OCSC

O'CONNOR · SUTTON · CRONIN

MULTIDISCIPLINARY CONSULTING ENGINEERS

W370: DUNLAVIN FIRE STATION

EIA SCREENING ASSESSMENT

For

Wicklow County Council

16 June 2023

NOTICE

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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 proposal is for the construction of a new two-storey fire station, on-site parking, a training tower, and associated boundary treatment, drainage, and site development works in Dunlavin Lower, County Wicklow. The regulatory authority for the site is Wicklow County Council.

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. The Report is prepared in the context of an application under Part 8 of the Planning & Development Regulations 2001 (as amended).

A Stage 1 Screening for Appropriate Assessment has also been prepared. 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 was not foreseen to give rise to any significant adverse effects on any designated European sites, alone or in combination with other plans or projects. Therefore, it has been screened out at Stage 1.

1.2 STUDY AREA

The site is located 0.3km southwest of the town of Dunlavin, County Wicklow. The site currently consists of agricultural land within an area which is primarily in agricultural land use with nearby limited residential, industrial, and municipal infrastructure. The study area is shown in Figure 1.1.

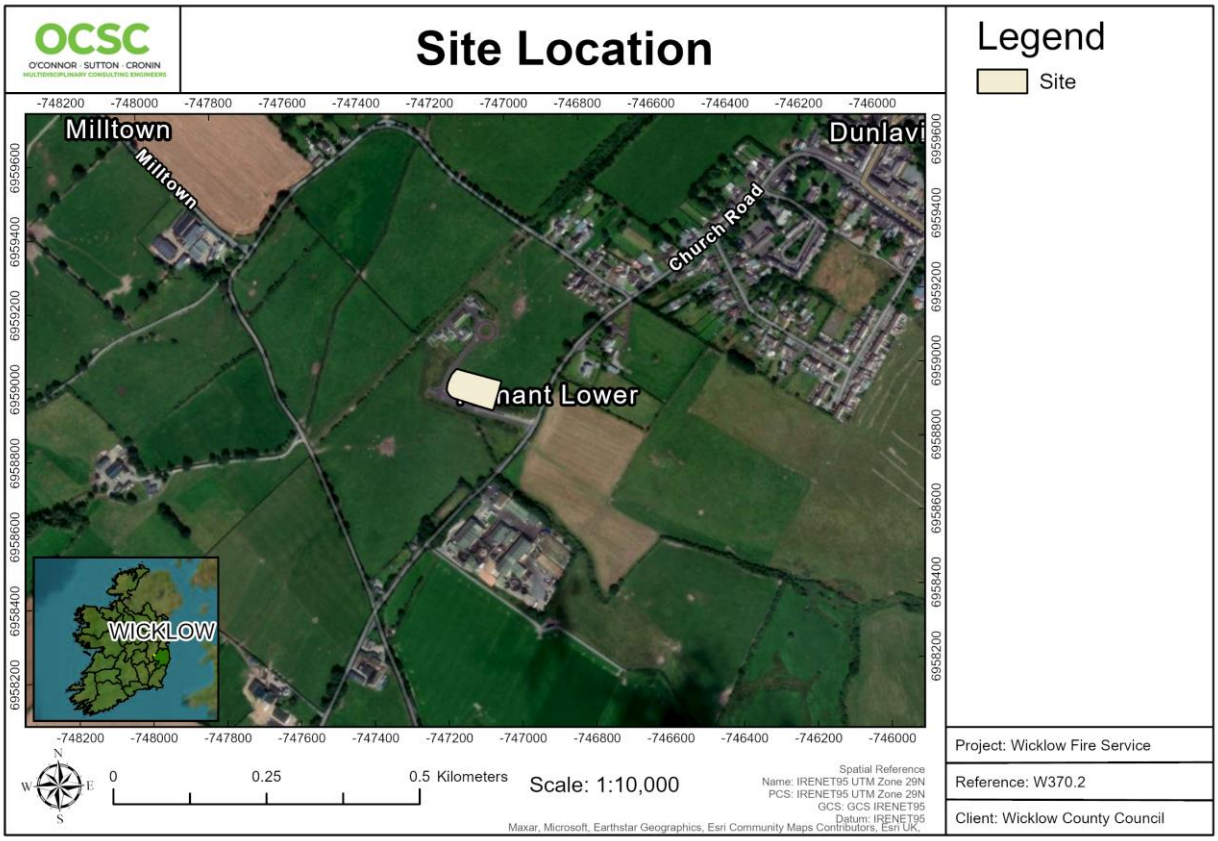


Figure 1.1: Study Area; site location indicated by the red star (Source: OSI, 2023)

1.3 SURROUNDING LAND USE

The area immediately surrounding the site is in agricultural and municipal infrastructural use as shown in Figure 1.2. The site consists of a greenfield site in agricultural use which is bordered to the east by agricultural land, to the north by the Dunlavin wastewater treatment plant, and to the west and south by an access road to the treatment plant and agricultural land. Further to the northeast and east are Church Road and residential areas of Dunlavin. Further to the south are Church Road and Dublin Products. In other directions distal to the site, land use consists of agricultural land with scattered residences. See Table 1.1 for adjacent land uses.

Table 1.1: Adjacent Land Uses

Boundary	Land Use
North	Dunlavin Wastewater treatment plant
South	Access road to the wastewater treatment plant and agricultural land
East	Agricultural land
West	Access road to the wastewater treatment plant and agricultural land

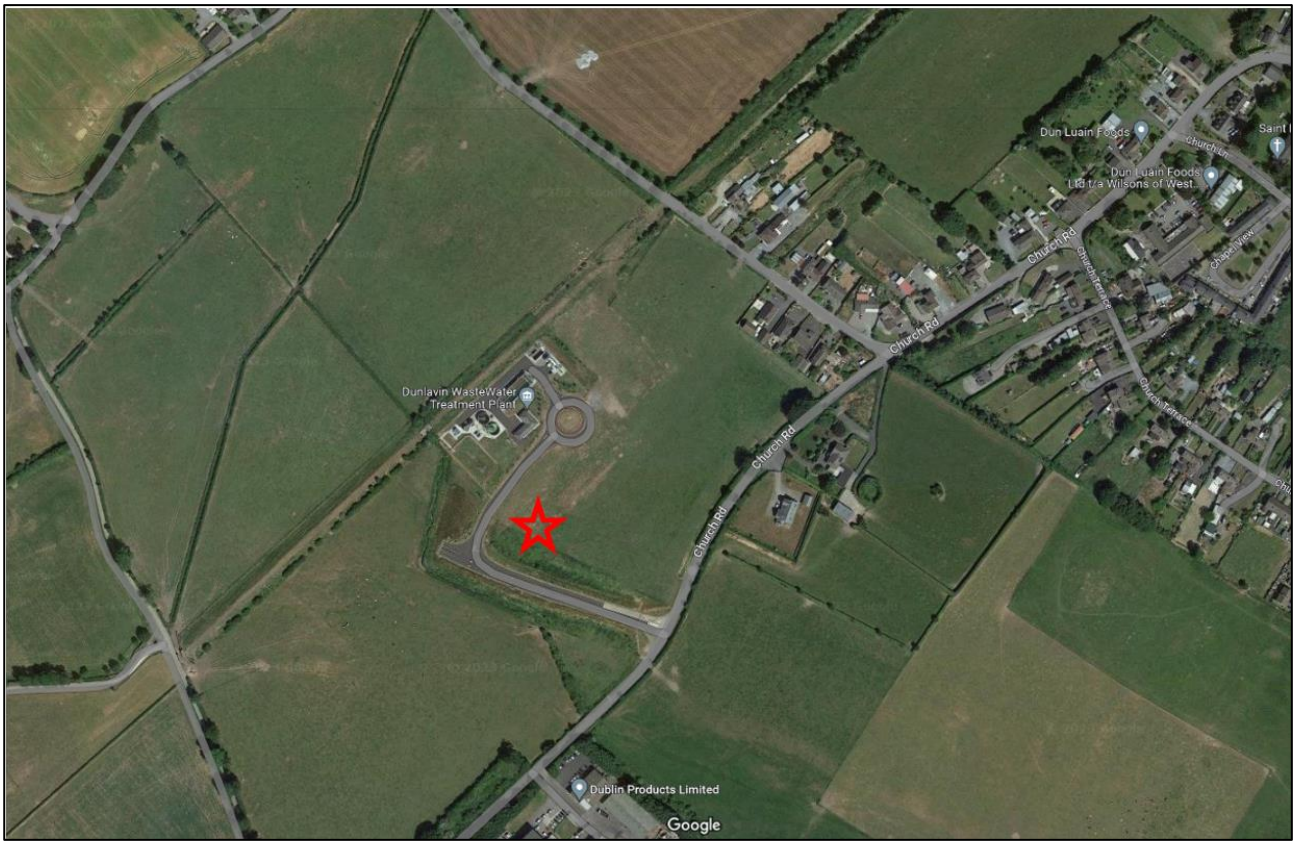


Figure 1.2: Surrounding Land Use; site location indicated by red star (Google Maps, 2023)

1.4 PROJECT DESCRIPTION

This Environmental Impact Assessment (Screening) Report has been prepared for the proposed construction of a new fire station at Dunlavin Lower in the town of Dunlavin, Co. Wicklow, in the townland of Dunlavin Lower. The proposal is for the construction of a new two-storey fire station building including on-site parking for 16 vehicles, a hard-landscaped training yard to the rear of the new building, the construction of a new four storey training tower at the northeast corner of the site to the rear of the main building and hard and soft landscaping and all associated boundary treatments. The development will include all associated drainage and site development works.

1.5 SCREENING REPORT

This screening report includes the following elements:

- 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;
- a 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 EIA 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 was 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 Wicklow County Council ("the Client") as part of a part 8 planning application. 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 May 2023 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 determine 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 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 directives. 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.

The project would be considered sub-threshold under Schedule 5 Part 2 (10b):

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

paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use).

The proposed new construction of Dunlavin Fire Station will use 0.42ha of land to accommodate the development.

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 a significant potential negative impact on the environment using different criteria including:
Characterisation of the proposed development
Location of the proposed development
Type and Characteristics of the potential impact

Information to be provided for the purposes of screening sub-threshold development for Environmental Impact Assessment include:
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 regard to the environmental sensitivity of geographical areas likely to be affected.

- A description of the aspects of the environment likely to be significantly affected by the proposed development.
- 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.
- The compilation of the information in paragraphs 1 to 3 shall consider, where relevant, the criteria set out in Schedule 7 of the Directive". (Schedule 7 states 'Criteria for determining whether a development listed in Part 2 of Schedule 5 should be subject to an environmental impact assessment)".

3 PLANNING CONTEXT

3.1 NATIONAL POLICY

3.1.1 NATIONAL PLANNING FRAMEWORK

The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of Ireland until 2040. This was released in tandem with the National Development Plan (NDP), which sets out the budget for national infrastructure investment for the next 10 years.

The NPF is considered a new approach that aims to improve the different areas of our lives while bringing the various government departments, agencies, State-owned enterprises, and local authorities together behind a shared set of strategic objectives for rural, regional, and urban development.

The proposed fire station will serve the existing community of Baltinglass, neighbouring towns and villages, and the adjacent counties of Kildare and Carlow. In the NPF's list of Strategic Investment Priorities, number 10 is Education, Health and Childcare. With regard to this Strategic Investment Priority, the NPF states:

> *"Good access to a range of quality education and health services, relative to the scale of a region, city, town, neighbourhood or community is a defining characteristic of attractive, successful and competitive places. Compact, smart growth in urban areas and strong and stable rural communities will enable the enhanced and effective provision of a range of accessible services."*

Furthermore, the NPF refers to key planning and development and place-making policy priorities for the Eastern and Midland Region and has specific goals toward:

> *"Preparing and implementing a regional priorities programme, to shape and inform delivery of the Regeneration and Development Initiative. Part of this programme should identify significant ready to-go city, rural town and village and rural rejuvenation priorities which could harness publicly owned land and other assets that are not being used actively at present such as former healthcare, military, transport and other complexes and combining the potential of such assets with community and wider private and public sector support and investment to bring about the transformation of both urban and rural areas and places in an integrated manner".*

The following National Policy Objectives (NPOs) set the context for regional/ local planning policy and are supportive of the Baltinglass Fire Station:
NPO 04 Ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.

