

EIAR SCREENING ASSESSMENT

DUNBOYNE LINK ROAD

Meath County Council

PROJECT NO. M1346/1

OCTOBER 2022

EIAR SCREENING ASSESSMENT

Dunboyne Link Road

for

Meath County Council



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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, Meath County Council. The proposed development includes a link road that shall be approximately 340min length and a new access road that shall be approximately 50m in length, the scheme will also include junctions, footpaths, bus stops, public lighting, accommodation and fencing/boundary works, landscaping works, drainage/attenuation works, and ancillary infrastructure and utility works. The scheme will serve as a connection between the Dunboyne Business Park and the R157.

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 Sinéad Doran, BSc, Environmental Scientist, reviewed by 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 between Dunboyne Business Park to the east and the R157 to the west. The study area is approximately 900m in length and consists of lands between Dunboyne Business Park to the east and the R157 to the west.

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 to the proposed site is primarily agricultural with a mix of residential, commercial/industrial and educational properties. To the north, the study area is bounded by agricultural land, the R157, and commercial and industrial premises including Thornton's Recycling and the Dunboyne College of Further Education. Agricultural land borders the site to the west and agricultural land and houses and the Navan Road to the east. Further east a rail line and the M3. Residential premises, agricultural land, and the R157 border the site to the south, and Dunboyne town is located further to the south.

Refer to Table 1.1 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	Agricultural land; commercial, industrial including a recycling facility, and educational premises; and the R157
South	Residential premises, agricultural land, and the R157
East	Agricultural land, residential properties, and the Navan Road
West	Agricultural land







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

1.4 Project Description

This Environmental Impact Assessment Screening Report is prepared for the proposed link and access road connection between the Dunboyne Business Park and the R157. The proposed project includes junctions, footpaths, bus stops, public lighting, accommodation and fencing/boundary works, landscaping works, drainage/attenuation works, and ancillary infrastructure and utility works. Proposed layouts for the new junction with the R157 are shown in Appendix A.

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 Subthreshold 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 of any significant negative environmental impacts which may arise from the proposed project.





1.8 Limitations

This Environmental Impact Assessment Screening Report has been prepared for the sole use of Meath 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 April 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 (2001-2022), 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.	Article 8 of the Roads Regulations, 1994 (Road development prescribed for the purposes of S. 50(1)(a) of the Roads Act, 1993
The construction of a new bridge or tunnel which would be 100 metres or more in length.	

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 Subthreshold 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 is located in Dunboyne, County Meath and is approximately 900m in length. The Site consists of lands along the main road through the Dunboyne Business Park from the Navan Road to the east and extending beyond the current western boundary of the business park to the R157 Dunboyne bypass to the west and into agricultural land on the west side of the R157. The works have been designed to connect Dunboyne Business Park with the R157.

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

A review of Meath 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 seven 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 traffic access. 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 Dunboyne is the Dunboyne Clonee Pace Local Area Plan 2009-2015. However, this Area Plan does not specifically address the works currently being proposed. The Meath Council Development Plan 2021-2027 has zoned the site as General Enterprise and Employment, Transport - Indicative Road Route, New Residential, A2 Phasing - Residential land not available for development until post 2027 and Rural Area.

3.3 The nature of any associated Demolition Works

No demolition works are associated with the project. This is an assessment of the overall study area.

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

There will be no long-term use of any natural resource as this project is, by its nature, of short-term duration and is required to improve vehicular traffic access within the area.





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, in the event 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 also 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 is an unlikely potential source and pathway given the works will avoid working within and near waterways within the site area including the Bennetstown Stream located on the site boundary. Works will be suitably setback to ensure no risk of erosion or sediment deposition.

Drainage will be constructed in accordance with best practice requirements including design in accordance with the Greater Dublin Strategic Drainage Study and CIRIA C753 The SuDS Manual. Therefore, the risk of drainage pollution from the extended and upgraded road 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

The site is located within the Inner Public Supply Source Protection Areas (SPZs) (groundwater) for the Dunboyne Public Water Scheme (see Figure 3.1). As such, fuel and chemical storage and use on the site could 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 the SPZ.

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 major 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, subject to the implementation of mitigation measures in the CEMP.

