# N27 KINSALE ROAD TO AIRPORT HILL PHASE 2 PEDESTRIAN & CYCLE SCHEME

## EIA Screening Report

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# 1 INTRODUCTION

RPS has been instructed by Cork City Council to undertake a screening assessment to inform a determination on the requirement for an Environmental Impact Assessment (EIA) for the N27 Kinsale Road to Airport Hill Phase 2 Pedestrian & Cycle Scheme (hereafter referred to as the proposed scheme). The EIA screening process ascertains whether a development requires an EIA and is determined by reference to mandatory and discretionary provisions.

The purpose of this EIA Screening Report is to establish the likely significant effects of the proposed scheme on the environment and advise if an EIA is required or not. This EIA Screening Report is set out as follows:

- Section 1 – Introduction;
- Section 2 – Description of the proposed scheme;
- Section 3 - EIA Legislative context of the screening exercise;
- Section 4 – Methodology for EIA Screening;
- Section 5 – Evaluation for EIA Screening;
- Section 6 – Conclusions.

Other supporting documents not included in this report but available for consideration to ensure a robust review of the proposed scheme include the following:

- Screening for Appropriate Assessment, prepared by Mayfly Ecology, (2022);

It should be noted that the 'Screening for Appropriate Assessment' (Mayfly Ecology, 2022) has informed the ecological considerations within this report.

# 2 DESCRIPTION OF THE PROPOSED SCHEME

## 2.1 Site Location

The proposed scheme is located along an approximate 3 km section of the N27 south of Cork City between the Frankfield Junction (Lat 51.8729, Long -8.47148) and the Airport Roundabout (51.84798, Long -8.47628). A map indicating the location of the proposed scheme and red line boundary is shown below in **Figure 2-1**.

## 2.2 Proposed Road Improvement Scheme

The proposed scheme is largely located within the footprint of the existing N27 road, cycleway, and footpaths. The proposed scheme will upgrade existing pedestrian and cyclist facilities along the 3 km scheme length, located mainly within the confines of the existing N27 road with some sections requiring extension into existing footpaths and grassy verges. The works footprint is narrow and is largely confined to the existing road corridor. Materials used will include concrete for the shared pedestrian and cyclist path. Tarmac will be used where the cycleway is on the road. The red line boundary of the proposed scheme is presented in **Figure 2-1**. More detailed drawings of the proposed scheme layout are shown in **Appendix A**.

The design of the proposed scheme complies with the following design standards and guidance:

- Design Manual for Urban Roads and Streets (DMURS), (Government of Ireland, 2019);
- National Cycle Manual, (National Transport Authority, 2011);
- Specification for Road Works Series 900 – Road Pavements – Bituminous Materials, CC-SPW-00900, (TII, 2015) and
- Footway Design, DN-PAV-03036, (TII, 2005);
- Cork City Council's Scheme Specific Requirements

The design provides pedestrian crossings that incorporate 0mm upstand drop kerbs to allow for safe cyclist crossing. 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 easy access through the crossing. There are three existing bus stop locations along the Scheme with easy access provided.

Underground gas, watermains and overhead ESB poles and lines are to be retained where possible but may need to be diverted if impacted by the proposed scheme. The drainage system will outfall into the existing surface water drainage system at Frankfield Road Stream, a small tributary of the Tramore River classified as part of the Moneygurney_010 waterbody.

Areas for biodiversity enhancement have been identified along the proposed scheme, which will include native tree planting and/or a wildflower meadow. The biodiversity enhancement measures will need to consider sightlines for vehicles.

It is expected that the main construction works to the proposed scheme will be carried out in one construction phase over an expected six-month period commencing in Q3/Q4 2022. Cork City Council propose to locate the temporary construction site compound in the Togher Industrial Estate, Cork City, or other suitable location with an existing hard standing area. This is to be confirmed at prior to construction.

The following sections describe the proposed design in the urban (semi-urban/industrial) and rural environment.

### 2.2.1 Urban Scheme

Shared pedestrian and cyclist facilities will be provided on both sides of the road along the section from Frankfield Junction to the Ballycurreen Junction this section is located in an urban environment. Works along this section will consist of a realignment of existing road markings and widening of the existing footpaths along an approximate 400m section of the northbound carriageway. Widening of the existing footpaths will consist of extending the footpath into approximately 1m of the existing verge for approximately 200m of the

section. The widened footpaths will utilise the existing drainage system, with a number of gullies requiring minor alignment. At the Ballycurreen Junction some vegetation will need to be removed to facilitate the proposed scheme (hedging and trees).

A realignment of the existing Ballycurreen Junction is proposed. The realignment of the Ballycurreen Junction will be contained within the existing road extents. The provision of a new shared footpath will require the installation of a new drainage system along an approximate 50m of the Ballycurreen Road. The drainage system will outfall into the existing surface water drainage system. An approximate 50m long, 3m wide section of new lands are to be obtained in front of a derelict house along the N27 northbound carriageway at the Ballycurreen Junction. The site clearance may involve the removal of a several trees and bushes along the section. There is a proposed new footpath to be installed on the northbound verge on Forge Hill Road, the new footpath will be provided within the existing road extents.

The proposed design will provide additional vegetation areas along Ballycurreen Road. A re-alignment of Ballycurreen Road will provide an area of vegetation located in the existing road pavement. It is proposed to provide pollinator friendly vegetation in this area. The proposed design will also provide safety barriers in the form of concrete flowerpots in the vicinity of Bull McCabe's Pub. The flower pots will be planted with low height pollinator friendly flowers and vegetation. These measures have been proposed to offset any vegetation loss along the route of the proposed scheme.

### 2.2.2 Rural Scheme

A segregated cycle lane is proposed in both carriageways along the section from Ballycurreen Junction to the Airport Roundabout, this is located in a rural environment. The existing road is to be realigned to provide the required lane widths, with no construction required outside the existing road extents. The existing drainage systems are to be maintained.

At the Airport Roundabout the existing footpaths are to be widened into the existing grass verges by approximately 1m. The widening of the footpaths will require the relocation of serval existing utilities including lamp post locations. No additional lighting will be required. The existing drainage will be maintained.

At the Airport Roundabout there may be opportunities to increase biodiversity potential with native wildflower planting or reduced mowing regimes. In particular there is a large strip of disturbed ground which has colonised with winter heliotrope. Plans here would be dependent on sightlines for vehicles and airport restrictions.

## 2.3 Operation

The operational phase will coincide with the end of construction and the commissioning of the proposed pedestrian footpath and cycleway. Maintenance will be undertaken as required by the Cork City Council Roads Department, and would likely include path cleaning, gully clear out, landscaping etc.

