

Report to Inform Environmental Impact Assessment Screening

Greystones Pathfinder Project

R774 Charlesland Dual Carriageway Junction Improvement Works

Five Roundabouts

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1 INTRODUCTION

Deborah D’Arcy was commissioned by Wicklow County Council to carry out an Environmental Impact Assessment (EIA) Screening Report in relation to the proposed R774 Charlesland junction improvement works as part of the Greystones to Kilcoole Pedestrian and Cycle Improvement Scheme in Greystones, Co. Wicklow, hereinafter referred to as the ‘Proposed Scheme’.

The purpose of this EIA Screening Report is to establish the likely significant effects of the proposed development in the environment and advise if an EIA is required. The EIA Screening is set out as follows:

- Section 1 – Introduction;
- Section 2 – Description of the Proposed Development;
- Section 3 – EIA Legislative Context and Methodology;
- Section 4 – Screening Evaluation; and
- Section 5 – Conclusions.

The report makes reference to the design plans and reports pertaining to the project and should be read in conjunction with those plans and reports.

1.1 Need for the Proposed Scheme

The settlement of Greystones is located along Ireland’s east coast, to the north of County Wicklow, approximately 25 kilometres south of Dublin City Centre. Greystones is a coastal town and seaside resort located approximately 7 kilometres south of Bray. Greystones has a population of approximately 18,000 (based on the 2016 census). Greystones has seen substantial residential growth over the past decade with most of this taking place south of the town in Charlesland, which is earmarked for significant additional residential development. Charlesland has a population of over 3,000 people. Generally, Greystones is well served by road infrastructure. Having regard to the high levels of population growth in the area and the large number of new communities, Wicklow County Council (WCC) is conscious that the area would benefit from the introduction of traffic calming and reduction measures, such as pedestrian priority crossings, shared surfaces and cycle parking, as well as the introduction of new pedestrian footpaths and cycling infrastructure. As such, WCC has identified the Wicklow Active Travel Links Project as a priority pathfinder project. The focus of this report is on the junction improvement of 5 no roundabouts on the R774.

1.2 About the Authors

This report was authored by Caoife D’Arcy with input and review by Deborah D’Arcy. Caoife D’Arcy is an environmental scientist with a BSc in Planning and Environmental Management and 6 years relevant industry and environmental consultancy experience and is a member of the Chartered Institute of Ecology and Environmental Management, the chief professional body for Ecology and Environmental Management in Ireland and as such bound by the professional code of conduct.

Deborah D’Arcy. is an Ecologist with an MSc in Ecological Assessment and 10 years ecological consultancy experience and is an Associate Member of the Chartered Institute of Ecology and Environmental Management, the chief professional body for Ecologists in Ireland and as such is bound by their professional code of conduct.

1.3 Supporting Reports

The following documents relating to the proposed development have informed this EIA screening assessment.

- General Arrangement and Engineering Drawings, prepared by Arup (May 2023).
- Appropriate Assessment Screening (Deborah D’Arcy, July 2023).

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Location

The proposed scheme is within the footprint of the R774 Charlesland dual carriageway road corridor, cycleway and footpaths. The proposed scheme starts to the north towards Greystones at the Milltown Roundabout (Roundabout 1). It then progresses southward at the following existing roundabouts: Kilfernoc Roundabout (Roundabout 2), The Glen Roundabout (Roundabout 3), Ballynerrin Roundabout (Roundabout 4). The proposed scheme concludes at Knockroe Roundabout (Roundabout 5). Works are not proposed along the carriageway between the roundabouts or the Winnowbank Roundabout, c. 365m from Milltown Roundabout (Roundabout 1).



Figure 2-1 Site Location

2.2 Proposed Scheme

The proposed works would include the upgrade of the existing junctions at the five roundabouts identified to better accommodate cyclists and pedestrians, using rapid build measures where possible. This will involve the installation of toucan crossings and a combination of other infrastructure upgrades to promote active travel, improve traffic flow and create a more accessible pedestrian and cyclist-friendly environment for all road users. Works are not proposed on the carriageway between these roundabouts.

The site clearance may involve removal of several trees, bushes and flower beds at these existing junctions. Areas of the proposed junctions have been identified to provide pollinator friendly vegetation to offset any vegetation loss along the proposed scheme. No additional lighting is proposed.

The proposed scheme is shown in **Figure 2.2**. Detailed drawings of the proposed scheme are included in **Appendix A**.

The main infrastructural elements to be included on the 5 no. roundabouts in the proposed scheme comprise the following:

- Site and vegetation clearance including c. 20 no semi-mature trees;
- Provision of toucan crossings: Strategically placed at key entry and exit points of the roundabouts to facilitate safe and efficient crossings for both pedestrians and cyclists. High friction surfacing will be applied in advance of the toucan crossings to improve grip for pedestrians and cyclists, and road users especially during adverse weather conditions. This measure will enhance overall safety and reduce the risk of accidents.
- Footpaths and cycle lanes: the provision of well-defined footpaths and dedicated bike lanes around the roundabouts. This separation of pedestrian and cyclist paths from vehicular traffic will ensure the safety of vulnerable road users and encourage active modes of transportation.
- Shared Footpath and Cycleways: Certain sections of the roundabouts will feature shared footpath and cycleways to promote a sense of shared space and encourage more sustainable travel options.
- Tactile paving and corduroy pavement: Installed at pedestrian crossings to assist visually impaired individuals, providing tactile cues for safe navigation. Corduroy pavement will also be used to signal crossing points and encourage adherence to pedestrian pathways.
- Uncontrolled crossings to be provided and retained: In selected areas, uncontrolled crossings will be introduced and retained to offer more direct and flexible crossing options for pedestrians and cyclists. These crossings will prioritise the safety of users while promoting a seamless flow of non-motorised traffic.
- Speed restriction ramps: Strategically installed on approach to the roundabouts to calm vehicular traffic and reduce speeds. Slower traffic will increase safety for all road users and enhance the effectiveness of toucan crossings.
- Widened central island: Where feasible, the central island will be widened to provide a safe waiting area for pedestrians and cyclists. This additional space will ensure improved visibility for all road users.
- Uncontrolled crossing on raised table: Implemented at specific locations within the roundabouts. This feature will elevate the crossing area, providing better visibility for all road users and encouraging slower vehicle speeds.
- Flexible bollards: Strategically placed around the roundabout to separate vehicular lanes from pedestrian and cyclist areas. These bollards will serve as physical barriers, ensuring the safety of vulnerable road users and preventing unauthorised vehicle access to pedestrian and cyclist paths.
- Additional road markings: Clear and visible road markings will be added to guide motorists and alert them to the presence of pedestrian and cyclist crossings. This measure will reinforce the importance of yielding to vulnerable road users.
- Other consequential construction works necessary in order to complete the proposed scheme.
- Landscaping and reseeded with low height pollinator friendly flowers and vegetation.

The design of the proposed scheme adheres to the principles, approaches and standards set out in the Design Manual for Urban Roads and Streets [DMURS], and also the National Cycle Manual [NCM].

2.2.1 Surface Water Management

The proposed scheme will not need any modifications to the current road drainage system. Additionally, it will not involve a significant increase the amount of hard surface, which could lead to a higher risk of flooding in other areas.

2.2.2 Utilities

Underground utilities such as gas, watermains and overhead utilities will be retained and remain unaffected by the proposed scheme.

2.3 Cross Section Elements

The proposed scheme is located mainly within the existing R774 road corridor with some section requiring extension into existing footpaths, amenity grassland and grassy verges. The cross-sectional elements of the key entry and exit points of the five roundabouts are set out in Table 2.1 - Table 2.5.