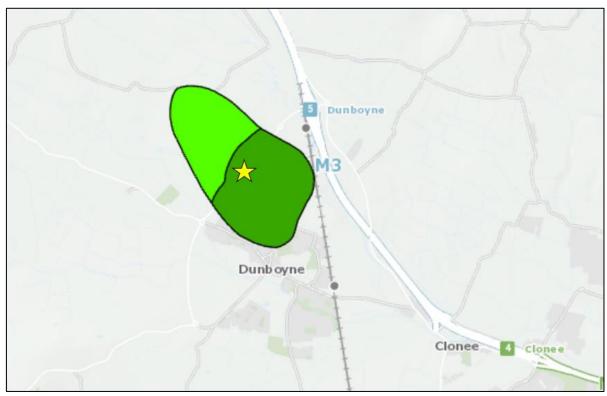


Figure 3.1: Source Protection Zones within a 2km Radius of the site (Source: GSI, 2022); site location shown by yellow star





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, commercial/industrial, and educational premises and agricultural land. Bennetstown stream, which is a tributary of the Tolka River is located directly adjacent to the site boundary as shown by Figure 4.15. 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 site has been undeveloped 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 the agricultural lands to the north of Dunboyne town centre. Surrounding areas consisted of woodlands and a house to the east, woodland to the southwest, gravel pits and a marl pit to the northeast and northwest, respectively, and undeveloped land, as shown in Figure 4.1.



Figure 4.1: 1837-1842 6-inch OS Map (Source: OSI, 2022); site location indicated by yellow star

The 25-Inch Map (1888-1913) shows no significant change to the study area and immediately surrounding areas since the previous mapping except for the construction of several houses to the north and the construction of the rail line to the east of the site as shown in Figure 4.2.





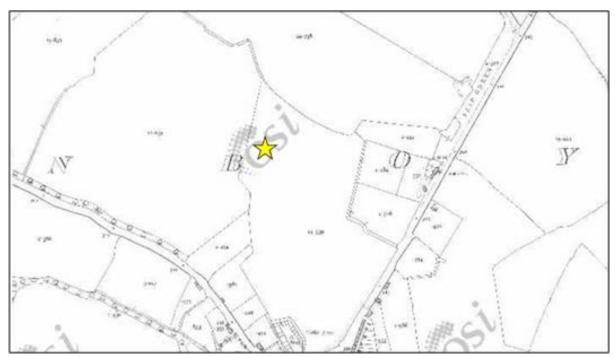


Figure 4.2: 1888-1913 25 inch OSI Map (Source: OSI, 2022); site location indicated by yellow star

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.

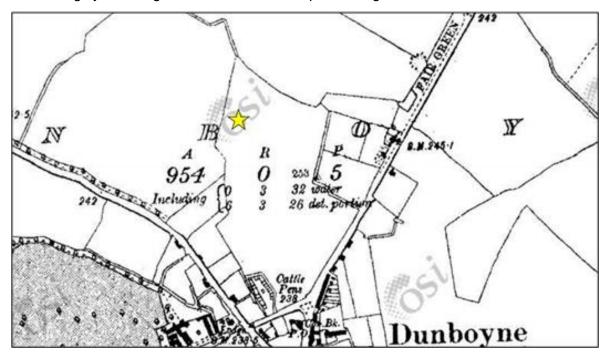


Figure 4.3: 6 Inch Cassini Map (Source: OSI, 2022); site location indicated by yellow star





The 1995 aerial image indicates that the eastern portion of the Dunboyne Business Park had been constructed. The remainder of the site was undeveloped and in agricultural use. Additional houses had been constructed to the north of the site and significant residential construction had occurred and was underway to the south and southeast of the site shows as on Figure 4.4.

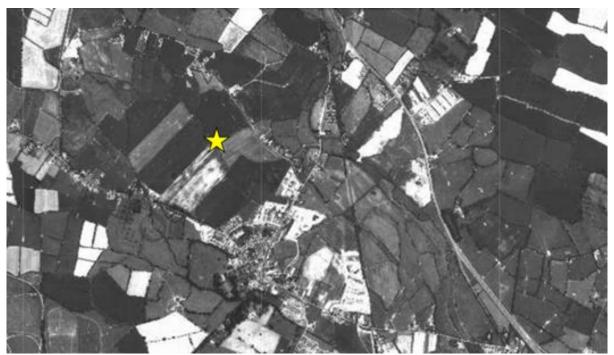


Figure 4.4: 1995 Aerial Photograph (Source: OSI, 2022); site location indicated by yellow star

