EIAR SCREENING ASSESSMENT

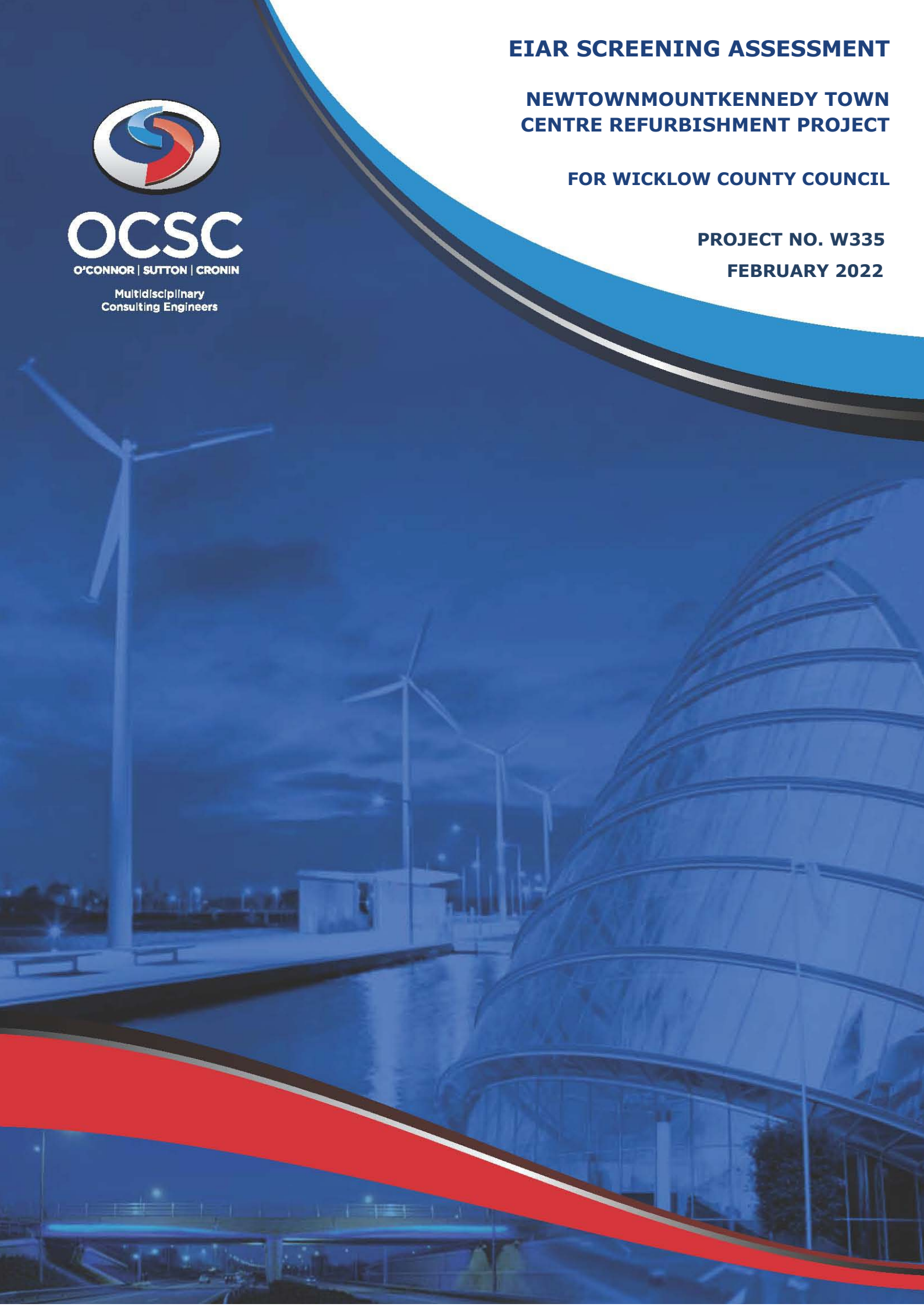
NEWTOWNMOUNTKENNEDY TOWN CENTRE REFURBISHMENT PROJECT

FOR WICKLOW COUNTY COUNCIL

PROJECT NO. W335

FEBRUARY 2022

OCSC
O'CONNOR | SUTTON | CRONIN
Multidisciplinary
Consulting Engineers



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NOTICE

DOCUMENT CONTROL & HISTORY

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P01	DRAFT	GB/LI	EB	EB	28.01.2022

EIAR SCREENING ASSESSMENT

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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. Wicklow County Council propose road improvements such as gateway treatment, redefinition of the road carriageway, widening/improving and providing footpaths along the route, providing appropriate parking facilities outside business and private properties, and junction improvements to the Main Street of Newtownmountkennedy, Co. Wicklow.

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 Luis Iemma, BSc, MSc, Ph.D, Senior Ecologist and Glenda Barry, BSc, MSc, Principal Consultant 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 is located in Newtownmountkennedy, County Wicklow where there is a proposal to undertake improvements to the existing Main Street of the town. The study area is approximately 1km in length and consists of lands including and adjacent to the R772 which comprises the Main Street of the town.

The site location is outlined in Figure 1.1.

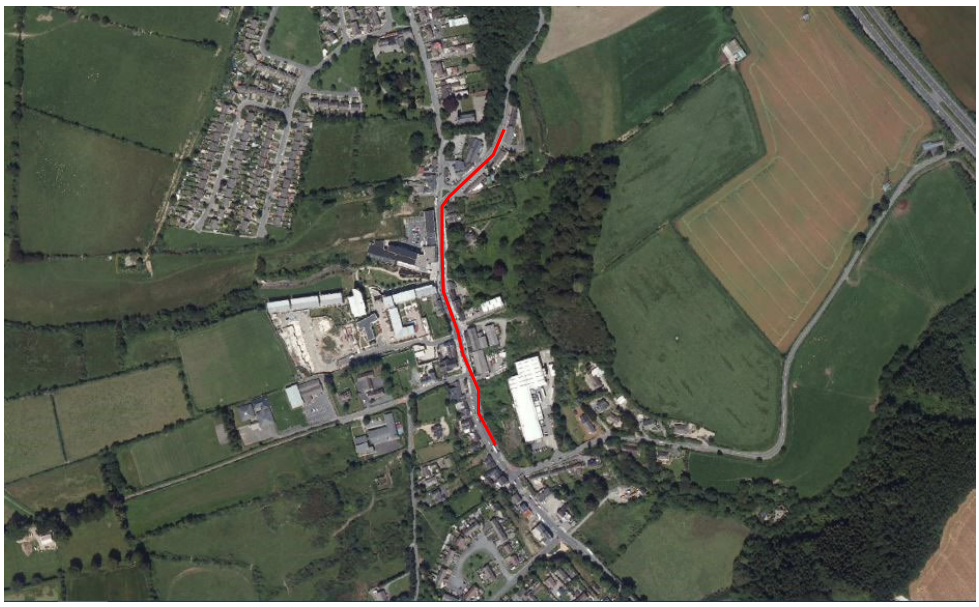

Figure 1.1: Study Area (Google Maps, 2022).

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 Fishers of Newtownmountkennedy, other commercial areas, agricultural land, and woodland. Residential areas border the site to the south and west. MacFarlane Labels, other commercial premises, and woodlands border the site to the east. A tributary to the Newtownmountkennedy River transects the site and joins the river to the east. Refer to Table 2.1 for a full list of adjacent land uses and Figure 1.2 for an aerial photograph of surrounding land uses.