Table 2.1 Roundabout 01

Cross Section Elements	Northbound	Southbound
Footpaths	1.8	1.8
Path Bike Lane	2.0	2.0
Verge	0.7	0.7
Carriageway	5.5 - 7.3	5.6 - 7.4
Central Verge (where present)	4.1	
Total Cross-Section	20.2 - 28.0	

Table 2.2 Roundabout 02

Cross Section Elements	Northbound	Southbound
Footpaths	1.8	1.8
Path Bike Lane	2.0	2.0
Verge	1.0	1.0
Carriageway	7.6- 7.9	7.6
Central Verge (where present)	1.5-3.7	
Total Cross Section	26.6 - 28.9	

Table 2.3 Roundabout 03

Cross Section Elements	Northbound	Southbound
Footpaths	1.8	1.8
Path Bike Lane	2.0	2.0
Verge	1.0	1.0
Carriageway	5.0 - 8.2	5.0-8.0
Central Verge (where present)	3.7	

Cross Section Elements	Northbound	Southbound
Total	18.3-29.5	

Table 2.4 Roundabout 04

Cross Section Elements	Northbound	Southbound
Footpaths	1.8	1.8
Path Bike Lane	2.0	2.0
Verge	1.0	1.0
Carriageway	4.0 - 8.0	4.0 - 7.3
Central Verge (where present)	3.7	
Total cross Section	18.0 – 28.0	

Table 2.5 Roundabout 05

Cross Section Elements	Northbound	Southbound
Footpaths	1.8-2.4	1.8-2.4
Path Bike Lane	2.0	2.0
Verge	1.0	1.0
Carriageway	4.0 - 8.6	4.0 - 10.0
Central Verge (where present)	3.2	
Total cross Section	17.6 – 32.6	



Figure 2.2 Proposed Scheme

2.4 Construction Phase

It is expected that the main construction works to the proposed scheme will be carried out in a single phase in 2023. It is proposed to use rapid build techniques, where possible. The total construction time accounting for site clearance, excavations, pavement surfacing, concreting, and finishing and tying in will take in the order of 3 months. Prior to commencement of works, the site compound will be set up and traffic management measures will be put in place.

The main phases applicable to the main construction phase of this proposed scheme will include:

- Establishment of the site compound;
- Establishment of appropriate traffic control measures to provide adequate separation and protection of work areas from live traffic on R774.
- Mobilisation of construction plant;
- Site clearance and preparations.
- Excavation of footpath tie ins.
- Application of high friction surfacing.
- Spreading and levelling;
- Aggregate application;
- Compaction and curing;
- Installation of traffic bollards
- In-situ installation of tactile paving in line with relevant accessibility standards and regulations;
- Landscaping, as required;
- Final inspection and quality control.

Working Hours

The proposed scheme can be characterised by a single phase although the duration is not yet confirmed. The proposed operating hours for the proposed scheme are as follows:

- 07:00 hrs – 18:00 hrs Monday to Friday;
- 07:00 hrs – 14:00 hrs Saturdays; and
- Site closed on Sundays / Public Holidays.

2.5 Operation Phase

The operational phase will coincide with the end of construction and the commissioning of the proposed scheme. Maintenance will be undertaken as required by Wicklow County Council Roads Department and would likely include path clearing, and landscaping etc..

3 LEGISLATIVE CONTEXT FOR EIA

The European Union's Environmental Impact Assessment (EIA) Directive (Council Directive 85/337/EEC, as amended by Council Directive 97/11/EC, Directive 2003/35/EC, Directive 2009/31/EC, Directive 2011/92/EU as amended by 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment, aims to ensure that projects likely to have significant effects on the environment are subject to a comprehensive assessment of environmental effects prior to development consent. In the context of planning, the EIA Directive is transposed in Ireland through the Planning and Development Act 2000, as amended.

Directive 2014/52/EU is transposed into Irish legislation through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018. Key amendments to of the Directive include a strengthening of the procedures for screening, particularly through the introduction of new information requirements to be provided by the developer (Annex IIA) and revised selection criteria to be used by the competent authority in making a determination (Annex III of Directive).

The following sections outline the current planning and development legislative requirements in Ireland regarding EIA screening.

3.1 Planning and Development Act

The legislation relating to the requirement for an EIA for several types of developments is the Planning and Development Act 2000, as amended, and the Planning and Development Regulations 2001-2022, as amended.

3.1.1 Mandatory EIA

Schedule 5 Part 1 of the Planning and Development Regulations sets out a number of classes and scales of development that require EIA. Every project listed in Part 1 must undertake an EIA if the threshold is met or exceeded, or where there are no thresholds set, an Environmental Impact Assessment Report (EIAR) must be submitted to the planning authority as part of the application for consent. The proposed development is not a class of development listed in Part 1 of Schedule 5; accordingly a mandatory EIA is not required.

3.1.2 Sub-Threshold EIA

In examining whether the proposed development is a type that is listed in the Regulations, the scale and nature of the junction improvement scheme is such that it would not trigger an EIA under the Regulations.

The proposed scheme provides traffic calming measures which facilitate the safe use of pedestrians on R774, Greystones, Co. Wicklow as defined by section 38(9) Road Traffic Act 1994.

3.2 Road Traffic Act, 1994

A Road Authority, in this case, Wicklow County Council, may in the interests of safety and convenience of road users; provide such "traffic calming measures" as they consider desirable; in respect of public roads in their charge. "Traffic calming measures" defined in section 38(9) Road Traffic Act 1994: "measures which—

a) enhance the provision of public bus services, including measures which restrict or control access to all or part of a public road by mechanically propelled vehicles (whether generally or of a particular class) for the purpose of enhancing public bus services, or

b) restrict or control the speed or movement of, or which prevent, restrict or control access to a public road or roads by, mechanically propelled vehicles (whether generally or of a particular class) and measures which facilitate the safe use of public roads by different classes of traffic (including pedestrians and cyclists),

and includes for the purposes of the above the provision of traffic signs, road markings, bollards, posts, poles, chicanes, rumble areas, raised, lowered or modified road surfaces, ramps, speed cushions, speed tables or other similar works or devices, islands or central reservations, roundabouts, modified junctions, works to reduce or modify the width of the roadway and landscaping, planting or other similar works.

3.2.1 Conclusion

The proposed scheme is not a type of development listed in Schedule 5 of the Planning and Development Regulations 2001, as amended. Wicklow County Council, under section 38 of the Road Traffic Act 1994 and the Planning and Development Regulations, in considering local authority own development, must have regard to whether or not such a development is likely to have a significant effect on the environment. While the section 38 procedures under the Road Traffic Act 1994 does not include procedural requirements in respect of EIA and AA screening, a local authority has obligations under other statute to satisfy itself that EIA / AA is not required.

As such, the purpose of this Report to Inform EIA Screening is to assist Wicklow County Council in determining whether, the project is likely to have a significant effect on the environment by addressing the criteria and information set out in Annex III and IIA of the EIA Directive and Schedules 7 and 7A of the Planning and Development Regulations 2001 - 2021, as amended.

3.3 SCREENING METHODOLOGY

This Report to Inform EIA Screening provides an assessment of whether the proposed scheme would or would not be likely to have significant effects on the environment by addressing the criteria and information set out in Annex III and IIA of the EIA Directive and Schedules 7 and 7A of the Planning and Development Regulations 2001 (as amended).

3.3.1 EIA Guidelines

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, May 2022);
- Environmental Impact Assessment Screening Practice Note (Office of the Planning Regulator, June 2021);
- EIA Guidance for Consent Authorities regarding Sub-Threshold Development (DHLGH, 2020);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DHLGH, August 2018);
- Environmental Impact Assessment of Projects, Guidance on Screening (European Commission, 2017);
- Advice Notes on Current Practice (in the preparation of Environmental Impact Statements), (EPA, 2003); and
- Guidance on EIA Screening (European Commission, June 2001).

3.3.2 Methodology

Baseline information to inform the screening exercise is drawn primarily from desk studies and supplemented by walkover surveys of the site undertaken by Caoife D'Arcy in July 2023.. The desk study component of the EIA Screening has drawn information from the following sources:

- Department of Housing, Planning and Local Government EIA Portal <https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1>;
- Wicklow County Development Plan 2022-2028;
- Environmental Protection Agency (EPA) online interactive mapping tools (<https://gis.epa.ie/EPAMaps>) and (<https://www.catchments.ie/maps/>) for water quality data including surface and ground water quality status and river catchment boundaries;
- Geohive online Environmental Sensitivity Mapping tool (<https://airomaps.geohive.ie/ESM>);
- Geological Survey Ireland (GSI) Public Data Viewer (<https://www.gsi.ie/en-ie/Pages/default.aspx>)
- Health Safety Authority (HSA) – List of Notified Seveso Establishments;
- Mapping of European Site boundaries and Conservation Objectives for relevant sites in Dublin and beyond, as relevant, available online from the NPWS (<https://www.npws.ie/protected-sites>);
- National Inventory of Architectural Heritage (NIAH);
- National Monument Service – Historic Environment Viewer (Department of Housing, Local Government and Heritage) (<https://www.archaeology.ie/>);
- Ordinate Survey Ireland (OSI), Historical Mapping (<https://osi.maps.arcgis.com>)

3.3.3 Supporting Assessments

A screening for Appropriate Assessment has been carried out for the proposed development (Deborah D'Arcy, 2023). The Appropriate Assessment Screening report has informed the ecological considerations within this EIA Screening report.