The aerial image captured in 2000 shows further expansion of the buildings and roadways within the Dunboyne Business Park and the continued construction of residential developments to the south and southeast of the site. See Figure 4.5







Figure 4.5: 2000 Aerial Photograph (Source: OSI, 2022); site location indicated by yellow star

The 2005 aerial photo indicates that roads within the business park had been constructed to approximately their current configuration and that further building construction had occurred within the business park. Further residential construction had occurred to the south and southeast of the site. See Figure 4.6



Figure 4.6: 2005 Aerial Photograph (Source: OSI, 2022); site location indicated by yellow star





The 2005-2012 aerial photo indicates that further building construction had occurred within the business park and that the R157 was under construction. Residential construction which had been in progress to the south of the site on the previous photo had been completed. No other significant changes are shown to the site or adjacent properties. See Figure 4.7

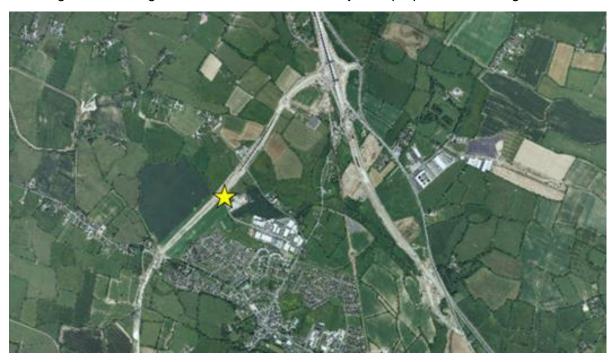


Figure 4.7: 2005-2012 Aerial Photograph (Source: OSI, 2022); site location indicated by yellow star

The 2013-2018 aerial photograph shows no significant changes to the site or surrounding area other than the completion of the R157 as shown in Figure 4.8.







Figure 4.8: 2013-2018 Aerial Photograph (Source: OSI, 2022); site location indicated by yellow star

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

There are no Special Protection Areas (SPAs) within 15km of the proposed scheme. The closest SPA to the proposed scheme is South Dublin Bay and River Tolka Estuary SPA, located 18km to the southeast.

There is one Special Area of Conservation (SAC) within 15km of the study area, the Water Valley/Carton SAC (Site Code 001398) which is located 6.1km southwest of the site at its nearest point. There are no hydrological links between the nearest surface water (Bennetstown stream, which is a tributary of the Tolka River (IE_EA_09T010600)) and this SAC or any potential groundwater connectivity between the works area and this SAC as it lies within the River Liffey catchment area. As any connecting pathways from the proposed works area to the aforementioned SAC have been ruled out, potential impacts from the proposed project on the SAC are not anticipated.





There are no Natural Heritage Areas (NHAs) and four pNHAs within 15km of the study area (see Figure 4.9). The nearest pNHA is the Royal Canal (Site Code 002103) which is located 5km southeast of the site at its nearest point. There is no hydrological link or physical connectivity between the site and any of the pNHAs. Therefore, there are no anticipated impacts on the surrounding pNHAs from the proposed development.

Bennetstown stream, which is a tributary of the Tolka River, is located directly adjacent to the site boundary. There is a low 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 fact that there is rooms to accommodate a setback to the stream and the distance between the site and the indirectly linked South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) located greater than 18km downstream, as well as the distance between the site and the nearest proposed Natural Heritage Area (pNHA), 6.1km south west of the site, there will be 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.

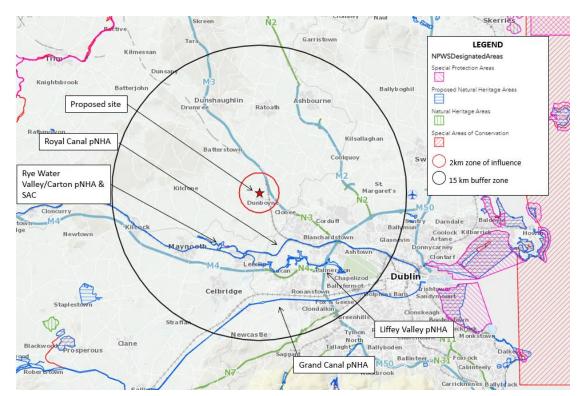


Figure 4.9: National Parks and Wildlife Services Map; approximate site location indicated by yellow star (Source: GSI, 2022).

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 site is essentially flat with the topography of the surrounding area is characteristically flat to gently undulating.