NPO 06 Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets, that can accommodate changing roles and functions, increased residential population and employment activity and enhanced levels of amenity and design quality, in order to sustainably influence and support their surrounding area.

NPO 07 Apply a tailored approach to urban development, that will be linked to the Rural and Urban Regeneration and Development Fund, with a particular focus on:-

Reversing the stagnation or decline of many smaller urban centres, by identifying and establishing new roles and functions and enhancement of local infrastructure and amenities;

In more self-contained settlements of all sizes, supporting a continuation of balanced population and employment growth.

NPO 18a To support the proportionate growth of and appropriately designed development in rural towns that will contribute to their regeneration and renewal, including interventions in the public realm, the provision of amenities, the acquisition of sites and the provision of services.

NPO 28 Plan for a more diverse and socially inclusive society that targets equality of opportunity and a better quality of life for all citizens, through improved integration and greater accessibility in the delivery of sustainable communities and the provision of associated services.

The proposal is in compliance with the above NPOs and will significantly upgrade the existing fire services in the area and provide a high-quality amenity.

3.2 LOCAL POLICY

3.2.1 WICKLOW COUNTY DEVELOPMENT PLAN 2021-2027

The Wicklow County Development Plan sets out a strategic spatial framework for the proper planning and sustainable development of County Wicklow for the period between 2022 and 2028. "It is the vision and aim of the plan to guide and facilitate the sustainable growth of the County in a manner which supports a deep respect for its unique natural heritage, capitalises on the potential of the towns and villages to deliver compact growth, facilitates healthy placemaking, supports the creation of self-sustaining settlements and rural areas that are attractive places to live in, work in and visit, provides for new job opportunities, embraces climate action and enables the transition to a low carbon, climate resilient and environmentally sustainable economy, improves sustainable mobility and conserves our heritage" (Wicklow County Council, 2022).

The development plan sets out ten Strategic County Outcomes informed by the National Planning Framework, the Regional Spatial and Economic Strategy, and the key issues arising in submissions from members of the public. The Strategic County Outcome most relevant to this development is:

SCO4 Sustainable Healthy Communities - Places should facilitate a high quality of life for all regardless of age or ability. Access to quality housing, employment, childcare, education, health services, community

facilities and a clean unpolluted, environment including clean air and water, are defining elements of healthy, attractive and successful places. Investment in a well-designed public realm which includes public spaces, parks, playgrounds, streets and recreational infrastructure to cater for all ages is essential".

Dunlavin is a small town with a relatively large rural hinterland and has been identified as one of five Small Towns (Type 1) in Wicklow. The addition of the new fire station to the area would upgrade the existing services and provide targeted 'catch up' investment to make the town more self-sustaining.

3.2.2 DUNLAVIN TOWN PLAN 2022-2028

This plan is from Volume 2 of the Wicklow County Development Plan which identifies Dunlavin as Level 5 Small Town. Level 5 settlements are defined as "the smaller towns of the County that provide important economic and social services to their populations and immediate hinterland. Such towns normally have a good range of infrastructural services and are suited to accommodating urban generated housing demand." The purpose of this plan is to put in place a structure that will guide the future sustainable development of the town. This plan, in conjunction with the County Development Plan, informs and manages the future development of the town.

Among the visions stated for Dunlavin in the Town Plan is to improve the quality of life for existing residents by identifying deficiencies in services and infrastructure in the town and making provision through zoning and development objectives to address these issues. This is to be achieved by facilitating the provision of new and improved infrastructure to meet the demands of the existing population and future residents.

There is an existing fire station in Dunlavin. However, the land where the current station is located has been zoned as a 'Town Centre' site and is currently under-utilised in terms of development potential. The proposed development site is shown in the Dunlavin Town Plan as within the land zoning category 'E-Employment'. The objective is 'to provide for the development of enterprise and employment'. This zoning aims to facilitate the further development and improvement of existing employment areas and to facilitate opportunities for the development of new high-quality employment and enterprise developments in a good-quality physical environment (WCC, 2022). The proposed fire station is a suitable development within this zone.

4 CHARACTERISTICS OF PROPOSED DEVELOPMENT

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

4.1 SIZE AND DESIGN

The proposed new construction of Dunlavin Fire Station will use 0.5ha of land to accommodate the development. The development will consist of a new two-storey fire station, on-site parking, a training tower, and associated boundary treatment, drainage, and site development works.

4.2 CUMULATION WITH OTHER EXISTING DEVELOPMENTS/DEVELOPMENT THE SUBJECT OF A CONSENT

Grants of planning in the vicinity of the site were reviewed to identify works of a significant scale which may produce in-combination effects with the proposed works. The following planning grants of larger than a single domestic scale were identified:

20466: (Liam Burke): permission for the construction of a 26 no. housing development in two separate phases. Phase A will consist of 23 no. houses as follows: 5 no. two bedroom terraced two storey houses (houses no 1-5 inclusive). 4 no. three bedroom terraced two storey houses (houses no. 6-9 inclusive). 6 no. three bedroom terraced two storey houses (houses 10-15 inclusive). 4 no. three bedroom semi-detached two storey houses (houses no. 16-19 inclusive). 4 no. two bedroom semi-detached two storey houses (houses 20-23 inclusive). Phase B will consist of 3 no. four bedroom detached houses (houses 24-26 inclusive). Permission for the construction of a vehicular entrance through Chapel Hill, connection to public foul sewer, open space and pedestrian access to Chapel View, permission to amalgamate public open space of Chapel Hill into proposed development and all associated site works. Retention of existing block wall t the north eastern boundary of the site as constructed.

211141: (DL Residential Properties Ltd.): permission for 89 no. dwellings consisting of 8 no. 2 bed terraced bungalow dwellings, 10 no. 2 bed semidetached 2 storey dwellings, 4 no. 2 bed terraced 2 storey dwellings, 34 no. 3 bed semidetached 2 storey dwellings, 6 no. 3 bed terraced 2 storey dwellings, 13 no. 3 bed detached 2 storey dwellings, 8 no. 4 bed semidetached 2 storey dwellings 6 no. 4 bed detached 2 storey dwellings. Development is to include connection to the existing access road across Cow Green which connects to R412, proposed internal roads and pathways, alterations to existing levels, site landscaping, boundary treatments, pedestrian access and all ancillary site development and excavation works.

Other granted planning permissions in the vicinity of the site pertain primarily to small-scale agricultural, residential, and commercial constructions, extensions, change of use, or retention of works. Although two

larger planning grants were identified in the vicinity of the site, due to the small scale of the proposed development, in-combination effects with these are considered to be unlikely and not significant.

4.3 THE NATURE OF ANY ASSOCIATED DEMOLITION WORKS

There are no buildings or structures on the site which will require demolition.

4.4 THE USE OF NATURAL RESOURCES, IN PARTICULAR LAND, SOIL, WATER AND BIODIVERSITY

There will be no long-term use of any natural resources in association with the project, except during the operational phase of the proposed works when water will be required to supply the water tank for fire training and for general use within the station. However, this water will be sourced from the existing municipal water mains and will not impact the resources necessary for the maintenance of the conservation objectives of any European site.

4.5 PRODUCTION OF WASTE

Any waste generated during the construction will 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 the waste following the completion of the works other than that of waste generated during the typical day-to-day running of the fire station.

4.6 POLLUTION AND NUISANCES

There will be a temporary increase in noise during the proposed works. However, noise levels will not exceed levels typical of construction works and will be short-term in duration. There will be a slight increase in traffic disturbance during the construction activities, i.e., bringing supplies to the site and removal of material if required. This disturbance will be short-term. 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 following the completion of the works other than noise related to the use of the site as a fire station.

Potential surface water pollution via runoff, including pollution by silt or hydrocarbons, will be managed in accordance with best practices. The risk of surface water pollution during the construction stage is considered unlikely and not significant due to the small scale of the project and subject to the implementation of mitigation measures.

The appointed contractor will be required to prepare a site-specific Construction Environmental Management Plan (CEMP). These measures include:

- Careful project management in respect of water protection;

Proper management of fuels and building materials;

Based on EPA mapping, a tributary to the River Greese is located on the site. The River Greese discharges to the River Nore and River Barrow SAC north of Carlow. Although the site is topographically and hydrologically upgradient of the River Nore and River Barrow SAC, the River Nore and River Barrow SAC is 30.2km downstream of the site. In addition, surface water drainage from the site will discharge to the municipal surface water system which discharges to River Greese. Therefore, impact to the River Greese and the downgradient European site and other designated sites within the Zone of Influence of the proposed works is deemed to be short-term and unlikely given the nature of the development and the scale and duration of the proposed construction works. Subject to the implementation of design and construction mitigation measures, no significant negative impacts on the local biodiversity and conservation objectives of the local species are anticipated as a result of this development.

4.7 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 short duration of the proposed 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.

4.8 RISKS TO HUMAN HEALTH – E.G., WATER CONTAMINATION/ AIR POLLUTION

Risks to surface water during the construction phase will be minimised via engineering design in line with best practices. In addition, contractors will be required to implement construction methods in line with best practices regarding fuel and chemical storage, excavation, waste storage, and use on the site of any items that may pose a risk to surface water or groundwater.

Based on the GSI groundwater well database (refer to section 5.15), one well is potentially located within the site. However, the location of this well has a high degree of inaccuracy and, therefore, is unlikely to be located on the site. The next nearest well is located 0.3km west of the site. There are a further 13 wells or springs within 1km of the site.

The GSI database provides information on groundwater source protection zones (SPZs) (e.g., areas of contribution to water supply bores). SPZ delineation provides an assessment of the land area that contributes

groundwater to a borehole or spring. The purpose of SPZs is to provide additional protection to safeguard drinking water quality through constraining the proximity of an activity that may impact upon a drinking water abstraction. The nearest SPZ is Usk/ Gormanstown Group Water Scheme (GWS) which is located 2.9km northeast of the site. As such, fuel and chemical storage and use on the site is unlikely to pose a risk to water of groundwater contamination within this SPZ. However, the risks to both groundwater and surface water will be minimised via construction in line with best practice. Contractors will prepare and implement a site-specific CEMP which will address the mitigation of risks to groundwater.

Given the short-term nature of the works and the undertaking of works in accordance with best practice, it is not anticipated that the works will pose a significant 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. Best practice guidelines will be applied to noise and dust nuisance mitigation. Overall, the risk to human health is low, subject to the implementation of mitigation measures in the CEMP.

5 LOCATION OF THE PROPOSED DEVELOPMENT

5.1 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;

The National Parks and Wildlife Service (NPWS) online map tool;

Heritage Maps online; and

Environmental Sensitivity Mapping online.

5.2 ABUNDANCE, AVAILABILITY, QUALITY, AND REGENERATIVE CAPACITY OF NATURAL RESOURCES

Limited natural resources will be required to complete the work. It is proposed that any material generated during the works will be reused on site or removed from site for recycling or reuse where possible. The relevant natural resources have been looked at in more detail in the following sections.

5.3 THE ABSORPTION CAPACITY OF THE NATURAL ENVIRONMENT

The absorption capacity of the natural environment with regard to the proposed project has been screened in accordance with Regulations paying particular attention to:

wetlands, riparian areas, river mouths;

- coastal zones and the marine environment;

mountain and forest areas;

nature reserves and parks;

areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive;

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;

densely populated areas; and

landscapes and sites of historical, cultural, or archaeological significance.

5.4 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 immediately surrounding area is comprised of primarily agricultural land with scattered residential, industrial, and municipal infrastructural use. Refer to Section 1.3 for a full list of adjacent land uses.

5.5 SITE DEVELOPMENT

A review of the OSI historical maps dataset has found that the study area has not been developed since at least 1842. The following section outlines the historically mapped features on and in the immediate environs of the study area.

The 6-Inch map (1837-1842) shows the site and adjoining land as undeveloped. Widely scattered residences were located in all directions. A mill race was located to the west of the site and a corn mill to the southwest. The village of Dunlavin was located to the northeast as shown in Figure 5.1.