Through an assessment of potential impacts, it was concluded that the proposed scheme will have no likely significant effects on European sites, either alone or in-combination with other plans or projects and that an Appropriate Assessment is not required.

4 EIA SCREENING EVALUATION

In considering local authority own development, Wicklow County Council, under Section 38 of the Road Traffic Act, 1994 and the Planning and Development Regulations, must have regard to whether the proposed scheme is to have likely significant effects on the environment. This is done by reference to the criteria specified in Annex III of the EIA Directive 2014/52/EU and Schedule 7 of the Planning and development Regulations 2001, as amended. As such, the proposed scheme is considered under the criterion, as outlined below.

4.1 Characteristics of Proposed Development

Schedule 7 Criteria	Characteristics of Proposed Development
The size and design of the whole of the proposed development	Details of the footprint and infrastructure upgrades of the proposed scheme are outlined in Section 2 and detailed drawings included in Appendix A. In short, the proposed scheme involves junction improvements at five roundabouts on the R774 to provide improved pedestrian and cycling facilities and traffic calming measures.
The cumulation with other existing development and/or development subject of a consent for Proposed Development	<p>A review of planning applications within the vicinity of the proposed scheme was undertaken using the Department of Housing, Local Government and Heritage EIA portal and Wicklow County Council Web portal map. A number of other permitted and proposed projects were identified. However, none of these have potential to contribute to significant effects within the meaning of the Directive when considered in-combination with the effects of the proposed scheme.</p> <p>The proposed scheme will form part and interact with the wider transport network of Co. Wicklow. It is subject to ongoing management, monitoring and review by Wicklow County Council.</p>
The nature of any associated demolition works	The proposed scheme seeks to avoid demolition in the first instance. The reuse of existing materials preserves the embodied energy expended in the original construction of the dual carriageway, minimises waste and reduces the use of new raw materials in line with circularity objectives of Wicklow County Council County Development Plan 2022-2028. The proposed scheme involves minimal demolition. Discreet sections of curb may need to be removed or realigned to accommodate the proposed new layout at the five roundabouts. If suitable, clean material will be stored on site within the site compound and potentially reused as fill. If there is no suitable application, this material will be removed offsite for recovery or disposal at an authorised waste facility in line with the Waste Management Act 1996. The proposed scheme will therefore not give rise to significant demolition waste or any associated environmental impacts.
The use of natural resources, in particular land, soil, water and biodiversity	<p>The proposed scheme will require natural resources during the construction phase of the</p> <ul style="list-style-type: none"> • Fuel for machinery use and transportation of materials and waste • Water for construction activities. • Cement • Aggregates: fine and coarse aggregates <p>Exact quantities have not yet been determined; however, it is considered that there will be no significant effects on the environment given the scale and nature of the proposed scheme.</p>

Schedule 7 Criteria	Characteristics of Proposed Development
	<p>Land: The proposed scheme is within the previously excavated R774 road corridor within the Wicklow County Council, Greystones-Delgany-Kilcoole area. Land take is not required outside of the existing road corridor. The impact on land is negligible.</p> <p>Soils: The proposed scheme requires minimal excavations. Where excavations are required, these will be within discreet section of the roadside verge which comprises of made ground and subsoil from the original construction of the dual carriageway. Exact quantities for excavation have not yet been determined but given the scale and nature of the proposed scheme, they are not considered significant. If suitable, clean material will be stored on site within the site compound and potentially reused as fill. If there is no suitable application, this material will be removed offsite for recovery or disposal at an authorised waste facility in line with the Waste Management Act 1996.</p> <p>Water: There is unlikely to be the requirement for any substantial water use, other than for standard construction activities and water misting for dust minimisation. Water is to be drawn from the existing water mains connection on the R774. The proposed scheme does not involve any abstraction of groundwater or discharge of untreated wastewater to groundwater. Water is not required for the operation of the proposed scheme.</p> <p>A single stream is culverted under the R774 carriageway and flows east -west towards the coast and outfalls into the Irish Sea – Killiney Bay (HA10). This is the Three-trout’s stream. Importantly, construction works are not proposed in the vicinity of the stream with its location being between two roandabouts. The third cycle (2016-2021) Water Framework Directive (WFD) river water body status for this stream is ‘Good’ and ‘Not at risk’. The stream will remain unaffected by the proposed scheme.</p> <p>The Kilcoole Stream_010 is c. 1.2km south of Roundabout 5. This waterbody is hydrologically connected to the Murrough SAC. This stream flows in a west-east direction and outfalls to the Irish Sea – Killiney Bay (HA10) c. 3.5km downstream. The third cycle (2016-2021) Water Framework Directive (WFD) river water body status for this stream is ‘Poor’ and ‘At risk’. The significant pressure identified is urban waste water.</p> <p>The proposed scheme will utilise the existing road drainage. There are no modifications to the drainage proposed.</p> <p>Biodiversity: The proposed scheme is not located in or adjacent to any European site or nationally designated area. The proposed scheme is located within the footprint of the existing R774 road corridor, footpaths and cycleways. The areas of the roadside are characterised by amenity grassland, grassy verges and treelines. The central island of the existing roundabouts is characterised by flower beds and borders (BC4). These are predominantly non-native species, semi-mature trees and of lower ecological value. There will be a requirement to remove scattered trees, bushes and flower beds to achieve the required sightlines. Impacts within the site will comprise the removal of the existing habitat. But, due to the fact that the trees are semi-mature, and the site is poor in species diversity and no species of conservation importance were found, these impacts are limited and localised and not significant.</p> <p>During a sight walkover survey undertaken in July 2023, a survey for the presence of invasive plant species listed on the Third Schedule of the Birds and Habitats Regulations 2011 was undertaken. No Third Schedule species were recorded. A single invasive alien plant species, Butterfly-bush (<i>Buddleia davidii</i>), which is not listed on the Third Schedule of the Birds and Habitats Regulations 2011 was noted at the Ballynerrin Roundabout (Roundabout 4). The National Biodiversity Data Centre classify this invasive species as a risk of medium impact.</p>
<p>The production of waste</p>	<p>Construction: The proposed scheme will result in a generation of waste during the construction phase. Waste streams typically generated from construction works are identified in the table below.</p> <p>The control of waste in the construction phase will be through best practice methods for disposal which seeks recovery of waste in the first instance, maximises recycling and</p>

Schedule 7 Criteria	Characteristics of Proposed Development																						
	<p>outlines waste prevention methods and procedures. In relation to waste management, only approved waste collection permit holders will be contracted for the collection of waste during the construction phase. The waste streams and European Waste Codes (EWC) that are typically identified in the construction phase, are included in the Table below.</p> <table border="1" data-bbox="560 394 1265 920"> <thead> <tr> <th>Waste Stream</th> <th>EWC Code</th> </tr> </thead> <tbody> <tr> <td>Concrete, bricks, ceramics</td> <td>17 01-03 & 07</td> </tr> <tr> <td>Wood, glass, and plastics</td> <td>17 02 01-03</td> </tr> <tr> <td>Treated wood, glass, plastic, containing hazardous substances</td> <td>17-02-04*</td> </tr> <tr> <td>Bituminous mixtures, coal, tar and tarred products</td> <td>17 08 01 & 02</td> </tr> <tr> <td>Cardboard</td> <td>20 01 01</td> </tr> <tr> <td>Mixed C&D waste</td> <td>17 09 04</td> </tr> <tr> <td>Green waste</td> <td>20 02 01</td> </tr> <tr> <td>Electrical and electronic components</td> <td>20 01 33 34</td> </tr> <tr> <td>Liquid fuels</td> <td>13 07 01 – 10</td> </tr> <tr> <td>Chemicals (solvents, pesticides, paints adhesives etc.)</td> <td>20 01 13 19 27-30</td> </tr> </tbody> </table> <p>Operation: The operation of the proposed scheme does not involve the production of waste.</p>	Waste Stream	EWC Code	Concrete, bricks, ceramics	17 01-03 & 07	Wood, glass, and plastics	17 02 01-03	Treated wood, glass, plastic, containing hazardous substances	17-02-04*	Bituminous mixtures, coal, tar and tarred products	17 08 01 & 02	Cardboard	20 01 01	Mixed C&D waste	17 09 04	Green waste	20 02 01	Electrical and electronic components	20 01 33 34	Liquid fuels	13 07 01 – 10	Chemicals (solvents, pesticides, paints adhesives etc.)	20 01 13 19 27-30
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<p>Pollution and nuisances</p>	<p>There is potential that the construction phase of the proposed development will give rise to pollution and nuisances as a result of increases in traffic, changes in air quality (traffic emissions, dust), changes in noise. The main receptors are local residents and businesses. This is estimated to last 3 months.</p> <p>Noise and Vibration. Control measures will be put in place to minimise the impact of noise and vibration on the immediate environs due to construction activities. Measures will include: operating hours and limiting construction activity to daytime periods between 08:00-19:00 Monday to Friday and Saturday 08:00-18:00. Works will not be planned outside of these working hours including weekends and public holidays. Furthermore, the Contractors, will be required to comply with the requirements for noise control detailed in European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations and Safety, Health and Welfare at Work (Control of Noise at Work) Regulations.</p> <p>Dust: Measures for the management of dust shall be implemented. Roads and footpaths will be cleaned on a regular basis. Trucks leaving the site will be adequately cleaned to ensure soil, mud and debris is prevented from spilling onto the adjoining roads and footpaths. Where appropriate dust monitoring may be carried out near site boundaries and sensitive receptors. If dust levels are higher than 350mg/m²/day further mitigation measures may be required.</p> <p>Sediment Runoff: There is potential, albeit low, for accidental release of pollutants (e.g., sediment, fuel) into the surrounding environment including surface water and groundwater. Potential sources of sediment during the construction of the proposed scheme include:</p> <ul style="list-style-type: none"> - soil stockpiles with significant side slopes can create sediment laden runoff - and construction traffic travelling into and out of earthworks. <p>Employing standard good construction methodologies will mitigate the risk of sediment runoff.</p> <p>Operation phase: This phase will not give rise to pollution or nuisance as it is a junction improvement scheme. The proposed scheme is not likely to result in an increase in</p>																						

