in Chapter 2 of this EIAR and within the Greater Dublin Area. However, contract and procurement procedures will ensure that all aggregates and fill material originating from quarry sources that will be required for construction are sourced from reputable authorised suppliers operating in a sustainable manner and in accordance with the necessary statutory consents. Therefore, regardless of the number of other projects and developments using aggregates from the same source sites, there will be an ‘indirect’, ‘neutral’, ‘imperceptible’ and ‘permanent’ impact on the geological environment at the source site.

There are no other cumulative impacts associated with land, soil and geology associated with the construction phase and operational phase of the Proposed Development.

6.5.4 “Do Nothing” Impact

The ‘Do Nothing’ scenario assesses the potential impact on the receiving land, soils, and geological environment if the Proposed Development did not proceed. It is considered that there would be no change or resulting impact on the nature of the site with respect to land, soil and geology as the site of the Proposed Development would remain as undeveloped grasslands.

6.6 Avoidance, Remedial & Mitigation Measures

The mitigation measures as outlined below, will ensure that there will be no significant impact on the receiving land, soil and geology.

6.6.1 Construction Phase

During the construction phase, all works will be undertaken in accordance with the Construction Management Plan (CMP) (Atkins Ireland Limited, 2024) (Appendix 6-1), the Construction Environmental Management Plan (CEMP) (Enviroguide, 2024) and the Resource and Waste Management Plan (RWMP) (Enviroguide, 2024) (Appendix 6-2). Following appointment, the contractor will be required to further develop the CMP, CEMP and RWMP to provide detailed construction phasing and methods to manage and prevent any potential emissions to ground with regard to the relevant industry standards (e.g., Guidance for Consultants and Contractors, CIRIA-C532', CIRIA, 2001). The CMP, CEMP and RWMP 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.

6.6.1.1 Import of Aggregates and Materials

Contract and procurement procedures will ensure that all imported aggregates and materials required for the construction of the Proposed Development will be sourced from reputable suppliers operating in a sustainable manner and in accordance with industry conformity/compliance standards and statutory obligations. The importation of aggregates and materials will be subject to management and control procedures which will include testing for contaminants, invasive species and other anthropogenic inclusions and assessment of the suitability for use in accordance with engineering and environmental specifications for the Proposed Development. Therefore, any unsuitable material will be identified prior to unloading / placement onsite.

6.6.1.2 Airborne Dust Generation

Excavated soils will be carefully managed and maintained in order to minimise potential impact on soil quality and soil structure. Handling of soils will be undertaken in accordance with documented procedures outlined in the CMP and CEMP that will be set out in order to protect ground and minimise airborne dust. The normal measures required to prevent airborne dust emissions and associated nuisance arising from site work will be in place including measures to prevent uncovered soil drying out leading to wind pick up of dust and mud being spread onto the local road network and adjoining properties. This may require additional wetting at the point of dust release, dampening down during dry weather and wheel cleaning for any

vehicles leaving the site. Potential impacts and avoidance and mitigation measures associated with generation of dust are addressed in Chapter 8 of this EIAR.

6.6.1.3 Reuse of Soil

Soil and subsoil materials to be reused within the Proposed Development (i.e., for engineering fill and landscaping) will be subject assessment of the suitability for use in accordance with engineering and environmental specification for the Proposed Development.

6.6.1.4 Management and Control of Soils and Stockpiles

Segregation and storage of soils for re-use onsite or removal offsite and waste for disposal offsite will be segregated and temporary stored onsite pending removal or for reuse onsite in accordance with the measures outlined in the CMP and CEMP.

Where possible, stockpiling of soils and subsoils onsite will be avoided. However, in the event that stockpiling is required, stockpiled materials, pending reuse onsite, will be located away from the location of any sensitive receptors (watercourses and drains). In accordance with Inland Fisheries Ireland guidelines, stockpiles will not be allowed within 30m of the open water where sufficient working areas are available within the site boundary.

The re-use of suitable cut material onsite for the Proposed Development (i.e., landscaping, raising levels or engineering fill) will be undertaken in accordance with the engineered design of the Proposed Development. Surplus or unsuitable soils will be removed offsite.