**Figure 2-1 Site Location including the red line boundary of proposed scheme**

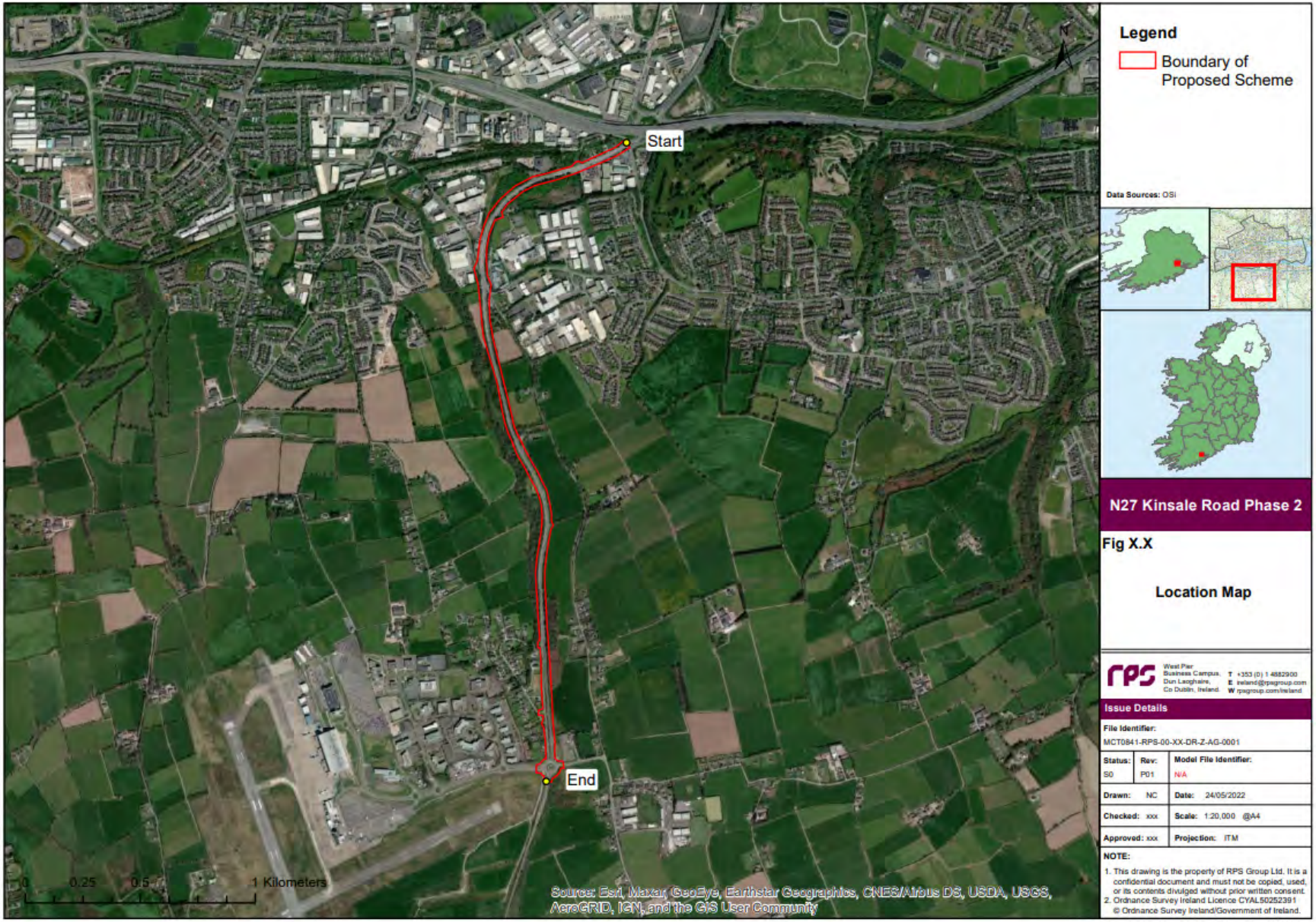
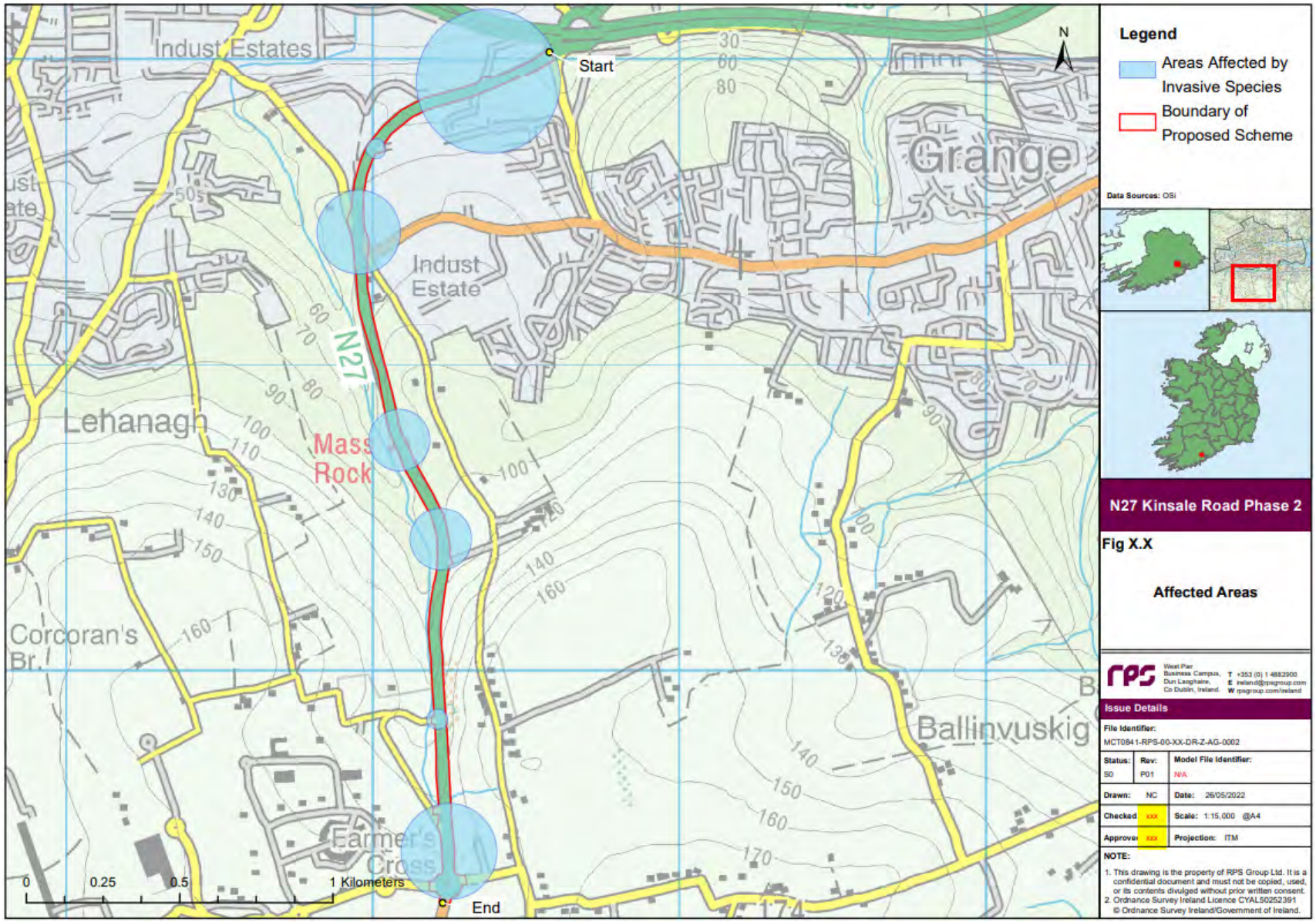


**Figure 2-2 Site Location including Areas Affected by Invasive Species**



# 3 EIA LEGISLATIVE CONTEXT AND GUIDANCE

EIA requirements derive from EU Directive 85/337/EEC (as amended by Directives 97/11/EC 2003/35/EC and 2009/31/EC, 2011/92/EU) as well as 2014/52/EU on the assessment of the effects of certain public and private projects on the environment. The primary objective of the EIA Directive is to ensure that projects which are likely to have 'significant effects' on the environment are subject to an assessment of their likely impacts. In the context of planning, the EIA Directive is given effect in Ireland through the Planning and Development Act 2000 (as amended).