Schedule 7 Criteria	Characteristics of Proposed Development
	vehicular and traffic related pollutants. The proposed design has the potential to reduce traffic speeds which would reduce traffic related noise on the R774. No significant impact arises.
<p>The risk of major accidents, and /or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge</p>	<p>The construction method has not yet been determined. It would be considered standard, with no novel construction methodologies and not particularly complex. Therefore, the risk of accidents occurring during construction are considered to be low. The proposed development is not of a nature which will result in it generating a risk of major accidents and/or disasters.</p>
<p>Risks to Human Health</p>	<p>Design, construction and operation of the proposed development shall be in accordance with the relevant health and safety regulations and guidelines, including:</p> <ul style="list-style-type: none"> • Safety, Health & Welfare at Work (Construction) (Amendment) Regulations 2021 (S.I. No. 528 of 2021); • Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2019 (S.I. No. 129 of 2019); • Safety, Health & Welfare at Work (General Application) Regulations 2007 to 2016; • Safety, Health & Welfare at Work (Construction) Regulations 2006 to 2013; and • Safety, Health & Welfare at Work Act 2005. <p>Construction: There are no schools or hospitals directly adjacent to the proposed scheme. During construction there is potential for pollution and nuisance as outlined above, however, such impacts will be temporary and subject to best practice control measures. The R774 is to remain open to the public users during the proposed works. Traffic management measure will be put in place to maintain traffic flow and minimising the risk of works causing accidents and ensuring safe temporary measures for pedestrians and road users. These measures are temporary and not considered significant.</p> <p>In considering the risk to human health, consideration of nearby sensitive receptors has been taken into consideration. Sensitive receptors typically relate to homes, hospitals, hotels and holiday accommodation, schools, tourism and recreational amenities and facilities, economic activities such as visitor attractions based on cultural/historic or natural assets. There are also a number of commercial receptors located in the vicinity of the proposed scheme. There are no schools or hospitals located directly adjacent to the works. As outlined above, any potential for air, odour or noise pollution during the construction phase will be temporary and localised.</p> <p>The upgraded scheme will be characterised by high quality facilities designed to DMURS, and National Cycle Manual standards and in many cases, full or light segregation, where possible, from other modes and cyclists. Local traffic calming, improved priority and signalling at junctions and lower speed limits will be required in some instances, particularly at more complex junctions.</p> <p>The design provides tactile paving in the form of blister paving and corduroy paving to ensure the visually impaired can identify pedestrian crossing locations. Pedestrian crossing locations are designed to ensure wheelchairs have ease of access through the crossing. Bus stop locations along the R774 are to be retained with ease of access provided.</p> <p>One of the objectives of the proposed scheme is to enhance safety for pedestrians, cyclist users and road users. It is considered that during the operational phase the proposed scheme will provide a safer route than the existing situation.</p> <p>Overall, the proposed scheme will have a positive impact on human beings by providing improved pedestrian, cyclist and road users facilities. The provision of a coherent, safe and attractive pedestrian and cycle network will support a shift from the private car to cycling</p>

Schedule 7 Criteria	Characteristics of Proposed Development
	for all aspects of life including employment and education trips and provide a strong basis for increasing leisure and tourist cycling.
Flood risk	A review of the CFRAM flood maps ¹ has been undertaken to assess the flood risk of the proposed development. The proposed scheme site is not within any historically recorded flood event. Milltown Roundabout (Roundabout 1) intersects with an area associated with flood probability. The other junctions do not intersect with an area associated with flooding. However, the proposed scheme will not result in a significant increase of hardstand that will increase the potential for flood risk elsewhere.

4.2 Location of Proposed Development

Schedule 7 Criteria	Location of the Proposed Development
The existing and approved land use	<p>The proposed scheme is located within the Greystones-Delgany-Kilcoole Local Area. The Greystones/Delgany and Kilcoole Local Area Plan (LAP) 2013-2019 (lifetime extended) roads and transportation objectives relevant to the proposed scheme include:</p> <p><i>TS7: Promote the development of safe and accessible pedestrian and traffic routes.</i></p> <p><i>TS9: To facilitate the introduction of traffic management, calming and reduction measures throughout the plan area.</i></p> <p>The area surrounding the proposed scheme is zoned:</p> <p><i>E1 Zone 1: Employment To promote and facilitate the development of lands zoned for employment development.</i></p> <p><i>CE: To provide for civic, community, institutional, health, educational facilities and burial grounds.</i></p> <p><i>E1 Zone 2 To provide for a mix of employment creating development, in accordance with objective EMP4 for this area.</i></p> <p><i>E: To provide for economic development, enterprise, industry, distribution, warehousing and employment with the exception of lands zoned E in Killincarrig townland, where retail warehousing shall not be permitted.</i></p> <p><i>AOS: Active Open Space: To provide for active recreational open space.</i></p> <p><i>RE: Existing Residential: To protect, provide for and improve residential amenities of adjoining properties and areas while allowing for infill residential development that reflects the established character of the area in which it is located.</i></p> <p><i>R22: Residential: To provide for the development of sustainable residential communities up to a maximum density of 22 units per hectare and to preserve and protect residential amenity.</i></p> <p><i>OS: Open Space: To preserve, provide for and improve public and private open space for recreational amenity and passive open space.</i></p> <p><i>NC: Neighbourhood Centre: To protect, provide for, and improve a mix of neighbourhood centre services and facilities, which provide for the day-to-day needs of the local community.</i></p> <p><i>AP7: Action Plan 7: 10.8 AP7: CHARLESLAND ACTION PLAN This action plan is located at Charlesland, on a site approximately 29ha in size. This area shall be developed for a mix of uses including residential, employment and schools.</i></p> <p>The proposed scheme aims to ensure the future resilience of the R774 in line with population growth and zoning objectives of the environs of Greystones, Delgany and North Kilcoole.</p>