Surplus material, not suitable for reuse onsite, will be segregated, and stockpiled appropriately for removal offsite. For any excavated material identified for removal offsite, while assessment and approval of acceptance at a destination re-use, recovery site or waste facility is pending, excavated soil for recovery/disposal shall be stockpiled as follows:

- A suitable temporary storage area shall be identified and designated.
- All stockpiles shall be assigned a stockpile number.
- Material identified for reuse onsite, offsite and waste materials will be individually segregated and all segregation, storage and stockpiling locations will be clearly delineated on the Site drawings.
- Soil stockpiles will be covered to prevent run-off from the stockpiled material generation and/or the generation of dust.
- Material identified for reuse on Site, off Site and waste materials will be individually segregated.
- Any waste that will be temporarily stored / stockpiled will be stored on impermeable surface high-grade polythene sheeting, hardstand areas or skips to prevent cross-contamination of the soil below or cross contamination with soil.
- Regular watering will take place to ensure the moisture content is high enough to increase the stability of the soil and thus suppress dust.
- Stockpiles will be a minimum of 30m from drains.

Any waste generated from construction activities, including concrete, asphalt and soil stockpiles, will be managed in accordance with the procedures outlined in the CMP, CEMP and RWMP and will be stored onsite in such a manner as to:

- Prevent environmental pollution (bundled and/or covered storage, minimise noise generation and implement dust/odour control measures, as may be required).

- Maximise waste segregation to minimise potential cross contamination of waste streams and facilitate subsequent re-use, recycling and recovery.
- Prevent hazards to site workers and the general public during Construction Phase (largely noise, vibration and dust).

6.6.1.5 Degradation of Soils

The segregation and stockpiling of soils during the construction phase of the Proposed Development pending reuse or removal offsite will be carefully managed and maintained in order to minimise potential impact on soil quality. Handling of the stockpiled soil and stone will be minimised and will not be disturbed once formed. Stockpiles will be formed to minimise infiltration or accumulations of rainwater in the stockpiles.

6.6.1.6 Export of Resource (Soil and Subsoil) and Waste

All surplus materials and any waste will be removed offsite in accordance with the requirements outlined in the CMP, CEMP and RWMP and will be managed in accordance with all legal obligations. It will be the contractor's responsibility to either; obtain a waste collection permit or, to engage specialist waste service contractors who will possess the requisite authorisations, for the collection and movement of waste offsite.

The re-use of soil and subsoil offsite will be undertaken in accordance with all statutory requirements and obligations including where appropriate re-use as by-product in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011 (SI No. 126 of 2011) as amended.

Any surplus material not suitable for re-use as a by-product and other waste materials arising from the construction phase will be removed offsite by an authorised contractor and sent to the appropriately authorised (licensed/permitted) receiving waste facilities. As only authorised facilities will be used, the potential impacts at any authorised receiving facility sites will have been adequately assessed and mitigated as part of the statutory consent procedures.

Any waste soils will be transported under a valid waste collection permit issued under the Waste Management (Collection Permit) Regulations 2007, as amended and will be delivered to an appropriately authorised waste management facility.

Materials and waste will be documented prior to leaving the site. All information will be entered into a waste management register kept on the site.

Vehicles transporting material with potential for dust emissions to an offsite location shall be enclosed or covered with a tarpaulin at all times to restrict the escape of dust.

Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary. The main contractor will carry out road sweeping operations, employing a suction sweeper or similar appropriate method, to remove any project related dirt and/or material deposited on the road by construction/ delivery vehicles. All vehicles exiting the site will make use of a wheel wash facility where appropriate, prior to exiting onto public roads.

6.6.1.7 Concrete Works

Pre-cast concrete will be used where technically feasible to meet the design requirements for the Proposed Development. Where cast-in-place concrete is required, all work will be carried out to avoid any contamination of the receiving geological environment through the use of

appropriate design and methods implemented by the appointed Contractor and in accordance with the CMP, CEMP and relevant industry standards.

All ready-mixed concrete will be delivered to the site by truck. The following measures will be implemented where poured concrete is being used on site:

- The production, transport and placement of all cementitious materials will be strictly planned and supervised. Site batching/production of concrete will not be carried out on site.
- Shutters will be designed to prevent failure. Grout loss will be prevented from shuttered pours by ensuring that all joints between panels achieve a close fit or that they are sealed.
- Where concrete is to be placed by means of a skip, the opening gate of the delivery chute will be securely fastened to prevent accidental opening.
- Where possible, concrete skips, pumps and machine buckets will be prevented from slewing over water when placing concrete.
- Concrete mixer trucks will not be permitted to wash out on-site with the exception of cleaning the chute into a container which will then be emptied into a skip for appropriate compliant removal offsite.
- Surplus concrete will be returned to batch plant after completion of a pour.

