EIAR SCREENING ASSESSMENT

Newtownmountkennedy River Walkway Project
Wicklow County Council

PROJECT NO. W335

JULY 2022

OCSC
O'CONNOR | SUTTON | CRONIN
Multidisciplinary
Consulting Engineers

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NOTICE

DOCUMENT CONTROL & HISTORY

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1 INTRODUCTION

1.1 Project Contractual Basis & Parties Involved

This report has been prepared by O'Connor Sutton Cronin & Associates Ltd. (OCSC) at the request of their Client, Wicklow County Council. The site for assessment comprises land adjacent to the Newtownmountkennedy River, Newtownmountkennedy, Co. Wicklow where the project proposes the addition of a walkway along the river with entry/exit points located on the Dublin Road and Main Street.

The purpose of this report is to determine whether the project requires the preparation of an Environmental Impact Assessment Report (EIAR). This report documents the screening completed to provide a summarised overview of the potential impacts on the receiving environment whilst taking cognisance of the relevant statutory requirements.

A Stage 1 Screening for Appropriate Assessment has also been prepared (OCSC, 2022). A Stage 1 Screening exercise assesses the likely significant effects of the development on Natura 2000 sites within the zone of influence of the proposed project. This project has been screened out at Stage 1; and, therefore, it has been determined that the project does not require the preparation of a Natura Impact Statement (NIS).

The report was completed by Glenda Barry, BSc, MSc, Principal Consultant and Eadaoin Butler BSc, Consultant and reviewed and approved by Eleanor Burke, BSc, MSc, DAS, MIEnvSc, CSci, Technical Principal, and the OCSC Environmental Division Manager.

1.2 Study Area

The study area consists of a small section of the Dublin Road, agricultural fields, a small, wooded area, and sections of the Newtownmountkennedy River banks. The site location is outlined in Figure 1.1.

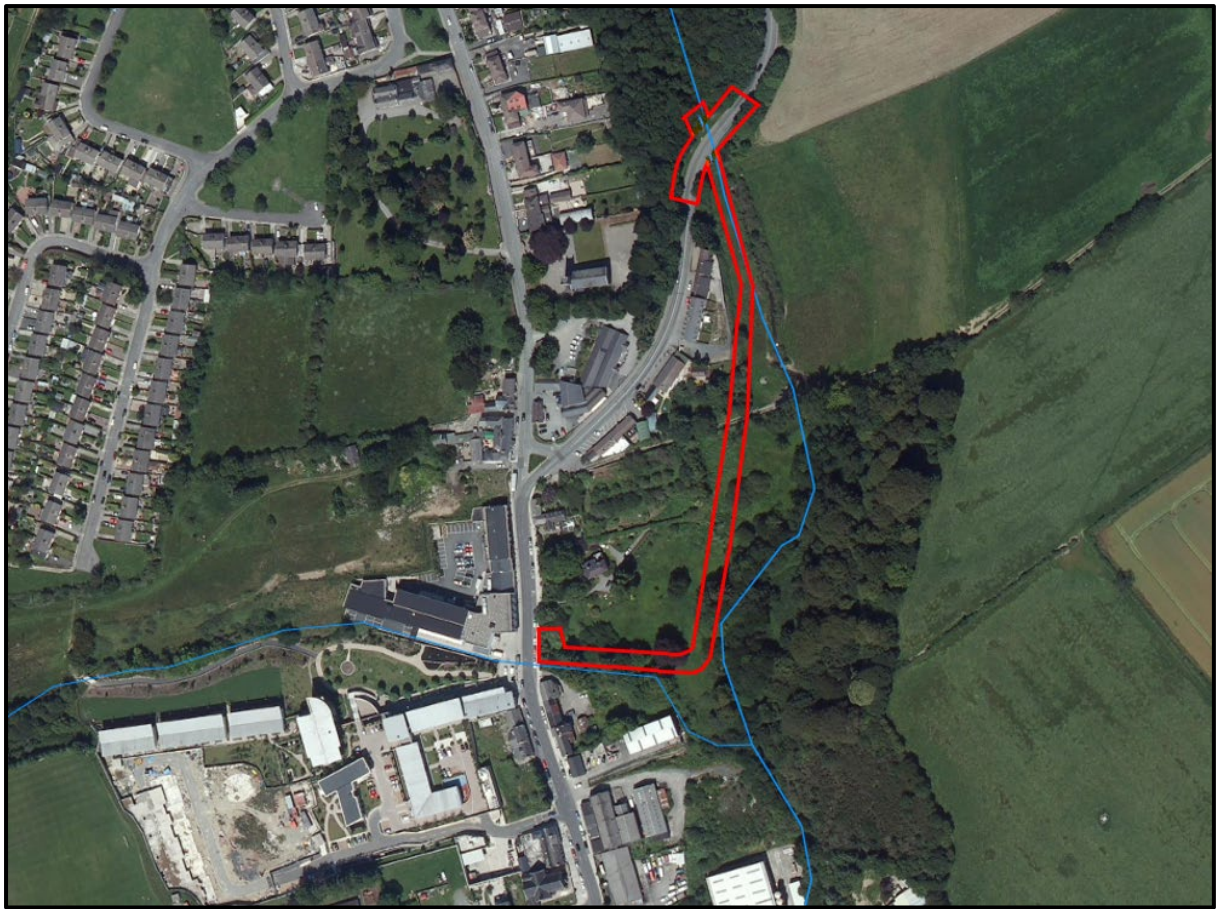

Figure 1.1: Study Area; site location indicated by red line (Google Maps, 2022)

1.3 Surrounding Land Use

The immediately surrounding area consists of industrial, residential, educational, recreational/ community, and commercial/retail business land uses. To the north, the study area is bounded by the Dublin Road, agricultural land, and woodland. Residential areas border the site to the south and west. Agricultural land, the Newtownmountkennedy River and woodlands border the site to the east. Refer to Table 2.1 for a full list of adjacent land uses.

Table 1.1: Adjacent Land Uses

Boundary	Land Use
North	Bounded by the Dublin Road, agricultural land, and woodlands
South	Residential and commercial premises
East	Woodlands, Newtownmountkennedy River, and agricultural land further to the east
West	Golden Village Takeaway, The Mount Kennedy Inn, Dunnes Stores, and additional commercial and residential premises

Figure 1.2: Surrounding Land Use (Google Maps, 2022)

1.4 Project Description

This Environmental Impact Assessment Report (Screening) has been prepared for the proposed development of a walkway along the river with entry/exit points located on the Dublin Road and Main Street in Newtownmountkennedy, Co. Wicklow.

1.5 Project Objectives

The overall project objectives include:

- a description of the physical characteristics of the whole project;
- a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected;
- description of the aspects of the environment likely to be significantly affected by the project; and
- A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from a) the expected residues and emissions and the production of waste, where relevant and b) the use of natural resources, in particular soil, land, water, and biodiversity.

1.6 Methodology and Approach

The methodology and approach used in the preparation of this report will follow:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports, Irish Environmental Protection Agency, May 2022.
- European Commission (2015) Environmental Impact Assessment – EIA, Over, Legal Context
- European Union EIA Directive (85/337/EEC) and its amendments in 1997, 2003 and 2009
- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment;
- Planning and Development Act 2000 (as amended)
- Planning and Development Regulations 2001 (as amended);
- Directive 2014/52/EU;
- Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licensing Systems – Key Issues Consultation Paper (2017; DoHPCLG)
- Preparation of guidance documents for the implementation of EIA directive (Directive 2011/92/EU as amended by 2014/52/EU) – Annex I to the Final Report (COWI, Milieu; April 2017)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018)
- Environmental Impact Assessment – Guidance for Consent Authorities regarding Sub-threshold Development (2003; DoEHLG)

Using the above documents, it has been possible to carry out a desktop EIAR Screening using the best available guidance and operating within the applicable legislation. The methodology employed in this screening exercise updates previous guidance in line with the new Directive 2014/52/EU.

1.7 Scope of Works

To meet the project objectives, the following scope of works were completed:

- Present a discussion of the current site status and key environmental influences around the site;
- Undertake and present a historical site and area review, primarily referring to old Ordinance Survey Ireland maps but utilising other sources as appropriate and readily available;
- Present a discussion of the general soil and groundwater conditions within the topographical and area context; and
- Present an overview if any significant negative environmental impacts can arise from the proposed project.

1.8 Limitations

This Environmental Impact Assessment Screening Report has been prepared for the sole use of Wicklow County Council ("the Client"). No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by OCSC.

This assessment is based on a review of available historical information, environmental records, consultations, relevant guidance information, and reports from third parties. All information received has been taken in good faith as being true and representative.

This report has been prepared in line with best industry standards. The methodology adopted and the sources of information used by OCSC in providing its services are outlined in this Report. The assessment undertaken by OCSC and described was undertaken in June 2022 and is based on the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

OCSC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to OCSC's attention after the date of the Report.

The conclusions presented in this report represent OCSC's best professional judgement based on review of the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

The findings of the EIA screening assessment prepared for the project has informed our professional opinion as to whether an EIAR is warranted for the proposed project, with due regard to all relevant statutory requirements and technical guidance. However, it is ultimately the responsibility of the relevant planning authority to make a determination as to whether an EIAR is required for a particular project, based on screening conducted by the planning authority.

2 EIA SCREENING PROCESS

2.1 Introduction

This section of the report discusses the legislative basis for screening used to decide if the proposed project requires the preparation of an Environmental Impact Assessment Report (EIAR). It also sets out the project in terms of planning context.

This project has been screened in accordance with Section 3.2 of the 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022), the Environmental Impact Directive (85/337/EEC) and all subsequent relevant amendments, and Planning and Development regulations (2001-2018), including S.I. No. 296 of 2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, which came into operation on 1st September 2018.

2.2 EIA Applicable Legislation

The Environmental Impact Assessment (EIA) Directive 85/337/EEC has been in force across the European Union since 1985 and applies to a wide range of defined public and private projects which are defined in Annexes I (Mandatory EIA) and II (Screening-Discretion of Member States) of the directive. The EIA Directive of 1985 has been amended three times: 97/11/EC, 2003/35/EC, and 2009/31/EC. These amended directives have been coded and replaced by Directive 2011/92/EU of the European Parliament and Council on the assessment of the effects of certain public and private projects on the environment (and as amended by Directive 2014/52/EU). Directive 2014/52/EU has been transposed in 2018 in Irish law under the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296 of 2018).