¹ Available at: <https://www.floodinfo.ie/map/floodmaps/>

Schedule 7 Criteria	Location of the Proposed Development
<p>The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and underground</p>	<p>Bedrock: According to GSI online mapping, the underlying bedrock is greywacke and quartzite of the Bray Head Formation.</p> <p>Quaternary sediments: Quaternary sediments across the proposed scheme include Mbs Marine deposits, sandy beach/raised sand, Sand and Gravels GLs Sand and Gravels type: Limestone sands and gravels (Carboniferous) and IrSTCSsS: Till type: Sandstone and shale till (Cambrian/Precambrian) with matrix of Irish Sea Basin origin: Clayey: Tills (diamictons).</p> <p>Subsoils: described as Clonroche1100a Fine loamy drift with siltaceous stones.</p> <p>Soils: The soil type is Urban (<i>Urban</i>). These soil types are consistent with the CORINE Landcover which classifies the landcover as Artificial surfaces – Industrial, Commercial and transport units (Code 121).</p> <p>Water: The proposed scheme lies within the Ovoca-Vartry catchment (WFD 10) and the Newcastle [Wicklow] sub-catchment (Newcastle [Wicklow]_SC_010). The Three Trout’s Stream_010 (IE_EA_10T030580) intersects the R774 carriageway approximately 150m south of Roundabout 2 and 170m from Roundabout 3 of the proposed scheme. The stream is culverted under the carriageway. This stream flows in a west-east direction and flows 1.9km where it meets the Southwestern Irish Sea - Killiney Bay (HA10) (IE_EA_100_0000). The third cycle (2016-2021) Water Framework Directive (WFD) river water body status for this stream is ‘Good’ and ‘Not at risk’. Importantly, the proposed construction won't occur in the area of the proposed scheme. The Three-Trout’s Stream_010 stream will remain unaffected by the proposed scheme. The WFD coastal waterbody status is ‘Good’ and ‘Not At risk’.</p> <p>The Kilcoole Stream_010 is c. 1.2km south of Roundabout 5. This stream flows in a west-east direction and outfalls to the Irish Sea – Killiney Bay (HA10) c. 3.5km downstream. This stream is hydrologically connected to The Murrrough SAC, The Murrrough SPA and Murrrough pNHA. The third cycle (2016-2021) Water Framework Directive (WFD) river water body status for this stream is ‘Poor’ and ‘At risk’. This stream is crossed by the R774 1.6 km west of roundabout 5 and therefore is to not considered to be within the zone of influence of the construction works.</p> <p>Groundwater: The Wicklow (IE_EA_G_076) ground waterbody underlies the proposed scheme. It is generally unproductive bedrock except for local zones. The 3rd cycle groundwater status is ‘Good’ however the groundwater is ‘At risk’ of failing to achieve WFD status. Significant pressures on the Wicklow ground waterbody include agricultural pressures and anthropogenic pressures. The area of Greystones is designated for the abstraction of water intended for human consumption under Article 7 of the Water Framework Directive. Abstraction of groundwater is not required for this scheme.</p> <p>The groundwater vulnerability across the proposed scheme length ranges from low to High (H)_ Low (L).</p> <p>Bedrock aquifer Poor Aquifer – Bedrock which is Generally Unproductive except for Local Zones.</p> <p>Biodiversity: The proposed scheme is within the footprint of the R774 Charlesland Dual Carriageway corridor, cycleway and footpaths which is characterised by artificial surfaces (BL3). The verge edges and the central islands of the existing roundabouts are characterised by amenity grassland (GA2), grassy verges (GS2), flower beds and borders (BC4) with treelines (WL2) along the carriageway.</p> <p>The habitat types identified along and adjacent to the proposed scheme are identified in Table 3.1.</p> <p>Table 4.1 Habitat types identified within and adjacent to the proposed scheme boundary</p>

Schedule 7 Criteria	Location of the Proposed Development		
	Habitat	Fossitt Code	Description
	Buildings and other artificial surfaces	BL3	<p>The proposed scheme is within the R774 road corridor which is characterised by artificial surfaces of tarmac and concrete. Areas of the central island at the roundabouts include bricked surfacing. These surfaces will be reconfigured to accommodate the proposed new layout.</p> <p>Areas surrounding the proposed scheme comprise of buildings and artificial surfaces with commercial premises and residential housing.</p>
	Amenity grassland	GA2	Amenity grassland borders the road corridor. This is mown short and dominated by grass species.
	Dry meadows and Grassy verges	GS2	Grassy verges occur along some sections of the road corridor and in the central islands of the existing roundabouts. These had recently been mown. They are dominated by grass species with occasional herbs species such as creeping buttercup, common hogweed and common knapweed.
	Flower beds and borders	BC4	Flower beds feature in the central islands and originate from planting. They include the scattered trees. Trees at the existing junctions are primarily silver birch (<i>Betula pendula</i>) and other non-native tree species include cordyline (<i>Cordyline</i> spp). A high proportion of the species observed are perennials including daisies (<i>Bellis perennis</i>), Aster (<i>Asteraceae</i> spp), <i>Erigeron</i> spp, non-native species including <i>Agapanthas</i> spp. The flower beds and borders habitats are scheduled for removal as part of the proposed scheme.
	Treelines	WL2	Treelines feature along the carriageway between the 5 no. identified roundabouts. These treelines will remain unaffected by the proposed scheme.

Terrestrial mammals: During the site walkover survey terrestrial mammals were not recorded at the proposed scheme. A review of NBDC online mapping revealed records of protected terrestrial mammals. Records for the 2km square (O21V and O20Z) within which the proposed scheme site lies were extracted from the National Biodiversity Data Centre (NBDC) database on 11th August 2023 and reviewed. There are no species recorded on or adjacent to the site. There is no record of Annex II terrestrial mammals recorded. Other species protected under the Wildlife Act 1976, as amended, include: Eurasian Badger (*Meles meles*), Eurasian Red Squirrel (*Sciurus vulgaris*) and West European Hedgehog (*Erinaceus europaeus*). There is no suitable habitat for these species affected by the works.

Bats: A review of NBDC online mapping for the 2km grid square (O21V and O20Z) shows 21 no. records of bats within 2km of the proposed scheme. The trees scheduled for removal are semi-mature and are not a suitable roosting habitat for bats. No additional lighting is proposed. Therefore no negative effect on bat species is anticipated.

Birds: The proposed scheme involves minimal vegetation removal and the vegetation scheduled for removal- immature trees and planting borders is of low ecological value. The trees have low nesting potential due to their immaturity and location within the road corridor.

Schedule 7 Criteria	Location of the Proposed Development																								
	<p>Invasive Species: No invasive species listed on the Third Schedule of the Birds and Habitats Regulations 2011 were recorded along the proposed scheme during the walkover survey. A single invasive species, Butterfly-bush (<i>Buddleja davidii</i>) was recorded during the site visit at Ballynerrin Roundabout (Roundabout 4). This is a medium impact invasive species. The species is common and widespread and no increased spread of this species is anticipated as a result of the scheme. All vegetation cleared will be removed from site and verges disturbed will be landscaped reseeded and or replanted which will help reduce the potential for Buddleia to regenerate on disturbed ground.</p> <p>For the surrounding area, the following Third Schedule species were recorded and the distance from the proposed scheme is included in the table below. Based on the distance from the scheme it is considered that there is no potential for the spread of these Third schedule species during the works.</p>																								
	<table border="1"> <thead> <tr> <th data-bbox="421 638 619 801">Species name</th> <th data-bbox="619 638 783 801">Record count</th> <th data-bbox="783 638 941 801">Date of last record</th> <th data-bbox="941 638 1219 801">Designation</th> <th data-bbox="1219 638 1402 801">Distance from Proposed scheme</th> </tr> </thead> <tbody> <tr> <td data-bbox="421 801 619 1077">Water Fern (Azolla filiculoides)</td> <td data-bbox="619 801 783 1077">2</td> <td data-bbox="783 801 941 1077">24/01/2023</td> <td data-bbox="941 801 1219 1077">Invasive Species: Medium Impact Regulation S.I. 477 (Ireland)</td> <td data-bbox="1219 801 1402 1077">1.00km southwest</td> </tr> <tr> <td data-bbox="421 1077 619 1352">Three-cornered Garlic (Allium triquetrum)</td> <td data-bbox="619 1077 783 1352">4</td> <td data-bbox="783 1077 941 1352">05/03/2023</td> <td data-bbox="941 1077 1219 1352">Invasive Species: Medium Impact Regulation S.I. 477 (Ireland)</td> <td data-bbox="1219 1077 1402 1352">0.45km west</td> </tr> <tr> <td data-bbox="421 1352 619 1518">Spanish Bluebell (Hyacinthoides hispanica)</td> <td data-bbox="619 1352 783 1518">1</td> <td data-bbox="783 1352 941 1518">23/04/2022</td> <td data-bbox="941 1352 1219 1518">Invasive Species: Regulation S.I. 477 (Ireland)</td> <td data-bbox="1219 1352 1402 1518">1.00km southwest</td> </tr> </tbody> </table>	Species name	Record count	Date of last record	Designation	Distance from Proposed scheme	Water Fern (Azolla filiculoides)	2	24/01/2023	Invasive Species: Medium Impact Regulation S.I. 477 (Ireland)	1.00km southwest	Three-cornered Garlic (Allium triquetrum)	4	05/03/2023	Invasive Species: Medium Impact Regulation S.I. 477 (Ireland)	0.45km west	Spanish Bluebell (Hyacinthoides hispanica)	1	23/04/2022	Invasive Species: Regulation S.I. 477 (Ireland)	1.00km southwest				
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	<p>Natural Heritage Areas and proposed Natural Heritage Areas: are protected under the Wildlife Amendment Act 2000, as amended. There are no designated sites, European or National in the immediate vicinity of the proposed scheme. The nearest national sites are shown in Figure 4.1 and outlined below:</p> <ul style="list-style-type: none"> • Great Sugar Loaf pNHA (001769) • Bray Head pNHA (000714) • The Murrough pNHA (000730) • Kilmacanoge Marsh pNHA (000724) • Glen of the Downs pNHA (000719) <p>No negative effect on any proposed NHA is anticipated due to their remote distance from the scheme and the lack of any viable downstream hydrological connectivity.</p>																								