Table 1.1 – Adjacent Land Uses

BOUNDARY	LAND USE
North	Fishers of Newtownmountkennedy, commercial premises, agricultural land, and woodlands
South	Residential and commercial premises
East	MacFarlane Labels, Grove Motors, and woodlands; agricultural land and the Newtownmountkennedy River further to the east
West	Golden Village Takeaway, The Mount Kennedy Inn, Dunnes Stores and additional commercial and residential premises

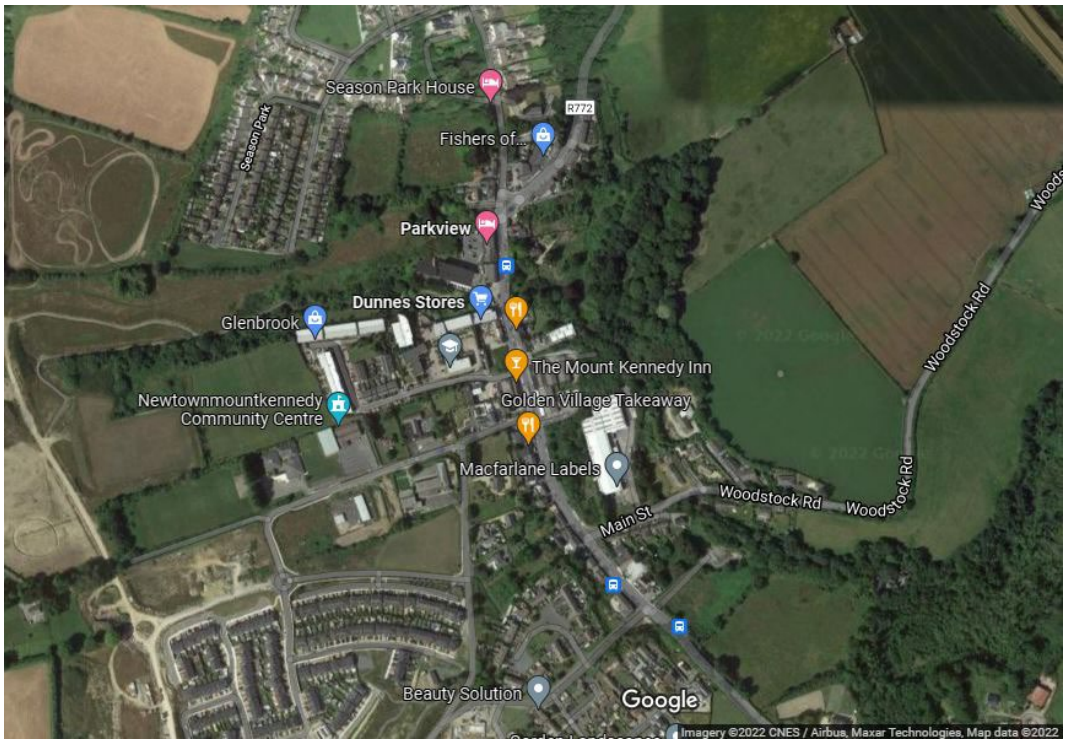

Figure 1.2: Surrounding landuse (Google Maps, 2022).

1.4 Project Description

This Environmental Impact Assessment Report (Screening) is prepared for the proposed extension and upgrade of the Main Street and adjacent footpath in Newtownmountkennedy. The proposed project involves road improvements such as gateway treatment, redefinition of the carriageway, widening/improving and providing footpaths along the route, providing appropriate parking facilities outside business and private properties, and junction improvements. The proposed work area extends along the R772 from the agricultural land bordering the town centre to the south, through the town centre, and to the wooded and agricultural area bordering the town to the north.

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; 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, Draft Edition, August 2017.
- 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;
- 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 January 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 – Draft' (EPA, 2017), 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.

The proposed road enhancement is also not on the list of road projects requiring an EIA as outlined in Section 50 of the Roads Act, 1993 (as amended) and in Article 8 of the Roads Regulations, 1994. Road projects requiring mandatory EIA is listed in Table 2.1.

Table 2.1 Roads Projects Requiring Mandatory EIA

Mandatory Threshold	Reference
Construction of a Motorway.	S. 50(1)(a) of the Roads Act, 1993, as substituted by S. 9(1)(d)(i) of the Roads Act, 2007
Construction of a Busway.	S. 50(1)(a) of the Roads Act, 1993, as substituted by S. 9(1)(d)(i) of the Roads Act, 2007
Construction of a Service Area.	S. 50(1)(a) of the Roads Act, 1993, as substituted by S. 9(1)(d)(i) of the Roads Act, 2007
Prescribed type of proposed road development: 1. The construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area. 2. The construction of a new bridge or tunnel which would be 100 metres or more in length.	Article 8 of the Roads Regulations, 1994 (Road development prescribed for the purposes of S. 50(1)(a) of the Roads Act, 1993

Annex II of the Directive lists the activities for which each member state is permitted to exercise discretion to decide whether an EIA is necessary. The proposed development plan is not listed specifically on Annex II. It is also not listed on the sub-threshold development in the Road Act, 1993 (as amended), and the Roads Regulations, 1994.

Sub-threshold EIS (123A.) 2, of the Planning and Development Regulations 2001 – 2015.

(g) a place or site which has been included by the Minister for Arts, Heritage and the Gaeltacht in a list 151 of proposed Natural Heritage Areas published on the National Parks and Wildlife Service website, the State authority shall, in determining whether the development would or would not be likely to have significant effects on the environment, have regard to the likely significant effects of the development on such site, area, land, place or feature as appropriate.

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 projects 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 at 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 an area approximately 1km in length and located along the of Main Street of Newtownmountkennedy from the northern to the southern boundaries of the town centre. The works have been designed to provide upgraded infrastructure for vehicular and pedestrian access through the town.

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 improves the vehicular and pedestrian traffic. 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.

3.3 The nature of any associated Demolition Works

It is not anticipated that any buildings will require demolition. This is an assessment of the overall study area within which preferred options will be selected.

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 by its very nature is of short-term duration and required to improve the vehicular and pedestrian traffic within the town.

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 during operations, i.e. following the completion of works.

Surface water pollution via runoff including silt or hydrocarbons will be managed in accordance with best practice, particularly in the section of works where the Main Street crosses the tributary of the Newtownmountkennedy River. Therefore, the risk of surface water pollution during the construction stage is considered to be low.

Drainage will be constructed in accordance with best practice and standard design parameters. Therefore, the risk of drainage pollution from the upgraded road, parking areas, and footpaths into the waterways is low.

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 and/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 vehicular 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 source protection zones (SPZs) (groundwater) within a 2km radius of the proposed site. There are reportedly four wells within the site boundary and an additional 13 wells within 1km of the site area. These wells are discussed further in Section 4 of this report. Given the short-term nature of the works and that the works will be 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, in accordance with Regulations, been screened 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 and;
(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, educational, recreational/community properties, commercial/retail businesses, and agricultural/ horticultural land uses. The Newtownmountkennedy River intersects the northern site boundary and flows north to south to the east of the site. It is joined by a tributary which flows from the west to east through the central portion of the site. 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 occupied since at least the 1830'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 within Newtownmountkennedy with a church, a post office, a market house, a police station, and numerous other structures along the main street. Surrounding areas consisted of wooded and undeveloped lands, a flour mill with an associated mill race, and a disused quarry as shown in Figure 4.1.