2.3 Mandatory EIAR Review

Annex I of the European Communities (EIA) Directive lists the activities for which an EIA is required. The proposed project is not listed in Annex I; therefore, it is not mandatory for an EIA to be carried out.

Where a project is listed on Annex II or is a development that is not exempted, the national authorities of the member state must decide whether an EIA is needed for a proposed project. This is done by the "screening procedure", which determines the effects of project on the basis of thresholds/criteria or a case-by-case examination. Annex III of the Directive outlines the specific criteria that must be considered when a sub-threshold project is being examined for Environmental Impact Assessment.

The screening procedure investigates whether the project has significant potential negative impact on the environment using different criteria including:

- Characterisation of the proposed development
- Location of proposed development

- Type and Characteristics of the potential impact

The relevant information to be provided Information for the Purposes of Screening Sub-threshold Development for Environmental Impact Assessment include:

1. A description of the proposed development, including in particular—

(a) A description of the physical characteristics of the whole proposed development and, where relevant, of demolition works and

(b) A description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.

2. A description of the aspects of the environment likely to be significantly affected by the proposed development.

3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—

(a) The expected residues and emissions and the production of waste, where relevant, and

(b) The use of natural resources, in particular soil, land, water, and biodiversity.

4. The compilation of the information in paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7".

3 CHARACTERISTICS OF PROPOSED DEVELOPMENT

Schedule 7 of SI 296 of 2018 requires that the characteristics of proposed development are identified. In particular, it references the following sections:

3.1 Size and Design

The study area comprises a small portion of the Dublin Road, agricultural fields, a small wooded area, sections of the Newtownmountkennedy River banks, and a section of Main Street. The works have been designed to provide a river walkway between the two roads for pedestrian access.

3.2 Cumulation with other Existing Developments/Development the Subject of a Consent

A review of Wicklow County Council planning records for the area was undertaken. The review covered projects which are in receipt of a grant of planning within the last 7 years. None of these are to the scale and nature of this application and generally relate to construction of or amendments to individual properties.

The proposed development is short term by its very nature and expands the pedestrian traffic infrastructure in the area. Based on a review of planning applications, it is considered unlikely that any of the committed developments in the immediate vicinity will result in a significant potential for cumulative environmental impacts (including potential cumulative traffic impacts, surface water quality, etc) with the proposed development during either the construction or operational phases.

The most recent finalised development plan for Newtownmountkennedy is the Newtownmountkennedy Local Area Plan 2008-2014, extended to 2018. However, this Area Plan does not specifically address the works currently being proposed. A draft Newtownmount kennedy Town Plan has been published that covers 2022-2028 and forms part of the draft County Development Plan 2022-2028. Zoning for the area is Open Space with a view to protect and enhance existing and provide for recreational open space.

3.3 The nature of any associated Demolition Works

It is not anticipated that any buildings will require demolition as there are no buildings in the study area.

3.4 The use of Natural Resources, in particular Land, Soil, Water and Biodiversity

There will be no long-term use of any natural resource as this project is of short-term duration.

3.5 Production of Waste

Any waste generated during the construction will firstly be reused on-site where possible, e.g. topsoil generated will be reused to provide landscaping and excavated material will be reused for backfill where this material meets acceptable construction criteria. However, if offsite disposal is required for any material, it will be managed in accordance with all relevant waste management legislation. There will be no generation of waste following the completion of the works.

3.6 Pollution and Nuisances

There is the potential that there will be a temporary increase in noise during the proposed works. However, they will not exceed levels typical of construction works and are short-term in nature. There will be a slight increase in traffic disturbance during the construction activities, i.e. bringing supplies to site and removal of material if required. However, this disturbance will be short term in duration. Some dust will likely be generated during the works; however, this nuisance will be managed in line with best practice. There will be no pollution or nuisance after operations, i.e. following the completion of works.

Surface water pollution via runoff, including pollution by silt or hydrocarbons, will be managed in accordance with best practice. The risk of surface water pollution during the construction stage is considered to be moderate due to the proximity of the site to the Newtownmountkennedy River.

Drainage will be constructed in accordance with best practice and standard design parameters. The risk of drainage pollution from the addition of the walkway in the waterways is deemed to be moderate due to the proximity of the site to the Newtownmountkennedy River. However, the appointed contractor will be required to prepare a site-specific Construction Environmental Management Plan (CEMP) which will clearly detail all necessary environmental control measures.

3.7 The Risk of Major Accidents or Disasters including those caused by Climate Change

There is minimal risk of major accidents or disasters including those caused by climate change given the small-scale and temporary nature of the construction works. Any risks that are present are associated with typical construction activities including working with machinery. However, the appointed contractor will be required to prepare a site-specific CEMP clearly detailing all necessary environmental control measures.

There will be no risks following construction above that which would be expected for pedestrian traffic.

3.8 Risks to Human Health – e.g. Water Contamination/Air Pollution

Risks to surface water during the operations phase will be minimised via construction in line with best practice. In addition, contractors will be required to implement construction methods in line with best practice regarding fuel and chemical storage and use on the site and any other items that may pose a risk to water.

There are no reported groundwater source protection zones (SPZs) within a 2km radius of the proposed site.

Based on the GSI database (refer to section 4.15) there are reportedly three wells within the site boundary and an additional three wells within 1km of the site area. Given the short-term nature of the works and the works being conducted in accordance with best practice guidance, it is not anticipated that the works will pose a risk to groundwater quality during either the construction or operations phase of the works. In addition, air pollution will be limited to typical construction nuisance such as dust. The same best practice guidelines will be applied to noise nuisance. Overall, the risk to human health is low.

4 LOCATION OF THE PROPOSED DEVELOPMENT

4.1 Information Sources

An understanding of the site setting and history was gained by undertaking a review of the following primary sources including:

- A review of available extracts of historical Ordnance Survey of Ireland (OSI) maps;
- National Monuments Service (NMS) viewer;
- A review of information held by the Environmental Protection Agency (EPA) EnVision online Mapping;
- Aerial images available of the site (OSI and Google);
- The Geological Survey of Ireland (GSI) and GeoHive online mapping tools; and
- The National Parks and Wildlife Service online map tool.

4.2 Abundance, Availability, Quality, and Regenerative Capacity of Natural Resources

Limited natural resources will be required to complete the works. It is proposed that material generated during the works is reused on site. The relevant natural resources have been looked at in more detail in the following sections.

4.3 The Absorption Capacity of the Natural Environment

In the description of the site, the absorption capacity of the natural environment has been screened in accordance with Regulations paying particular attention to:

(i) wetlands, riparian areas, river mouths;
(ii) coastal zones and the marine environment;
(iii) mountain and forest areas;
(iv) nature reserves and parks;
(v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive;
(vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;
(vii) densely populated areas; and
(viii) landscapes and sites of historical, cultural, or archaeological significance.

4.4 Surrounding Land Use

The terrestrial environment is characterized not only by its physical land cover, but also from a human/social perspective by its land use which is distinguished by its designated or identifiable purpose (EPA, 2008).

The site and immediate surrounding area are comprised of residential, commercial/retail businesses, and agricultural/ horticultural land uses. Refer to Section 1 for a full list of adjacent land uses.

4.5 Site Development

A review of the OSI historical maps dataset has found that the study area has been structurally unoccupied from the 1830's until the 1930's. The following section outlines the historically mapped features in the immediate environs of the study area.

The 6" inch (1837-1842) shows the site area of Newtownmountkennedy town with a church, post office, a market house and police station all labelled. A small path is shown on the map which cuts across the site. The site was being used solely for agricultural practices as shown in Figure 4.1.

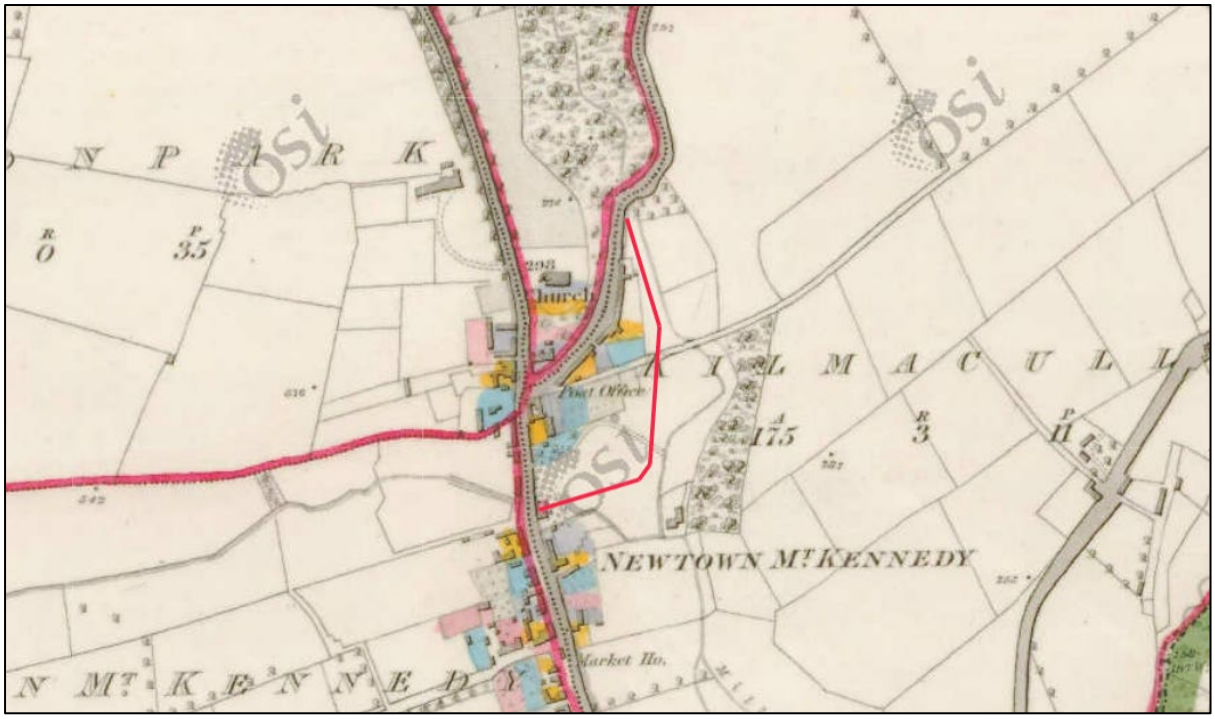

Figure 4.1: 1837-1842 6-inch OS Map; site location shown by red line (Source: OSI, 2022)

The 25-Inch Map (1888-1913) now shows a well and the protected Georgian house, Valle Pacis, near the site. The surrounding areas of Newtownmountkennedy have undergone further development with the addition of a second church, a fever hospital, a courthouse, two schools, scour valves and a dispensery as shown in Figure 4.2.