4.9 **Unconsolidated Geology**

Portions of the western end of the site are underlain by mainly basic, shallow, peaty, poorly drained mineral soil. Portions of the western and eastern ends of the site are underlain by mainly basic, deep, well drained mineral soil. Portions of the eastern end of the site are also underlain by made ground. The central portion of the site is underlain by mainly basic, poorly drained mineral soil. See Figure 4.10.

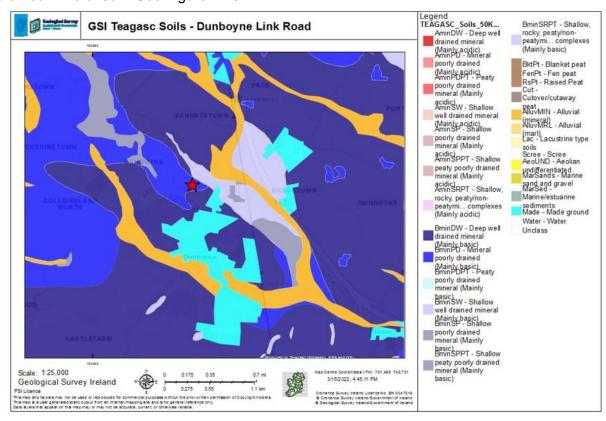


Figure 4.10: Teagasc Topsoil Soil Classification; approximate site location indicated by red star (Source: GSI, 2022).

4.10 Geology

The site is underlain by the Lucan Formation which is characterized by dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar. See Figure 4.11.





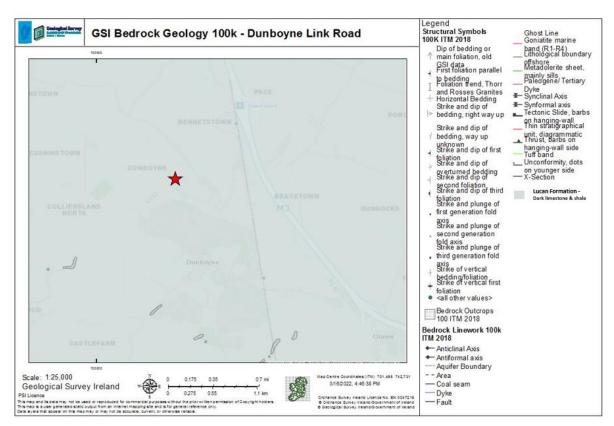


Figure 4.11: Bedrock 100k; approximate site location indicated by red star (Source: GSI, 2022).

4.11 Areas of Geological Interest

The GSI online mapping service was consulted regarding areas of geological interest in the vicinity of the site. The nearest area of geological interest is Louisa Bridge Cold Spring, which is located approximately 6.1km southwest. Louisa Bridge Cold Spring has a site code of KE016 and is designated a County Geological Site (CGS), due to it being 'a cold spring associated with a warm spring formerly used as a spa'. The second nearest area of geological interest is Lucan Esker, which is located approximately 8km south of the site and consists of an esker comprised of 'a large accumulation of sands and gravels primarily deposited under the ice sheet. This is a good example of a deglacial, meltwater-deposited feature.' The Lucan Esker has a site code of SD008 and is designated as a CGS. 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 4.12.





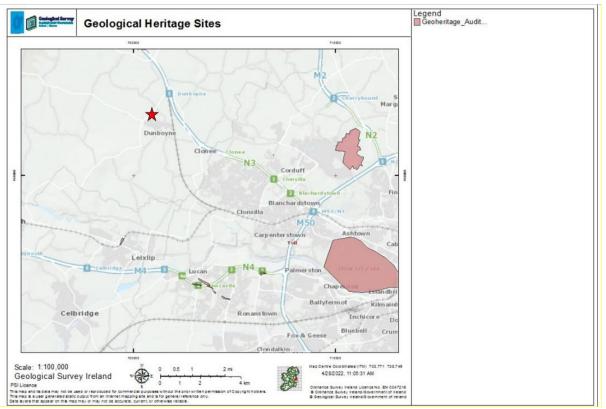


Figure 4.12: Geological Heritage Sites; approximate site location indicated by red star (Source: GSI, 2022).