6.6.1.8 Handling of Fuels, Chemicals and Materials

Fuelling and lubrication of equipment will be carried out in accordance with the procedures outlined in the CEMP (Enviroguide, 2024), in a designated area of the site away from any watercourses and drains (where not possible to carry out such activities onsite).

Any diesel, fuel or hydraulic oils stored on-site will be sealed, secured and stored in a dedicated internally bunded chemical storage cabinet unit or inside concrete bunded areas to prevent any seepage to ground. There will be clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage.

- Bunds will have regard to Environmental Protection Agency (EPA) guidelines 'Storage and Transfer of Materials for Scheduled Activities' (EPA, 2013) and Enterprise Ireland's Best Practice Guide (BPGCS005 Oil Storage Guidelines). All tank and drum storage areas will, as a minimum, be bunded to a volume not less than the greater of the following:
 - 110% of the capacity of the largest tank or drum within the bunded area; or
 - 25% of the total volume of substance that could be stored within the bunded area.
- Vehicle or equipment maintenance work will take place in a designated impermeable area within the site.
- Emergency response procedures will be put in place, in the unlikely event of spillages of fuels or lubricants.
- Spill kits including oil absorbent material will be provided so that any spillage of fuels, lubricants or hydraulic oils will be immediately contained.
- In the event of a leak or spill from equipment in the instance of a mechanical breakdown during operation, any contaminated soil will be removed from the site and compliantly disposed off-site. Residual soil will be tested to validate that all potentially

contaminated material has been removed. This procedure will be undertaken in accordance with industry best practice procedures and EPA guidelines.

- Site staff will be familiar with emergency procedures for in the event of accidental fuel spillages.
- All staff on-site will be fully trained on the use of equipment to be used on-site.
- Portable generators or similar fuel containing equipment will also be placed on suitable drip trays or bunds.

Refuelling of plant and vehicles during the construction phase will only be permitted at designated refuelling station locations onsite and will be from a road tanker brought to site as required. Each station will be fully contained and equipped for spill response and a specially trained and dedicated Environmental and Emergency Spill Response team will be appointed by the Contractor before the commencement of works onsite.

A procedure will be drawn up by the contractor which will be adhered to during refuelling of on-site vehicles. This will include the following:

- Fuel will be delivered to plant on-site by dedicated tanker.
- All deliveries to on-site vehicles will be supervised and records will be kept of delivery dates and volumes.
- The driver will be issued with, and will carry at all times, absorbent sheets and granules to collect any spillages that may accidentally occur.
- Where the nozzle of a fuel pump cannot be placed into the tank of a machine then a funnel will be used.
- All re-fuelling will take place in a designated impermeable area. In addition, oil absorbent materials will be kept on-site in close proximity to the re-fuelling area.

6.6.1.9 Emergency Procedures

Emergency procedures will be developed by the appointed Contractor in advance of works commencing and spillage kits will be available on-site including in vehicles operating on-site. Construction staff will be familiar with emergency procedures for in the event of accidental fuel spillages. Remedial action will be immediately implemented to address any potential impacts in accordance with industry standards and legislative requirements.

- Any required emergency vehicle or equipment maintenance work will take place in a designated impermeable area within the Proposed Development site.
- Emergency response procedures will be put in place, in the unlikely event of spillages of fuels or lubricants.
- Spill kits including oil absorbent material will be provided so that any spillage of fuels, lubricants or hydraulic oils will be immediately contained.
- In the event of a leak or spill from equipment in the instance of a mechanical breakdown during operation, any contaminated soil will be removed from the Proposed Development Site and compliantly disposed off-site. Residual soil will be tested to validate that all potentially contaminated material has been removed. This procedure will be undertaken in accordance with industry best practice procedures and standards.
- All construction works staff will be familiar with emergency procedures for in the event of accidental fuel spillages.
- All construction works staff on-site will be fully trained on the use of equipment.

This procedure will be undertaken in accordance with industry best practice procedures and standards. These measures will ensure that there is minimal risk to the receiving hydrological and hydrogeological environment associated with the construction phase of the Proposed Development.