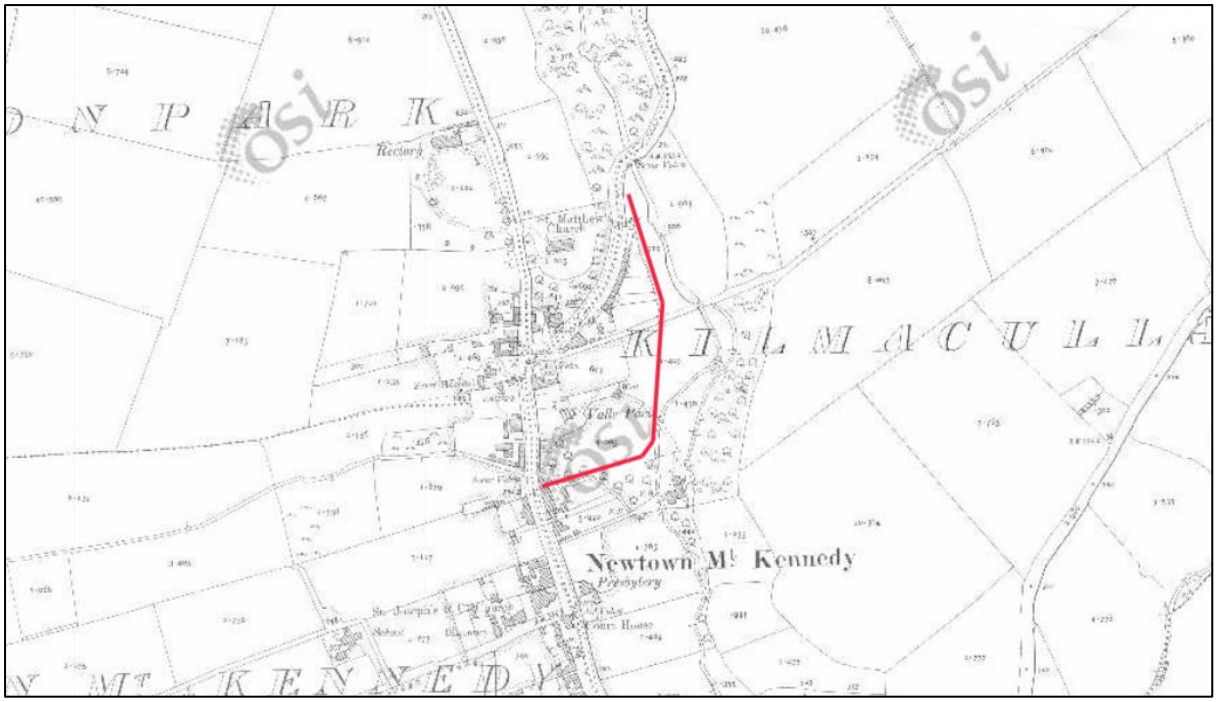

Figure 4.2: 1888-1913 25 inch OSI Map; site location shown by red line (Source: OSI, 2022)

The 6-inch Cassini Map (1830s to 1930s) shows the study area and immediately surrounding area as unchanged from 1888-1913 map. See Figure 4.3.

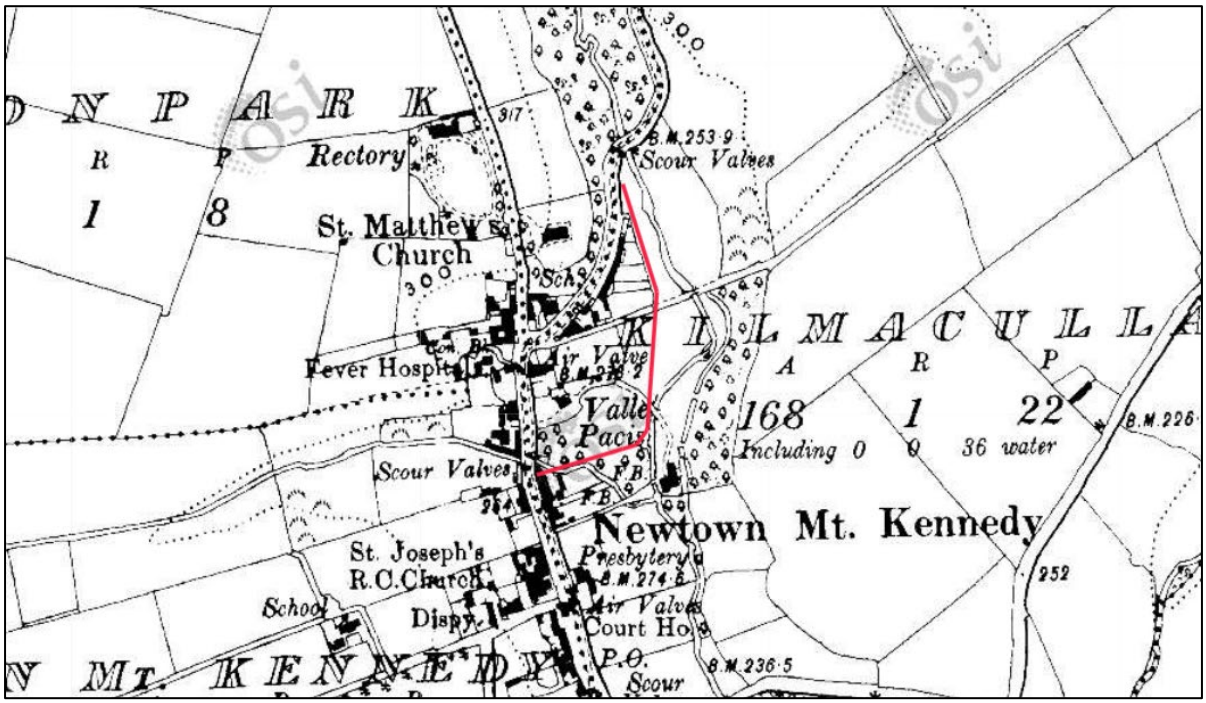

Figure 4.3: 6 Inch Cassini Map; site location shown by red line (Source: OSI, 2022)

The aerial photograph for 1995 (Figure 4.4) shows no changes to the site conditions. Beyond the boundary, two residential housing estates have been constructed to the northwest of the site and a factory to the south of the site since the Cassini mapping.

Figure 4.4: Aerial photograph for 1995; site location shown by red line (Source: GeoHive, 2022)

The 2000 aerial photo (Figure 4.5) shows no significant changes to the site or surrounding area since the 1995 aerial photo was taken.

Figure 4.5: Aerial photograph for 2000; site location shown by red line (Source: GeoHive, 2022).

The 2005 aerial photo (Figure 4.6) shows no significant changes to the site or surrounding area since the 2000 aerial photo was taken.

Figure 4.6: Aerial photograph for 2005; site location shown by red line (Source: GeoHive, 2022).

The 2011-2013 aerial photo (Figure 4.7) indicates that an industrial estate has been built to the west of the proposed site location. This estate currently houses Little Explorers Childcare, Dunnes Stores, and Glenbrook Home Goods Store among others. No other significant changes shown for the site or surrounding area.

Figure 4.7: Aerial photograph 2011-2013; site location shown by red line (Source: GeoHive, 2022)

The 2013-2018 aerial photo (Figure 4.8) shows no significant changes to the site or surrounding area since the 2011-2013 aerial photo was taken.

Figure 4.8: The aerial photograph from 2013-2018 showed no significant changes from 2011-2013.

4.6 Site Physical Setting

Information regarding the site topography, hydrology, geology, hydrogeology, and ecology of the area has been obtained from records held by the Geological Survey of Ireland (GSI), Environmental Protection Agency (EPA) Envision online mapping tool, Ordnance Survey of Ireland (OSI), GeoHive, Water Framework Directive Maps, and National Parks and Wildlife Service (NPWS) databases.

4.7 Biodiversity

An Appropriate Assessment (AA) Screening Report has been prepared by OCSC which concluded that it the proposed project in the absence of mitigation is likely to give rise to adverse effects on the designated European sites with which it is hydrologically linked. Therefore, a Natura Impact Statement (NIS) was undertaken.

There are three SPAs within 15km of the proposed scheme: The Murrough SPA (4.2km east), Wicklow Mountains SPA (7.6km west), and Wicklow Head SPA (14km east). There is no physical connectivity, in the form of hedgerows, treelines, or woodlands, from the proposed works area to any SPA.

There are eight SACs within the 15km of the proposed scheme: Carriggower Bog SAC (3.2km northwest), Glen of the Downs SAC (3.8km north), The Murrough Wetlands SAC (4.5km east), Bray Head SAC (7.5km northeast), Wicklow Mountains SAC (7.6km west), Knocksink Wood SAC (11.9km northwest), Ballyman Glen SAC (12.3km northwest), and Wicklow Reef SAC (14km southeast). There is no physical connectivity, in the form of hedgerows, treelines, or

woodlands, from the proposed works area to and of these SACs. There is a hydrological link between the Newtownmountkennedy_020 River situated to the east of the study area and its tributary which crosses the study area, and The Murrough Wetlands SAC located 4.5km downstream.

There are no Natural Heritage Area (NHA) within 15km of the study area.

There are 19 proposed Natural Heritage Areas (pNHA) within 15km of the site. The nearest is the Carriggower Bog (Site Code 000716), located 3.1km northwest of the study area. There is no linkage between the study area at the Carriggower Bog pNHA as the study area is located downstream of this pNHA. There is however, a hydrological link between the Newtownmountkennedy_020 River, located to the east of the study area, and its tributary which crosses the study area and The Murrough Wetlands pNHA (4.5km downstream). There is no hydrological links to any other proposed Natural Heritage Areas.

Although this project is small in magnitude and extent, the close proximity to the river and indirect hydrological links to The Murrough SPA, The Murrough Wetlands SAC, and the Murrough pNHA (located 4.2km, 4.5km, and 4.5km downstream, respectively) indicate the potential for low to moderate impacts to occur.