4.12 Aquifers

The GSI provides a methodology for aquifer classification based on resource value (Regionally Important, Locally Important, and Poor) and vulnerability (Extreme, High, Moderate, or Low). Resource value refers to the scale and production potential of the aquifer whilst vulnerability refers to the ease with which groundwater may be contaminated by human activities (vulnerability classification primarily based on the permeability and thickness of subsoils). The site lies above a Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones as shown in Figure 4.13.





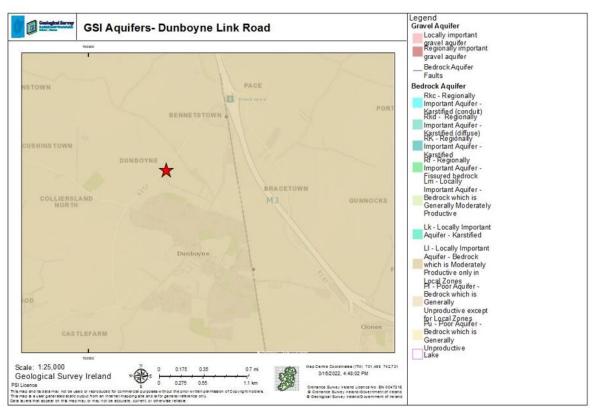


Figure 4.13: Aquifers; approximate site location indicated by red star (Source: GSI, 2022).

4.13 Groundwater Vulnerability

The GSI resources indicate that the groundwater vulnerability beneath the study area is classified by three vulnerabilities: a Low 'L' vulnerability aquifer underlies the majority of the study area with the exception of the eastern portion which is underlain by an aquifer of Moderate 'M' vulnerability and small portions of the northeast site boundary and the western end of the site which are underlain by areas of High 'H' vulnerability (see Figure 4.14). 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.





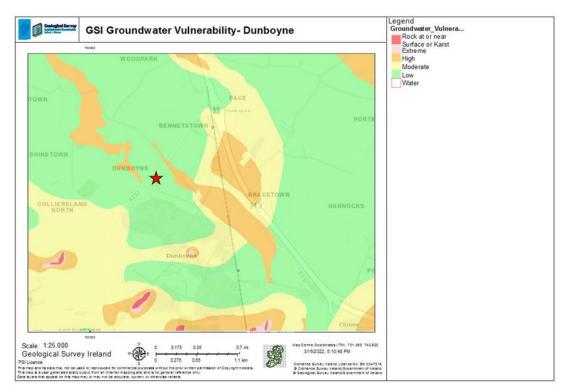


Figure 4.14: Groundwater Vulnerabilty; approximate site location indicated by red star (Source: GSI, 2022).

4.14 Groundwater Recharge

Diffuse recharge generally occurs via rainfall percolating through the subsoil with its rate being higher in areas where the subsoil in thinner and/or more permeable. The proportion of effective rainfall that recharges the aquifer is largely determined by the thickness and permeability of the soil and subsoil and by the slope. The groundwater recharge parameters are variable across the site area which encompasses a number of groundwater recharge zones as shown in Figure 4.15. GSI groundwater recharge model parameters for these zones are summarised in Table 4.1.





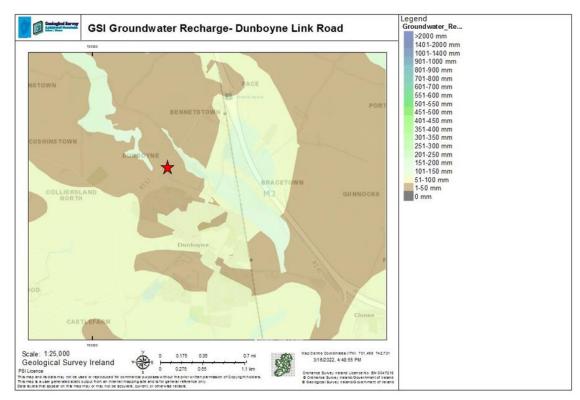


Figure 4.15: Groundwater Recharge; approximate site location indicated by red star (Source: GSI, 2022).