Ireland transposed Directive 2014/52/EU into Irish law, the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, came into operation on 1st September 2018. A strengthened screening procedure was one of the key changes introduced by the 2014 Directive. It sets out new information requirements for the developer (Annex IIA) and new selection criteria to be used by the competent authority in making their screening determination (Annex III).

The following sections outline the current planning and development legislative requirements in Ireland regarding EIA screening and the key changes introduced by Directive 2014/52/EU.

## 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, as amended.

Cork City Council has obligations under Article 129 the Planning and Development Act 2000, as amended to undertake mandatory EIA for specified classes of development and AA and EIA screening for sub-threshold development for local authority own development.

Where there is a possibility that the development may significantly affect the environment, Cork City Council must prepare information on the development specified under Annex II and Annex III of the EIA Directive and transposed into Irish legislation under schedule 7A of the Planning and Development Regulations which is the appropriate information necessary to undertake an EIA Screening. This is the information which would typically be presented in a report to inform EIA Screening.

### 3.1.1 Mandatory EIA

Every project listed in Part 1 of Schedule 5 must be subject to an EIA if the stated threshold set therein has been met or exceeded or where no thresholds are set, and accordingly, an EIAR must be submitted to the competent authority with an application for development consent in this regard.

No development types listed in Schedule 5 Part 1 would apply to the proposed scheme. Accordingly, a mandatory EIA under Schedule 5 Part 1 is not required.

### 3.1.2 Sub-Threshold

An examination of Parts 1 and 2 of the Schedule 5 of the Regulations indicates that the nature and scale of the proposed scheme is such that it would not trigger a mandatory EIA under the Regulations.

## 3.2 Road Traffic Act, 1994

The proposed scheme in Lehenagh/Ballycurreen, provides traffic calming measures which facilitate the safe use of pedestrians and cyclists on the N27 Kinsale Road as defined by section 38(9) Road Traffic Act 1994.

A Road Authority, in this case, Cork City 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.*

## 3.3 Conclusion and Requirement for EIA

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

As such, the purpose of this report is to assist Cork City 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.

# 4 METHODOLOGY FOR EIA SCREENING

Based on the legislative basis and guidance documentation set out in **Sections 3.1** and **3.2** the proposed approach for undertaking this screening assessment is to present information on the proposed scheme, the location of the development and the type and characteristics of potential environmental impacts of the development with reference to the three headings of Annex III of the EIA Directive. In presenting this information, regard has also been given to the closely aligned assessment criteria of Annex IIA of the Directive.

## 4.1 Schedule 7 and Schedule 7A

Annex III of the EIA Directive is transposed into Irish legislation in Schedule 7 of the Planning and Development Regulations 2001-2021. The Criteria as set out in Schedule 7 sets out the criteria for determining whether Development listed in Part 2 of Schedule 5 of the Planning and Development Act 2001-2021 should be subject to an Environmental Impact Assessment. Schedule 7A provides information which a developer must provide to the competent authority to inform a screening determination, as set out in **Table 4-1.**

**Table 4-1 Schedule 7A - Information to inform the Screening for EIA**

| Characteristics of the Proposed Development |
|---|
| The characteristic of projects must be considered, with particular regard to:<br>(a) the size and design of the whole proposed development;<br>(b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposed of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment;<br>(c) the nature of any associated demolition works;<br>(d) the use of natural resources, in particular land, soil, water and biodiversity;<br>(e) the production of waste;<br>(f) pollution and nuisances;<br>(g) 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;<br>(h) the risks to human health (for example due to water contamination or air pollution). |
| **Location of the Proposed Development** |
| The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:<br>(a) the existing and approved land use;<br>(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;<br>(c) the absorption capacity of the natural environment, paying particular attention to the following areas:<br>i) wetlands, riparian areas, river mouths;<br>ii) coastal zones and the marine environment;<br>iii) mountain and forest areas;<br>iv) nature reserves and parks;<br>v) areas classified or protected under national legislation, Natura 2000 areas designated by Member States pursuant to Directives 92/43/EEC and Directive 2009/147/EC;<br>vi) areas in which there has 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;<br>vii) densely populated areas; |

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

**Characteristics of the Proposed Development**

The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, with regard to the impact of the project on the factors specified in Article 3(1), taking into account:

(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
(b) the nature of the impact;
(c) the transboundary nature of the impact;
(d) the intensity and complexity of the impact;
(e) the probability of the impact;
(f) the expected onset, duration, frequency and reversibility of the impact;
(g) the cumulation of the impact with the impact of other existing and/or development the subject of a consent for the proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and;
(h) the possibility of effectively reducing the impact.

## 4.2 EIA Guidelines

### 4.2.1 Guidelines on the Information to be contained in Environmental Impact Assessment Report (EPA, May 2022)

The stated primary objective of the guidelines is to improve '*the quality of EIARs with a view to facilitating compliance (with the Directive). By doing so they contribute to a high level of protection for the environment through better informed decision-making processes*.' According to the guidelines the start of the EIA process involves making a decision about whether an EIAR needs to be prepared or not. The guidelines note that the decision-making process begins by examining the regulations and if this does not provide a clear answer then the nature and extent of the project, the site and the types of potential effects are examined.

### 4.2.2 Environmental Impact Assessment Screening OPR Practice Note PN02 (2021)

This Practice Note was published in June 2021 by the Office of the Planning Regulator (OPR) and provides information and guidance on screening for EIA by planning authorities. It includes useful templates and addresses issues that commonly arise. The OPR Practice Note does not have the status of Ministerial Guidelines issued under Section 28 of the Planning and Development Act 2000, but are issued for general information purposes only, in accordance with the OPR's statutory remit to engage in education, training and research activities.

### 4.2.3 Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)

In August 2018, the Minister for Housing, Planning and Local Government (now Department of Housing, Local Government and Heritage) published Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment. These guidelines address key areas introduced by Directive 2014/52/EU including procedures for screening and the introduction of new information requirements to be provided by the developer (Annex II.A) (Schedule 7A of the Planning and Development Regulations, 2001 (as amended)) and revised selection criteria to be used by the competent authority in making a determination (Annex III of Directive) (Schedule 7 of the Planning and Development Regulations, 2001 (as amended)).

### 4.2.4 Other Guidance

The screening assessment was also undertaken with regard to the following guidance:

- European Commission (2001), Guidance on EIA Screening;
- EPA (2002), Guidelines on the Information to be Contained in Environmental Impact Statements;
- EPA (2003), Advice Notes on Current Practice in the Preparation of Environmental Impact Statements;
- EPA (2015), Advice Notes for Preparing Environmental Impact Statements, Draft; and
- Department of Environment, Heritage and Local Government (2003), EIA Guidance for Consent Authorities regarding Sub-threshold Development.

## 4.3 Supporting Assessment

A Report to Inform the Appropriate Assessment Screening (Mayfly Ecology, 2022) has been prepared to determine whether, in view of best scientific knowledge and applying the precautionary principle, the proposed scheme, either individually or in combination with other plans or projects, is likely to have a significant effect on any European site(s). This screening assessment is used to inform the relevant consideration criteria of this EIA Screening.

The report concludes that while best practice construction methods will be employed these are not required to avoid or reduce any effects on a European site. These measures are not relied upon to reach a conclusion.