Given the nature of the development, its scale, and its location it is concluded that the project is foreseen to give rise to low adverse effects on the biodiversity local to the site. An NIS has been completed (OCSC, 2022) for European sites.

4.8 Topography

The topography of the regional area is varied with rolling hills, troughs, and lower lying elevations towards The Murrough SAC.

4.9 Unconsolidated Geology

The site is comprised of three different soils, with well-drained, mainly basic main soils and alluvial mineral soils underlying the majority of the site area (lavender and ochre, respectively on Figure 4.9). A small area in the western portion of the site is underlain by made ground shown as aqua on Figure 4.9.

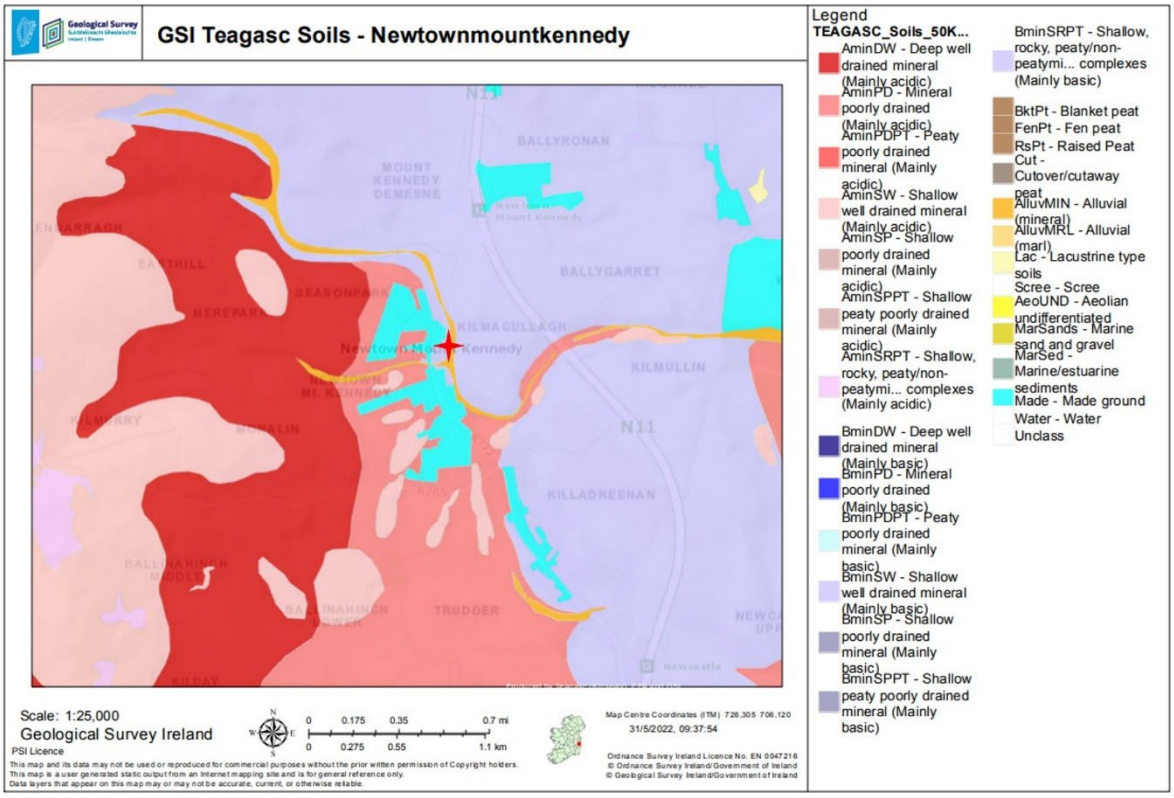

Figure 4.9: Teagasc Topsoil Soil Classification; approximate site location indicated by red star (Source: GSI, 2022).

4.10 Geology

The site is underlain by Cambrian greywacke and quartzite of the Bray Head Formation as shown in Figure 4.10. The formation is dominated by greywacke and by the distinctive quartzite units which range in thickness from 10m to over 100m. Slump deformation is widespread with slumped zones from 10m to 200m thick alternating with coherent undeformed sediments (GSI, 2022). undeformed sediments (GSI, 2022).

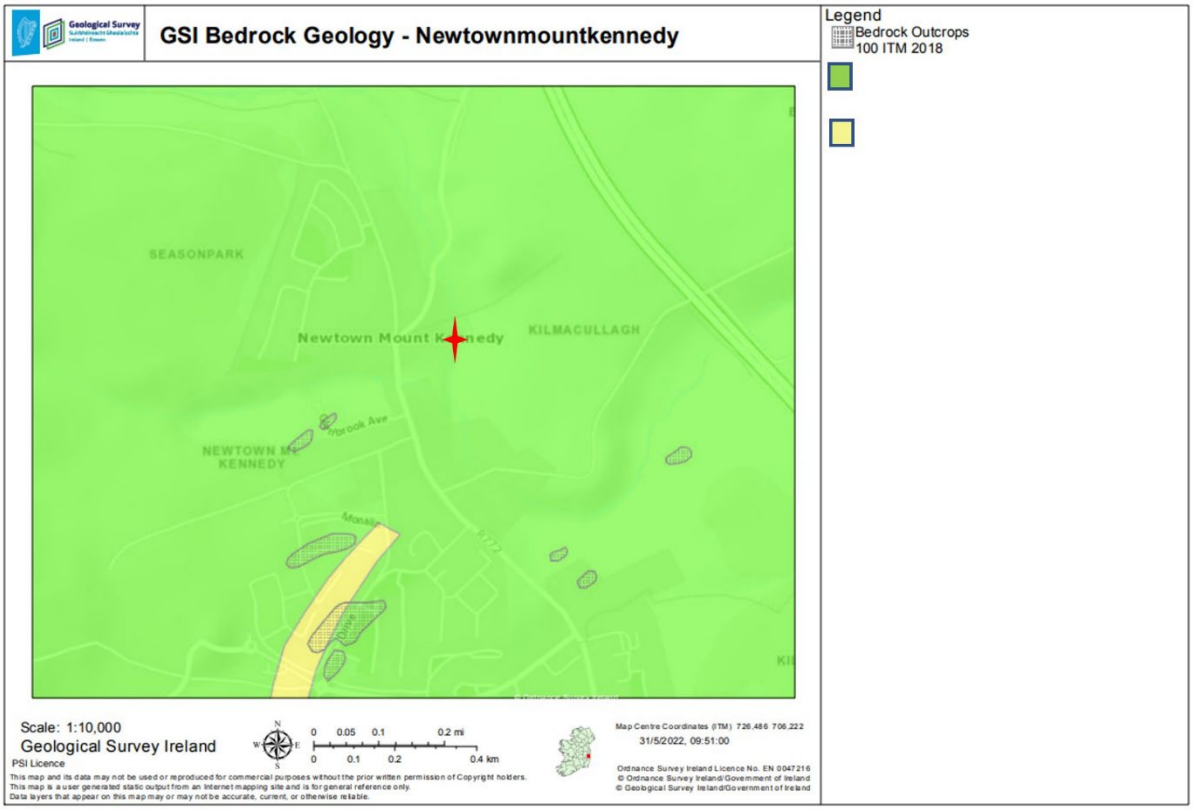

Figure 4.10: Bedrock Geology; approximate site location indicated by red star (Source: GSI, 2022).

4.11 Areas of Geological Interest

The GSI online mapping service was consulted regarding areas of geological interest in the vicinity of the site. The nearest area of geological interest is Dunran Channel (site code WW019) which is located 3.1km south of the site and is a designated County Geological Site (CGS). Dunran Channel is up to 80m deep with a U-shaped profile typical of meltwater channels and was formed by meltwater erosion on the eastern flank of the Wicklow Mountains. The second nearest area of geological interest is the Wicklow-Greystones Coast (site code WW060), a CGS located 4km east of the site. The Wicklow-Greystones Coast is an uninterrupted shingle beach which is understood to have formed around 5,000 years ago and extends for over 17km between Greystones and Wicklow.

Given the distance between the site and the two nearest areas of geological interest, it can be considered that these are not within the area of influence of the proposed development. See Figure 4.11.

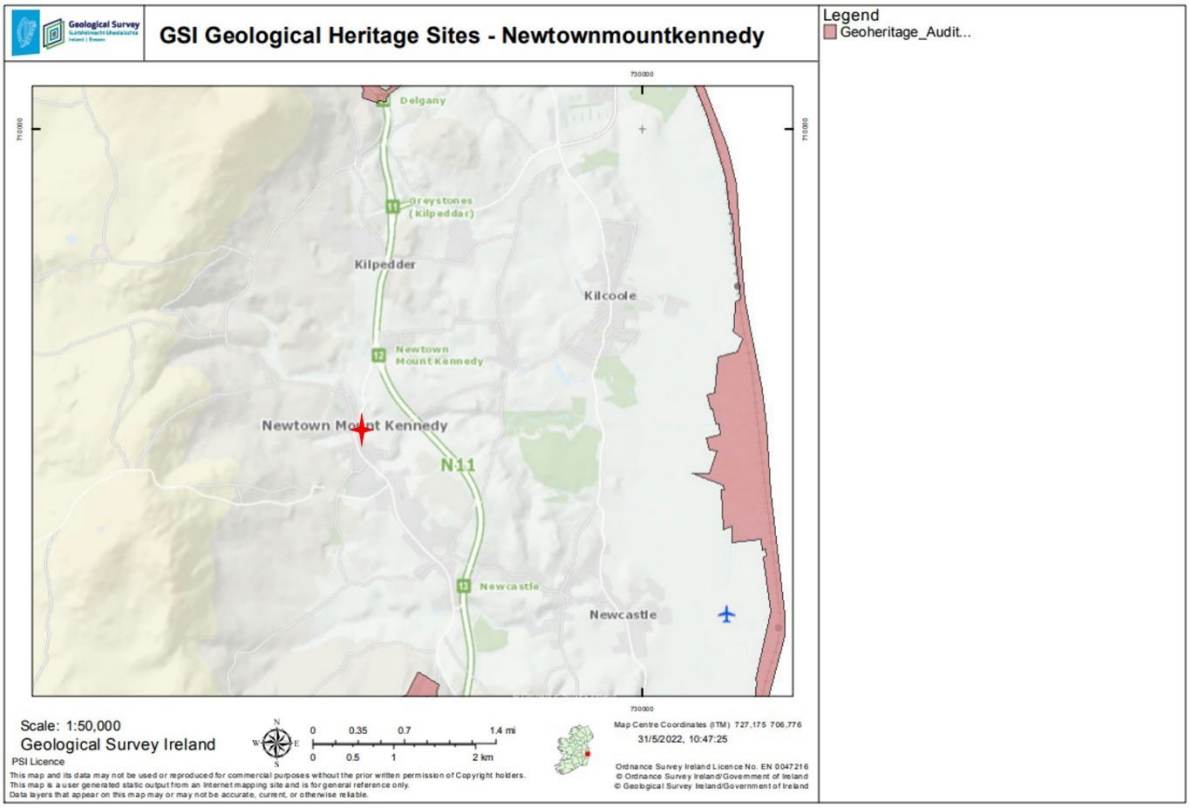

Figure 4.11: Geological Heritage Sites; approximate site location indicated by red star (Source: GSI, 2022).