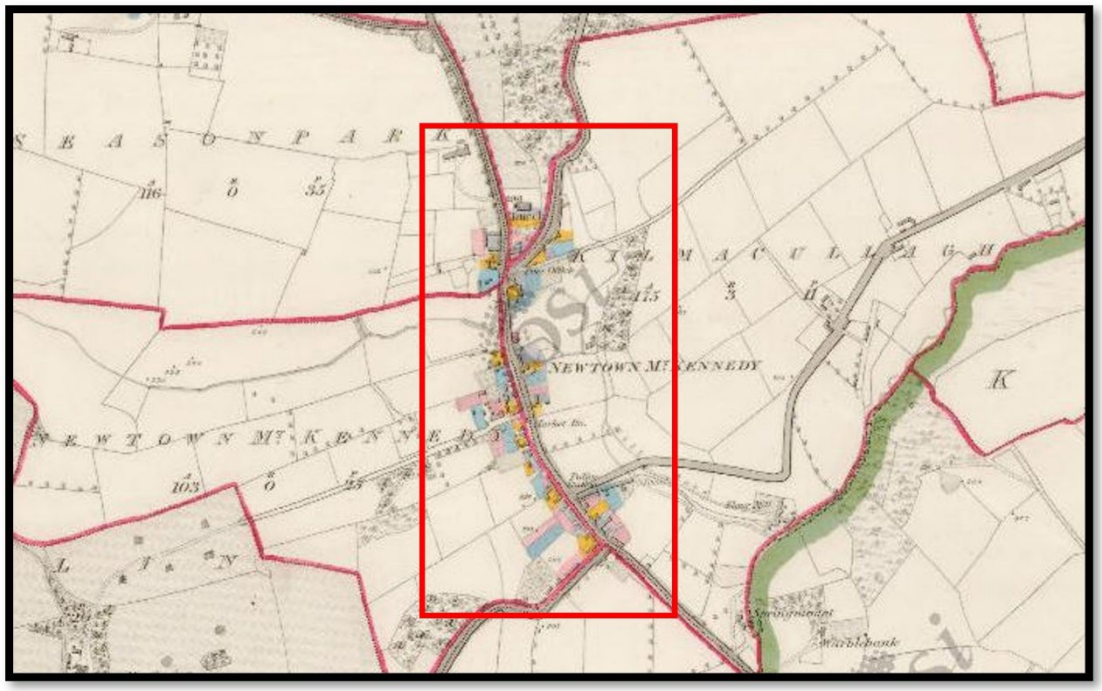

Figure 4.1: Study Area Location on 1837-1842 6-inch OS Map (Source: OSI, 2022)

The 25-Inch Map (1888-1913) shows the study area and immediately surrounding areas of Newtownmountkennedy to be further developed with two churches, two schools, a fever hospital, a presbytery, a courthouse, a smithy, numerous other structures along the main street, and numerous scour and air valves along water mains that passed through the town as shown in Figure 4.2.

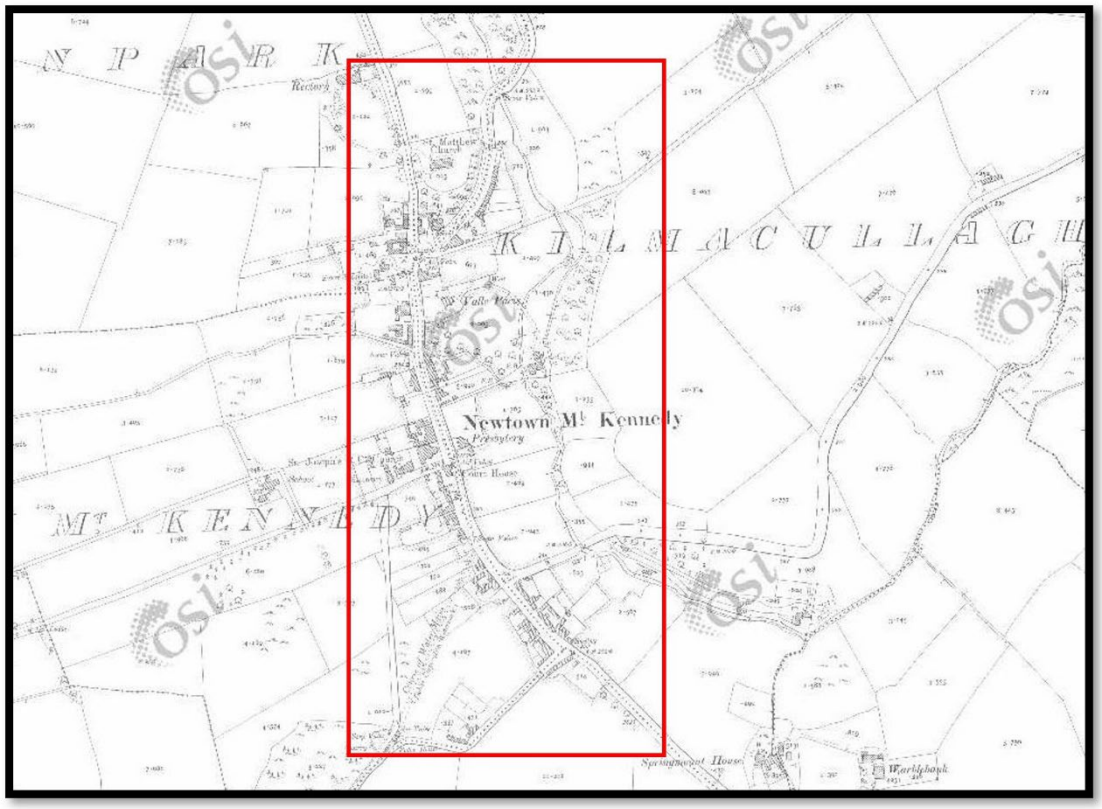

Figure 4.2: Study Area Location on 1888-1913 25 inch OSI Map (Source: OSI, 2022)

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

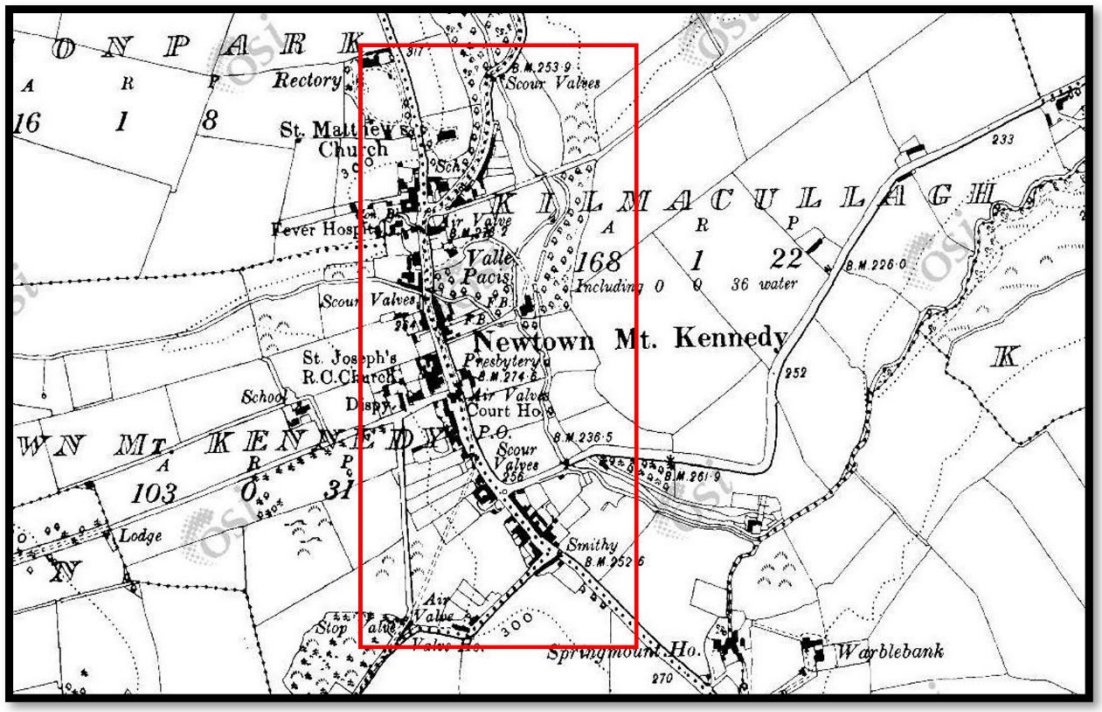

Figure 4.3: Site Location on 6 Inch Cassini Map (Source: OSI, 2022)

The Google Earth aerial photograph from 2008 indicates that extensive residential construction had occurred to the north, northwest, south, and southwest of the town since the Cassini mapping. Limited residential construction had also occurred to the east of the town. A large industrial unit now occupied by MacFarlane Labels had been constructed on the east side of Main Street, and redevelopment had occurred on the west side of Main Street at the north end of the town.