Table 4.1 - GSI Groundwater Recharge Parameters

		loonargo r ara			
	Groundwater Recharge Parameters				
Site Location	Eastern	North- eastern	Central	Central/ Western	Northern/ Western
Average Recharge (mm/yr)	75	56	28	27	26
Hydrogeological Setting	3.m/4.m	3.iii	4.i	4.i	4.i
Hydrogeological Setting Description	M Vul: made ground	M Vul: low permeability subsoil	M Vul: low permeability subsoil	L Vul: Low permeability subsoil	L Vul: Low permeability subsoil
Recharge Coefficient (%)	20.00	15.00	7.50	7.50	7.50
Effective Rainfall (mm/yr)	377.00	376.500	376.0	356.600	349.600
Recharge (mm/'yr)	75	57	28	27	26
Subsoil Permeability Description	Low	Low	Low	Low	Low





GW Vulnerability	Moderate to Low	Moderate	Low	Low	Low
Aquifer Category	LI	LI	LI	LI	LI
Aquifer Category Description	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones

4.15 Wells & Springs

A search of the GSI groundwater well database was conducted to identify registered wells within the site footprint and/or the surrounding area. There is one borehole (2923NWW378) reported as potentially within the site boundary. This borehole was drilled in January the 28th of 1988 to a depth of 57.9m for domestic use only. However, the low degree of accuracy on the siting of this well and its use for domestic purposes would indicate that it is not within the site boundaries. An additional 30 wells are located within 1km of the site area. Their uses include domestic to public supply and depths range from 1.8 to 61m. The nearest is located 80m north of the site and is a hand dug well which was installed in 1899 to a depth of 1.8m. See Figure 4.16 for well locations.

The GSI database also provides a framework for the protection of groundwater source zones (e.g. areas of contribution to water supply bores). The site is located within the Inner Public Supply Source Protection Areas (SPZs) (groundwater) for the Dunboyne Public Water Scheme (see Figure 3.1).





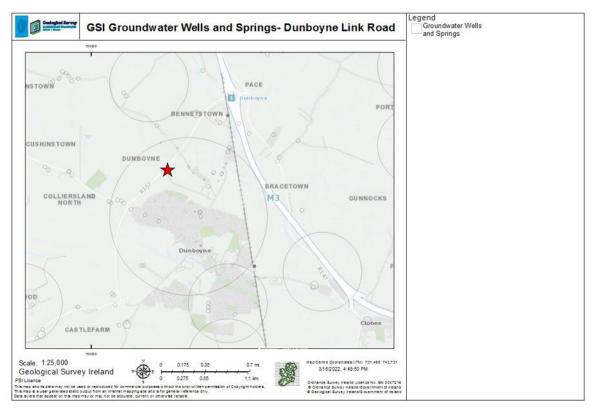


Figure 4.16: Wells and Springs; approximate site location indicated by red star (Source: GSI, 2022).

4.16 Hydrology

There are no surface water features mapped within the site area. Bennetstown stream, which is a tributary of the Tolka River (IE_EA_09T010600), is located directly adjacent to the site boundary as shown by Figure 4.17. Bennetstown stream (Segment code 09_385) flows into Naulswood (Segment Code 09_1422) which in turn flows into the Tolka River (IE_EA_09T010600). At the nearest point, the Tolka River is located 386m north of the proposed link road.

Dunboyne Stream (IE_EA_09D040500) is located approximately 434m southwest of the proposed link road. The Dunboyne Stream flows from west to southeast through Dunboyne town and discharges into the Tolka River approximately 2.37km southeast of the site.

Based on the most recent water quality information 2013-2018, Tolka River and the Dunboyne Stream have an overall Water Framework Directive (WFD) status of poor and moderate, respectively, as shown in as shown in Figure 4.17. The EPA spatial dataset shows that the WFD River Waterbody risk for the Tolka River and its tributaries, including the ones mentioned above, of "At Risk" of failing to meet their WFD objectives by 2027 (see Figure 4.18). WFD summary information is included in Table 2.2





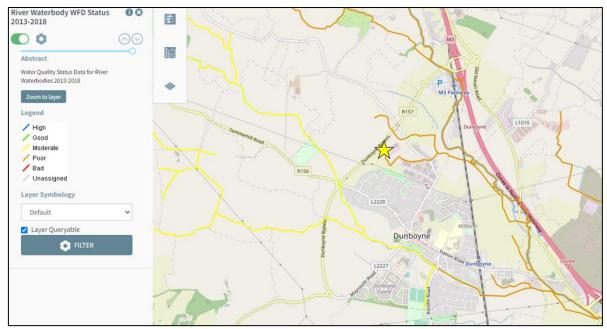


Figure 4.17: River Waterbody WFD Status; approximate site location indicated by yellow star (Source: EPA Maps, 2022).