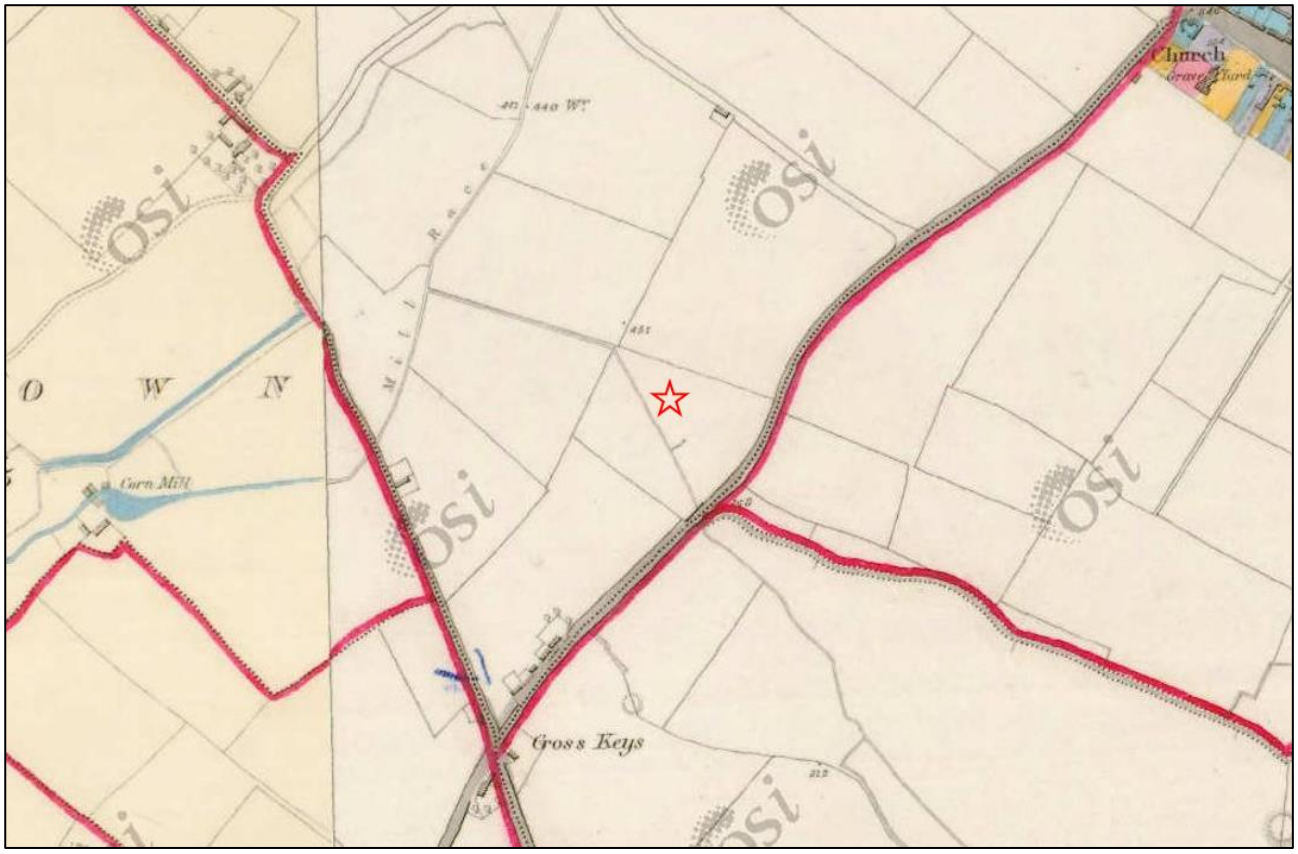


Figure 5.1: 1837-1842 6-inch OS Map; site location shown by red star (Source: GeoHive, 2023)

The 25-Inch map (1888-1913) indicates no changes to site usage. The Tullow branch of the Great Southern and Western Railway had been constructed to the northwest of the site. No other significant changes were noted in the surrounding are as shown in Figure 5.2.

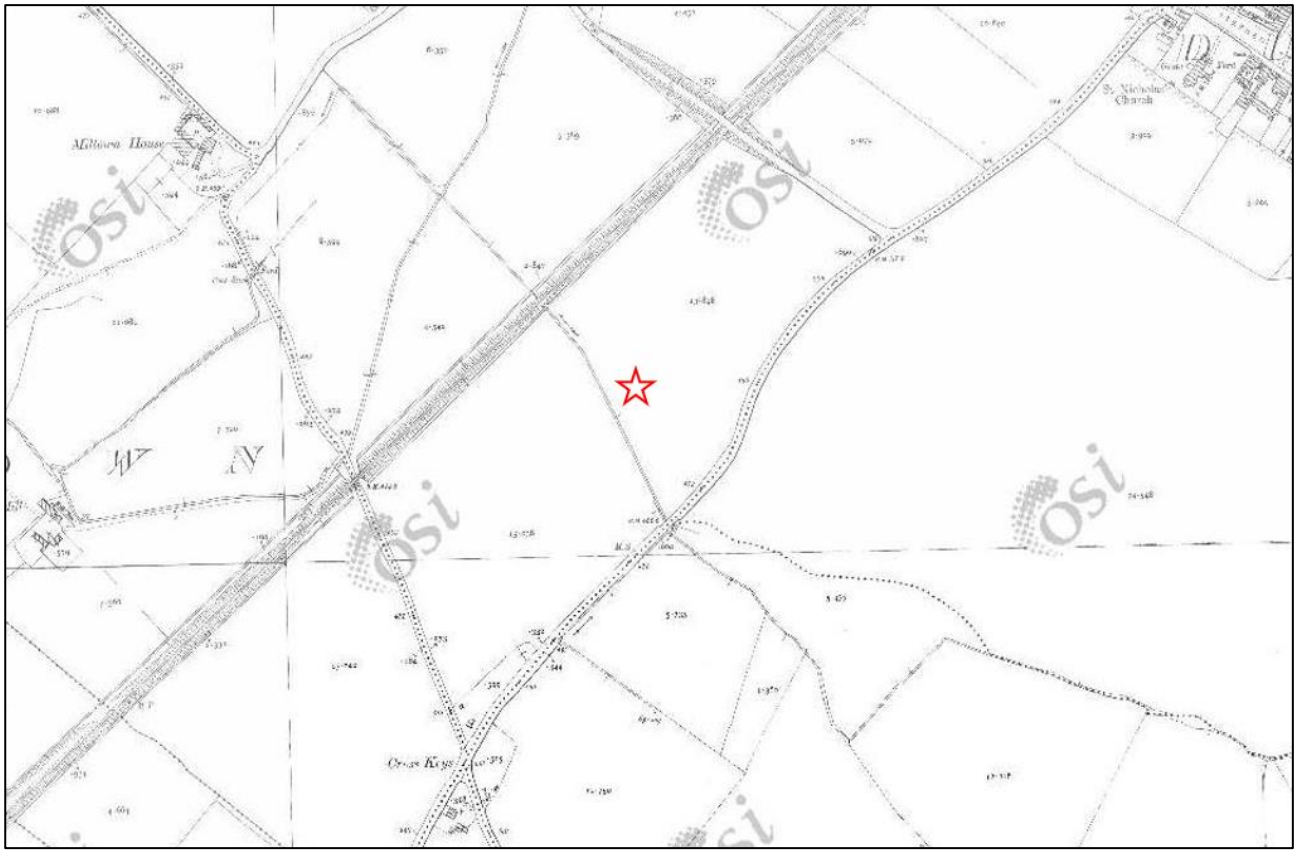


Figure 5.2: 1888-1913 25-inch OSI Map; site location shown by red star (Source: GeoHive, 2023)

The 6-Inch Cassini map (1830s to 1930s) shows no change to the site or the surrounding area since the previous mapping as shown in Figure 5.3.

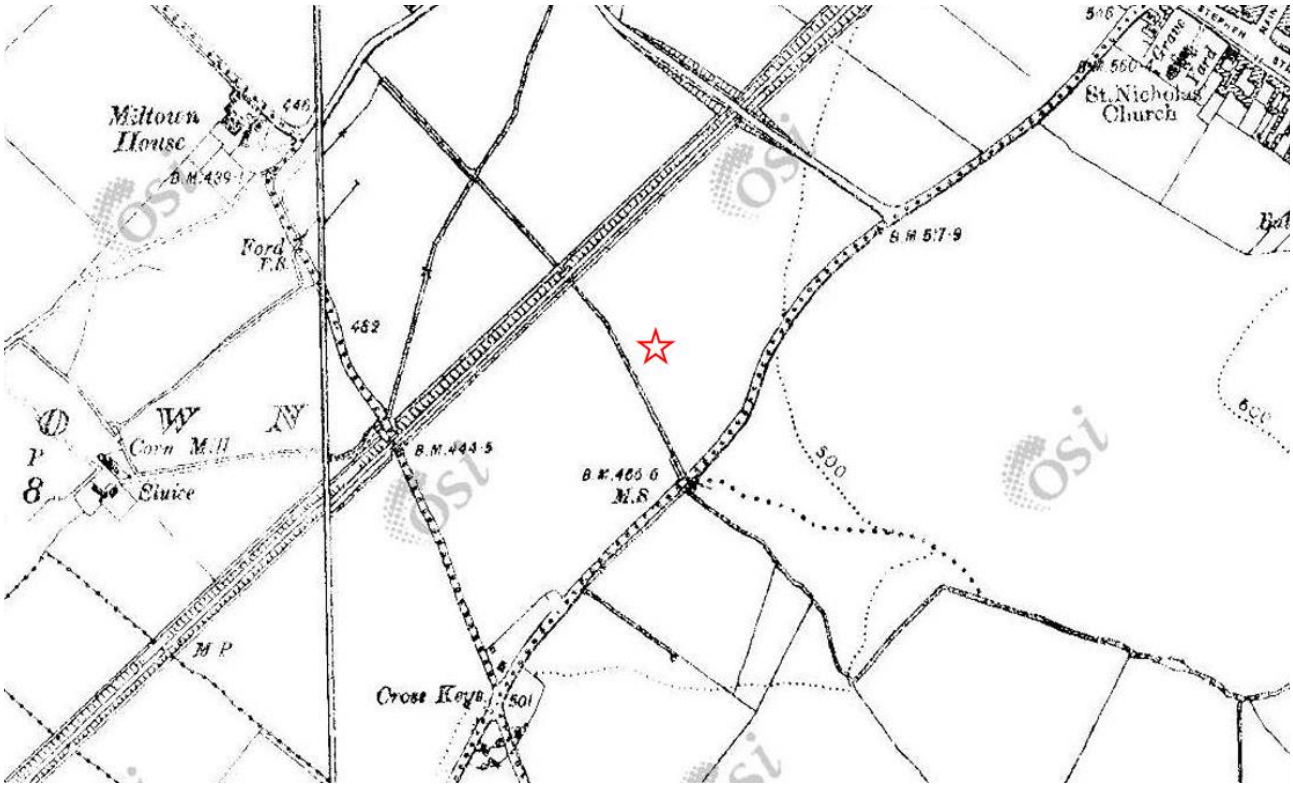


Figure 5.3: 6 Inch Cassini Map; site location shown by the red star (Source: GeoHive, 2023)

The 1995 aerial photograph (Figure 5.4) shows no significant change to the site since the Cassini mapping. A wastewater treatment plant had been constructed on the adjoining site to the northwest. A large factory had been constructed to the south of the site along with scattered houses and agricultural buildings in all directions. Larger scale residential development had occurred in the village of Dunlavin. To the northwest of the site, the mill race had been infilled and the Great Southern and Western Railway had been removed.

Figure 5.4: Aerial photograph for 1995; site location shown by the red star (Source: GeoHive, 2023)

The 1999-2003 aerial photo show no significant changes to the site or the nearby surrounding area other than the additional residential construction to the northeast in Dunlavin and quarrying on former agricultural land to the west as shown in Figure 5.5.

Figure 5.5: Aerial photograph for 1999-2003; site location shown by the red star (Source: GeoHive, 2023)

The 2004-2006 aerial photo shows no significant changes to the site or the nearby surrounding area other than the expansion of the quarry to the west as shown in Figure 5.6.

Figure 5.6: Aerial photograph for 2004-2006; site location shown by the red star (Source: GeoHive, 2023)

The 2011-2013 aerial photo shows no significant changes to the site or the nearby surrounding area other limited residential and agricultural construction to the south and east and the abandonment of quarrying and the reclamation of formerly quarried land to the west as shown in Figure 5.7.

Figure 5.7: Aerial photograph for 2011-2013; site location shown by the red star (Source: GeoHive, 2023)

The 2013-2018 aerial photo shows no significant changes to the site or the nearby surrounding area other the construction of a new wastewater treatment plant on the adjoining land to the northwest and a new access road for the plant to the west as shown in Figure 5.8.