The Google Earth aerial photograph from 2013 showed no significant changes from 2008 other than limited commercial development on the northwest side of town. The 2016 to 2021 aerial photographs indicated extensive, ongoing residential development to the west, southwest, and south of the town centre.

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

A tributary to the Newtownmountkennedy_020 River is located in the mid-section of the site and flows from west to east through the site area to where it joins the main

branch of the Newtownmountkennedy_020 River east of the site. There is a potential for erosion of bare ground, and/or sediment movement resulting from surface run-off during the construction phase. However, given the relatively small-scale and short-term nature of the works, the lack of hydrological link between the study area and European sites as well as the distance between the site and the nearest pNHA (3.1km), there is no direct significant effects to the European Sites or designated sites anticipated as a result of erosion and/or sedimentation.

An Appropriate Assessment (AA) Screening Report has been prepared by OCSC which concluded that it is not expected to have any likely significant effects, either alone or in combination with other plans or projects, on any European site.

There are 2No. SPAs within 15km of the proposed scheme. There is no physical connectivity, in the form of hedgerows, treelines, or woodlands, from the proposed vehicular and pedestrian works area to either SPA. In addition, the distance from the proposed works area to the SPAs negates any potential groundwater connectivity between the works area and these SPAs. The closest SPA to the proposed scheme and the only one with a direct hydrological connection to the site is The Murrough SPA (Site Code 004086) which is located approximately 4.1km east of the proposed study area. Although there is a direct hydrological link to this SPA via the Newtownmountkennedy River, due to the small scale of the proposed works and the distance to this SPA, risks associated with surface water impact to this SPA are considered to be low. As any connecting pathways from the proposed works area to the aforementioned SPAs have been ruled out, potential impacts from the proposed project on any of the bird species or supporting habitats within the SPAs are not anticipated. Certain bird species, for which the SPA sites are designated, have the potential to feed within the wider landscape away from the habitats associated with the SPAs; however, it is not likely that the urban setting of Newtownmountkennedy supports these.

There is 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 Carrigower Bog (Site Code 000716) located 3.1km northwest of the study area. There is no linkage between the study area at the Carrigower Bog pNHA as the study area is located downstream of the proposed work area. 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. The Newtownmountkennedy River flows east into The Murrough Wetlands SAC (4.8km downstream) on its way to the bay. However, given the relatively small-scale and short-term nature of the works along with appropriate construction measures to mitigate impact to the Newtownmountkennedy River, the potential impact is considered to be negligible.

Therefore, there are no anticipated impacts on the surrounding Natura 2000 sites, SPAs or pNHAs from the proposed development.

Given the nature of the development, its scale, and the existing localised and temporary nature of the construction effects identified, it is concluded that the project

is not foreseen to give rise to any significant adverse effects on the biodiversity local to the site, either alone or in combination with any other plans or projects.

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 four different soils, with made ground as the main soil, covering a majority of the study area (light blue on Figure 4.4); mainly acidic, poorly drained mineral soils in the northern portion (pink on Figure 4.4); a small area of mainly basic, shallow, rocky, peaty/non-peaty mineral complexes in the northeastern portion of the site (lavender on Figure 4.4); and alluvial mineral soils along surface water courses (ochre on Figure 4.4).

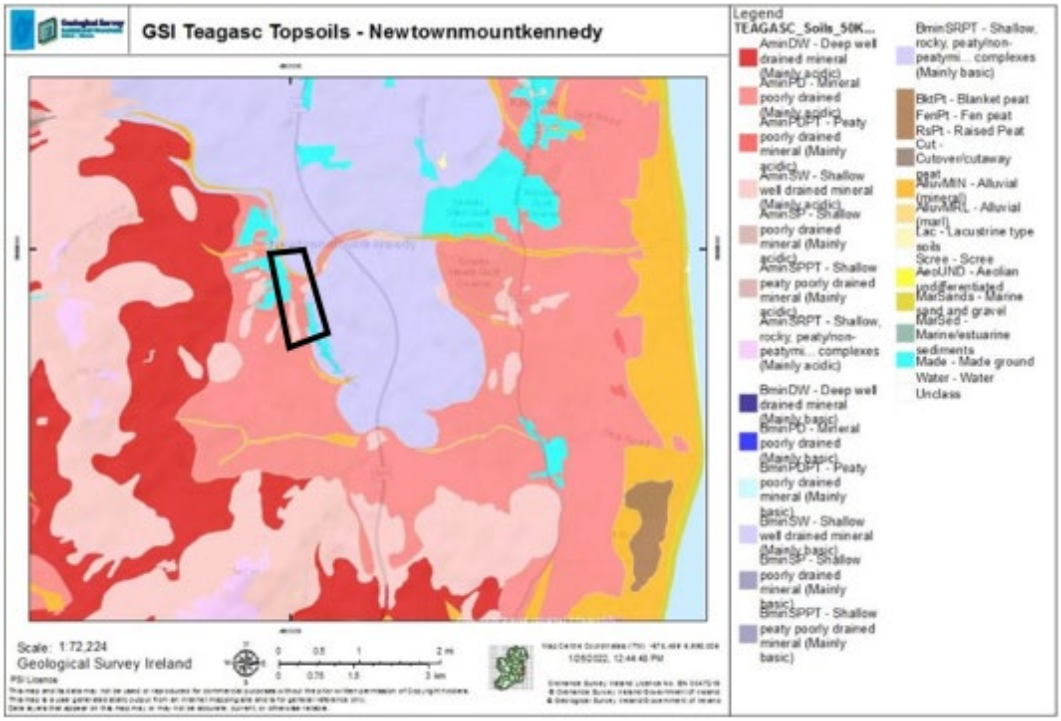

Figure 4.4: Teagasc Topsoil Soil Classification (approximate site location indicated by black rectangle) (Source: GSI, 2022).

4.10 Geology

The site is underlain by the Bray Head Formation which is characterized by greywacke and 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. See Figure 4.5.

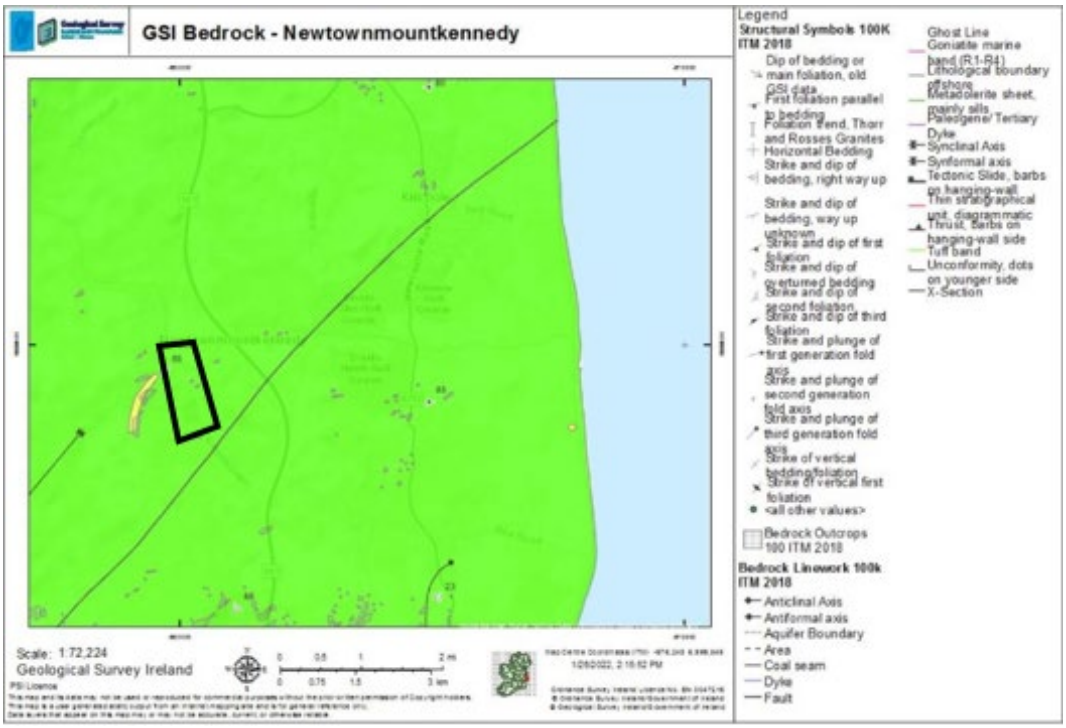

Figure 4.5: Bedrock 100k (approximate site location indicated by black rectangle) (Source: GSI, 2022).