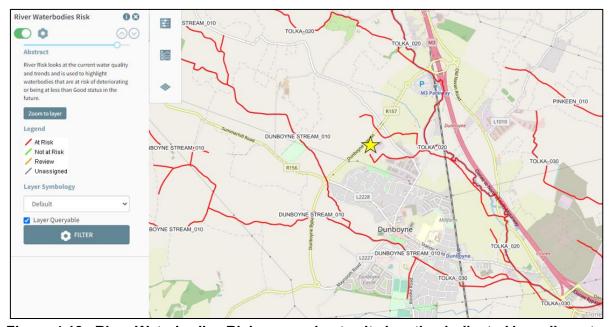


Figure 4.18: River Waterbodies Risk; approximate site location indicated by yellow star (Source: EPA Maps, 2022).

Table 4.2 - WFD Summary Information - TOLKA_020.

	—
Waterbody Code	IE_EA_09T010600
Waterbody Name	TOLKA_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 the site is located are estimated to be above the Reference Level of 200 Bq/m³ as shown in Figure 4.19.

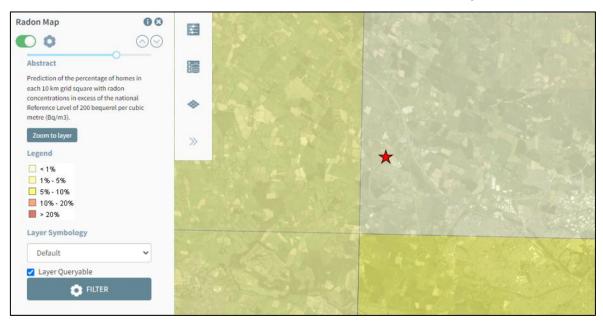


Figure 4.19: Radon Risk; approximate site location indicated by red star (Source: EPA Maps, 2022).

4.18 Protected Structures

The National Monuments Service (NMS) maps show that there is one site on the Sites and Monuments Record (SMR) within the site boundary: a field system (Reg. No. ME050-030): the boundaries of the fields likely originate from the medical time. This is identified along the public road.

There are also a further four SMR sites adjacent to the proposed works: 1 – A large D-shaped enclosure (Reg. No. ME050-027): the enclosure was established in the thirteenth to fourteenth century; 2 – Prehistoric structure (Reg. No. ME050-06200): thirty one stake and post-holes were recorded and create a long, narrow structure in this area; 3 – a Kiln (Reg. No. ME050-062002): a prehstoric structure consisting of a large, sub-oval pit with a clay lining; 4 – a Church (Reg. No. ME050-029): former monastery, the walls of which were standing until c. 1800. See Figure 4.20 for SMR locations in relation to the site.





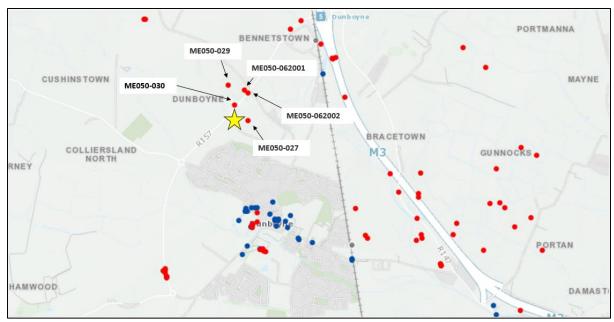


Figure 4.20: National Monument Service Protected Structures; approximate site location indicated by yellow star (Source: NMS, 2022).

4.19 Nearby Site Investigations

The Geological Survey of Ireland (GSI) have compiled a database from site investigations carried out in Ireland. Figure 4.21 identifies the site investigations locations closest to the site. The closest geotechnical wite approximately 0.7km east of the site and identified as the Bracetown Ground Investigation (ID 6,613). The report recorded trial pits, dynamic probe records, and laboratory testing conducted in 2006. The next nearest geotechnical site was 1.2km to the southeast and was the location of a site investigation for the N£ Clonee by-pass undertaken on 1989 (ID 2,140).