4.12 Aquifers

The GSI provides a methodology for aquifer classification based on resource value (Regionally Important, Locally Important, and Poor) and vulnerability (Extreme, High, Moderate, or Low). Resource value refers to the scale and production potential of the aquifer whilst vulnerability refers to the ease with which groundwater may be contaminated by human activities (vulnerability classification primarily based on the permeability and thickness of subsoils). The site is underlain primarily by a locally important gravel aquifer; however, the southwestern portion of the site is underlain by a poor bedrock aquifer which is generally unproductive except in local zones as shown in Figure 4.12.

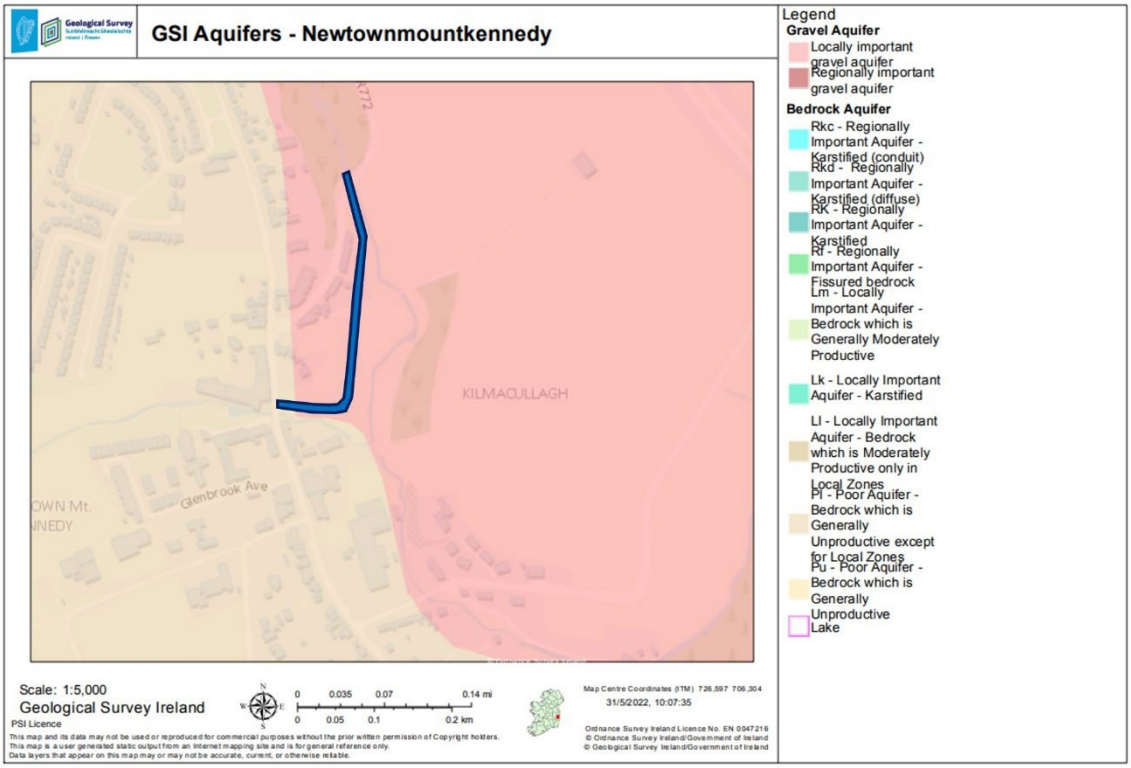

Figure 4.12: Aquifers; approximate site location indicated by blue line (Source: GSI, 2022).

4.13 Groundwater Vulnerability

The GSI resources describe the groundwater vulnerability beneath the site as High 'H' as shown in Figure 4.12.

Vulnerability ratings are related to a function of overburden thickness and permeability which might offer a degree of protection and/or attenuation to the underlying aquifer from surface activities and pollution. There are no karst features identified in the vicinity of the site.

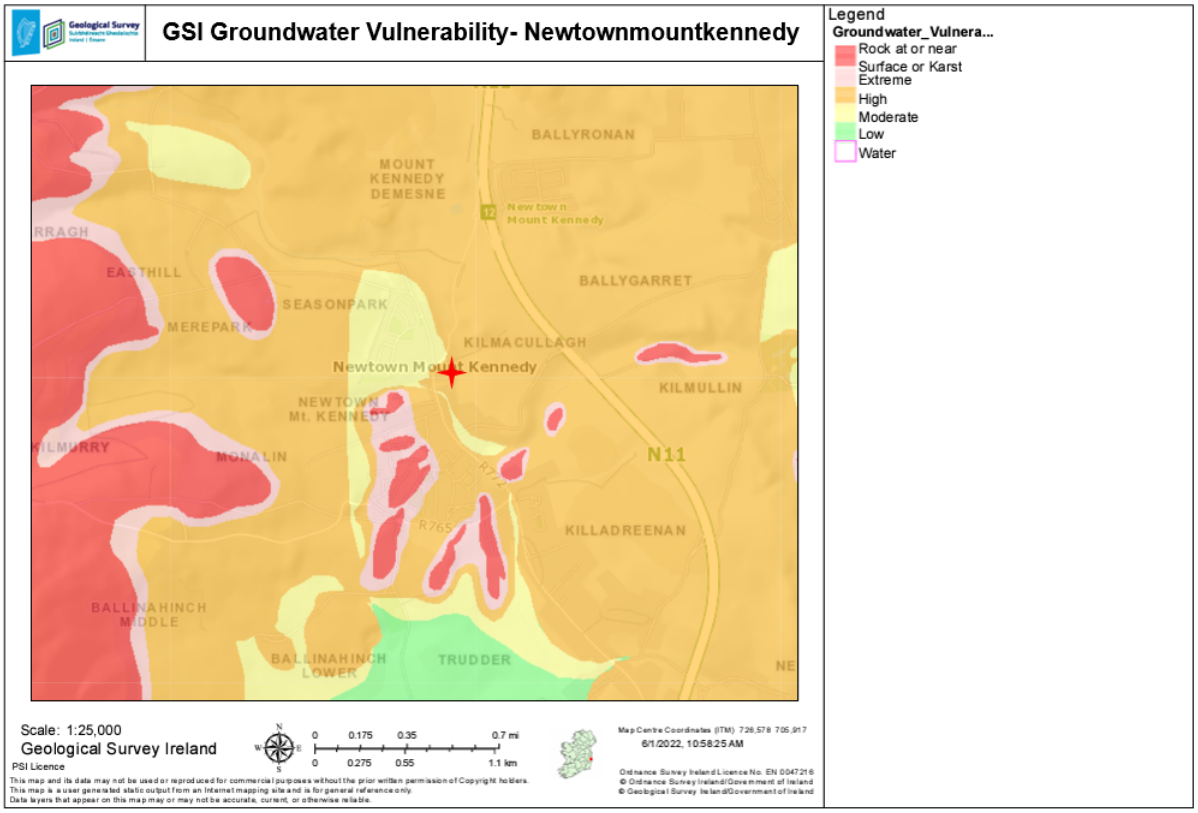

Figure 4.13: Groundwater Vulnerabilty; approximate site location indicated by red star (Source: GSI, 2022).

4.14 Groundwater Recharge

Diffuse recharge generally occurs via rainfall percolating through the subsoil with its rate being higher in areas where the subsoil in thinner and/or more permeable. The proportion of effective rainfall that recharges the aquifer is largely determined by the thickness and permeability of the soil and subsoil and by the slope. The groundwater recharge zones associated with the site are shown in Figure 4.14. GSI groundwater recharge model parameters for these zones are summarised in Table 4.1.

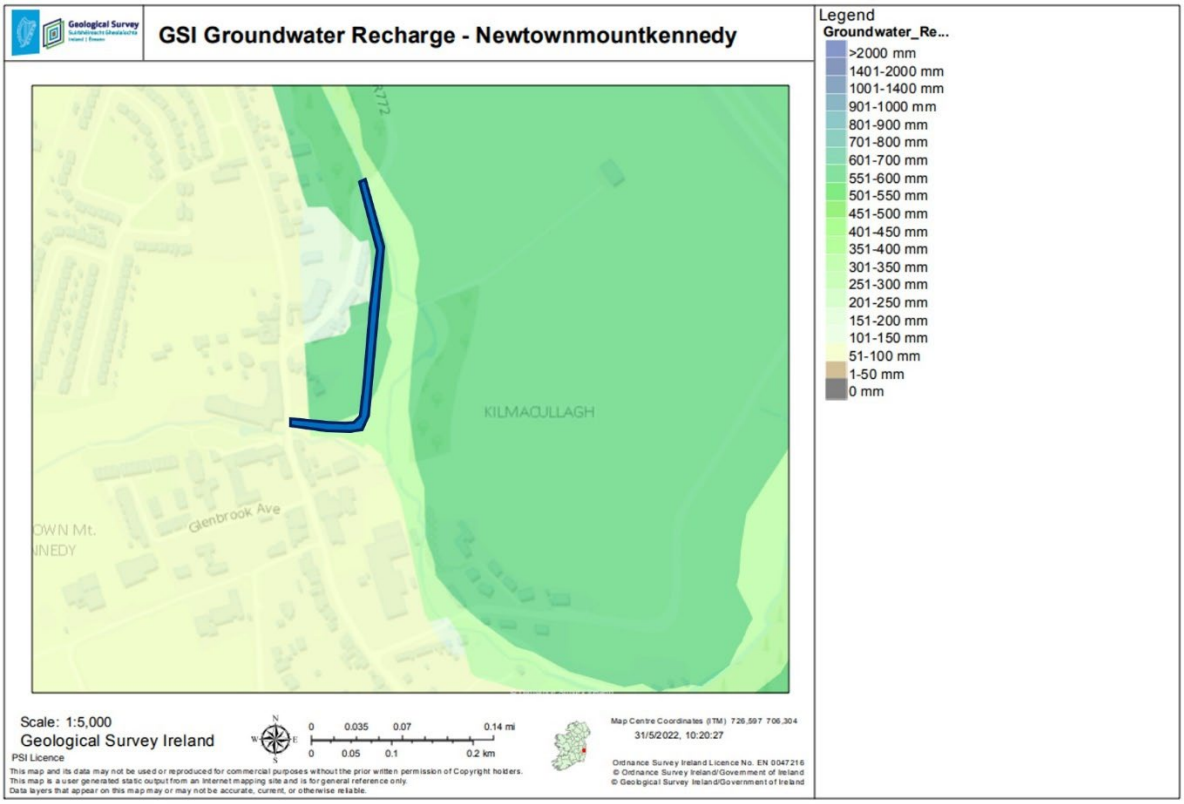

Figure 4.14: Groundwater Recharge; approximate site location indicated by blue line (Source: GSI, 2022).