6.6.1.10 Welfare Facilities

Welfare facilities have the potential, if not managed appropriately, to release organic and other contaminants to ground or surface water courses. Foul drainage from temporary welfare facilities during the construction phase of the Proposed Development will be discharged to temporary holding tank(s) the contents of which will periodically be tankered off site to a licensed facility. All waste from welfare facilities will be managed in accordance with the relevant statutory obligations by tankering of waste offsite by an appropriately authorised contractor.

Any connection to the public foul drainage network during the Construction Phase of the Proposed Development will be undertaken in accordance with the necessary temporary discharge licences issued by UE.

6.6.2 Operational Phase

There is no requirement for mitigation measures for the operational phase taking account of the design measures for the Proposed Development.

6.6.3 “Worst Case” Scenario

The potential accidental release of hazardous material including fuels, or other hazardous materials being used on-site during the construction phase could potentially impact on the receiving land, soil and geology environment. This scenario would only occur through the failure of secondary containment or a major incident on the site. The potential for or inadvertent import of contaminated materials during the construction phase could also result in an impact in the absence of the quality control measures. However, taking account of the mitigation measures any environmental harm would be avoided. There would therefore be a ‘neutral’, ‘imperceptible’ and ‘short-term’ impact on the receiving environment. These worst-case scenarios are deemed to be unlikely to occur.

6.7 Residual Impacts

Residual Impacts are defined as ‘effects that are predicted to remain after all assessments and mitigation measures’. They are the remaining ‘environmental costs’ of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts.

The predicted impacts of the construction phase and operational phase of the Proposed Development are described in Table 6-4 in terms of quality, significance, extent, likelihood, and duration. The relevant mitigation measures are detailed, and the residual impacts are determined which take account of the avoidance, remedial and mitigation measures.

There are no significant residual impacts on land, soils and geology anticipated regarding this Proposed Development.

Table 6-4. Summary of Residual Impacts

Activity	Attribute	Predicted Impact	Quality	Significance	Duration	Type	Mitigation	Residual Impact
Construction Phase								
Construction of the Proposed Development	Land Take and Land Use	The Proposed Development will require land take of approximately 14.2Ha and will change from undeveloped grasslands to residential and commercial / retail land use.	Negative	Significant	Permanent	Direct	Unavoidable and no mitigation. The Proposed Development will develop lands in line with the land zoning as set out in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 in order to ensure sustainable use of zoned lands in the Village Core.	Significant
Excavation of In-situ Soils	Soils	There will be an unavoidable loss of 95,250m ³ of excavated topsoil and subsoil through excavation works to achieve the formation levels for the Proposed Development including building foundations, roadways, parking, drainage infrastructure and landscaping.	Negative	Moderate	Permanent	Direct	None required. It is intended to reuse approximately 28,850m ³ of suitable excavated subsoil for engineering fill and landscaping. The removal of all surplus soil will be undertaken in accordance with applicable statutory requirements.	Moderate
Removal of Surplus Soil	Land, Soil and Geology at	Excavated soil and subsoil during the Construction Phase of the Proposed	Neutral	Imperceptible	Permanent	Cumulative	None required. All surplus soils and subsoils from the Site	Imperceptible

Activity	Attribute	Predicted Impact	Quality	Significance	Duration	Type	Mitigation	Residual Impact
	Receiving Facility	Development could potentially be directed to the same receiving waste facilities for recovery / disposal as excavated materials from other developments.					will be removed offsite in accordance with all statutory legislation.	
Use of Cementitious Materials	Soils and Subsoils	Potential release of cementitious material during construction works for foundations, pavements and infrastructure to the land, soil, and geological environment.	Negative	Moderate	Long Term	Direct	Where cast-in-place concrete is required, all work will be carried out to avoid any contamination of the receiving land, soil and geological environment through the use of appropriate design and methods implemented by the main contractor and in accordance with the CMP, CEMP and relevant industry standards	Imperceptible
Accidental Release of Deleterious Materials (e.g., Fuels or Other Hazardous Materials Being Used Onsite).	Soils, Subsoils and Bedrock	Potential (albeit low) for uncontrolled release of deleterious materials including fuels and other materials being used onsite, through the failure of secondary and tertiary containment or a materials handling accident, to the land, soil, and geological environment.	Negative	Moderate to Significant	Long Term	Direct / Worst Case	Refuelling of plant and storage of any deleterious materials including fuels will be undertaken in accordance with the requirements and procedures outlined in the CMP and CEMP.	Imperceptible