Schedule 7 Criteria	Location of the Proposed Development
Absorptive capacity of the Natural Environment	With respect to the absorption capacity of the natural environment, it is noted that the proposed development is to be carried out on artificial surfaces, which is a relatively robust environment.
i) Wetland, riparian areas, river mouths	There is no wetland, riparian areas, river mouths affected by the proposed development. No impact arises. The Three Trouts stream is located within the vicinity of the works but it being located between roundabout 2 and 3. Due to the nature and scale of the scheme no negative effect of the stream is anticipated.
ii) Coastal zones and the marine environment	Coastal zones and the marine environment are not affected by the proposed development. No impact arises. There is connectivity to Killiney Bay via the Three Trouts stream however no transmission of impacts via this pathway is anticipated due to the nature and sale of the scheme and the location of the stream with respect to the works
iii) Mountain and forest areas	There are no mountain or forest areas affected by the proposed development. No impact arises.
iv) Nature reserves and parks	The nearest Nature Reserve is the Glen of the Downs nature reserve. This is an area of sessile oak. This nature reserve is also a Special Area of Conservation (SAC) and the potential for likely significant effects are addressed within the Report to inform AA Screening. It concludes that the proposed scheme will have no likely significant effects on the Glen of the Downs SAC and therefore no impact on the Glen of the Downs Nature Reserve. No impact arises.
v) Areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive	<p>The report to inform Appropriate Assessment Screening identified three SACs and one SPA within the 5km potential zone of influence. The proposed scheme site does not lie within or adjoining the boundaries of any European site, therefore no direct impacts are likely to occur. Due to the nature and limited scale of the scheme and the remote distance to the European designated sites no indirect significant negative effects are likely.</p> <p>Through an assessment of potential impacts, it was concluded that the proposed scheme will have no likely significant effects on European sites, either alone or in-combination with other plans or projects and that Appropriate Assessment is not required.</p>
vi) Areas in which there has already been a failure to meet the environmental quality standards laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure	There are no features that have already been a failure to meet environmental quality standards, laid down in Union legislation and relevant to the project.
Densely populated areas	The area of the proposed development is in Greystones-Delgany and Kilcoole Local Area. The population of the settlement is targeted to increase from 18,021 in 2016 to 21,727 by Q2 2028.

Schedule 7 Criteria	Location of the Proposed Development																				
	<p>However, the proposed development is a junction improvement scheme and hence there is no predicted significant negative impact.</p>																				
<p>Landscapes and sites of historical, cultural or archaeological significance</p>	<p>Under the Wicklow County Development Plan 2022-2028, the landscape character type is 'Urban'.</p> <p>The proposed scheme is located in an area of archaeological potential. In the past, archaeological features were uncovered in the original construction of the R774 road corridor and the surrounding IDA Lands in Killincarrig and Charlesland, Greystones, Co. Wicklow. These excavations were carried out under a series of licences. As noted in the table below, these records are not scheduled for inclusion in the next revision of the Records of Monuments and Places. However, the proposed scheme is within the existing road corridor and minimal excavations are required in the previously excavated roadside area. The junction improvements being undertaken are not deemed to significantly impact archaeology. Consequently, archaeological monitoring over the course of the proposed scheme is not required.</p> <p>The proposed development will not directly impact any structures identified by the NIAH or that are included in the Record of Protected Structures (RPS).</p> <p>Sites and Monuments Recorded in the Road corridor</p> <table border="1" data-bbox="421 869 1433 1850"> <thead> <tr> <th data-bbox="421 869 572 1003">Code</th> <th data-bbox="572 869 724 1003">Class</th> <th data-bbox="724 869 884 1003">Townland</th> <th data-bbox="884 869 1054 1003">Incl in the next revision of the RMP</th> <th data-bbox="1054 869 1433 1003">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="421 1003 572 1294">WI013-074</td> <td data-bbox="572 1003 724 1294">Fulacht fia</td> <td data-bbox="724 1003 884 1294">Killincarrig</td> <td data-bbox="884 1003 1054 1294">No</td> <td data-bbox="1054 1003 1433 1294">Two burnt mounds and associated troughs, pits and post-holes were excavated here in 2003, prior to the construction of the dual carriageway from the R671 to Greystones (Excavation Licence 03E1645 (Site L)). One of the troughs contained a fragment of a saddle quern (Molloy 2006, 547-8)</td> </tr> <tr> <td data-bbox="421 1294 572 1395">WI013-120</td> <td data-bbox="572 1294 724 1395">Habitation site</td> <td data-bbox="724 1294 884 1395">Killincarrig</td> <td data-bbox="884 1294 1054 1395">No</td> <td data-bbox="1054 1294 1433 1395"></td> </tr> <tr> <td data-bbox="421 1395 572 1850">WI013-075</td> <td data-bbox="572 1395 724 1850">Habitation site</td> <td data-bbox="724 1395 884 1850">Charlesland</td> <td data-bbox="884 1395 1054 1850">No</td> <td data-bbox="1054 1395 1433 1850">The remains of a linear ditch (L 47m E-W), a structure defined by post-holes, a cremation pit, a number of animal burials and a curvilinear feature (L 10m) were excavated here in 2003 prior to the construction of the dual carriageway from the R671 to Greystones (Excavation Licence 03E0018 (Site A)). Finds included a Late Bronze Age socketed looped axehead and Beaker pottery. (Molloy 2006, 545)</td> </tr> </tbody> </table>	Code	Class	Townland	Incl in the next revision of the RMP	Description	WI013-074	Fulacht fia	Killincarrig	No	Two burnt mounds and associated troughs, pits and post-holes were excavated here in 2003, prior to the construction of the dual carriageway from the R671 to Greystones (Excavation Licence 03E1645 (Site L)). One of the troughs contained a fragment of a saddle quern (Molloy 2006, 547-8)	WI013-120	Habitation site	Killincarrig	No		WI013-075	Habitation site	Charlesland	No	The remains of a linear ditch (L 47m E-W), a structure defined by post-holes, a cremation pit, a number of animal burials and a curvilinear feature (L 10m) were excavated here in 2003 prior to the construction of the dual carriageway from the R671 to Greystones (Excavation Licence 03E0018 (Site A)). Finds included a Late Bronze Age socketed looped axehead and Beaker pottery. (Molloy 2006, 545)
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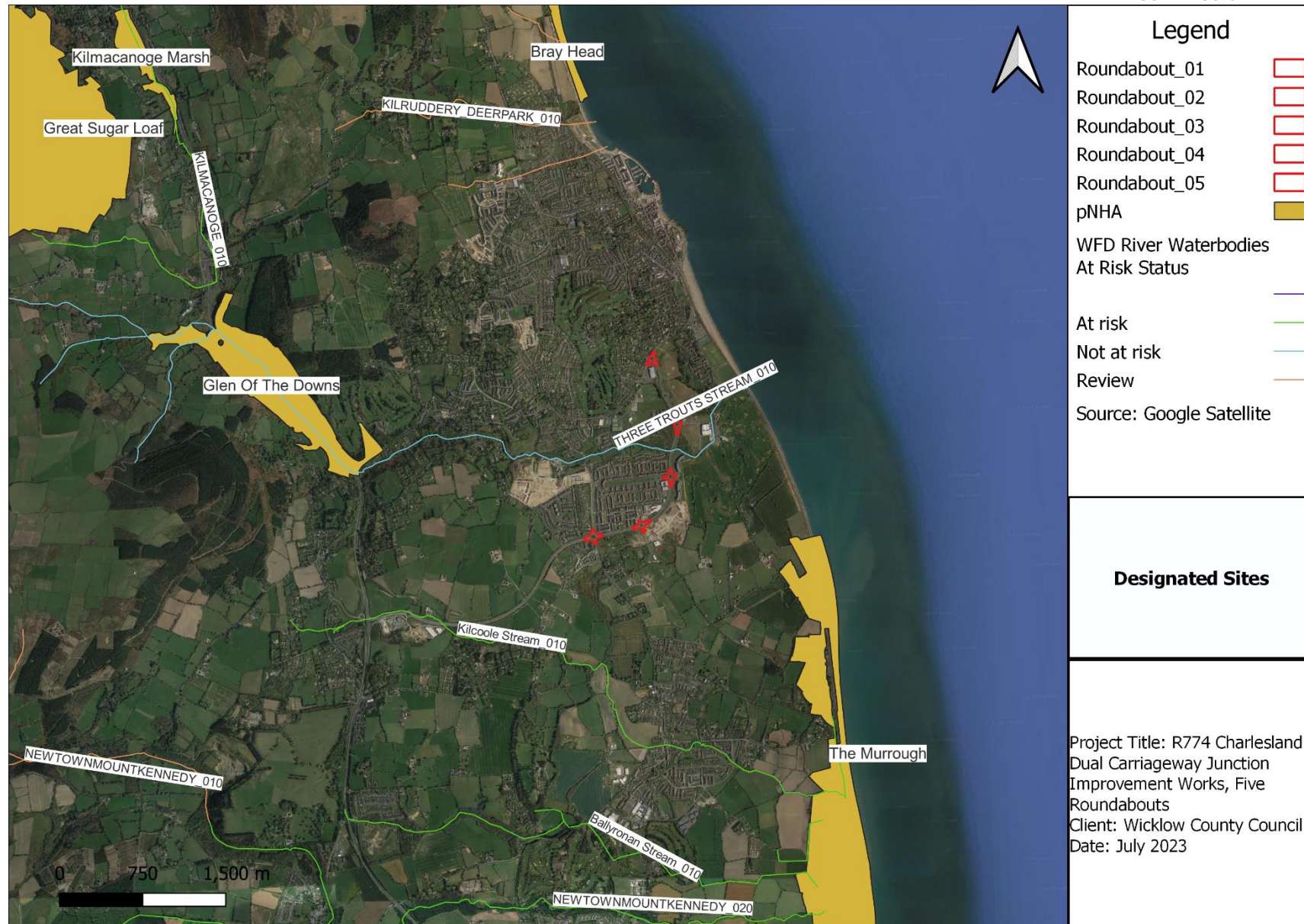