Following a source-pathway-receptor model the following European site was considered for detailed assessment. The potential impacts of the proposed scheme have been considered in the context of the Special Conservation Interests (SCI) and their conservation objectives for this European site.

- Cork Harbour SPA 004030.

It is concluded that the proposed scheme, individually or in-combination with other plans or projects, is **not predicted** to result in likely significant effects upon Cork Harbour SPA or any other European site, in view of the said sites' conservation objectives. Therefore, Stage 2 of Appropriate Assessment (Natura Impact Statement) is deemed **not to be required.**

# 5 SCREENING EVALUATION

As previously mentioned, in considering a local authority own development, Cork City Council, under section 38 of the Road Traffic Act 1994 and the Planning and Development Regulations, must have regard to whether or not such a development is likely to have 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 to the Planning and Development Regulations 2001, as amended and summarised in **Table 4-1** and as such the project is considered under each criterion as outlined below.

## 5.1 Characteristics of the Project

The Guidelines describe the information to be considered under this heading as:

'*the size of the proposed development, the cumulation with other proposed development, the use of natural resources, the production of waste, pollution and nuisances, the risk of accidents and having regard to substances or technologies used.'*

Annex II A (2a) requires a description of the physical characteristics of the whole project and, where relevant, of demolition works.

### 5.1.1 The Size and Design of the whole of the proposed project

Details of the footprint of the proposed scheme and infrastructure required for the proposed traffic calming measures along with details on the design are provided in **Section 2** and associated detailed drawings (which include details of construction design widths etc.) are included in Appendix A of this report. In short, the proposed scheme is c. 3km and is located in Cork City on the N27 National Road also known as Lehenaghmore Road and comprises of an upgrade of pedestrian and cycling facilities, associated services and infrastructure and biodiversity enhancement landscaping along the scheme length.

### 5.1.2 Other Existing or Permitted Projects

Schedule 7 of the EIA Regulations requires that the characteristics of the development include an examination of the potential for cumulative impact of the proposed scheme with other existing developments and nearby consented developments, along with proposed scheme, which are the subject of a consent which require EIA or other enactment e.g., SEA.

A search has been conducted of planning applications within the vicinity of the proposed scheme. This has been done using the Cork City Council Web Portal map and the Department of Housing, Planning and Local Government EIA portal. There are a number of other permitted and proposed projects in the area however, none of these other developments are of a scale or nature that would result in significant cumulative effects with the proposed scheme, which will result in temporary construction phase impacts over six months and positive permanent impacts once constructed. 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 pedestrian footpath and cycleway.

The proposed scheme will form part of the larger active travel network of Cork Metropolitan area. It is subject to ongoing management, monitoring and review of Cork City Council. It is anticipated that once complete, the proposed scheme will have a long-term positive impact to the area.

Other Government plans and strategies relevant to the proposed scheme include:

- The National Sustainable Mobility Policy;
- Draft Cork City Development Plan 2022-2028;
- Cork 2050 - Delivering a Bright Future for Cork;
- National Cycle Policy Framework; and
- Climate Action Plan 2021.

### 5.1.3 The Nature of any associated Demolition Works

In the first instance, the design of the proposed scheme seeks to avoid demolition and repurposes existing structures the scheme length. The reuse of existing materials preserves the embodied energy expended in the original construction, minimises waste and reduces the use of new material in line with the circularity objectives of the draft Cork City Development Plan 2022-2028. The proposed scheme involves minimal demolition and is largely within the existing road corridor of the N27. The project will involve break up and removal of sections of curbs and walls to accommodate the new layout. If suitable, clean material will be stored onsite within the site compound for potential reuse as fill. If there is no suitable application, this material will be removed off site 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 arisings or any associated environmental impacts.

### 5.1.4 The Use of Natural Resources (in particular Land, Soil, Water and Biodiversity)

#### Use of Natural Resources:

The exact quantities of materials for the construction of the proposed scheme have not yet been determined, however, this is an upgrade of an existing length of 3 km road and therefore significant quantities of materials are not required. The proposed scheme will require the following natural resources during the construction stage:

- Water for construction activities, dust minimisation and welfare facilities;
- Fuel for the refuelling of construction vehicles; and
- Granular material for construction works.

#### Land

The proposed scheme is largely within the road extent of the N27 which is within the Cork City Metropolitan area. There are three areas of land take required outside the existing road corridor, where lands lie within the red line boundary of the proposed scheme. The land take requirements will be subject to agreement with the landowners.

#### Soils, Geology and Hydrogeology

The proposed scheme will involve the excavation of made grade and subsoil within the roadside verge to accommodate the new layout. Exact quantities of material for excavation and construction have not been determined at this point, however, it is considered that if suitable, clean material will be stored onsite and potential reused as fill. If low levels of contamination are encountered during the construction works, soil testing and a risk assessment of material may be undertaken to assess its potential for use. If there is no suitable application, this material will be removed off site for recovery or disposal at an authorised waste facility in line with the requirements of the Waste Management Act 1996.

#### Water

There will be a requirement for water use during the construction of the proposed scheme. It will be for standard construction methods and the quantities are not considered significant given the scale and nature of the development. Water is to be drawn from the existing water mains connections. All drilling water would be recycled to reduce the requirement for water use. There will be no requirement for water use in the operation phase. Two streams intersect the proposed scheme however, no instream or bankside works are required.

#### Biodiversity

The proposed scheme is not located in any European or national designated area. The proposed scheme is largely located within the footprint of the existing N27 road, cycleway, and footpaths. The edges of the road are characterised by grassy verges, treelines, woodland and small sections of scrub. There will be a requirement for removal of c. 5 no. trees and verge side vegetation in affected areas to accommodate the new layout.

The retaining of other trees in addition to the replacement planting and area identified for biodiversity enhancement will assist in the mitigation of impacts on biodiversity, particularly as native and pollinator-

friendly species are selected, allowed to grow and are suitably managed. The biodiversity enhancement proposal would be dependent on sightlines for vehicles.

During an ecological survey, undertaken by Mayfly Ecology in May 2022, along with other bird species observed, a Blue tit (*Cyanistes caeruleus)* was observed nesting within a telephone pole beside the airport roundabout.

Three plant species listed as Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) were noted; Japanese knotweed (*Fallopia japonica),* Three-cornered garlic (*Allium triquetrum)*, and Rhododendrum (*Rhododendron ponticum)*.

The Parks Department of Cork City Council have an invasive species management plan in place and there is currently an ongoing eradication programme for Japanese knotweed (*Fallopia japonica)* separate to this proposed scheme.

Three-cornered garlic was identified at three locations along the grassy verge. This plant was observed in areas that will not be disturbed by the proposed scheme. Rhododendrum (*Rhododendron ponticum)* was observed only within private gardens and will not be impacted by the proposed scheme.

Other invasive plants were noted which are not listed on the Third Schedule but are considered to carry a high to low risk of impact are listed in **Table 5-1.**

Refer to **Figure 2-2** for areas affected by Invasive Species (also refer to AA Screening Report for more details).