Activity	Attribute	Predicted Impact	Quality	Significance	Duration	Type	Mitigation	Residual Impact
Stockpiling of Excavated Soil and Subsoils	Soil Structure	The temporary stockpiling of excavated soils will result in exposure of the materials to various elements including weather.	Negative	Slight	Long-term	Direct	The segregation and stockpiling of soil and stone at the Site pending reuse or removal offsite will be carefully managed and maintained in order to minimise potential impact on soil quality.	Imperceptible
Import of Required Aggregates and Materials	Land, Soil and Geology at the Source Site	The Proposed Development will require the importation of 77,750m ³ of aggregates for the construction of roads and utility infrastructure. The potential impacts may include loss of attribute and changes in geological setting at the source Site.	Negative	Slight	Permanent	Indirect	Only certified materials from authorised sources will be used.	Imperceptible
Operational Phase								
During the Operational Phase of the Proposed Development there is a limited potential for any direct adverse impact on the receiving land, soil and geological environment taking account of the proposed design measures.								

6.8 Monitoring

6.8.1 Construction Phase

During the construction phase of the Proposed Development the following monitoring measures will be considered:

- Routine monitoring and inspections during refuelling, concrete works to ensure no impacts and compliance with avoidance, remedial and mitigation measures.
- Inspections and monitoring will be undertaken during excavations and other ground-works to ensure that measures that are protective of water quality are fully implemented and effective.
- Materials management and waste audits will be carried out at regular intervals to monitor the following:
 - Management of soils onsite and for removal offsite.
 - Record keeping.
 - Traceability of all materials, surplus soil and other waste removed from the site.
 - Ensure records are maintained of material acceptance at the end destination.

6.8.2 Operational Phase

There is no requirement for mitigation measures to address potential cumulative impacts during the operational phase taking account of the design measures for the Proposed Development.

6.9 Interactions

6.9.1 Population and Human Health

An assessment of the potential impact of the Proposed Development on human health is included in Chapter 4 of this EIAR. There is a potential risk of dust generated from excavation and stockpiling of soil during the construction phase of the Proposed Development posing a human health risk in the absence of standard avoidance and mitigation measures which will be implemented to be protective of human health.

Appropriate industry standard and health and safety legislative requirements will be implemented during the construction phase of the Proposed Development that will be protective of site workers.

6.9.2 Biodiversity

An assessment of the potential impacts of the Proposed Development on the Biodiversity of the site, with emphasis on habitats, flora and fauna which may be impacted a result of the excavation and importation of materials to the site are included in Chapter 5 of this EIAR. It also 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 particular conservation importance and proposes measures for the mitigation of these impacts.

6.9.3 Hydrology and Hydrogeology

An assessment of the potential impact of the Proposed Development on the hydrological and hydrogeological environment is included in Chapter 7 of this EIAR. In the absence of avoidance, remedial and mitigation measures, there is a potential for sediment from excavated soils entering runoff and discharging into receiving local drainage during the construction phase of the Proposed Development. Procedures for the protection of receiving water environment are set out in Chapter 7 of this EIAR.

6.9.4 Air Quality and Climate

The excavation of soils across the site and the temporary stockpiling of soils pending reuse or removal offsite has the potential to generate nuisance impacts (i.e., dust) during the construction phase of the Proposed Development. An assessment of the potential impact of the Proposed Development on air quality is included in Chapter 8 of this EIAR.

6.9.5 Landscape and Visual

During the construction phase and into the operational phase of the Proposed Development, the site landscape will undergo a change from undeveloped lands to residential and commercial / retail with associated landscaping. An assessment of the potential impact of the Proposed Development on the receiving landscape is included in Chapter 10 of this EIAR.

6.9.6 Material Assets: Traffic and Transport

Where possible, it is intended to retain and re-use the excavated soil and subsoil on the site for engineering fill and landscaping. However, it is anticipated that approximately 66,400m³ of excavated soil will require removal offsite. There is also a requirement to import aggregates during the construction phase of the Proposed Development. The assessment of the potential impact of the Proposed Development is included in Chapter 13 of this EIAR.

6.10 Difficulties Encountered When Compiling

No difficulties were encountered in the preparation of this chapter of the EIAR.

6.11 References

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