Figure 4-1 Designated Sites

4.3 Type and Characteristics of the Potential Impacts

The proposed development is considered in the context of potential impacts. The area which may be impacted are outlined with reference to Section 171A of the Planning and Development Act.

Schedule 7 Criteria	Type and Characteristics of the Potential Impacts
(a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected)	The magnitude and spatial extent of impact is limited to the existing 5 no junctions on the R774, the immediate vicinity and road users in the area. The human population affected by the proposed development is relatively small due to the commercial/enterprise nature of the receiving environment.
(b) the nature of the impact	<p>In accordance with Directive 2014/52/EC, the nature of the impact has been assessed on the following factors:</p> <ul style="list-style-type: none"> a) population and human health; b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; c) land, soil, water, air and climate; d) material assets, cultural heritage and the landscape
Population and Human Health	<p>Construction Phase</p> <p>Impacts associated with the construction of the proposed scheme may entail short term intermittent traffic management measures due to construction related traffic on the roadway which may result in temporary impacts on local residents and local businesses. Construction works may result in impacts relating to the generation of noise and dust. In terms of noise, the construction phase may lead to a temporary increase in background noise levels through operation of plant machinery. There will be an increase in HGV movements in the vicinity of the works. Given the scale of the proposed scheme, these impacts are considered localised, temporary and not significant.</p> <p>Access to properties along the R774 will be maintained throughout the construction phase. There will be a requirement to operate traffic management measures which will be communicated to affected parties in advance. The predicted effects are likely to be minor negative over a temporary duration.</p> <p>Operation Phase</p> <p>Overall, the proposed scheme will have a long-term positive impact on human beings by providing improved pedestrian, cyclist and road users facilities. The provision of a coherent, safe and attractive cycle network will support a shift from the private car to cycling for all aspects of life including employment and education trips and provide a strong basis for increasing leisure and tourist cycling. The proposed infrastructure will facilitate additional safety and security of the road infrastructure that reduces the risk to the population in the area. Therefore, there is not considered to be a positive impact for population.</p> <p>Mitigation Measures:</p> <ul style="list-style-type: none"> - Implementation of a Traffic Management Plan which outlines measures for traffic during construction to minimise accidents, nuisance and disruption. <p>Conclusion: With the inclusion of the mitigation measure set out above, any residual impacts are temporary and no significant effects are anticipated on population from the construction or operation of the proposed development.</p>
Biodiversity	<p>Construction: The bulk of the works are linear in nature and taking place on made ground within the existing road corridor. The proposed works are primarily taking place on the existing hardstanding with discreet sections of grass verges and flower beds and borders in the central islands required to accommodate the proposed new layout. There will be some minor negative</p>

Schedule 7 Criteria	Type and Characteristics of the Potential Impacts
	<p>impacts to biodiversity arising from the removal of the flower beds and borders habitat (BC4) in the central islands to achieve the required sightlines of the proposed scheme. The habitats, by virtue of their nature and location, are considered of negligible ecological value. Limited to minor foraging habitat for pollinating insects and perhaps birds. All other trees and hedgerows along the scheme are to be retained. The retention of all other existing trees and hedgerows along the proposed scheme in addition to the replacement planting, will mitigate any minor impacts on biodiversity, particularly if native species are selected, allowed to grow to their full potential and appropriately managed. Should additional biodiversity areas be developed, it would also assist in mitigating impacts and improve biodiversity. The adoption of biodiversity enhancement measures will result in long-term, positive impacts to biodiversity.</p> <p>Additional lighting is not proposed for the scheme which would have potential to negatively impact bats or nocturnal animals. Impacts to bats and nocturnal animals is considered negligible.</p> <p>A single invasive species, <i>Buddleia davidii</i> has been identified at Ballynerrin Roundabout (Roundabout 4). All vegetation cleared will be removed from site. Reseeding and planting of disturbed areas will assist in prevention of the regrowth and/or proliferation of this species.</p> <p>The proposed scheme is not located within the vicinity of a designated site, European or National site. Due to the small scale and short-term nature of the proposed scheme and the potential low risk of minor pollution or sediment release, and the remote hydrological and hydrogeological distance it is considered very unlikely that the project would result in significant negative effects on any European site or National site, alone or in combination with other plans and projects.</p> <p>The potential effects on biodiversity arising from the proposed development will be reduced by adherence to the mitigation measures set out and ensuring that best practice construction methods and guidelines are followed and using existing resources where possible.</p> <p>Mitigation:</p> <ul style="list-style-type: none"> • Vegetation clearance must be carried out outside of bird breeding season from the 1st March to 31st August. • Measures to control the spread of invasive species on site will be implemented including all vegetation cleared will be removed from site and disposed in accordance with the Waste Management Act. Areas of disturbed ground will be reseeded/replanted promptly to reduce the potential for regrowth and proliferation of invasive non-native species. • The design and landscape management should have regard to guidance set out in 'Pollinator-friendly management of Transport Corridors,' National Biodiversity Data Centre, NBDO, 2019. • Planting should consist of native and pollinator-friendly species to enhance biodiversity potential. <p>Conclusion: With the inclusion of the above mitigation, no significant negative effects are anticipated on biodiversity from the construction or operation of the proposed scheme.</p>
<p>Land, Soil, Water, Air, Climate</p>	<p>The magnitude and spatial extent of potential impacts to land, soils, water, air and climate will be limited to the immediate receiving environment of the proposed development. The works will be largely contained within the existing site boundary.</p> <p>Land and soils: The existing use of the lands and soils where the proposed scheme is to be carried out is 'artificial surfaces'. Excavations are not anticipated as the works are confined to the existing road corridor. If low levels of contamination are encountered during the construction works, soil testing of material will be undertaken to assess its potential for reuse and disposal. Any effects on soils and geology would be localised within the footprint of the proposed scheme. Therefore, it is considered that there will be no significant impact on land or soils.</p> <p>Waste: The production of any waste associated from the construction of the proposed scheme will not cause unusual significant adverse effects that would require an Environmental Impact Assessment.</p>