**Table 5-1 List of other non-third schedule invasive plants identified within the proposed scheme boundary [1]**

| Species | Risk of impact | Location |
|---|---|---|
| Cherry laurel (*Prunus laurocerasus)* | High | Laurel hedging was observed around two of Airport Roundabout exits. |
| Traveller's joy (*Clematis vialba)* | Medium | Found frequently scattered throughout the proposed scheme. |
| Butterfly bush (*Buddleia davidii)* | Medium | Found infrequently scattered throughout the proposed scheme. |
| Winter heliotrope (*Petasites fragrans)* | Low | Present on edge of the grassy verges along most of the proposed scheme. |
| Montbretia (*Crocosmia crocosmiliflora)* | Not yet assessed | Scattered observations throughout the proposed scheme along the edges of grassy verges. |
| Snowberry (*Symphoricarpos albus*) | Not yet assessed | Scattered throughout the site located in the understory of treelines and woodland areas. |

### 5.1.5 The Production of Waste

The design of the proposed scheme seeks to avoid demolition and encourage re-purposing of existing structures minimising waste and reducing the use of new materials within the road corridor of the N27. The proposed scheme will result in the generation of waste during the construction phase. Waste streams typically generated from the construction works are identified in Table **5-2**. The waste stream and the quantities of waste will be confirmed at detailed design stage.

**Table 5-2 Typical Waste Streams**

| EWC Code | Waste Stream |
|---|---|
| 17 01 | Concrete, blocks, tiles and ceramic |
| 17 02 | Wood, glass and plastic |
| 17 03 | Bituminous mixtures, coal tar and tarred products |
| 17 04 | Metals (including their alloys) |
| 17 05 | Soil and stones |
| 20 01 01 | Paper and Cardboard |
| 17 09 | Mixed C&D waste |
| 20 02 01 | Green waste |

[1] Report to inform Screening for Appropriate Assessment, Mayfly Ecology, May 2022.

| EWC Code | Waste Stream |
|---|---|
| 20 02 33 & 34 | Electrical and electronic components |
| 13 07 | Liquid fuels |

The control of waste in the construction phase will be through best practice methods for disposal and adherence to a Waste Disposal Plan that should be prepared by the contractor. It will outline methods to achieve waste prevention, maximum reuse, recycling and recovery of waste and provides recommendations for the management of the various anticipated waste streams. It will include source segregations, storage and collection of all wastes generated in the construction phase of the proposed scheme. The plan will also provide guidance on collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g., contamination of soil or water resources). It is considered there will be no significant effects on the environment given the implementation of the Waste Disposal Plan.

### 5.1.6 Emissions and Nuisances

#### Construction

There is potential for pollution and nuisances to arise during the construction phase as a result of increases in traffic, changes in air quality (traffic emissions, dust), changes in noise and vibration (particularly during demolition) and potential for surface water contamination. The main receptors will be local residents and local businesses. Construction activity will lead to temporary increases in road traffic along the N27. This is estimated to last approximately 6 months.

**Noise and Vibration:** Noise and vibration control measures to minimise the impact of noise on the immediate environs due to construction activities associated with the scheme. Measures will include operating hours, limiting construction to daytime periods between 08:00-19:00, Monday to Friday and Saturday 08:00-16:00. No work shall be planned for outside these hours including weekend or Public Holidays.

Furthermore, the Contractors will be required to comply with requirements on noise control detailed in European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations and the Safety, Health and Welfare at Work (Control of Noise at Work). All plant items used during construction will comply with standards outlined in the 'Safety, Health and Welfare at Work (Control of Noise at Work) Regulations' and the 'European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations'. Reference will be made to BS 5228: Part 1: 2009 (Noise Control on Construction and Open Sites Part 1. Code of Practice for Basic Information and Procedures for Noise Control).

**Dust:** Measures for the management of dust during construction shall be implemented. Where appropriate, dust monitoring may be carried out near site boundaries/sensitive receptors. The TA Luft/VDI 2119/Bergerhoff Method of dust emission monitoring will be employed. The TA Luft total dust deposition limit value (soluble and insoluble) of 350 milligram per square metre per day will be adopted. If dust levels are found to be higher than 350mg/m2/day, further mitigation measures will be required. Trucks leaving the site will be adequately cleaned to ensure soil, mud and other site debris is prevented from spilling onto adjoining roads and footpaths. Roads and footpaths will be cleaned on a regular basis as required.

**Sediment Runoff:**

There is potential, albeit low, for accidental release of pollutants e.g., spillage of fuel or cement or release of sediment from excavations, into the surrounding environment including the surface and groundwater environment. Potential sources of sediment and runoff during the construction phase include:

- Soil stockpiles with significant side slopes can create another source of sediment laden runoff;
- Construction traffic such as excavators, dumpers or trucks travelling into and out of earthworks locations, soil may become attached to the wheels and then be tracked

Employing good practice construction methodologies will mitigate the risk of sediment runoff to the surface water network. These measures are addressed in **Section 5.3** of this report.

**Odour:** No odour is anticipated from the construction of the proposed scheme.

#### Operation

**Dust:** The operation of the proposed scheme will not give rise to any residues or

emissions to humans or impact during the operational phase as it is a pedestrian and cycleway. The proposed scheme will provide a positive impact for pedestrians through provision of a safer and sustainable transport mode.

**Noise:** No noise is anticipated from the operation of the proposed scheme. The design has potential to reduce traffic speeds on the road which would reduce traffic related noise on the N27.

**Sediment Runoff:** No impacts are anticipated from the operation of the proposed pedestrian and cycle scheme.

**Traffic:** The proposed pedestrian and cycleway is not likely to result in significant increase of traffic and traffic related pollutants such as $PM_{10}$, Ozone ($O_3$), Nitrogen Dioxide ($NO_2$), Sulphur Dioxide ($SO_2$), and Carbon Monoxide (CO) above the current figures on the N27. No impacts are anticipated from the operation of the proposed scheme.

**Odour:** No odour is anticipated from the operation of the proposed scheme.

### 5.1.7 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

The proposed scheme will be designed, constructed and operated in accordance with the following health and safety regulations and guidelines (or as updated):

- Safety, Health and 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 (Construction) Regulations 2006 to 2013; and
- Safety, Health & Welfare at Work Act 2005.

The construction methodology has not yet been determined for the proposed scheme. The construction method would be considered standard, with no novel construction methodologies. Therefore, the risk of accidents occurring during construction are considered to be low. A Traffic Management Plan will be produced by the appointed Contractor, this will mitigate risk associated with construction traffic.

The four key vulnerabilities that may potentially impact the proposed changes to the proposed scheme include the following:

- Proximity to Seveso (COMAH) establishments.
- Road traffic accidents and disruption to operations.
- Site Subject to Flood Risk; and
- Site Subject to extreme weather events.

The nearest Seveso (COMAH) site is the Irish Oxygen Company Ltd. This is located approximately c. 4.5 km west of the proposed scheme.

### 5.1.8 Flood Risk

The Flood Hazard Mapping website (www.floodinfo.ie) is a record of historic flood events maintained by the OPW. This is not a complete record, but it is useful in identifying areas that may be at risk of flooding. RPS reviewed the data published by the OPW on this website and found that there were 1 no. historic flood events within 1km of the site.

**Table 5-3 Historic Flood Events**

| Report Name | Date | Description | Distance from Proposed Scheme |
|---|---|---|---|
| Kinsale Road Roundabout, Cork | 30/01/2009 | Flooding at the Kinsale Road roundabout in Cork. | c. 0.3km downstream of the proposed scheme with Kinsale Road Business Park |

The proposed scheme will not result in a significant increase of hardstand that will increase the potential for flood risk elsewhere.

### 5.1.9 Risk to Human Health (for example, due to water contamination or air pollution, etc.)

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.