Figure 5.8: 2013-2018 Aerial Photograph; site location shown by red star (Source: GeoHive, 2023)

Subsequent Google Earth aerial photos show no significant changes to the site or adjacent lands since the 2013-2018 aerial photo.

5.6 SITE PHYSICAL SETTING

Information regarding the site topography, hydrology, geology, hydrogeology, and ecology of the area has been obtained from records held by the GSI, EPA Envision online mapping tool, OSI, GeoHive, Water Framework Directive Maps, and NPWS databases.

5.7 BIODIVERSITY

There is one surface water features within the site boundary. This stream is a tributary to the River Greese which is located 1.4km west-southwest of the site. The River Greese flows in a southwesterly direction to where it joins the River Barrow north of Carlow town.

An Appropriate Assessment (AA) Screening Report was prepared by OCSC which concluded that the potential for adverse impacts to the nearest designated European site, the Slaney River Valley SAC, is considered to be not significant given the nature of the development, its scale, and the localised and temporary nature of the construction effects identified as potential sources.

There are two SPAs within 15km of the proposed scheme as shown on Figure 5.9, the Wicklow Mountains SPA (c. 10.9km east) and the Poulaphouca Reservoir SPA (c.11 km northeast) . There is no direct or hydrological link between the site and these SPAs.

There are three SACs within the 15km of the proposed scheme as shown on Figure 5.9: the Slaney River Valley SAC (c. 6.5km southeast), Wicklow Mountains SAC (c. 9.6km east), River Barrow and River Nore SAC (c. 13.6km west at its nearest point). The Slaney River Valley and Wicklow Mountains SACs lie within a separate catchment area to the site and, therefore, will not be impacted by site activities. Although the site lies upgradient of the River Barrow and River Nore SAC, due to the distance from the site to this SAC (c. 30.2km downgradient) and the scale of the works, impacts to this European site during the construction phase are deemed to be short-term and unlikely.

There are no Natural Heritage Areas (NHAs) and 11 proposed Natural Heritage Area (pNHAs) within 15km of the site as shown on Figure 5.9. The nearest is Dunlavin Marshes pNHA located 1.4km northwest of the site. However, there is no hydrological connectivity or physical connectivity in the form of hedgerows, treelines, or woodlands between the area of the proposed works and any of the pNHAs.

The National Biodiversity Data Centre holds records of Annex I or Annex II species identified within the 2km square (N80Q) in which the site is located. Regarding Annex I or Annex II species listed for N80Q, Common Pheasant (*Phasianus colchicus*) is identified. Therefore, it is recommended a preconstruction survey to identify any impacts originating from the works on local habitats for Annex I or Annex II species.

Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) are also listed for N80Q. However there are no hedgerows and treelines that would provide roosting or foraging on site. Thus bats are scoped out of this report.

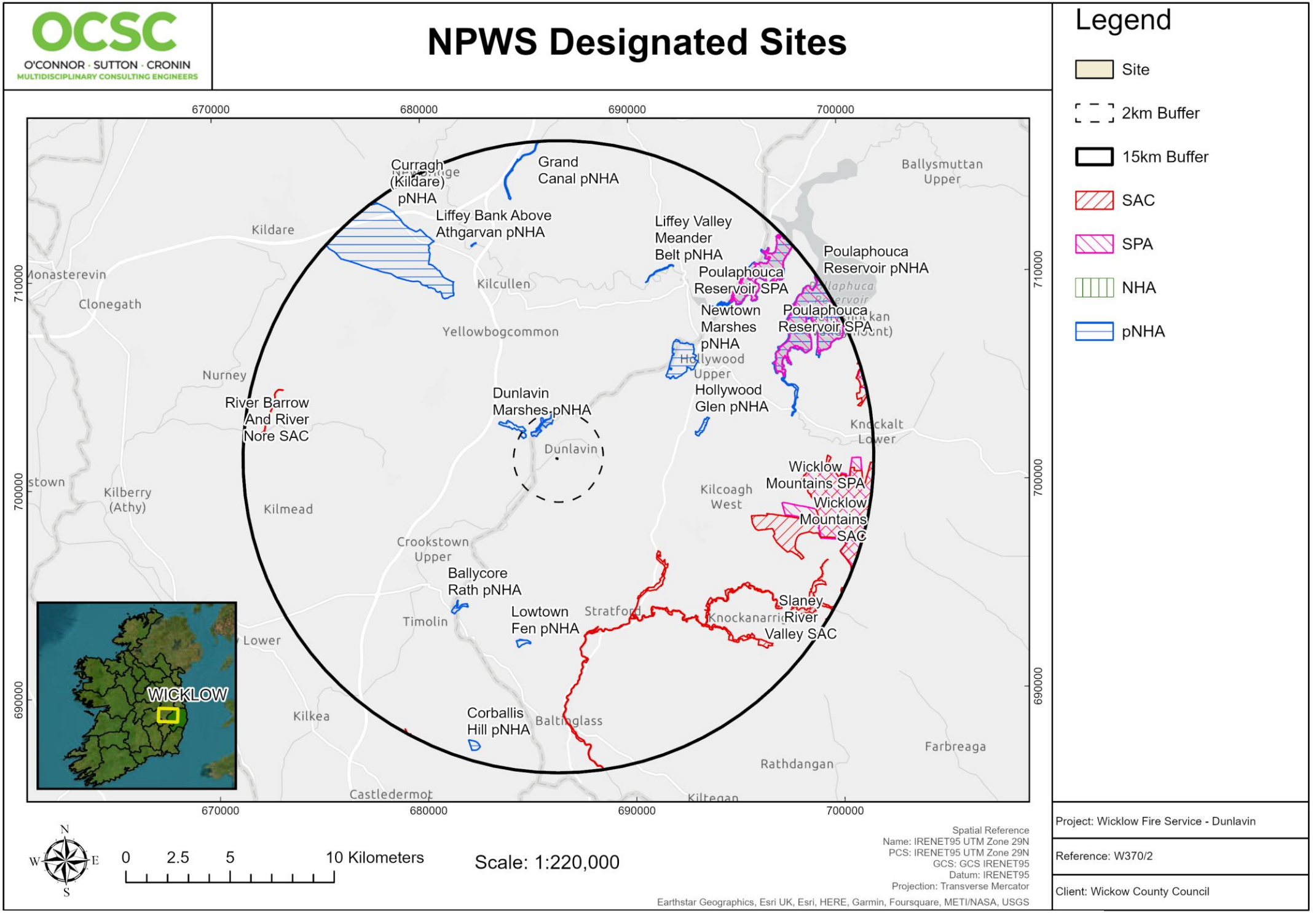


Figure 5.9: NPWS Designated Sites

5.8 TOPOGRAPHY

The topography of the site slopes gently towards the west.

5.9 UNCONSOLIDATED GEOLOGY

The site is underlain by AminDW, deep well-drained, mainly basic mineral soils, as seen in Figure 5.10.

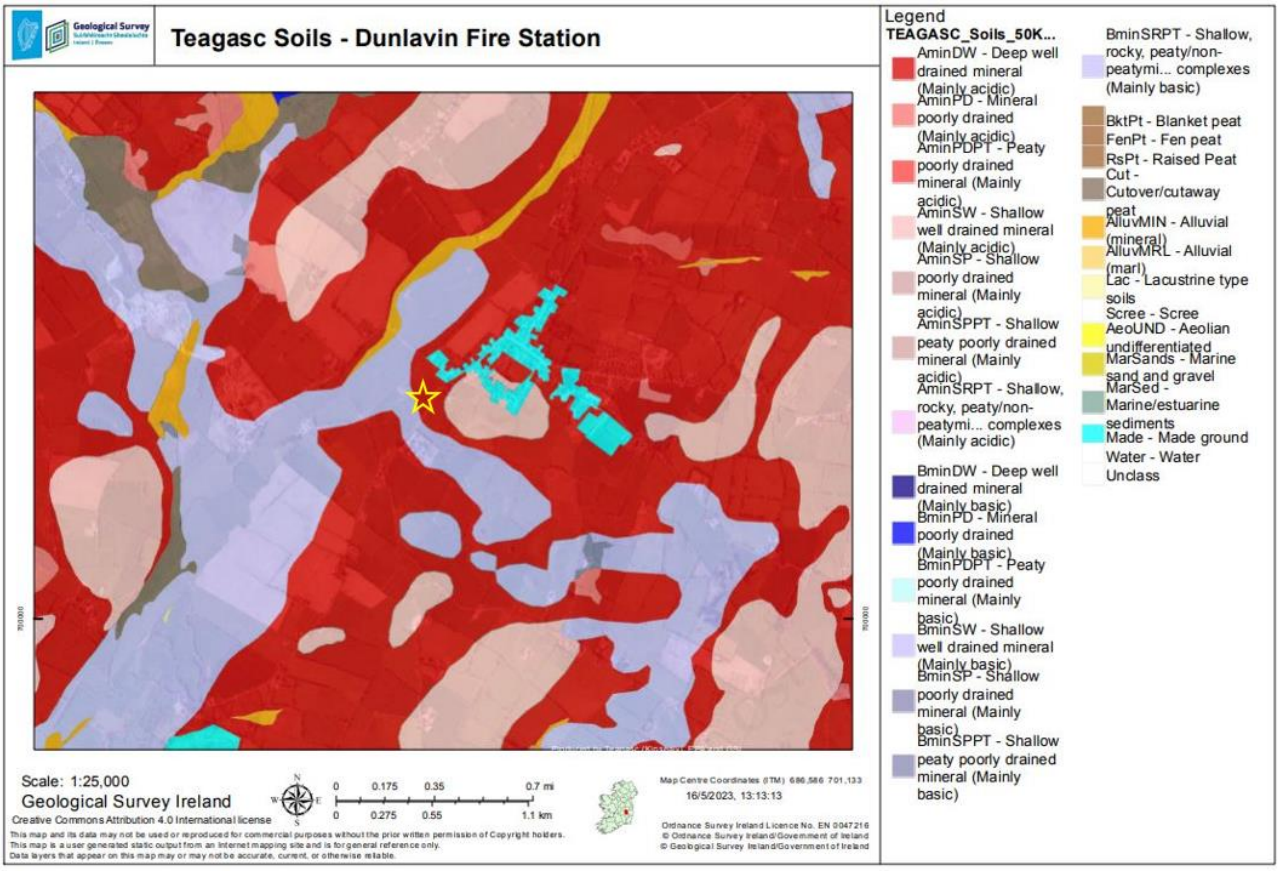


Figure 5.10: Teagasc Topsoil Soil Classification; approximate site location indicated by the yellow star (Source: GSI, 2023)

5.10 GEOLOGY

The site is underlain by Tipperkevin Formation as shown in red in Figure 5.11. The formation comprises medium and fine-grained greywackes and shales (GSI, 2023).