Schedule 7 Criteria	Type and Characteristics of the Potential Impacts
	<p>Water: The potential for pollutants (sediment and/or other toxic material) to enter the Three Trout's Stream and surface waterbodies during construction and operation phases are considered. The works footprint is narrow and is confined to the existing roundabouts. The proposed scheme will utilise the existing road drainage system. The Three Trout's Stream intersects the R774 and flows east towards the coast. The stream is culverted under the R774. There is a wide grassed verge and treelines along the carriageway. Importantly, there is no works proposed in the vicinity of the stream. No instream or bankside works are required. The movement and maintenance of plant on site can generate silt and oil contaminated water or introduce non-native species from other sites. Sources of silt (e.g., plant and wheel washing, site roads, river crossings) carry a risk of pollution. However, given the nature and scale of the proposed scheme these impact sources are considered to be of limited scale.</p> <p>The Kilcoole Stream_010 is hydrologically connected to The Murrough SAC, The Murrough SPA, and Murrough pNHA. However, this stream is not considered to be within the zone of influence of the works being situated 1.2 km south of the works and 1.6km distant via the road network. Therefore the stream is not deemed to be a potential pathway for the transmission of sediment or pollutants to the Murrough SAC/SPA.</p> <p>The implementation of construction techniques that adhere to good practices, along with the utilisation of standard best practice measures outlined below, will effectively prevent the release of sediments and pollutants into the surface water network during the construction phase. Given the project's minimal excavation and sediment generation, significant impacts to surface water during construction are considered unlikely.</p> <p>During the operation phase, no significant increase in hard surfaces will be introduced that would lead to a net increase in surface water runoff. The existing road drainage system will be utilised by the proposed scheme, which involves enhancing junctions and adding footpaths and cycleways. This is not expected to result in a significant increase in pollutants, such as hydrocarbons, that would lead to discernible adverse effects.</p> <p>Air & climate: During construction, there may be adverse effects on air quality, including generation of dust as a result of construction activity. Effects are anticipated to be localised, slight and temporary in nature. There will be no resultant emissions to air from the operation phase. No significant impact is anticipated to air and climate as traffic levels will not increase significantly due to the proposed development.</p> <p>Noise: In terms of noise, the construction phase may lead to temporary background noise levels through operation of plan machinery. The Contractor shall employ best practical means to minimise noise produced by activities and shall comply with the contents and recommendations of BS5228: Code of Practice for Noise Control on Construction and Open Site. Therefore, no significant impact on properties is anticipated.</p> <p>Mitigation Measures:</p> <ul style="list-style-type: none"> • The site compound must be at least 50m from any watercourse. • Appropriate secondary containment for the storage of fuels, oils, paints and other potentially hazardous materials on site. • Fuelling of plant is anticipated to be in a designated fuelling area of a site compound. • All parts of the surface water drainage system must be maintained in good working order and repair and steps must be taken to ensure that matter liable to block or obstruct the drainage system is prevented from entering; • Surface water control measures will be implemented to ensure that silt laden or contaminated surface water run-off from the site of the proposed scheme does not discharge directly to waterbodies; • All hazardous materials must be stored in appropriate containers, must be indelibly and legibly labelled to identify the contents, hazards and precautions required; • Appropriate management and storage fuel and felling activity will be implemented, and fuelling activity near watercourses will be avoided; • All spoil heaps will be located, protected, and stabilised in a way that will avoid the risk of contamination of drainage systems and local watercourses;

Schedule 7 Criteria	Type and Characteristics of the Potential Impacts
	<p>Conclusion: With the inclusion of the above mitigation which includes standard construction practices, significant effects are not anticipated on land, soils, water, air or climate from the construction or operation of the proposed development.</p>
<p>Material assets, Cultural heritage and Landscape and Visual Amenity</p>	<p>The main potential impacts are confined to the site boundary. It is expected that once complete, the proposed development will have a positive impact in terms of safety. Construction phase impacts on residential and commercial properties relate to nuisance issues such as traffic disruption, dust and noise as well as property access. Nuisance issues are addressed above and are predicted to generate a minor negative impact of temporary duration. Much of the expected disruption to services and existing transport networks will be of a temporary nature during the construction phase of the development and can be mitigated against through the provision of adequate notice to service providers.</p> <p>The proposed scheme will be contained within the previously excavated section of the road corridor and will therefore not have a significant impact on areas of archaeological or architectural potential. The proposed scheme will not impact on a protected structure (RPS site) or a NIAH sites. The junction improvements being undertaken is not deemed to significantly impact archaeology or cultural heritage. Consequently, archaeological monitoring over the course of the proposed scheme is not required.</p> <p>The site and its immediate context is the R774. The proposed scheme would introduce improved junctions within the existing road corridor but will require areas of the roadside verge to be developed. The loss of scattered trees, bushes and flower beds will occur, however, these losses would in part be replaced as part of the landscape regime for the junction improvement scheme.</p> <p>Areas for the enhancement of biodiversity with native and pollinator friendly species have been identified and will offset the impacts to landscape and visual impacts. TII has collaborated with the All-Ireland Pollinator Plan in developing a sector specific guideline to improve the design and landscape management of Transport Corridors for pollinators and overall biodiversity.</p> <p>Mitigation The design and landscape management should have regard to guidance set out in 'Pollinator-friendly management of Transport Corridors,' National Biodiversity Data Centre, NBDC, 2019.</p> <p>Conclusion</p> <p>Significant effects are not anticipated on material assets, cultural heritage and landscape and visual amenity from the construction or operation of the proposed development.</p>

4.4 Transboundary Impacts

No transboundary impacts are likely as a result of the proposed development.

4.5 The intensity and complexity of the impact

The nature of the impact has been detailed in **Table 4.3**. There will be construction impacts which will be short-term and of minor intensity and complexity.

4.6 The probability of the impact

The probability of impacts is considered low. During construction, temporary adverse impacts will occur such as dust generations and noise impacts, but the Contractor is required to implement a Traffic Management Plan to ensure no risks to the population working on the site or working adjacent to the site during the construction stage.

4.7 The expected onset, duration, frequency and reversibility of the impact

The onset of potential effects coincides with the start of the construction phase. These effects are expected to last for 3 months. Their occurrence is localised and intermittent determined by the ongoing construction activity within the aforementioned working hours. The proposed scheme will form part and interact with the wider transport network of Co. Wicklow. It is subject to ongoing management, monitoring and review by Wicklow County Council.

4.8 The cumulation of the impact with the impact of other existing and/or approved projects

A review of the other plans and projects in the vicinity of the proposed development was carried out. This analysis has considered the potential of other plans and project to contribute to in-combination or cumulative impacts with the proposed development. A number of other permitted and proposed projects were identified. However, the proposed development is not of a scale or nature that would result in significant cumulative effects. Therefore, these other developments, do not have potential to contribute to significant effects within the meaning of the Directive when considered in-combination with the effects of the proposed development.

5 CONCLUSION

This EIA Screening Report has considered the proposed development in terms of (i) Characteristics of Proposed Development, (ii) Location of Proposed Development and (iii) the Characteristics of Potential Impacts, in accordance with the DEHLG Guidance Documents, Schedule 7 of the EIA Regulations in determining whether the development would or would not be likely to have significant effects on the environment.

For the following reasons, it is considered that the proposed development is not likely to have significant effects on the environment:

- The nature and scale of the proposed development, which is not a development type listed in Schedule 5 Part 1 or 2;
- The site is not located in a European Site or national designated site;
- The Appropriate Assessment Screening concluded that the proposed scheme either alone or in-combination with other plans and/or projects, does not have the potential to significantly affect any European Site, in light of their conservation objectives;
- The types and characteristics of the potential impacts are such that no significant effects are predicted; and
- Appropriate mitigation measures are proposed, which will prevent / minimise impacts on the local environment.

Therefore, this Report to Inform EIA Screening concludes that the proposed scheme individually and cumulatively with associated existing and approved development will not result in the potential for significant negative impacts to arise on the environmental receptors as a result of the proposed scheme. As such it is concluded that the preparation and submission of an EIAR is not required.

APPENDIX A – GENERAL ARRANGEMENT DRAWING