The upgraded scheme will be characterised by high quality facilities designed to 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.

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. There are 3 bus stop locations along the Scheme with ease of access provided.

One of the objectives of the proposed scheme is to enhance safety for both pedestrians and cyclist users and for the local residents living in the vicinity. It is considered that during the operational phase the proposed scheme will provide a safer route than the existing situation.

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 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.

## 5.2 Location of the Proposed Road Improvement Scheme

The location of the proposed scheme is described and considered with reference to each of the criteria listed under ‘Location of proposed development’ in the screening determination form provided in the OPR guidelines (2021) with particular regard to the above Schedule 7 criteria a-c

### 5.2.1 Existing and Approved Land Use

The proposed scheme is located within the Cork City Council area. It encompasses two townlands Lehenagh and Lehenagh More to the south. The boundaries take a physical form at the airport roundabout to the south of the proposed scheme.

The draft Cork City Development Plan 2022-2029 sets out the Zoning Objectives for the City Metropolitan Area. South of the Kinsale Roundabout at the start of the scheme, the area is zoned for ZO Mixed Use Development. Northwest and east continuing along the scheme, the area is zoned for ZO 10 Light Industry & Related Uses[2]. South of the scheme, in the rural area, continuing to the airport roundabout, the area is zoned as ZO 21 City Hinterland.[3]

The draft Cork City Development Plan 2022-2028 sets out the following objectives relevant to the proposed scheme.

[2] Map 7 – South Central Suburb, draft Cork City Development Plan 2022 – 2028
[3] Map 15, draft Cork City Development Plan 2022 - 2028

- Transport and mobility objectives seek to 'encourage more sustainable travel patterns and higher quality environments. Pedestrian and cyclist use are to be prioritised.'

The Biodiversity Enhancement (BE) Objective 15-5 sets out objectives on Biodiversity on Council owned and managed land and property, this includes:

- Protect biodiversity and support the principle of biodiversity net gain where possible, enhance the biodiversity value of on land and property owned and managed by Cork City Council;
- The Council will incorporate primarily native planting into new landscaping schemes within its own developments.

### 5.2.2 Relative Abundance, Availability, Quality and Regenerative Capacity of the Natural Resources (including land, soil, water and biodiversity in the Area

#### 5.2.2.1 Land

The proposed scheme starts at the Kinsale Roundabout, the surrounding landscape is urbanised with roads, business and warehouses surrounding the area. CORINE Land Cover 2018, outlined in **Figure 5-1**, indicates the land cover type in this area includes '*Discontinuous urban fabric'* (Code 112) and '*Industrial and commercial units' (*Code: 121). After the junction between Forgehill and Ballycurreen Roads the landscape becomes more rural with agricultural grassland, '*Non-irrigated land'* (Code: 211), '*Pastures*' (Code: 231) and private housing surrounding the N27. Cork Airport ('*Airports'*, Code: 124) is located to the west, just off the Airport Roundabout.

#### 5.2.2.2 Soils, Geology and Hydrogeology

**Bedrock:** The GSI 100k bedrock series, outlined in **Figure 5-2**, indicates that the proposed scheme is underlain by three bedrock formations. At the start of the scheme, the Kinsale Formation - flaser-bedded sandstone & mudstone (CDKINS2). The Gyleen Formation - sandstone with mudstone & siltstone (DUGYLE) and the Ballytrasna Formation - purple mudstone and sandstone towards the south of the scheme.

**Quaternary Sediments:** The quaternary sediments, outlined in **Figure 5-3**, comprise of urban made ground towards the north and northeast of the proposed scheme. This is consistent with the light industry in the area. Till derived from Devonian sandstones (TDSs) in the rural area of the proposed scheme with areas of bedrock outcrop or subcrop (Rck) to the southeast and west along the proposed scheme. Outside of the urban areas, the hydrogeological setting can be described as till overlain by well drained soils and areas where rock is at ground surface or karst features.

**Soils:** North of the scheme, the soils are undefined and classified as Urban, consistent with the land use of the area. At the area of the scheme at Ballycurreen Road, the land use changes to more rural. The soil types comprise of Acid Brown Earths / Brown Podzolics (AminDW) with areas of Lithosols / Regosols (AminSW). Soil types are outlined in **Figure 5-4**.

**Groundwater**: The proposed scheme lies within the Ballinhassig East (IE_SW_G_004) ground waterbody (GWB) – poorly productive bedrock. This GWB has an overall status of 'Good', with an 'At risk' rating as classified under the Water Framework Directive (2000/60/EC).

The groundwater vulnerability as outlined in **Figure 5-5,** gives an indication of the likelihood of risk of contamination to the groundwater resource. The groundwater vulnerability indicates a range of vulnerability ratings present, from 'High' (H) to 'Rock at or Near Surface (X). Bedrock outcrops are visible along the scheme length.

**Aquifer:** The bedrock aquifer is locally important aquifer (Ll) – Bedrock which is moderately productive only in local zones. The GSI aquifer classification is outlined in **Figure 5-6**.

#### 5.2.2.3 Water

Under the third cycle of the National River Basin Management Plan 2022-2026, the proposed scheme is within the Lee, Cork Harbour and Youghal Bay catchment, Hydrometric Area 19 and the Glasheen [Corkcity]_SC_010 sub-catchment.

The scheme starts within 25m of a small tributary of the Tramore River classified as part of the Moneygurney_010 waterbody. For the purposes of this report, it is known as the Frankfield Road Stream. This is diverted underground where it is proposed to start the scheme. The proposed works will not interfere with this stream.

A second tributary of the Tramore River rises just north of the Airport Roundabout it is diverted under the N27 then turns sharply and flows northwards parallel to the N27 until it reaches the Tramore River at Togher. This is again part of the Moneygurney_010 water body and the EPA have named this the Lehenagh Beg. For the purpose of this report this stream is referred to as the Kinsale Road Stream to help discern between the location of the two streams throughout the report.

The Kinsale Road Stream flows within 15m of the proposed scheme at its closest point and it is diverted under an existing culvert where the scheme passes over it. There will be no interference with this stream.

#### Water Quality

The EPA online mapping resource was used to review waterbodies present and current (2013-2018) WFD water quality status. The Moneygurney_010 waterbody is assigned a 'Moderate' WFD Status and its risk of failing to meet WFD objectives is Under Review. A review of the EPA pressures and activities for waterbodies in the area indicates that the Moneygurney_010 is subject to anthropogenic pressures. Water Quality is outlined in **Figure 5-7.**

### 5.2.2.4 Biodiversity

An ecological survey was undertaken by Mayfly Ecology in May 2022. The results have informed the biodiversity assessment of this EIA Screening report. A detailed description of the habitats and the receiving environment can be found in the *Appropriate Assessment Screening,* (Mayfly Ecology 2022) that accompanies this report. The section provides a summary of the findings.

The proposed scheme is largely located within the footprint of the existing N27 road, cycleway and footpaths. The edges of the road are characterised by grassy verges, treelines, woodland and small sections of scrub.

The scheme starts within 25m of a small tributary of the Tramore River. This stream rises in Curragh Woods housing estate. It flows in a north westerly direction passing under the Kinsale Roundabout before joining in the Tramore River (also called the Douglas River) at the Barry's Tea factory. It is diverted underground for most of its course. It does surface briefly along the Frankfield Road before disappearing again. There will be no interference with this stream, and it is diverted underground where it is proposed to start the scheme. The EPA has classified this as the Moneygurney_010 waterbody. However, there are a number of separate Moneygurney_10 water bodies within the area and to avoid confusion this stream is referred to as the Frankfield Road Stream in this report.