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, which is located 2.8km south of the site. Dunran Channel has a site code of WW019 and is designated a County Geological Site (CGS) due to the 'deep channel that was formed by meltwater erosion on the eastern flank of the Wicklow Mountains. The second nearest area of geological interest is Wicklow-Greystones Coast, which is 4.1km east of the site and consists of an uninterrupted shingle beach extending for over 17km long between Greystones and Wicklow. The Wicklow-Greystones Coast has a site code of WW060 and is designated as a CGS. It is recommended for inclusion as a Geological Natural Heritage Area due to the 'shingle ridge (beach) which is a feature understood to have formed around 5,000 years ago'. 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 4.6.

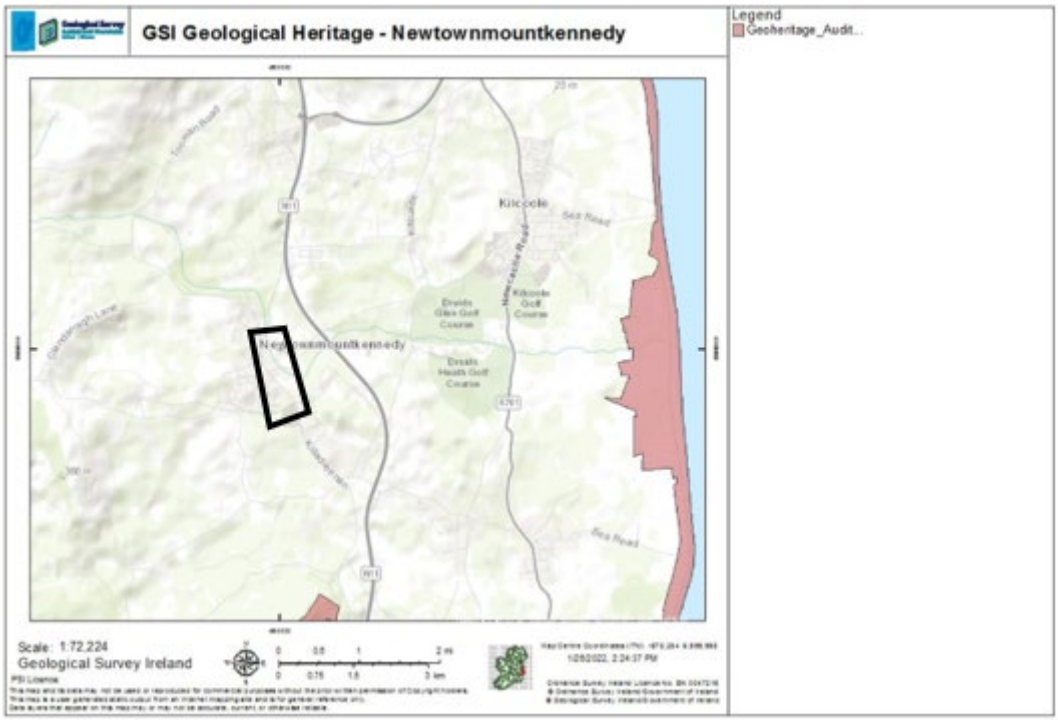

Figure 4.6 Approximate location of the study area (black rectangle) and the nearest Geological Heritage (Source: GSI, 2022).

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 lies above a Poor (Pl) aquifer which is generally unproductive except in local zones as shown in Figure 4.7.

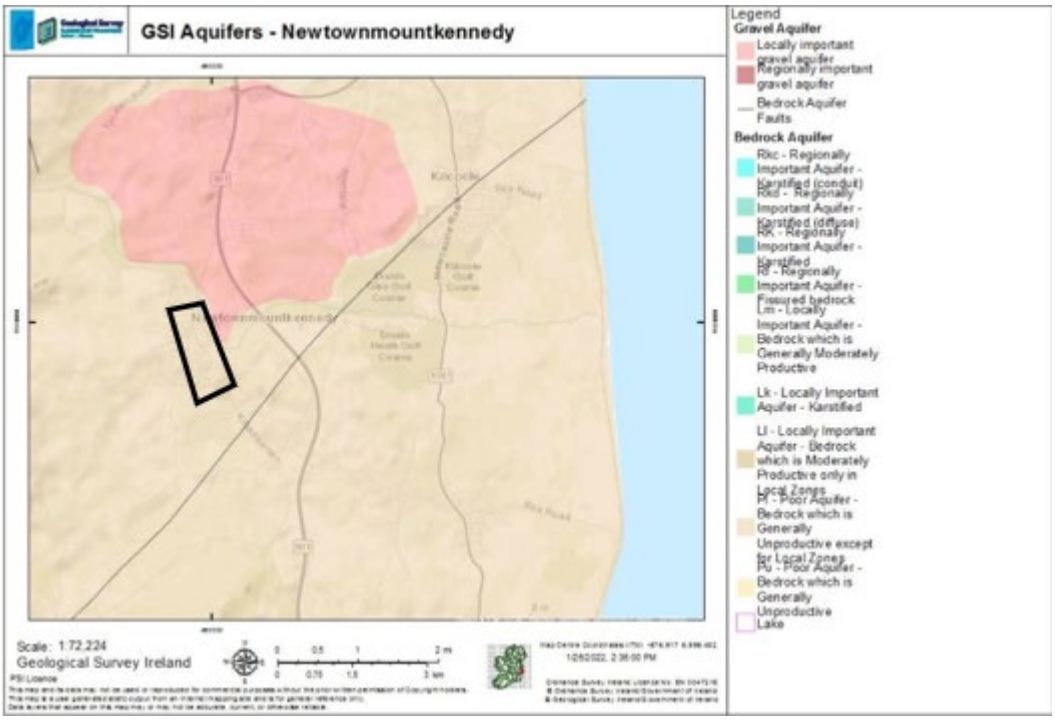

Figure 4.7: Aquifers (approximate site location indicated by black rectangle (Source: GSI, 2022).

4.13 Groundwater Vulnerability

The GSI resources describe the groundwater vulnerability beneath the site divided between two vulnerabilities: a High 'H' vulnerability aquifer underlies the majority of the site along the Main Street with the exception of the northern portion of the site and an area immediately to the east of the site which is underlain by an aquifer of Moderate 'M' vulnerability as shown on Figure 4.8. 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.