Table 4.1: GSI Groundwater Recharge Parameters

Groundwater Recharge Parameters				
Site Location:	Northern End	Along Stream Banks	West of Stream	Southwest End
Average Recharge (mm/yr):	268-559	268	559	100
Hydrogeological Setting:	2.i/ 2.iv	1.vii/ 2.iv	1.vi/ 2.i	2.m/ 2.ii
Hydrogeological Setting Description:	High vulnerability sand and gravel overlain by well-drained soil	High vulnerability sand and gravel aquifer overlain by poorly-drained soil or peat/ extreme vulnerability sand and gravel aquifer where the water table is <3m below the surface and overlain by	High vulnerability sand and gravel aquifer overlain by poorly-drained soil or peat/ extreme vulnerability sand and gravel aquifer where the water table is <3m below the surface and overlain by	Made ground/ high permeability sand and gravel overlain by well-drained soil

		poorly-drained soil or peat	poorly-drained soil or peat	
Recharge Coefficient (%):	42.50-85.00	42.50	85.00	20.00-85.00
Effective Rainfall (mm/yr):	629.700-657.400	629.700	657.400	657.400-657.800
Recharge (mm/'yr):	268-559	268	559	132-559
Subsoil Permeability Description:	High	High	High	High
GW Vulnerability:	High	High/ Extreme	High/ Extreme	High
Aquifer Category:	Lg/Pl	Lg/Pl	Lg/Pl	Pl
Aquifer Category Description:	Locally important gravel aquifer underlain by a poor bedrock aquifer which is generally unproductive except in local zones	Locally important gravel aquifer underlain by a poor bedrock aquifer which is generally unproductive except in local zones	Locally important gravel aquifer underlain by a poor bedrock aquifer which is generally unproductive except in local zones	Poor bedrock aquifer which is generally unproductive except in local zones

4.15 Wells & Springs

A search of the GSI groundwater well database was conducted to identify registered wells within the site footprint and/or the surrounding area.

There are three boreholes with the potential to be located within the site boundary and were installed for domestic use only: a dug well (3219NWW008) which was installed on 1st July 1970 to 22.5m; a borehole (3219NWW009) which was installed on 1st July 1970 to 23.5m; and a borehole (3219NWW035) which was installed on 27th June 1979 to 32m. There are three additional wells located within 1km of the site. These wells were dug or drilled between 1993 and 1997 to depths ranging from 3.8m to 48.7m. Two were drilled for domestic use and one carried the notation that it was part of a "depth to bedrock drilling programme (No. 145)".

The GSI database also provides a framework for the protection of groundwater source zones (e.g. areas of contribution to water supply bores). There are no reported source protection zones (SPZs) within a 2km radius of the proposed site. The nearest SPZ is Roundwood PWS which is situated approximately 8.3 km west-southwest of the site.

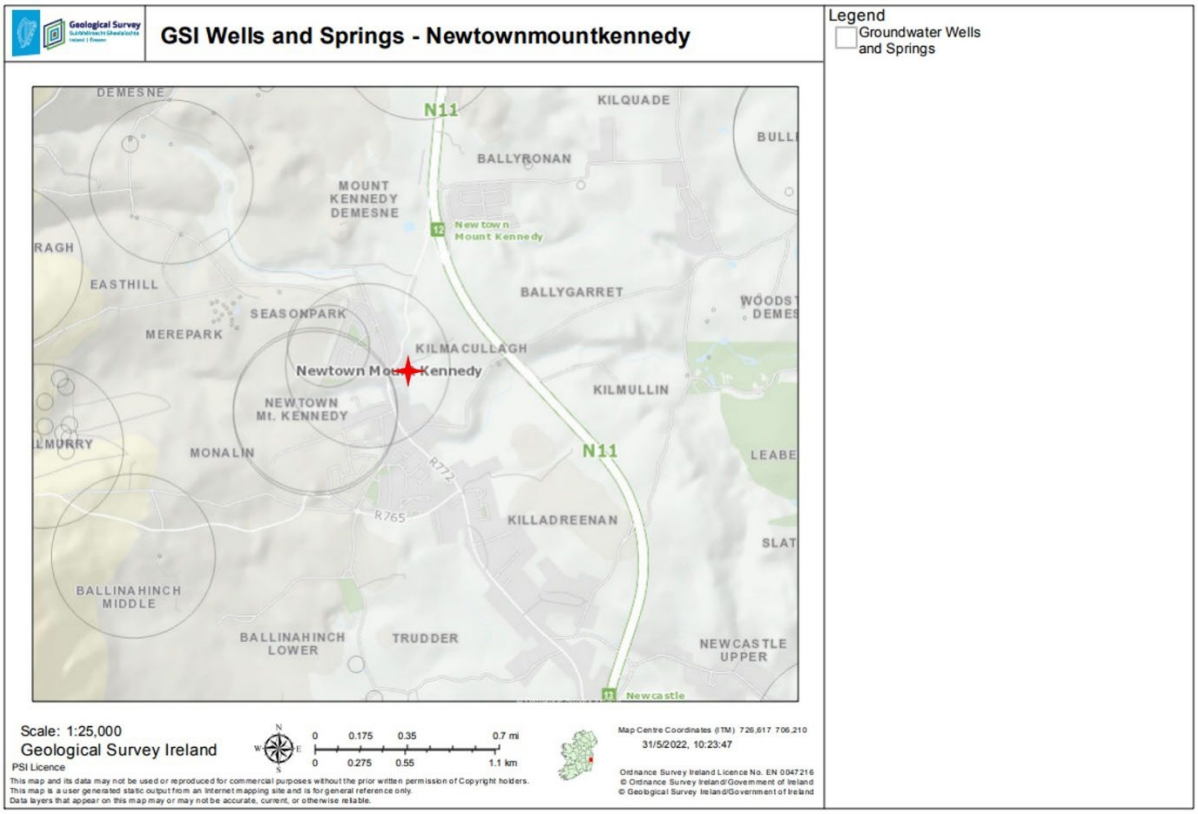

Figure 4.15: Wells and Springs; approximate site location indicated by red star (Source: GSI, 2022).

4.16 Hydrology

There is a surface water feature mapped within the site area. The EPA designated tributary stream Newtownmountkennedy_020 runs from north to south adjacent the site area and joins the Glendarragh river south of the site. The river flows from north to south past the northern end of the site area and eventually into the Murrough Wetlands SAC, 4.4km direct distance and 5.1km as the river flows. Based on the most recent water quality information 2013-2018, the Newtonmountkennedy_020 has an overall Water Framework Directive (WFD) Status of 'Poor' as shown in Figure 2.3. The EPA spatial dataset shows that the WFD River Waterbody Risk associated with the river is 'At Risk' (EPA 2022) as shown in Figure 2.4. WFD summary information for this stream is summarised in Table 4.2.

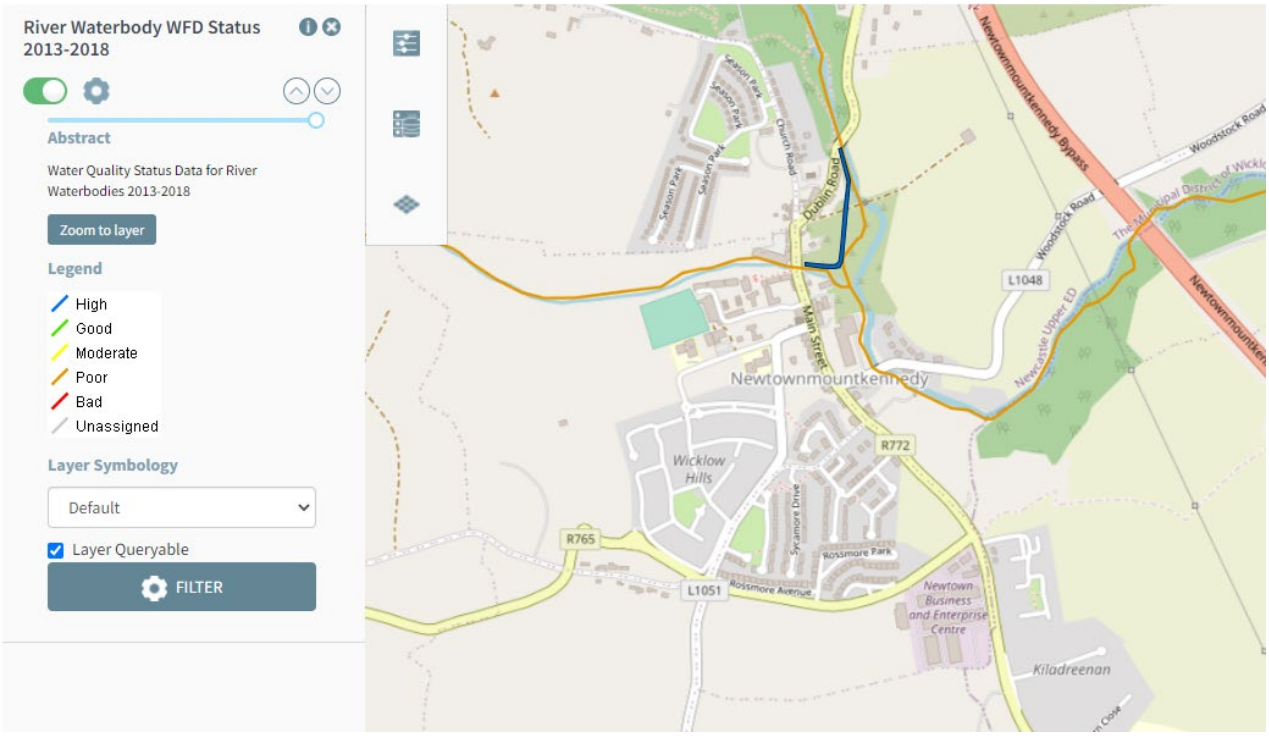

Figure 4.16: River Waterbody WFD Status; approximate site location indicated by blue line (Source: EPA Maps, 2022).