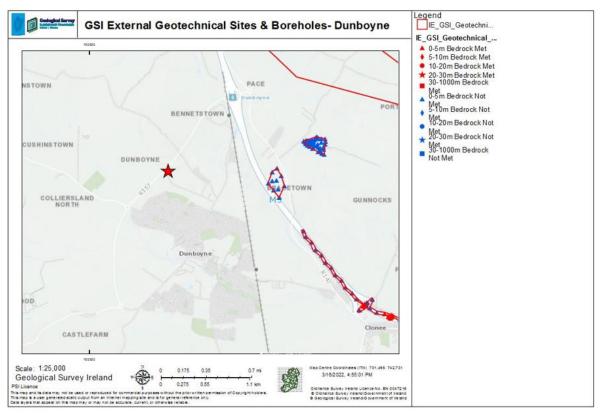


Figure 4.21: Nearby Boreholes and Site Investigations; approximate site location indicated by red star (Source: GSI, 2022).

4.20 Summary of the Physical Site Setting

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

Table 4.3 - Summary Site Setting

FEATURE	DETAILS & COMMENTS
Topography	The ground topography of the area is characteristically flat to gently undulating.
	Topsoil: The site is comprised of a mix of mainly basic, shallow, peaty, poorly drained mineral soil; mainly basic, deep, well drained mineral soil; made ground; and mainly basic, poorly drained mineral soil
Geology	Solid Geology: The site is underlain by the Lucan Formation which is characterized by dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained





	calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar
Hydrogeology	Aquifer Classification:
	Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones
	Vulnerability & Recharge:
	A Low 'L' vulnerability aquifer underlies the majority of the site with the exception of the eastern portion which is underlain by an aquifer of Moderate 'M' vulnerability and small portions of the northeast site boundary and the western end of the site which are underlain by areas of High 'H' vulnerability.
	The average recharge has been modelled at 26 to 75 mm/year.
	Groundwater Flow:
	The regional groundwater flow direction can be expected to be to the northeast towards the River Tolka.
	Well Search:
	The site is located within the Inner Public Supply Source Protection Areas (SPZs) (groundwater) for the Dunboyne Public Water Scheme.
	There is also one borehole reported as potentially within the site boundary. However, the low degree of accuracy on the siting of this well and its use for domestic purposes would indicate that it is likely located outside the site boundaries.
Hydrology	Surface Water Courses:
	There are no surface water features mapped within the site area. Bennetstown stream, which is a tributary of the Tolka River (IE_EA_09T010600), is located directly adjacent to the site boundary





5 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

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

5.1 Magnitude and Spatial Extent of Impact

This project relates to the construction of alink road that shall be approximately 340m in length and a new access road that shall be approximately 50m in length, which will connect the Dunboyne Business Park and the R157. This project will also include the construction of junctions, footpaths, bus stops, public lighting, accommodation and fencing/boundary works, landscaping works, drainage/attenuation works, and ancillary infrastructure and utility works. 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 construction of a new road which will serve as an extension of a link road previously constructed to access commercial and industrial buildings northwest of Dunboyne, Co. Meath. This project is small in magnitude and extent. Any potential impacts are not likely to be significant.

5.3 The Transboundary Nature of the Impact

There is no potential for transboundary impacts.

5.4 The Intensity and Complexity of the Impact

The project involves a small work area which has been limited to that required to improve 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 given the proposed works.

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 construction of the new link road extension and access road and its associated junctions, footpaths, bus stops, public lighting, accommodation and fencing/boundary works, landscaping works, drainage/attenuation works, and ancillary infrastructure and utility works. . 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	No
environmental conditions?	
Will new features be out-of-scale with the	No. Within and adjacent to an existing
existing environment?	business park. The construction will connect
	the business park to the Dunboyne bypass.
Will the impact be unusual in the area or	No
particularly complex?	
Will the impact extend over a large area?	No
Will there be any potential for transboundary	No
impact?	
Will many people be affected?	Minor temporary impacts. Overall positive
	impact in improving automotive and
	pedestrian access to the Dunboyne bypass.
Will many receptors of other types (fauna	No (refer to AA screening)
and flora, businesses, facilities) be	
affected?	
Will valuable or scarce features or	No (refer to AA screening)
resources be affected?	





Is there a risk that environmental standards	No (refer to AA screening)
will be breached?	
Is there a risk that protected sites, areas,	No (refer to AA screening)
features will be affected?	
Is there a high probability of the effect	No
occurring?	
Will the impact continue for a long time?	Temporary, short term.
Will the effect be permanent rather than	No (refer to AA screening)
temporary?	
Will the impact be continuous rather than	Temporary, short-term during construction.
intermittent?	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?	





APPENDIX A DRAWINGS