At the Ballycurreen junction a raised concrete platform exists by Bull McCabe's pub with flowerpots on top. There is only a very narrow grassy verge at the start of this junction with no footpath. Opposite the pub along the Ballycureen Road there are large leylandii and other conifers trees and as one travels up the road on one side there is a treeline dominated with hawthorns.

As the road continues to the Airport Roundabout main habitats along the road edge are again grassy verges, with treelines, woodland edges and scrub.

Along the southbound carriageway steep bedrock outcrops are present. On approach to the Airport Roundabout the carriageway is divided by beech hedging and maple trees. Exits along the roundabout and the roundabout itself consist mainly of amenity grass. Here there may be opportunities to increase biodiversity potential with native wildflower planting or reduced mowing regimes. In particular there is a large strip of disturbed ground which is colonised with Winter heliotrope (*Petasites fragrans)*. This strip has potential for native tree planting and/or a wildflower meadow. Plans here would be dependent on sightlines for vehicles and airport restrictions.

A second tributary of the Tramore River rises just north of the Airport Roundabout it is diverted under the N27 then turns sharply and flows northwards parallel to the N27 until it reaches the Tramore River at Togher. This is again part of the Moneygurney_010 water body and the EPA have named this the Lehenagh Beg Stream. For the purpose of this report this stream is referred to as the Kinsale Road Stream to help discern between the location of the two streams throughout the report. The Kinsale Road Stream flows within 15m of the proposed scheme at its closest point and it is diverted under an existing culvert where the scheme passes over it. There will be no interference with this stream.

**Habitats:** The habitat types identified within the proposed scheme boundary and immediate surrounding area are summarised in **Table 5-4**. The habitats have been classified according to '*A Guide to Habitats in Ireland*,' Fossitt, 2000.

**Table 5-4 Habitat types identified within and adjacent to the proposed scheme boundary[4]**

| Habitat Name | Fossitt Code | Description |
|---|---|---|
| Dry meadows and grassy verges | GS2 | Grassy verges occur on both side of the road along most of the proposed upgrade scheme and junction along the airport roundabout. The grass has been mown recently but species observed along uncut margins include herb-robert (*Geranium robertianum*, ribwort plantain (*Plantago lancelolata*), common hogweed (*Heracleum sphondylium*, nettle (Urtica dioca) and creeping buttercup (*Ranunculus repens*).<br>Winter heliotrope (*Petasites fragrans)* has colonised large sections along the edge of the roadside for most of the scheme. |
| Treelines | WL2 | A near continuous treeline is present along both carriage ways. Its only broken as one approaches the Kinsale and Airport roundabouts and the Forgehill/Ballycurreen junction.<br><br>The treeline consists mainly of a mix of broadleaves; willow (*Salix sp.*), beech (*Fagus sylvatica*), ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), Norway and field maple (*Acer platanoides & Acer capestre*), sycamore (*Acer pseudoplatanus*), alder (*Alnus glutinosa*), hornbeam (*Carpinus betulus*), birch (*Betula sp.)* and lime (*Tilia sp.)* with the occasional leylandii and Scot's pine (*Pinus sylvestris*). Understorey consists of ferns, nettle, bramble (*Rubus fructicosus*), ivy (*Hedera helix*), fox gloves (*Digitalis purpurea*), bluebell (*Hyacinthoides nonscripta)*, daffodil (*Narcissus sp.*) Winter heliotrope (Petasites pyrenaicus), occasional fuschia (Fuchsia magellanica), montbretia (*Crocosmia x crocosmiiflora*), Butterfly-bush (*Buddleja davidii*), and snowberry (Symphoricarpos albus).<br><br>One section of treeline consists solely of ash trees planted on mowed grassy verge on the northbound carriageway 220m from the Airport Roundabout.<br><br>Outside the Sisk building there is treeline formed solely of Norway maple trees planted on mowed grassy verge. |
| Scattered trees and parkland | WD5 | Heading south birch trees are planted along the boundary wall of the Toyota dealers. At the Ballycurreen junction aspen (*Populus tremula*) and Italian alder (*Alnus cordata*) has been planted at the sheltered housing entrance. Ash, rowan (*Sorbus aucuparia*) and birch trees have been planted along a wide section of grassy verge 1.1km north of the Airport Roundabout. |
| Mixed Broadleaved woodland | WD1 | Mature broadleaved trees form the boundary between the carriageways and agricultural lands along most of the scheme. In sections the treeline is actually the outer edge of small narrow woodlands. The first is located just after the Toyota dealers in a piece of land with planning application for development. A mix of trees is present with beech, field maple, sycamore, alder and hawthorn along the boundary grading into willows. Climbing vegetation and understorey consists of clematis, bittersweet (*Solanum dulcamara*), guelder rose (*Viburnum opulus*), bramble, nettle, ivy, herbrobert, dog wood (*Cornus* spp.) and creeping buttercup.<br><br>The next bit of woodland along the southbound carriageway is located 720m north of the airport roundabout here trees are located in a sunken area with a with a tall, exposed bedrock in the middle. Trees consist of |

[4] Appropriate Assessment Screening, Mayfly Ecology, 2022

| Habitat Name | Fossitt Code | Description |
|---|---|---|
| | | hawthorn, rowan, oak, sycamore, willow and beech with an understory of bramble, nettle, cleavers (*Galium aparine*), ferns, creeping buttercup, herbrobert.<br><br>Of particular note is the woodland along the northbound carriageway which follows the Kinsale Road Stream parallel to the scheme. It forms a continuous linear corridor for 2.2km until it meets the main channel of the Tramore River at Togher. It is part of a series of linear woodlands in the surrounding area which follow small tributary streams toward Cork city providing important wildlife connectivity in and out of the city.<br><br>Another section of woodland along the northbound carriage way is located between junction and Sisk entrance. This consists of willow, ash, hawthorn, beech and sycamores. |
| Scrub | WS1 | Small sections of scrub are present along the scheme. Narrow strip of gorse (*Ulex europaeus*) scrub along the southbound carriageway 900m from the Airport Roundabout. This is interspersed with low willow, ash, hawthorn and sycamore.<br>Another narrow strip of scrub is located 305m from the Airport Roundabout consisting mainly of gorse and hawthorn.<br>A dense and tall bramble scrub area is present on the northbound carriageway just at the entrance to Sisk. |
| Hedgerows | WL1 | Hedging within private front gardens along the scheme which consist mainly of ornamental species (box, privet).<br>Cherry laurel (*Prunus laurocerasus*) hedgerow is located at the Airport Roundabout junctions.<br><br>Beech hedgerow is located along the section dividing the carriage way as one approaches the Airport Roundabout. This is dotted with planted maple trees. |
| Recolonising bare ground | ED3 | Gravel pathway exists along the southbound carriageway as one approaches the Airport Roundabout. This section is recolonising with gorse, rushes (*Juncus* spp.), grasses and bramble. Also, at the roundabout by the exit to the airport there is an area where soil has been disturbed and is recolonising with winter heliotrope (*Petasites fragrans).* |
| River | FW1 | A tributary of the Tramore River (Frankfield Road Stream) is diverted under the Kinsale Roundabout.<br><br>Another tributary of the Tramore River (Kinsale Road Stream) flows parallel to the N27. |
| Stonewalls | BL1 | Stonewall forming property boundary along the Ballycurreen Road almost covered in ornamental hedging. Another stonewall which has been almost fully covered with vegetation present along the Rathmacullig Junction of the Airport Roundabout. |
| Buildings and other artificial surfaces | BL3 | Majority of proposed scheme lies within the existing N27 road, footpath and cycleway. Housing and commercial buildings are present along either side of the road. |
| Exposed Rock | ER | Sections with exposed bedrock along the northbound carriageway |

**Birds:** The birds noted during the ecological survey in May 2022 are listed in **Table 5-5**. A Blue tit (*Cyanistes caeruleus)* was observed within a telephone pole adjacent to the Airport Roundabout The birds observed are considered common within the wider landscape.