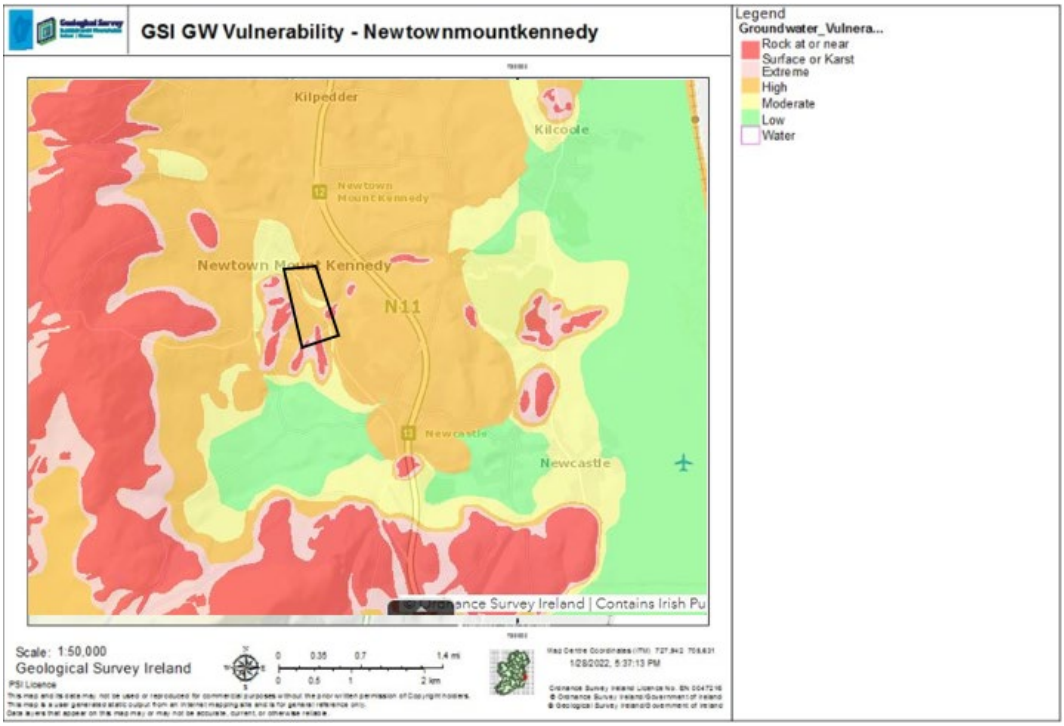

Figure 4.8: Groundwater Vulnerabilty (approximate site location indicated by black rectangule) (Source: GSI, 2022).

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 site footprint two main groundwater recharge zones as shown in Figure 4.9. GSI groundwater recharge model parameters for these zones are summarised in Table 4.1.

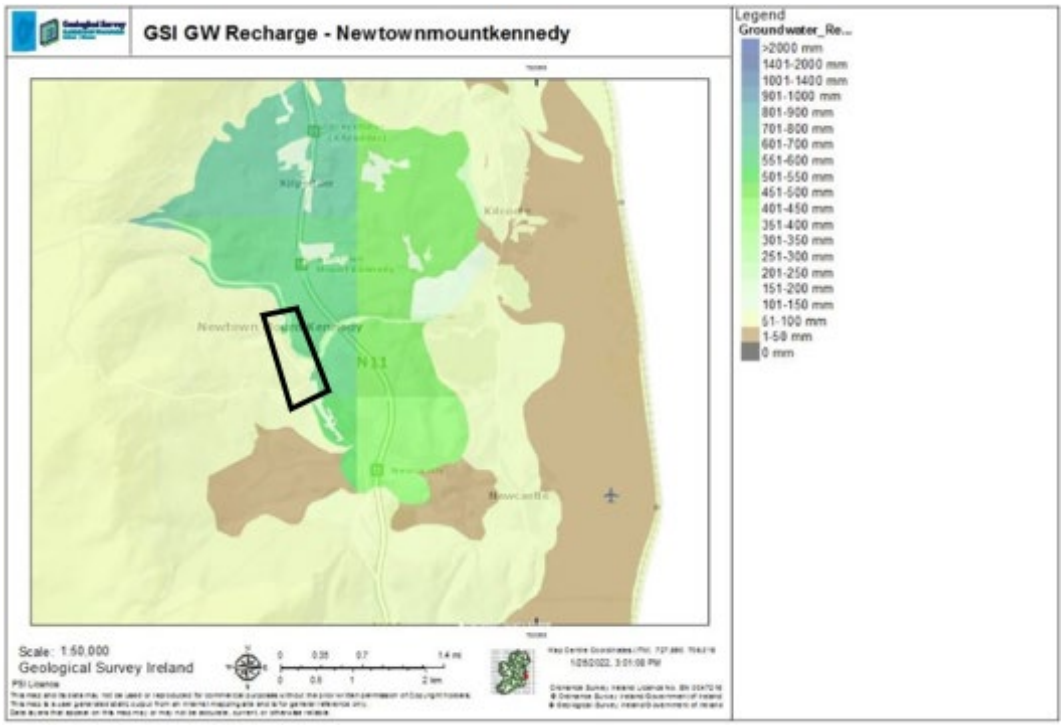

Figure 4.9: Groundwater Recharge (approximate site location indicated by black rectangle) (Source: GSI, 2022).

Table 4.1 - GSI Groundwater Recharge Parameters

	Groundwater Recharge Parameters	
Site Location:	Central and Southern	Northern
Average Recharge (mm/yr):	100	559
Hydrogeological Setting:	2.m, 2.ii	2.i
Hydrogeological Setting Description:	Made ground	Sand & gravel aquifer, overlain by well-drained soil
Recharge Coefficient (%):	20.00	85.00
Effective Rainfall (mm/yr):	657.800	657.400
Recharge (mm/'yr):	132	559
Maximum Recharge Capacity (mm/yr):	100	N/A
Subsoil Permeability Description:	Low to High	High
GW Vulnerability:	Moderate	High
Aquifer Category:	Pl	Pl
Aquifer Category Description:	Poor Aquifer - Bedrock which is generally unproductive except for local zones	Poor Aquifer - Bedrock which is generally unproductive except for 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 reportedly four wells within the site boundary. These wells were drilled between 1970 and 1979 to depths ranging from 22.5 to 32m. Three were drilled for domestic use and one for an unspecified use. An additional 14 wells are located within 1km of the site area. Two were installed for domestic use in 1993 and 1995 to depths of 3.8m and 48.7m, respectively. The remainder are boreholes which were drilled in 1991 to depths ranging from 7 to 24m.

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.

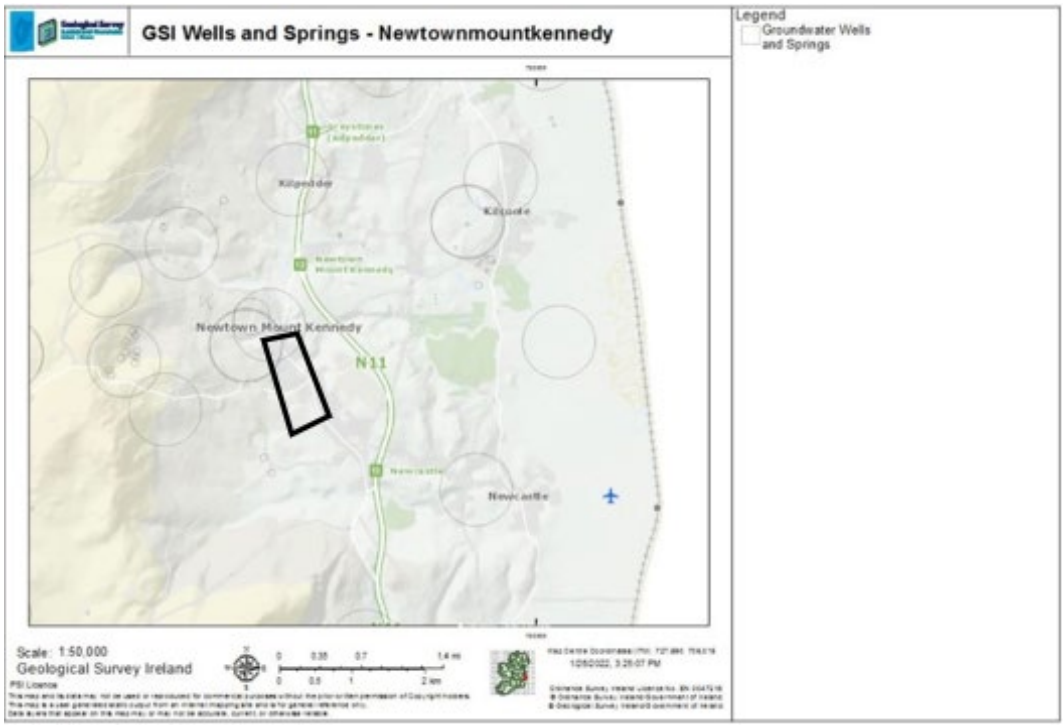

Figure 4.10: Wells and Springs (approximate site location indicated by black rectangle) (Source: GSI, 2022).