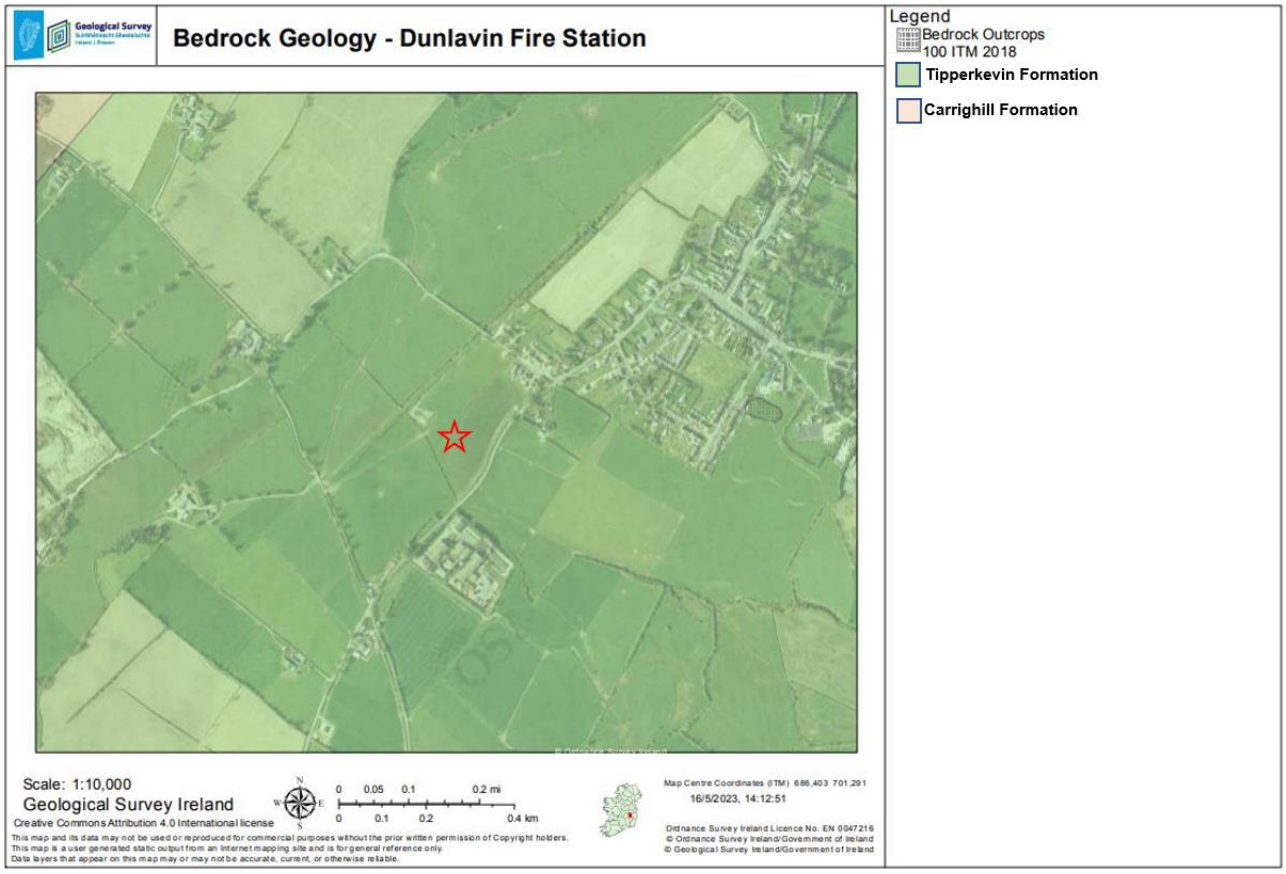


Figure 5.11: Bedrock Geology 100K; approximate site location indicated by the red star (Source: GSI, 2023)

5.11 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 Tober Demense (WW056) which is located 2.9km northeast of the site at its nearest point. It has been as a designated County Geological Site (CGS). The Tober Demense site is listed due to a spring which emerges from deep glaciofluvial gravels and flows into a man-made 'fishpond' feature. It is one of the largest springs in County Wicklow. See Figure 5.12 for the location of the nearest geological heritage site.

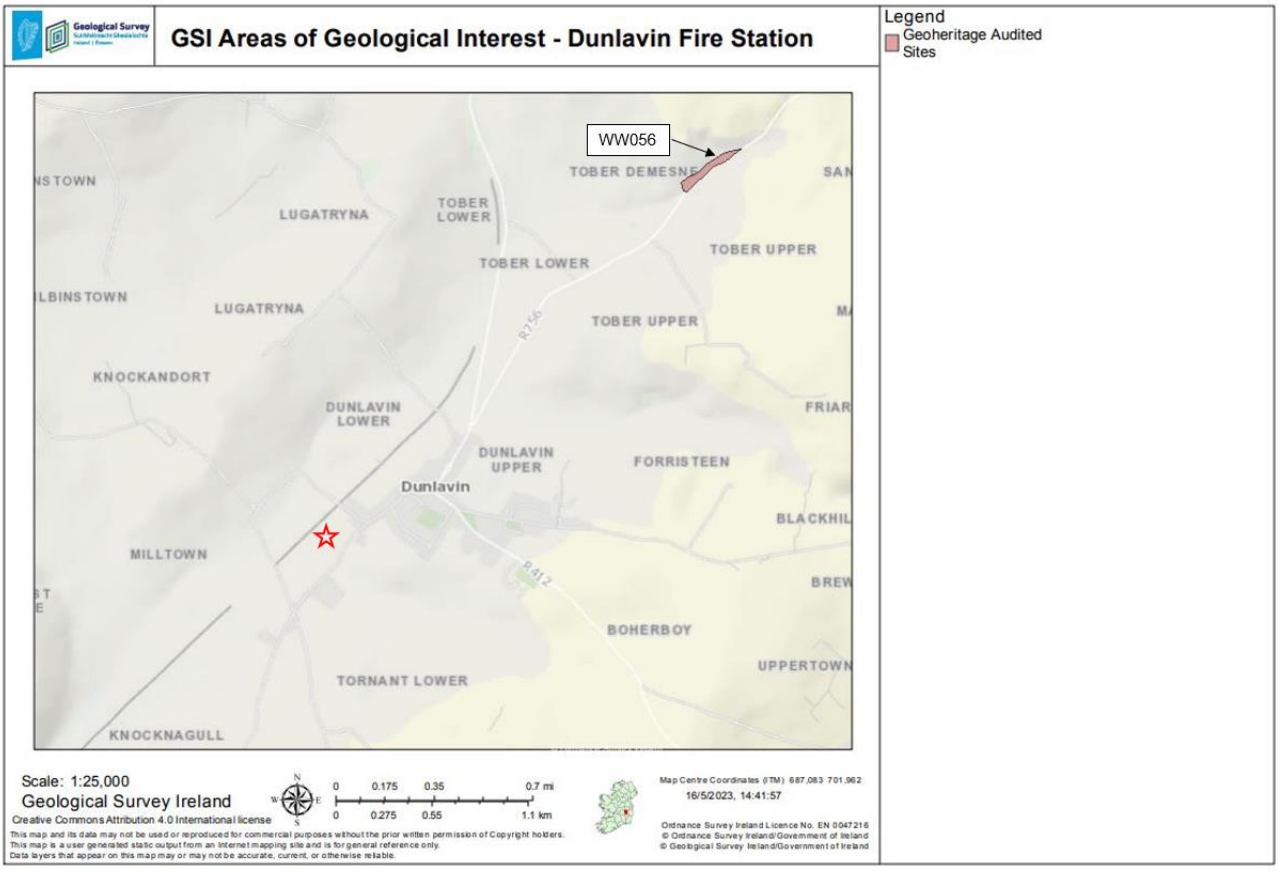


Figure 5.12: Geological Heritage Sites; approximate site location indicated by the red star (Source: GSI, 2023)

5.12 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 is primarily based on the permeability and thickness of subsoils). The site is underlain by a poor bedrock aquifer which is generally unproductive except for local zones (Pl) as shown in Figure 5.13.

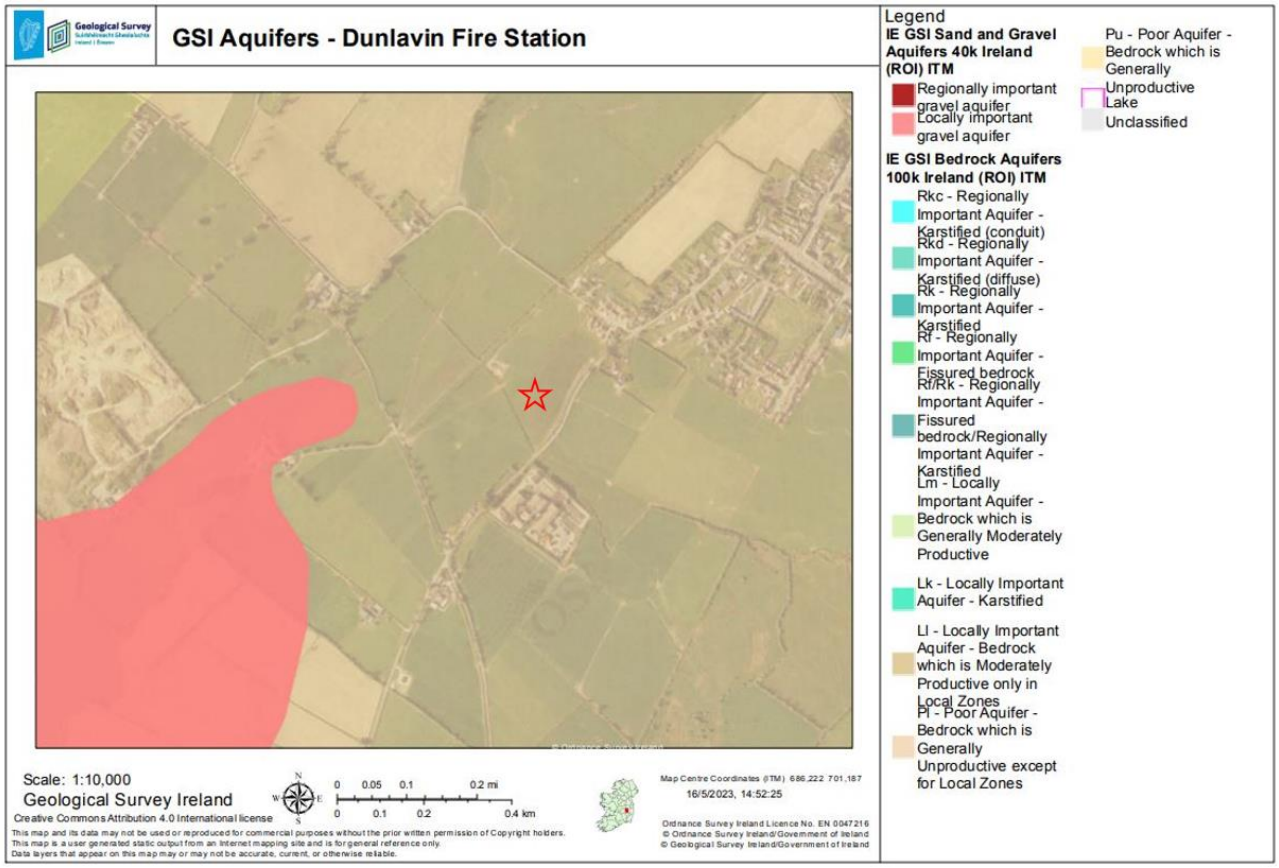


Figure 5.13: Aquifers; approximate site location indicated by the red star (Source: GSI, 2023)

5.13 GROUNDWATER VULNERABILITY

The GSI database indicates that groundwater vulnerability for the site is High as seen in Figure 5.14. Vulnerability ratings are 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.

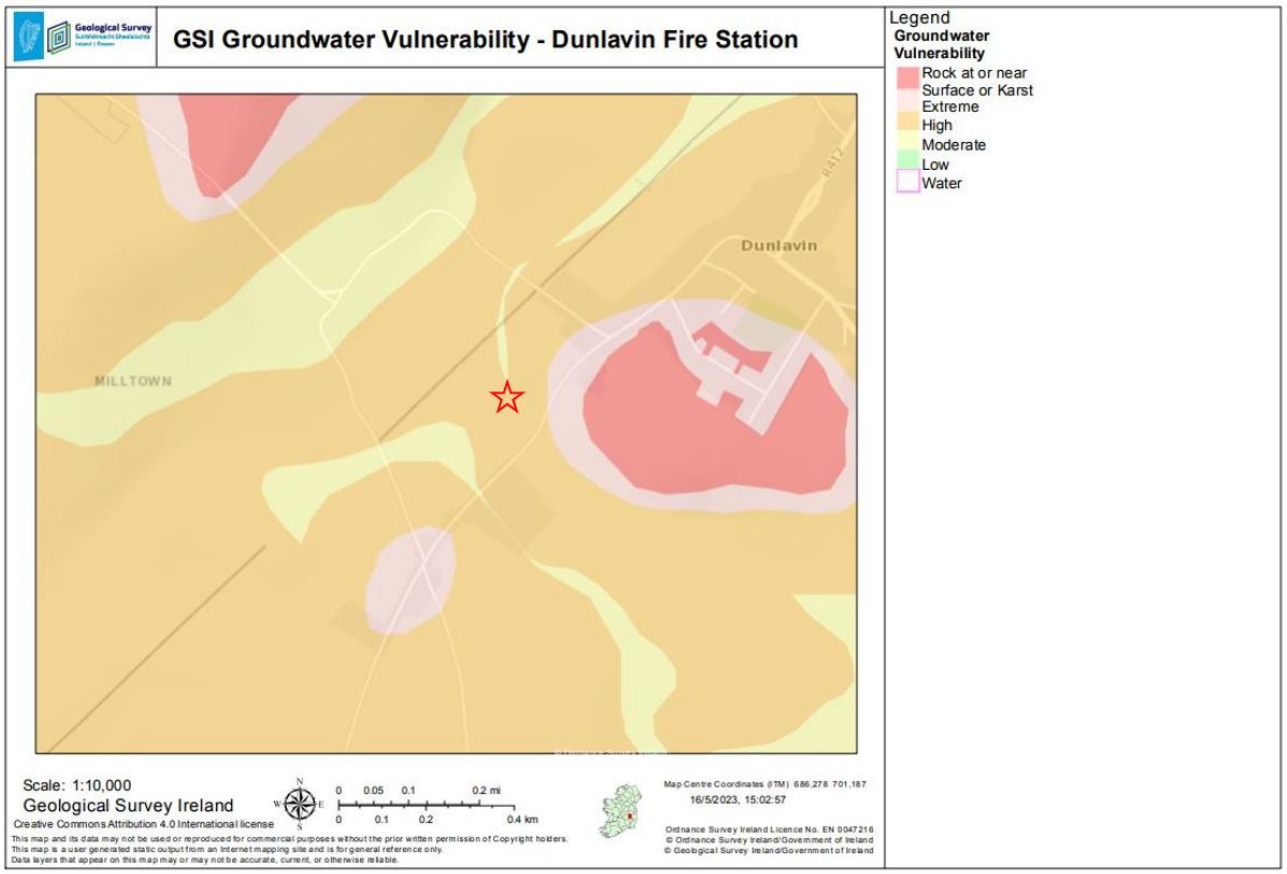


Figure 5.14: Groundwater Vulnerability; approximate site location indicated by the red star (Source: GSI, 2023)

5.14 GROUNDWATER RECHARGE

Diffuse recharge generally occurs via rainfall percolating through the subsoil with its rate being higher in areas where the subsoil is 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 5.15 GSI groundwater recharge model parameters for these zones are summarised in Table 5.1.