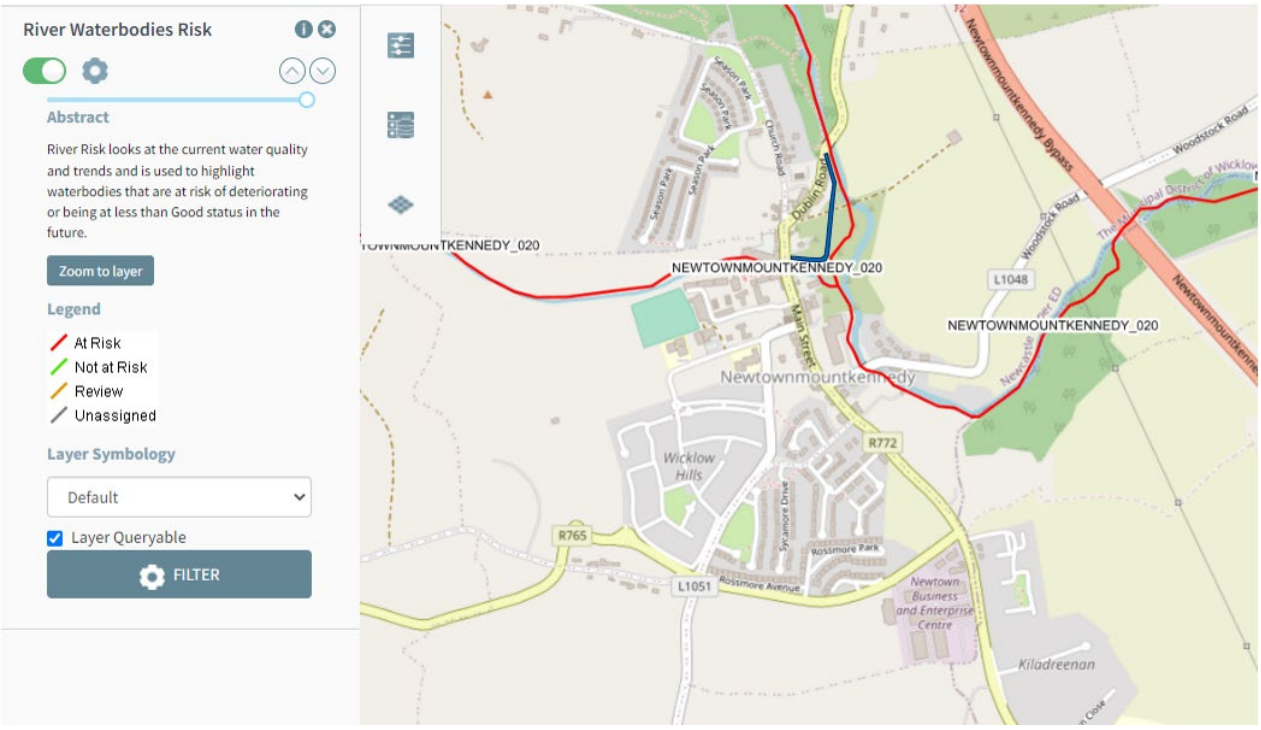

Figure 4.17: River Waterbodies Risk; approximate site location indicated by blue line (Source: EPA Maps, 2022).

Table 4.2: WFD Summary Information – Newtownmountkennedy River

Waterbody Code	IE_EA_10N020600
Waterbody Name	NEWTOWNMOUNTKENNEDY_020
Waterbody Type	River
Iteration	SW 2013-2018
Status	Poor
Risk	At Risk

4.17 Radon

According to the EPA (now incorporating the Radiological Protection Institute of Ireland), about 1 in 20 homes in this area is likely to have high radon levels Figure 4.13. This is not relevant to the proposed development.

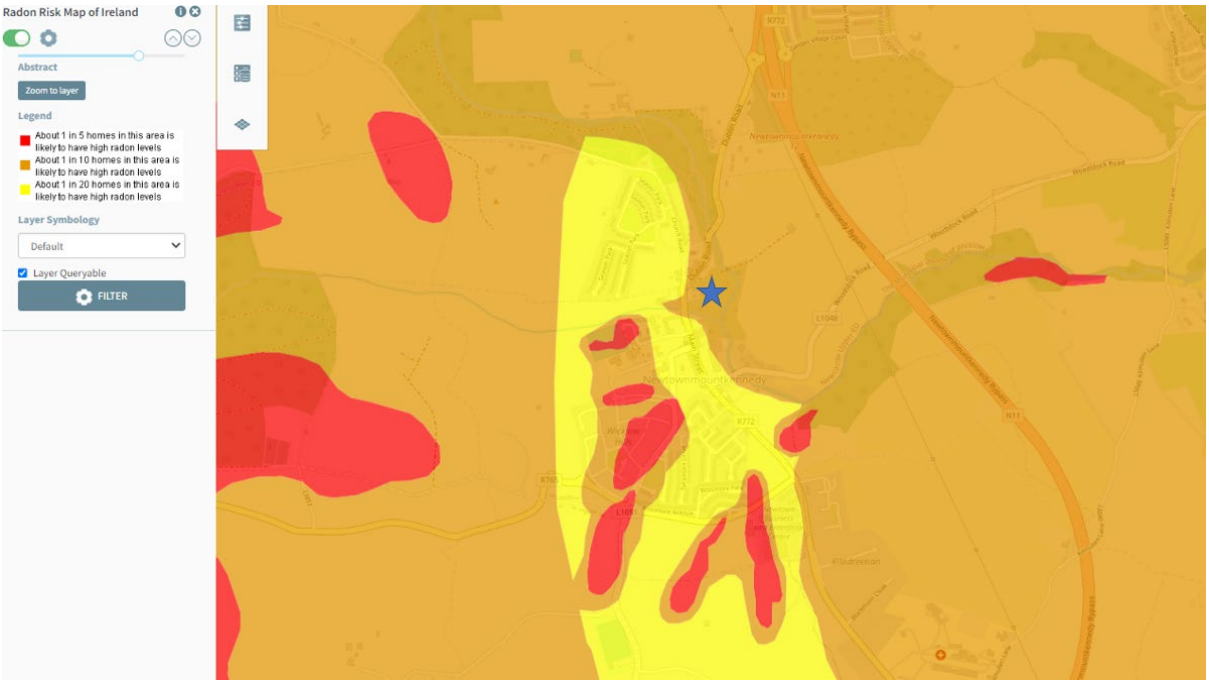

Figure 4.18: Radon Risk; approximate site location indicated by red star (Source: EPA Maps, 2022).

4.18 Protected Structures

The National Monuments Service (NMS) maps show that there are eight protected structures adjacent to the proposed works: 1 – a church, Reg. No. 16307009, built in 1830 to 1835; 2 – Reg. No. 16307008, built as a school in 1840 to 1860, now used as a retail outlet, Affordable Splendour; 3 – a house, Reg. No. 16307011, built between 1835 and 1845; 4 – a house, Reg. No. 16307007, built between 1790 and 1810; 5 – a house, Reg. No. 16307004, built between 1820 and 1840; 6 – a house, Reg. No. 16307003, built between 1850 and 1870; 7 – a public house, Reg. No. 16307002, built between 1820 and 1840 and 8 – a church/chapel, Reg. No. 16307001, built between 1860 and 1870. See Figure 4.14 for the locations of protected structures in relation to the site.

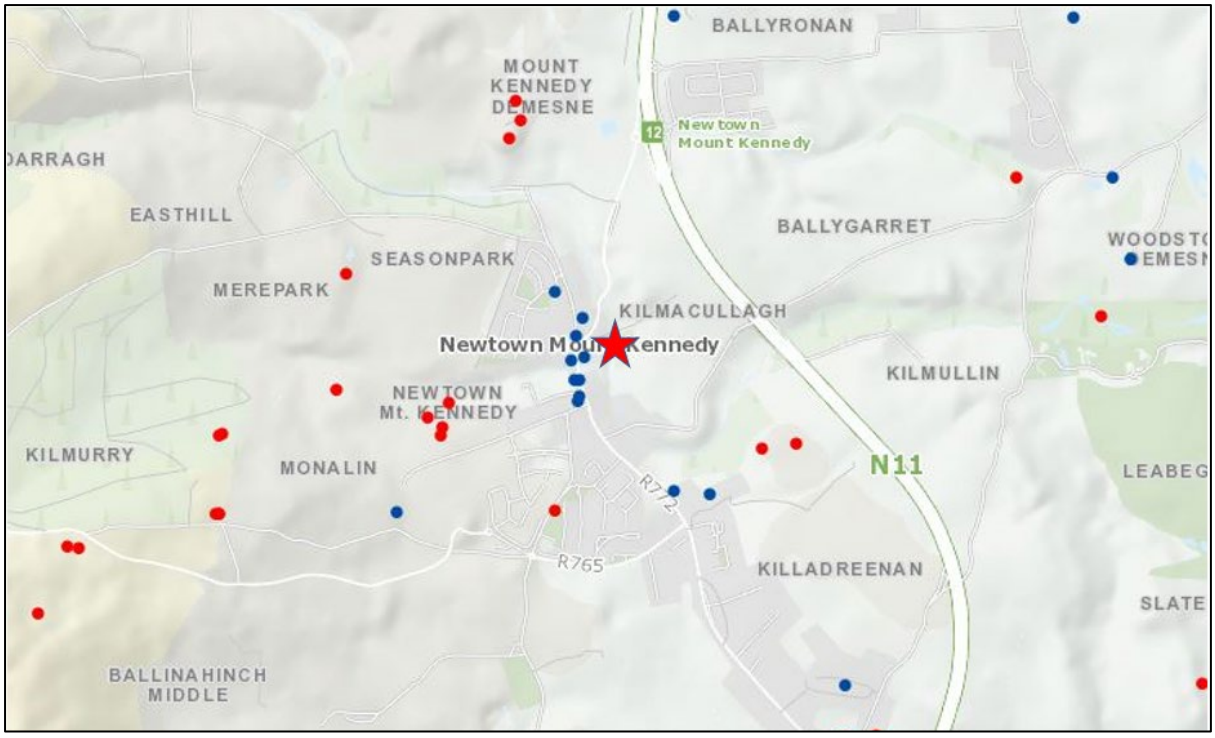

Figure 4.19: National Monument Service Protected Structures; approximate site location indicated by red star (Source: NMS, 2022).