4.16 Hydrology

There is a surface water feature mapped within the site area. The EPA designated tributary stream Newtownmountkennedy_020 runs from west to east through the site area and joins the main branch of the Newtownmountkennedy_020 River to the east of the site. The upper section of this river flows past the northern end of the site area. This stream eventually flows into The Murrough Wetlands SAC 4.8km downstream. 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 4.11. The EPA spatial dataset shows that the WFD River Waterbody Risk associated with the river is 'At Risk' (EPA 2022) as shown in Figure 4.12. WFD information for this river is summarised in Table 4.2.

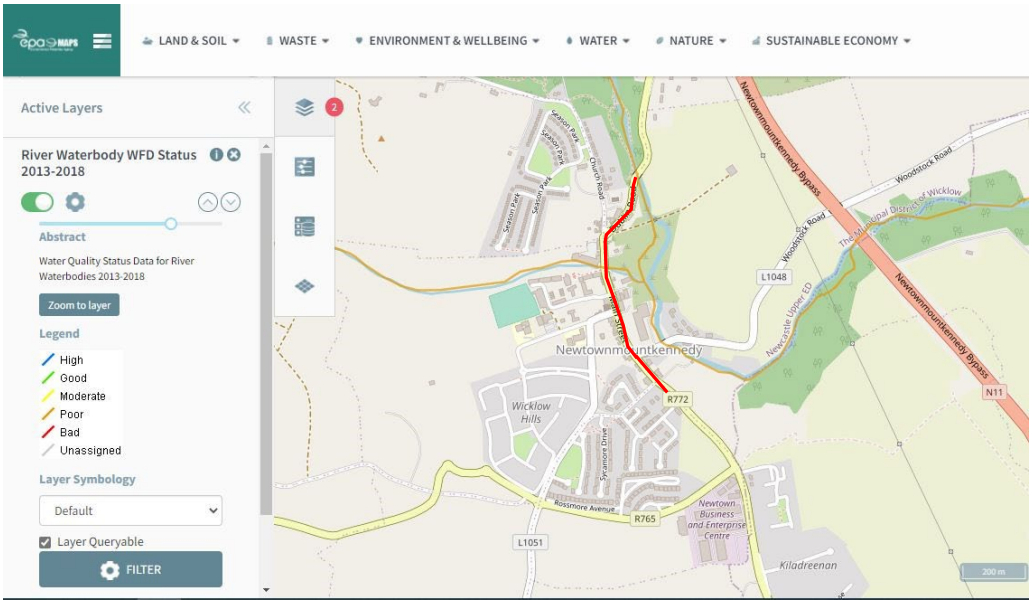

Figure 4.11: River Waterbody WFD Status (approximate site location indicated by red line) (Source: EPA Maps, 2022).

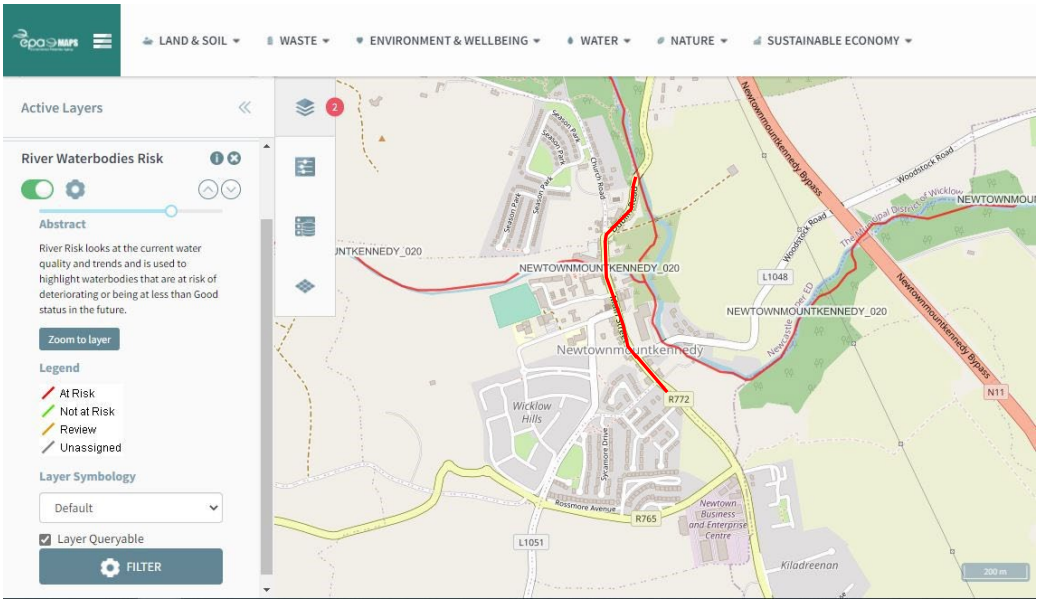

Figure 4.12: River Waterbodies Risk (approximate site location indicated by red line) (Source: EPA Maps, 2022).

Table 4.2 - WFD Summary Information – Newtownmountkennedy_020.

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), less than one per cent of the homes in the 10km grid square in which Newtownmountkennedy is located are estimated to be above the Reference Level of 200 Bq/m^3 as shown in Figure 4.13. The Building Regulations in Ireland only require radon protection to be installed in areas of high radon risk where 10% to 30% of homes exceed the reference level.

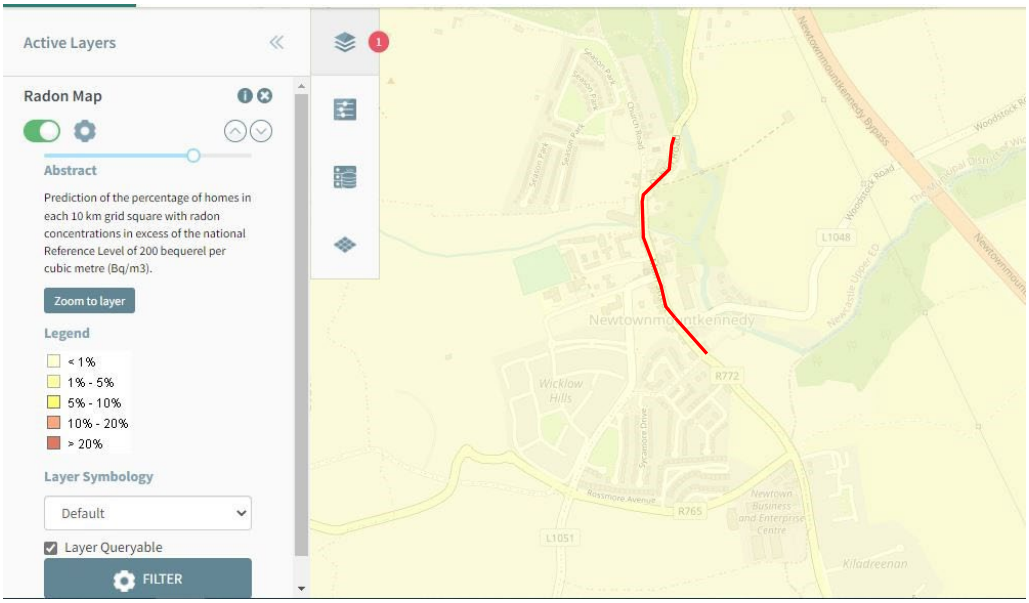

Figure 4.13: Radon Risk (approximate site location indicated by red line) (Source: EPA Maps, 2022).