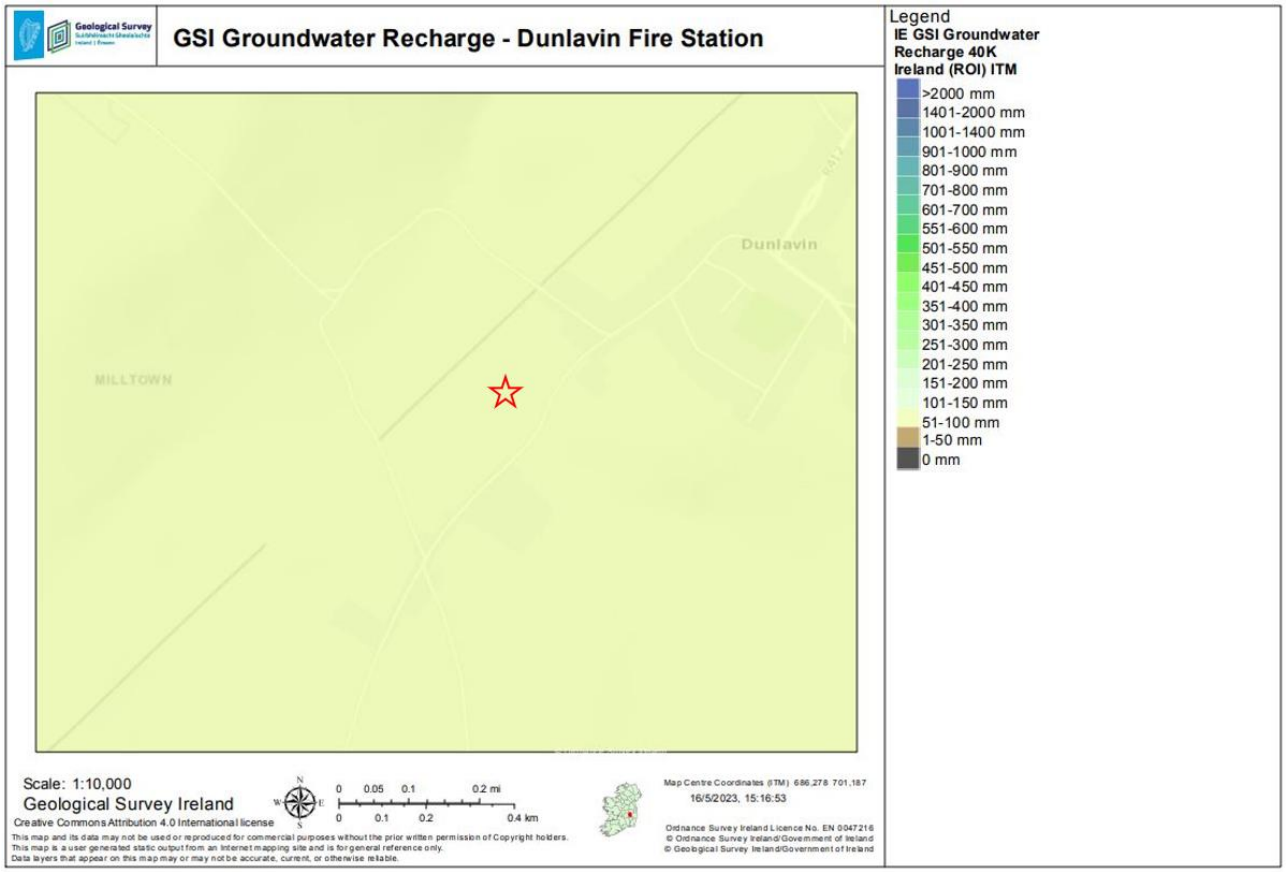


Figure 5.15: Groundwater Recharge; approximate site location indicated by the red star (Source: GSI, 2023)

Table 5.1: GSI Groundwater Recharge Parameters

Groundwater Recharge Parameters	
Average Recharge (mm/yr.):	100
Hydrogeological Setting Code:	2.ii
Hydrogeological Setting Description:	High permeability subsoil, sand & gravels overlain by well-drained soil
Recharge Coefficient (%):	85.00
Effective Rainfall (mm/yr.):	556
Average Recharge Range (mm/yr.):	51-100
Subsoil Permeability Description:	High
GW Vulnerability:	High
Aquifer Category Description:	Poor Aquifer - Bedrock which is Unproductive except in Local Zones
Rock Unit Group	Tipperkevin Formation

5.15 WELLS AND SPRINGS

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

One well is potentially located within the site: 2619NEW014 which was drilled on the 1st of September 1970 to 55m for an unspecified use. However, the location of this well has a high degree of inaccuracy and, therefore, is unlikely to be located on the site. The next nearest well, 2619NEW015 is located 0.3km west of the site. This well was drilled on the 15th of February 1961 to 25m for domestic use. There are a further 13 wells or springs within 1km of the site, as shown in Figure 5.16.

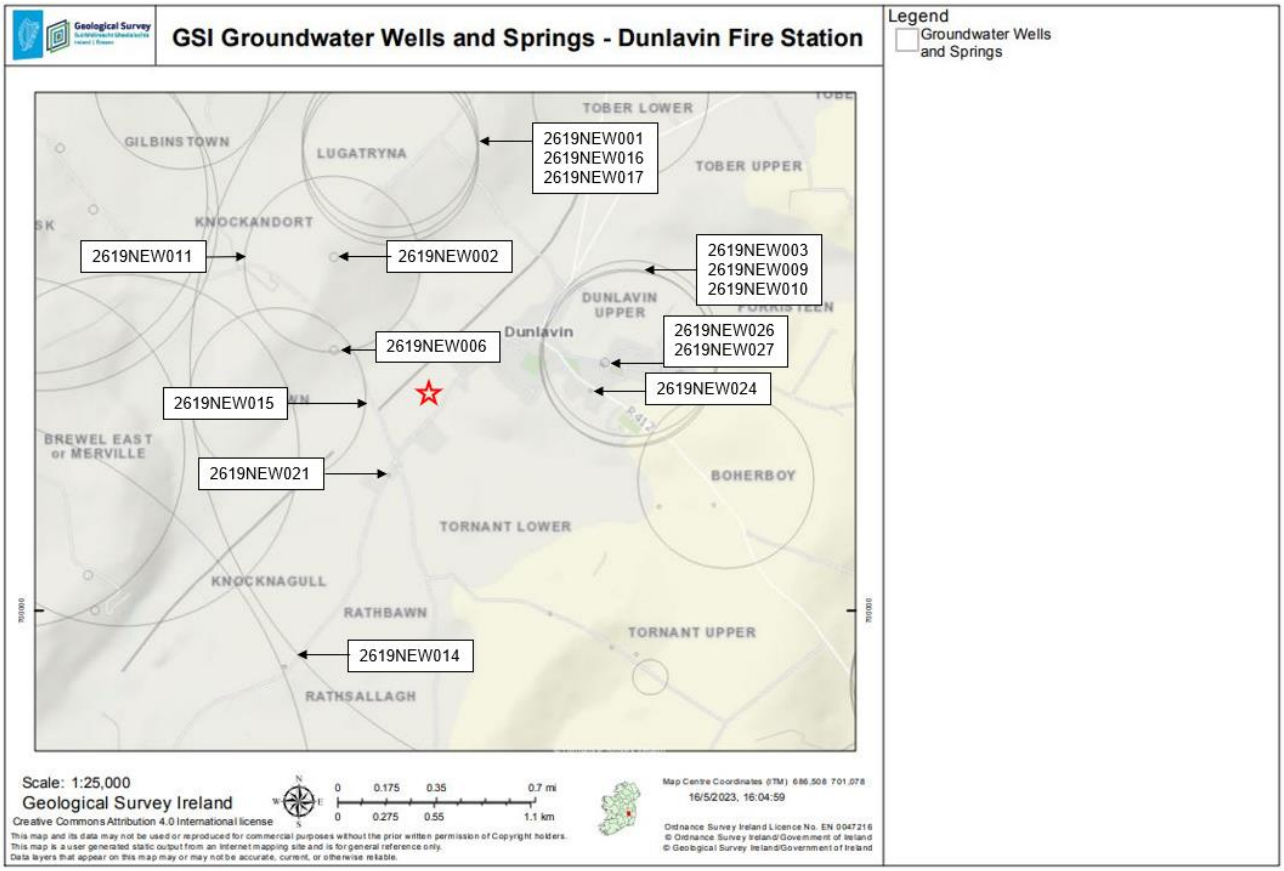


Figure 5.16: Wells and Springs; approximate site location indicated by the red star (Source: GSI, 2023)

The GSI database also provides information on groundwater Source Protection Zones (SPZs) (e.g., areas of contribution to water supply bores). The nearest SPZ is Usk/ Gormanstown Group Water Scheme (GWS) which is located 2.9km northeast of the site. See Figure 5.17.