4.19 Nearby Site Investigations

The Geological Survey of Ireland (GSI) have compiled a database from site investigations carried out in Ireland. Figure 4.20 identifies the site investigations locations closest to the vicinity of the site.

The nearest borehole to the site is located 0.15m to the south. The next nearest is a group of eight boreholes located 0.21-0.23km to the north. All of these boreholes as well as others more distal to the site are associated with a large site investigation area included under report ID 7,614 for which no further information was given. A second large site investigation was recorded 0.4km to the east of the site at its nearest point and was associated with the Newtownmountkennedy Bypass on the N11 (ID 1,735).

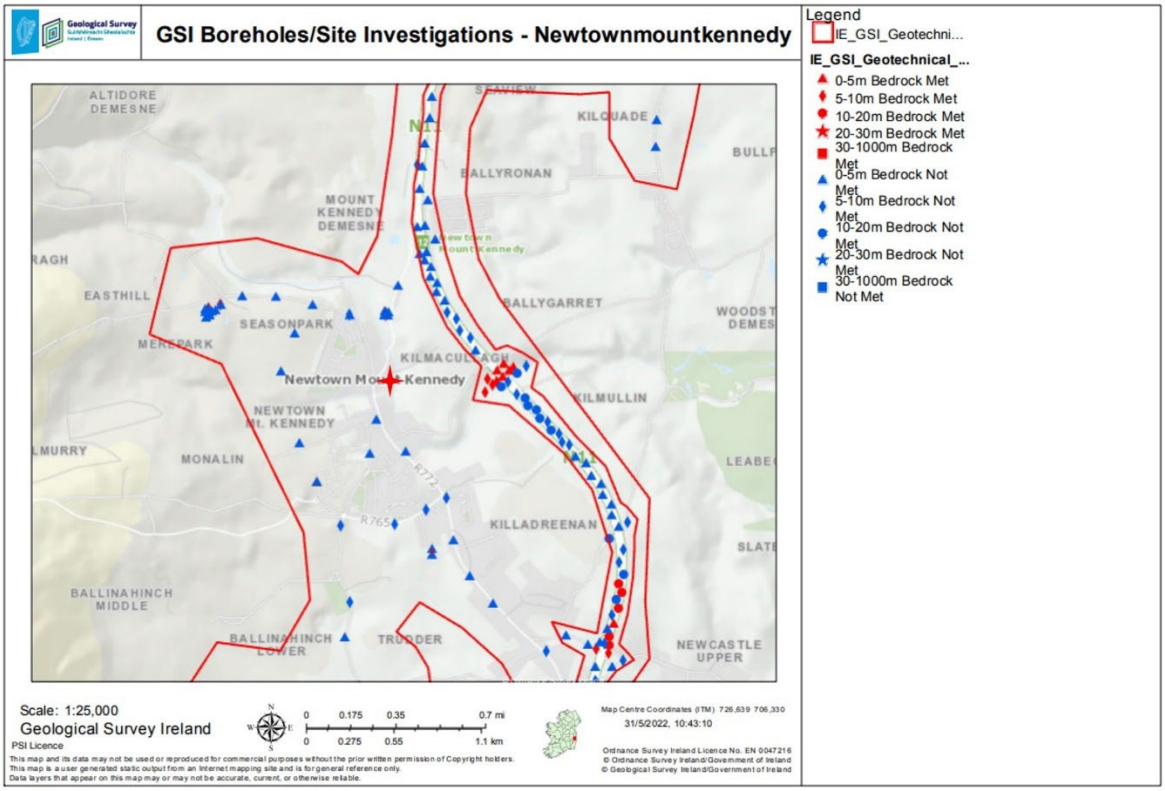

Figure 4.20: Nearby Boreholes and Site Investigations; approximate site location indicated by red star (Source: GSI, 2022).

4.20 Summary of the Physical Site Setting

Summary of the site physical setting are outlined in Table 4.3.

Table 4.3: Summary Site Setting

feature	details & comments
Topography	Varied with rolling hills, troughs, and lower lying elevations towards The Murrough SAC
Geology	**Topsoil:** well-drained, mainly basic main soils and alluvial mineral soils underlying the majority of the site area with a small area in the western portion of the site underlain by made ground
	Solid Geology: Bray Head Formation, a Cambrian greywacke with quartzite units which range in thickness from 10m to over 100m
Hydrogeology	**Aquifer Classification:** Locally important gravel aquifer (Lg) underlies the majority of the site; the southwestern portion of the site is underlain by a poor bedrock aquifer (Pl) which is generally unproductive except in local zones

	Vulnerability & Recharge: Groundwater vulnerability is High 'H' beneath the site. The average recharge has been modelled at 132 to 559 mm/year.
	Groundwater Flow: The regional groundwater flow direction can be expected to be to the east towards The Murrough Wetlands SAC.
	Well Search: There were no Source Protection Zones identified within 2 km of the site. It is therefore assumed that there are no public supply wells within this area.
Hydrology	**Surface Water Courses:** The Newtownmountkennedy River and its tributary border the eastern and southern sides of the site, respectively.

5 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

The likely significant effects on the environment of proposed development in relation to specified criteria are outlined below.

5.1 Magnitude and Spatial Extent of Impact

This project relates to the construction of a river walkway for pedestrian access and associated public lighting along the Newtownmountkennedy River with entry/exit points located on the Dublin Road and Main Street. Although this project is small in magnitude and extent, the close proximity to the river and distance downstream to the nearest protected areas, The Murrough SPA located 4.2km downstream and The Murrough Wetlands SAC located 4.5km downstream, indicate the potential for impacts to occur.

5.2 The Nature of the Impact

This project relates to the addition of a river walkway for pedestrian access along the Newtownmountkennedy River with entry/exit points located on the Dublin Road and Main Street which will include public ligthing. This project is small in magnitude and extent. Any potential impacts are not likely to be significant.

5.3 The Transboundary Nature of the Impact

There is no potential for transboundary impacts.

5.4 The Intensity and Complexity of the Impact

The project involves a small work area which has been limited to that required to create safe pedestrian access through the area. Any potential impacts are not likely to be significant.

5.5 The Probability of the Impact

The probability of impacts is low based on the following considerations:

- A project-specific CEMP will be prepared by the appointed contractor.
- The receiving environment is considered sensitive; however, no in-stream works will take place as part of the proposed development.

5.6 Expected Onset, Duration, Frequency and Reversibility of the Impact

Based on the limited work area required to undertake the proposed enhancement works and the short duration of the project, no significant or long-term potential impacts are anticipated. However, given the hydrological link to the Murrough SPA and SAC located 4.2km and 4.5km downstream, respectively, there is potential for low to moderate impacts.

5.7 The Cumulation of the Impact with the Impacts of other Existing and/or Future Developments

There are no likely cumulative impacts of the proposed works in conjunction with committed developments based on a review of planning grants.

5.8 The Possibility of Effectively Reducing the Impact

The small area affected has been limited to that required to enhance pedestrian access and safety in the area along the Newtownmountkennedy River. A CEMP will be prepared by the appointed contractor taking into account all site works and detailing all required mitigation measures.

The potential exists, particularly at the construction stage, for a small amount of nuisance associated with localised traffic disruption and construction noise and dust. However, for the most part, construction impacts related to this project are likely to be minimal and temporary.

5.9 Screening Decision

Based on the nature, scale, and location of the proposed project, by itself and in combination with other plans and projects, it is considered that the overall impact on the receiving environment will be low.

An Appropriate Assessment (AA) Screening Report has been prepared by OCSC which concluded that it is foreseen to likely give rise to adverse effects on the designated European sites with which it is hydrologically linked. Therefore, a Natura Impact Statement (NIS) has also been prepared for this proposed project.

Please refer to the completed Screening Checklist identified in European Commission publication Environmental Impact Assessment of Projects, Guidance on Screening (2017).

Table 5.1: Environmental Impact Assessment of Projects Screening Checklist.

Checklist	Response
Will there be a large change in environmental conditions?	No
Will new features be out-of-scale with the existing environment?	No. The improvement will create access for pedestrians.
Will the impact be unusual in the area or particularly complex?	No
Will the impact extend over a large area?	No
Will there be any potential for transboundary impact?	No
Will many people be affected?	Minor temporary impacts. Overall positive impact in creating new pedestrian access.
Will many receptors of other types (fauna and flora, businesses, facilities) be affected?	No (refer to AA screening)
Will valuable or scarce features or resources be affected?	No (refer to AA screening)
Is there a risk that environmental standards will be breached?	No (refer to AA screening)

Is there a risk that protected sites, areas, and features will be affected?	Yes. There is a low potential that downstream protected areas could be impacted by surface water run-off and other pollutants such as hydrocarbons, therefore an NIS has been undertaken to mitigate that risk.
Is there a high probability of the effect occurring?	No
Will the impact continue for a long time?	Temporary, short term.
Will the effect be permanent rather than temporary?	No (refer to AA screening)
Will the impact be continuous rather than intermittent?	Temporary and short-term following construction.
If it is intermittent will it be frequent rather than rare?	-
Will the impact be irreversible?	No
Will it be difficult to avoid, or reduce or repair or compensate for the effect?	No, mitigations outlined in the NIS.