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.

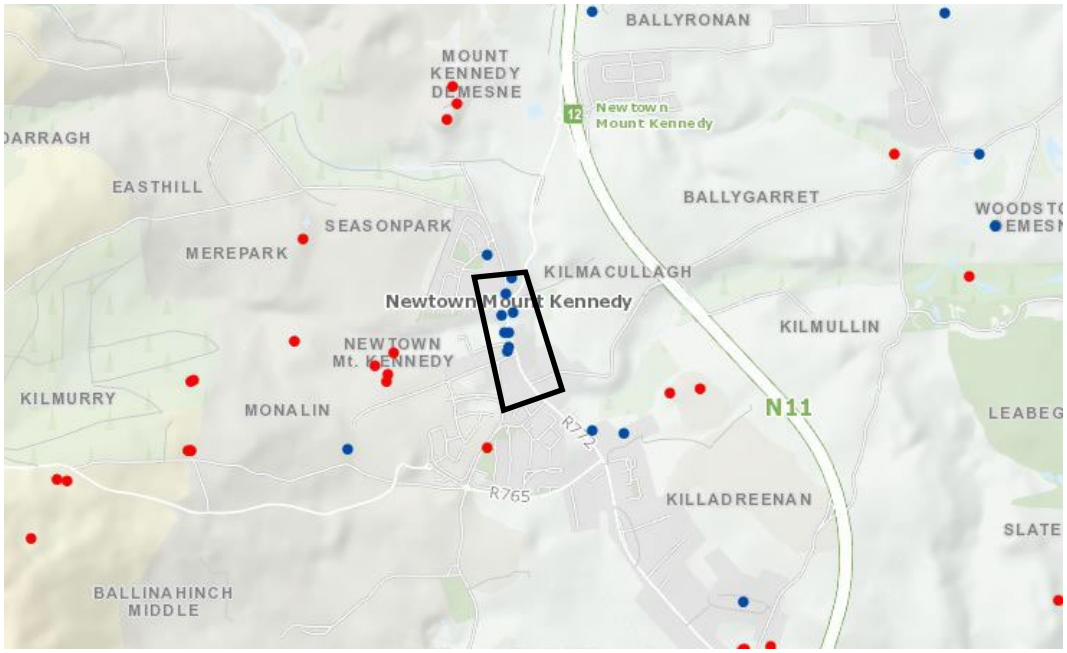

Figure 4.14: National Monument Service Protected Structures (approximate site location indicated by black rectangule) (Source: NMS, 2022).

4.19 Nearby Site Investigations

The Geological Survey of Ireland (GSI) have compiled a database from site investigations carried out in Ireland. Figure 4.15 identifies the site investigations locations closest to the vicinity of the site. One report (ID 1735) pertains to the Newtownmountkennedy Bypass N11 undertaken in 1986. The GSI website has a site ID of 7614 for the second site investigation location but no further information.

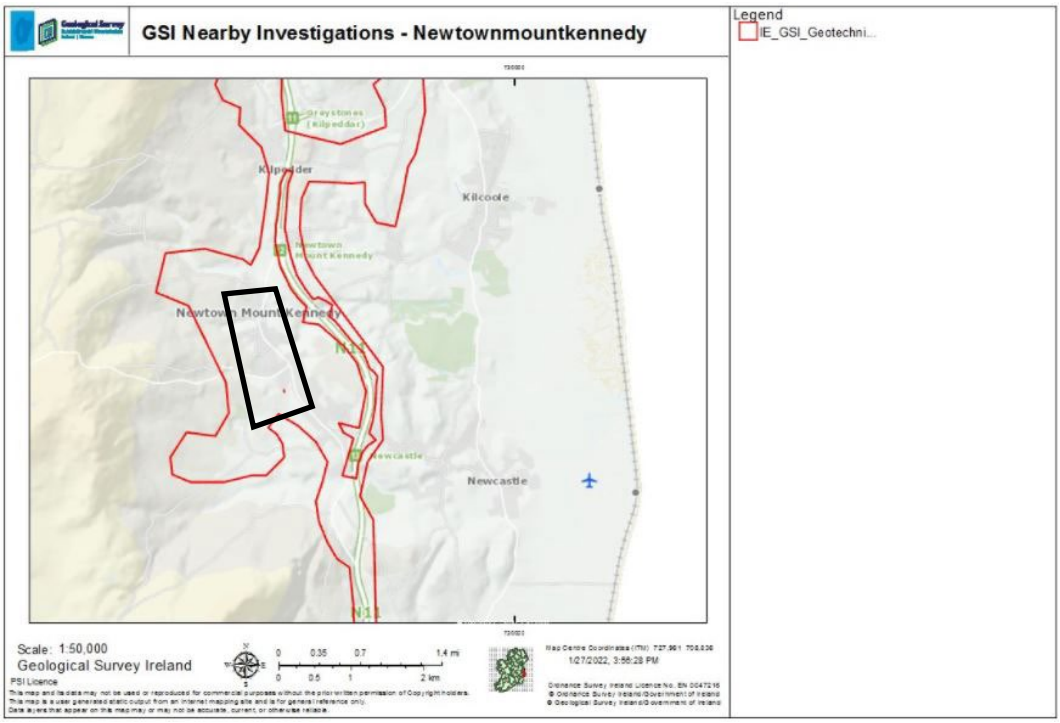

Figure 4.15 – Nearby Boreholes and Site Investigations (approximate site location indicated by black rectangle) (Source: GSI, 2022).

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:** Made ground covering the majority of the study area with poorly drained mineral soils in the northern portion.
	Solid Geology: Greywacke with 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.
Hydrogeology	**Aquifer Classification:** Poor Aquifer (Pl) – Bedrock which is generally unproductive except in local zones

	Vulnerability & Recharge: Groundwater vulnerability is High 'H' beneath the majority of the site and Moderate 'M' at the northern end of the site. The average recharge has been modelled at 100 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:** There is one surface water feature on site, a tributary to the Newtownmountkennedy_020 River which is located to the immediate north and east of the site.

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 improvement and widening of the main road and its footpaths in Newtownmountkennedy, Co. Wicklow. As this project is small in magnitude and extent, any potential impacts are not likely to be significant.

5.2 The Nature of the Impact

This project relates to the improvement and widening of the main road and its footpaths in Newtownmountkennedy, Co. Wicklow. 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 are 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 enhance the pedestrian and vehicular access and safety in 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 and
- The receiving environment is not considered significantly sensitive.

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.

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 for the improvement and widening of the Main Street and its footpaths. 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.

Therefore, it is not considered that an EIA is required at this time. Please refer to the completed Screening Checklist identified in European Commission publication Environmental Impact Assessment of Projects, Guidance on Screening (2017).

Checklist	Response
Will there be a large change in environmental conditions?	No
Will new features be out-of-scale with the existing environment?	No. Adjacent to an urban area. The improvement and widening will facilitate travel via Main Street.
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 improving automotive and 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, features will be affected?	No (refer to AA screening)
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, short-term during construction. No impact following.
If it is intermittent will it be frequent rather than rare?	-
Will the impact be irreversible?	-
Will it be difficult to avoid, or reduce or repair or compensate for the effect?	-