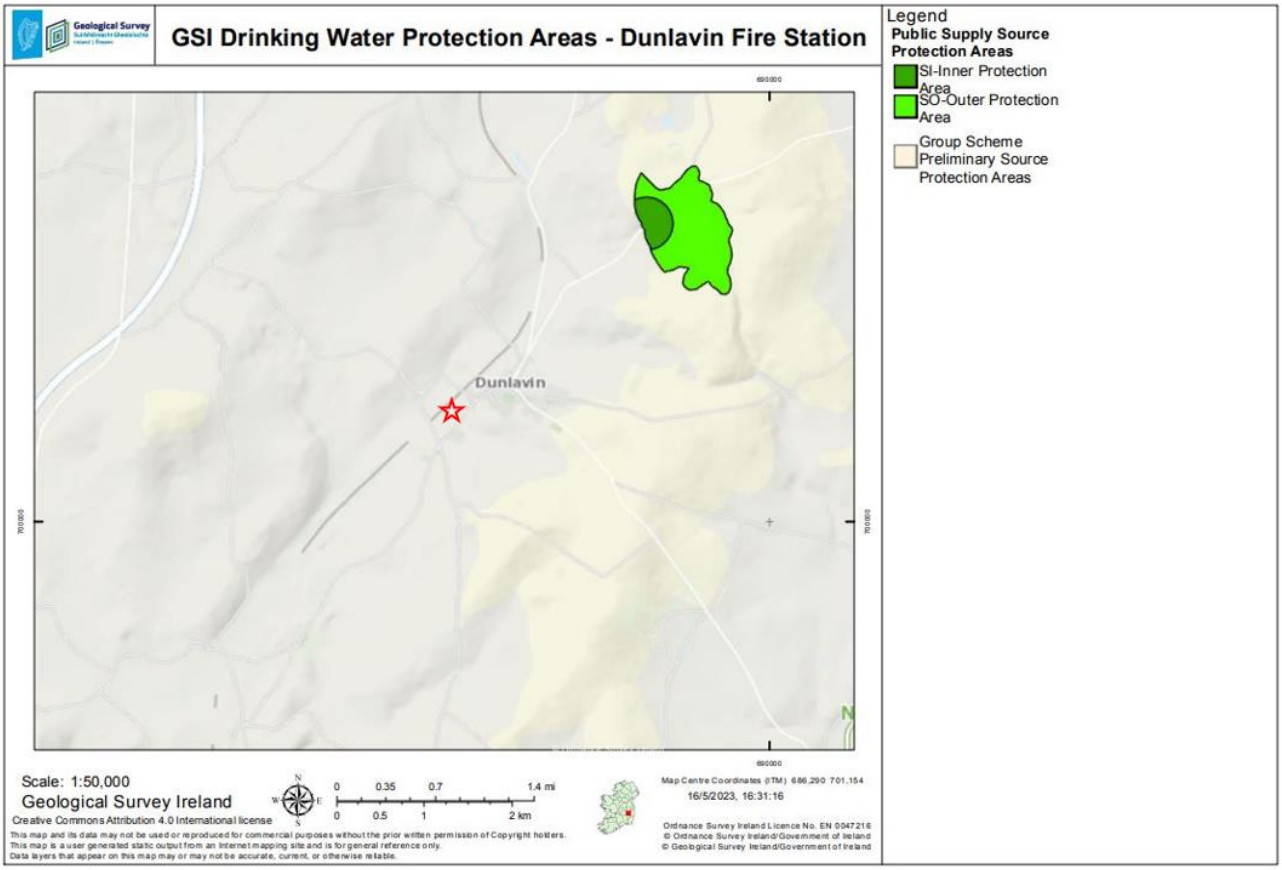


Figure 5.17: Source Protection Zones; approximate site location indicated by the red star (Source: GSI, 2023)

5.16 HYDROLOGY

There are no surface water features within the site boundary. The nearest surface waterbody is a small stream (IE_SE_14G040070) which is a tributary of the River Greese (IE_SE_14G040070). This stream is located 45m west of the proposed development at the nearest point. The stream flows from this point into the Greese, approximately 304 metres downstream. The Greese flows southwest through Ballitore, and Kilkea before entering the River Barrow approximately 25km downstream of the development. From here the Barrows continues south through Carlow town, Muine Beag, Graiguenamanagh and New Ross before reaching Waterford Harbour and flowing into the Irish Sea. See Figure 5.18 and Figure 5.19 for waterbody locations.

Based on the most recent water quality information (2016-2021), the stream segments nearest the site have an overall Water Framework Directive (WFD) status of Poor with downgradient sections of the Greese_010 and the Greese_020 having a Moderate status as shown in Figure 5.18.

The EPA spatial dataset indicates that the risk of the River Greese downgradient of the site and its tributaries near the site are at risk of failing to meet their WFD objectives by 2027 (EPA 2023) as shown in Figure 5.19. WFD information for the tributary streams nearest the site are summarised in Table 5.2.

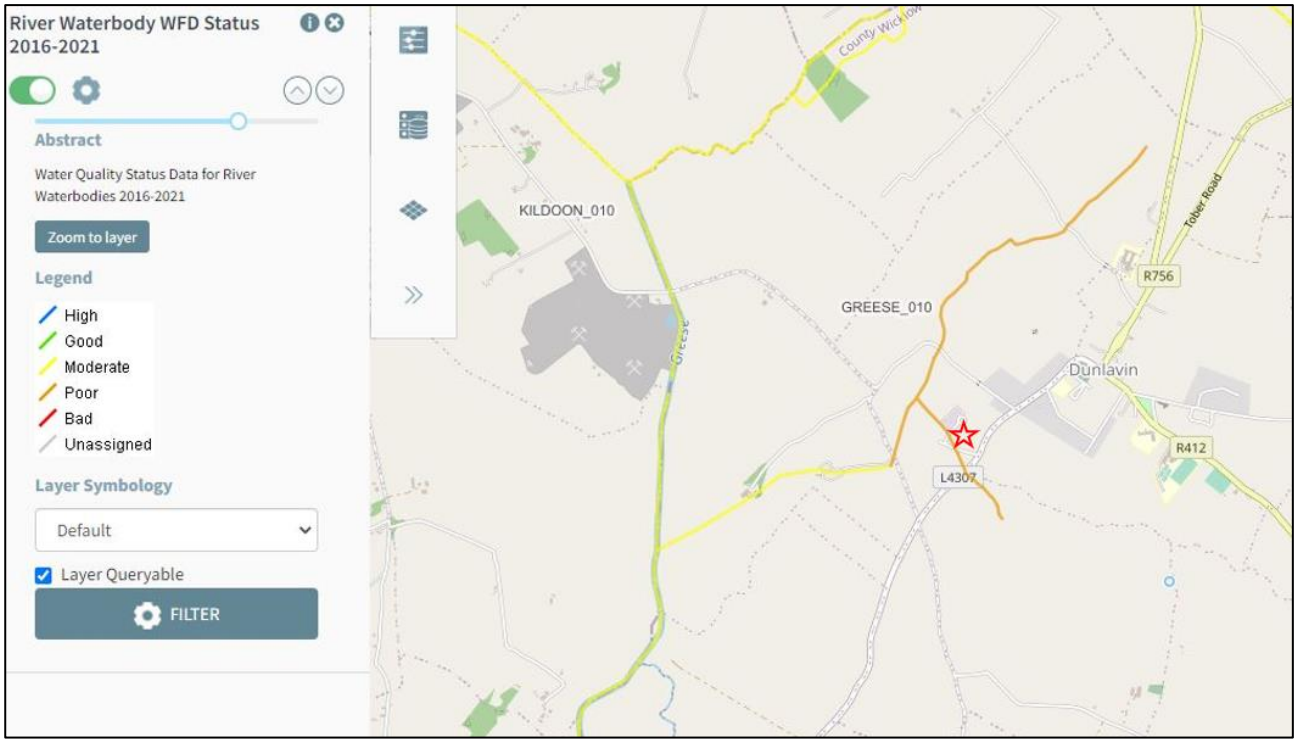


Figure 5.18: River Waterbody WFD Status; approximate site location indicated by red star (Source: EPA Maps, 2023)

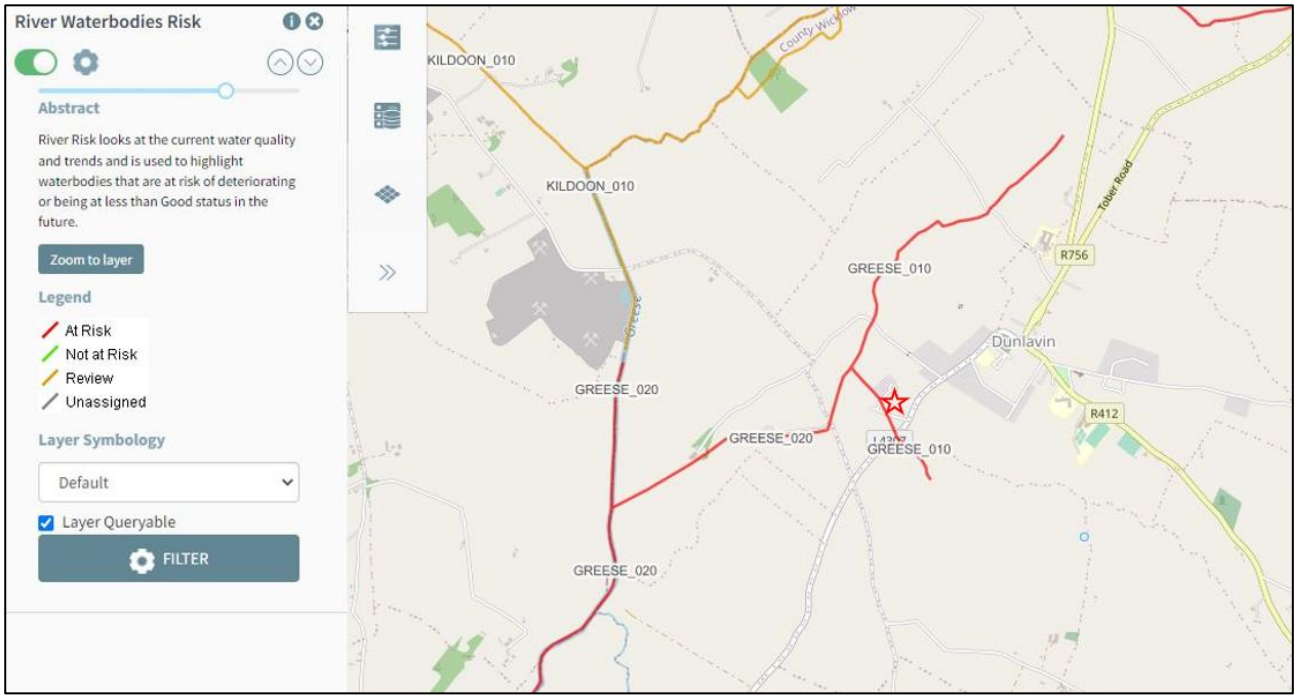


Figure 5.19: River Waterbodies Risk; approximate site location indicated by red star (Source: EPA Maps, 2023)

Table 5.2: WFD Summary Information

Name	River Greese
Waterbody Code	IE_SE_4G040070
Waterbody Name	GREESE_010
Waterbody Type	River
Iteration	SW 2016-2021
Status	Poor
Risk	At risk

5.17 RADON

According to the EPA, the site has been classified as an area where about 1 in 10 homes are likely to have high radon levels as shown in Figure 5.20.

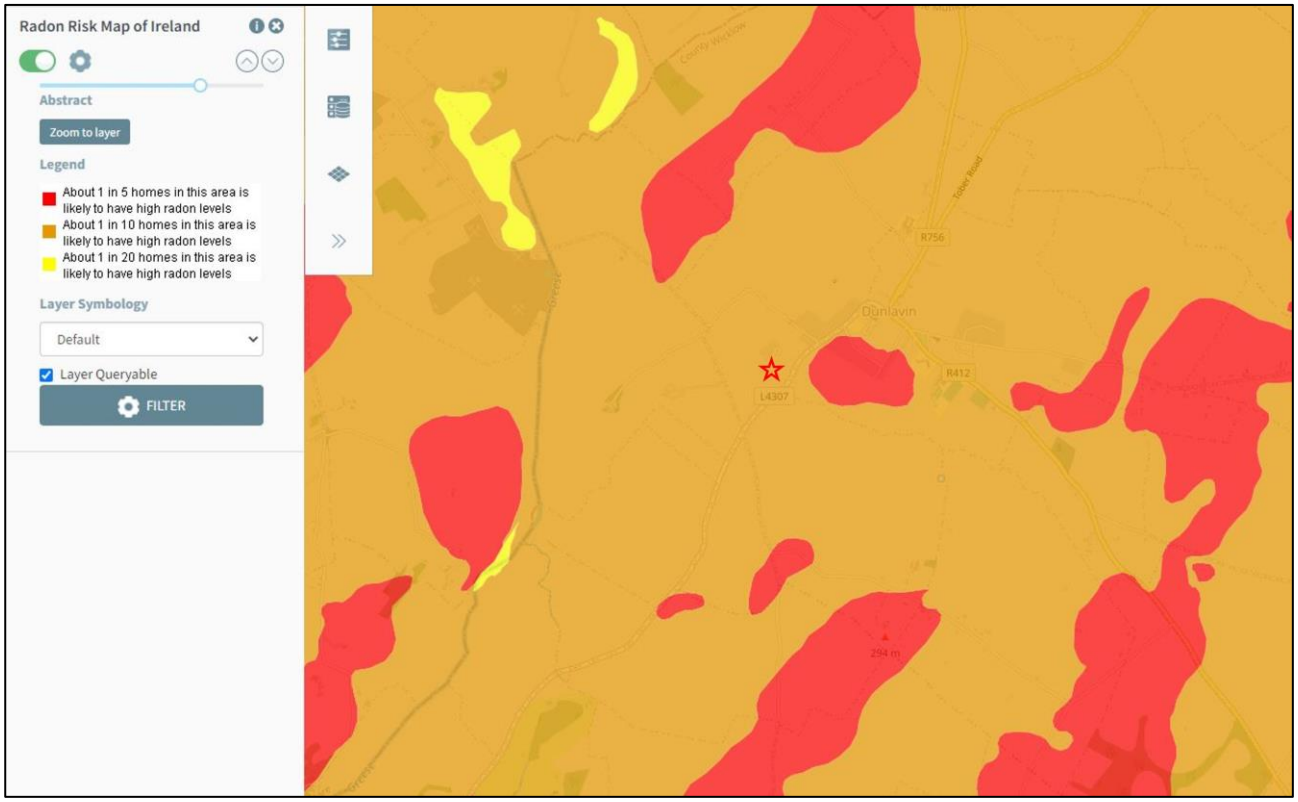


Figure 5.20: Radon Risk; approximate site location indicated by the red star (Source: EPA Maps, 2023)

5.18 PROTECTED STRUCTURES

The National Monuments Service (NMS) maps shows that there are no sites on the National Inventory of Architectural Heritage within 500m of the site. The nearest (16308013) is located 600m northeast of the site. See Table 5.3 and Figure 5.21 for locations of National Inventory of Architectural Heritage sites and information regarding nearby sites.

Figure 5.21: National Inventory of Architectural Heritage sites and Protected Structures in the vicinity of the proposed site; approximate site location indicated by the red star (Source: NMS, 2023)

The NMS maps also shows one listing on the Sites and Monuments Records within 500m of the site. This feature (WI015-030----) is located approximately 350m south of the site. See Table 5.4 and Figure 5.22 for locations of Sites and Monuments Records and information regarding nearby sites.

Figure 5.22: Sites and Monuments Records in the Vicinity of the Proposed Site; approximate site location indicated by the red star (Source: Source: NMS, 2023)

Table 5.3: Summary Of National Inventory Of Architectural Heritage Sites and Record of Protected Structures Near the Site

NIAH Ref.	Name	Location	Description	Distance from site
16308013	**Church/ chapel**	Saint Nicholas' Church, Stephen Street, Dunlavin Upper, Dunlavin, Wicklow	Detached five-bay single-storey Board of First Fruits Gothic Church of Ireland church, built 1816. Transepts were added in 1835 and the chancel in 1897.The building is finished in render. The sheeted double door has decorative strap hinges and is set within a pointed-arched opening with moulded surrounds. Window openings are generally pointed-arched with 'Y' tracery and hood mouldings; panes are leaded. The three-stage tower has ashlar castellated parapet and tall pinnacles. The pitched roof is finished in natural slate with cast-iron rainwater goods. The building is set well back behind a rubble wall with wrought-iron railings. It is set within a small graveyard.	600m NE

Table 5.4: Summary of Sites and Monuments Records Near the Site

NIAH Ref.	Name	Location – Townland	Description	Distance from site
WI015-030---	Enclosure	Tornant Lower	Listed as an 'enclosure' in SMR(1986) and as a possible 'enclosure' in RMP (1995). O'Donovan (1838-40, 177) refers to 'two small raths partly defaced in the N side' of this townland. Depicted as a circular enclosure (diam. c. 15m) on the 1st Edition OS 6-inch map (1838). On a gentle NW-facing slope in improved pasture. No visible surface trace.	350m S ZoN 310m

ZoN: Zone of Notification

All information taken from the Ordnance Survey Ireland website

5.19 NEARBY SITE INVESTIGATIONS

The Geological Survey of Ireland (GSI) have compiled a database of site investigations carried out in Ireland. There are four geotechnical sites within 5km of the proposed site. The nearest is an investigation (Report ID 5,963) conducted 2.9km northwest of the site. Ther is no further information available on the GSI website regarding this investigation. See Figure 5.23 for the location of nearby site investigations and boreholes.

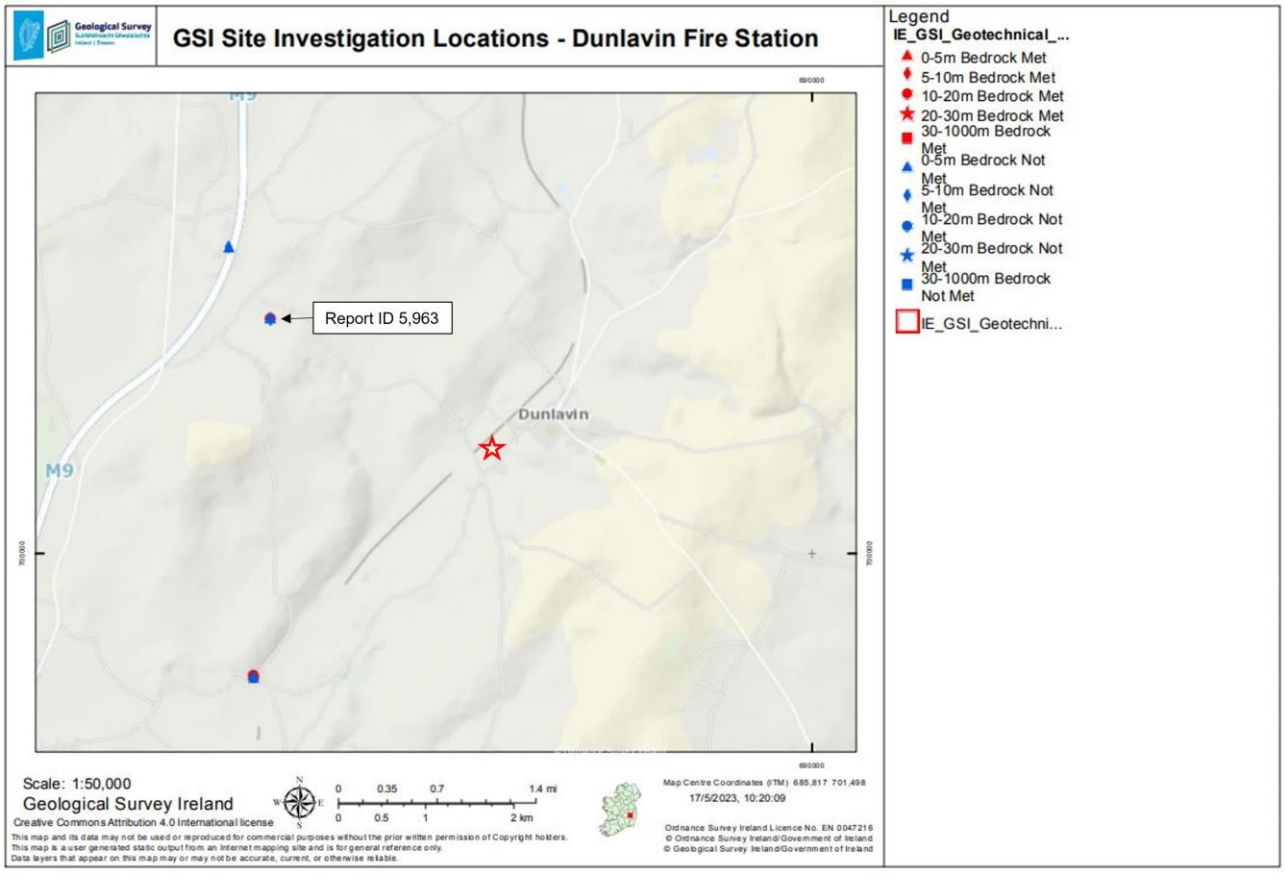


Figure 5.23: Nearby Boreholes and Site Investigations; approximate site location indicated by the red star (Source: GSI, 2023)

6 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

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

6.1 MAGNITUDE AND SPATIAL EXTENT OF IMPACT

This project relates to the proposed new construction of the Dunlavin fire station. Works include the construction of a new fire station, a fire training tower, a concrete water tank for fire training, and associated lighting, drainage, and entrance infrastructure in Dunlavin, County Wicklow. The current site consists of a greenfield site in an area of mixed residential and agricultural use.

Although the site is topographically and hydrologically upgradient of the River Slaney and the Slaney River Valley SAC (located 6.5km southeast) and surface water drainage from the site will discharge to the municipal surface water system which discharges to the River Greese, impact to this waterbody, the associated European site, and other designated sites within the Zone of Influence of the proposed works are deemed to be short-term and unlikely given the nature of the development and the scale and duration of the proposed construction works.

The appointed contractor will be required to prepare a site-specific Construction Environmental Management Plan (CEMP). These measures include:

- Careful project management in respect of water protection;

Proper management of fuels and building materials;

Subject to the implementation of mitigation measures, no significant negative impacts on the local biodiversity and conservation objectives of the local species are anticipated as a result of this development.

6.2 THE NATURE OF THE IMPACT

This project relates to the construction of a new fire station, a fire training tower, a concrete water tank for fire training, and associated lighting, drainage, and entrance infrastructure. This project is small in magnitude and extent. Potential impacts relate primarily to noise, vibrations, lighting, and sedimentation resulting from earthworks and are likely to be temporary and not significant subject to implementation of mitigation measures.

6.3 THE TRANSBOUNDARY NATURE OF THE IMPACT

Due to the scale and nature of the works, transboundary impacts are unlikely subject to implementation of mitigation measures.

6.4 THE INTENSITY AND COMPLEXITY OF THE IMPACT

The project involves a small work area which has been limited to create a vital emergency service for the community. Any potential impacts are not likely to be significant.

6.5 THE PROBABILITY OF THE IMPACT

The probability of impact to nearby European sites and local flora and fauna is low subject to the implementation of mitigation measures detailed in the project-specific CEMP which will be prepared by the appointed contractor.

6.6 EXPECTED ONSET, DURATION, FREQUENCY AND REVERSIBILITY OF THE IMPACT

Based on scope of work and the short duration of the project and the distance to the nearest designated national or European site, the Slaney River Valley SAC which is located 6.7km southeast of the site at its closest point, potential impacts to designated sites are expected to be unlikely, not significant, and short-term subject to the implementation of the site-specific CEMP.

6.7 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.

6.8 THE POSSIBILITY OF EFFECTIVELY REDUCING THE IMPACT

The project involves a work area which has been limited to that required to facilitate the construction of a fire station in Dunlavin. A CEMP will be prepared by the appointed contractor considering all site works and detailing all required mitigation measures.

The potential exists during the construction stage for a small amount of nuisance associated with localised traffic disruption, construction noise and dust, and siltation associated with soil disturbance. However, construction impacts related to this project are likely to be short term and not significant subject to implementation of the CEMP.

6.9 SCREENING DECISION

Based on the size, nature, and scale of the proposed project, it is considered that the overall impact on the receiving environment will be low subject to implementation of all mitigation measures detailed in the CEMP.

An AA Screening Report has been prepared by OCSC which concluded that the proposed project is not likely give rise to adverse effects on nearby designated European sites. Therefore, a Natura Impact Statement (NIS) does not need to be prepared for this proposed project.

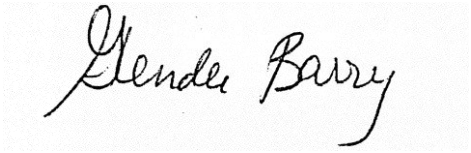
Please refer to the completed Screening Checklist (Table 6.1) identified in European Commission publication Environmental Impact Assessment of Projects, Guidance on Screening (2017).

Table 6.1: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
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, subject to implementation of the CEMP.
Will many people be affected?	Minor, short-term impacts. Overall positive impact in creating this essential service.
Will many receptors of other types (fauna and flora, businesses, facilities) be affected?	There will be a short time impact on flora and fauna during the works; however, this will be reduced subject to implementation of an appropriate CEMP.
Will valuable or scarce features or resources be affected?	No
Is there a risk that environmental standards will be breached?	No, subject to implementation of an appropriate CEMP.
Is there a risk that protected sites, areas, and features will be affected?	No, subject to implementation of mitigation measures.
Is there a high probability of the effect occurring?	No
Will the impact continue for a long time?	Temporary to short term.
Will the effect be permanent rather than temporary?	No
Will the impact be continuous rather than intermittent?	Temporary to short-term during 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

7 VERIFICATION

This report was compiled by Glenda Barry, BSc, MSc, PGeo, Eurgeol, and Principal Consultant; reviewed by Luis Iemma, BSc, MSc, Ph. D, CEcol, MCIEEM, Principal Ecologist; and approved by Eleanor Burke, BSc, MSc, DAS, MIEnvSc, CSci, Technical Principal, and the OCSC Environmental Division Manager.



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