**Table 5-5 List of bird species noted within and adjacent to the proposed scheme site[5]**

[5] Appropriate Assessment Screening, Mayfly Ecology 2022

| Common name | Latin Name | Identification |
|---|---|---|
| Wren | *Troglodytes troglodytes* | Song |
| Robin | *Erithacus rubecula* | Song |
| Chaffinch | *Fingilla coelebs* | Song |
| Blackbird | *Turdus merula* | Visual |
| Blue Tit | *Cyanistes caeruleus* | Visual and nesting @51.84885; -8,47630 |
| Woodpigeon | *Columba palumbus* | Visual |
| Goldcrest | *Regulus regulus* | Song |
| Blackcap | *Sylvia articapilla* | Song |
| Willow warbler | *Phylloscopus trochilus* | Song |
| Starling | *Sturnus vulgaris* | Visual |
| Rook | *Corvis frugilegus* | Visual |

**Invasive species:** A review of NBDC online mapping returned records of four invasive plant species listed as Third Schedule within or adjacent (1km) to the proposed scheme. These are; Himalayan balsam (*Impatiens glandulifera*); Japanese knotweed (*Fallopia japonica*); three-cornered garlic (*Allium triquetrum*) and water fern (*Azolla filiculoides*). The Japanese knotweed (*Fallopia japonica)* is the only record occurring within the proposed scheme area.

**Terrestrial mammals:** A review of NBDC online mapping revealed records of protected terrestrial mammals within the proposed scheme and adjacent (1km). There are records of otter (*Lutra lutra*) within 1km of the proposed scheme. These records are along the Tramore River within the Tramore Valley Park and just upstream of it. One record is just below the confluence of the Kinsale Road Stream and Tramore River. It is considered that otter would be able to access the Kinsale Road Stream however the stream may be limited as a feeding resource given how shallow it is. Otter is an Annex II species and the closest European site where it is a Qualifying Interest (QI) is the River Blackwater (Cork/Waterford) SAC (002170), 18.3km north of the proposed scheme.

**Bats**: A review of NBDC online mapping also returned records of bats within 1km of the proposed scheme. Records of three bat species and one unidentified pipistrelle species were returned; Daubenton's bat (*Myotis daubentonii*), lesser noctule (*Nyctalus leisleri*), soprano pipistrelle (Pipistrellus pygmaeus) and pipistrelle (*Pipistrellus pipistrellus sensu lato*).

The five-point scale bat habitat suitability index available from NBDC online mapping was utilised to assess the importance of the study area for bat species. This index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. For all bat species an Index number of 28.22 was returned indicating Moderate potential. The soprano pipistrelle (*Pipstrellus pygmaeus*) returned the highest score at 43 while the score for the Annex II bat lesser horseshoe bat (*Rhinolophus hipposideros*) is 0.

**European Sites:** The proposed scheme is not located within or immediately adjacent to any European sites. The nearest European site is Cork Harbour SPA (Site Code: 004030) approximately 2.6 km and 3.2 km downstream of the Moneygurney_010 (Frankfield Road Stream). There is potential for pollutants to be transported downstream to the European Site during construction. An Appropriate Assessment Screening has been undertaken by Mayfly Ecology, it concluded that the proposed scheme, individually or in-combination with other plans or projects, is not predicted to result in likely significant effects upon Cork Harbour SPA (Site Code: 004030) or any other European site, in view of the said sites' conservation objectives. The nearest European Sites are shown in **Figure 5-8**.

**Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHA):** National sites comprise of Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs). NHAs are protected under the Wildlife Amendment Act 2000 (as amended). There are no designated sites, European or National, in the immediate vicinity to the proposed scheme. The nearest designated sites are shown in **Figure 5-8** and listed in **Table 5-6**.

**Table 5-6 Designated sites in the proximity of the proposed scheme**

| Site Code | Site Name | Designation | Distance from the proposed scheme |
|---|---|---|---|
| 001081 | Cork Lough | pNHA | 1.7 km north |
| 001046 | Douglas River Estuary | pNHA | 2.6 km |
| 004030 | Cork Harbour | SPA | 2.6 km |

#### 5.2.2.5 Air and Climate, Noise

The proposed scheme is located within Cork City Air Quality Index Region. The nearest air monitoring site is located on Cork South Link Road (Station 56). The site monitors typical pollutants of traffic including: $PM_{10}$, Ozone ($O_3$), Nitrogen Dioxide ($NO_2$), Sulphur Dioxide ($SO_2$), and Carbon Monoxide (CO). The Air Quality Index is 'Good' with a rating of 2. The latest readings from Station 56 are listed in **Table 5-7**.

**Table 5-7 Latest readings from Air monitoring station on Cork South Link Road**

| Air Monitoring Site | Average $PM_{10}$ µg/m³ | Average $O_3$ µg/m³ | Average $NO_2$ µg/m³ | Average $SO_2$ µg/m³ | CO µg/m³ |
|---|---|---|---|---|---|
| Cork South Link Road (Station 56). | 10. 25 | 37.23 | 24.12 | 1.22 | 0.6 |

Noise: Under the 3rd Noise Action Plan for Cork, the proposed scheme is located within is within Cork Agglomeration – Airport. In a review of the EPA Noise mapping, the decibel (dB) value along the N27 is Lden 65-69.

'*Good Practice Guidance for the Treatment of Noise during the Planning of National Road Scheme,*' (TII, 2014) propose design goals for noise related to the planning, construction and operational stages of new roads schemes. It proposes an operational design goal of Lden ≤ 60dB free field value. Essentially what this means is that for any new road scheme the Environmental Impact Assessment Report (EIAR) must take this target into account with regard to any existing sensitive residential property likely to be affected by the road scheme.

### 5.2.3 Absorptive Capacity of the Natural Environment

With respect to the absorption capacity of the natural environment, it is noted that the proposed scheme is to be carried out within primarily artificial surfaces, which is a relatively robust environment.

#### 5.2.3.1 Wetlands, riparian areas, river mouths, coastal zones and the marine environment

There are no wetlands, river mouths, coastal zones, or the marine environment along the route of the proposed scheme. Riparian areas exist at the aforementioned streams (section 5.2.2.3 Water and 5.2.2.4 Biodiversity); however, no instream works are proposed. All surface water during construction will be subject to sediment control prior to discharge during construction.

The Moneygurney_010 drains into the Douglas River Estuary (pNHA) (Site Code: 001046) and this drains to Cork Harbour coastal waterbody (IE_SW_060_0000) and Cork Harbour SPA (Site Code: 004030). Cork Harbour coastal waterbody has an 'Intermediate' water quality status (2018-2020) in terms of achieving the objectives of the Water Framework Directive (WFD) and as such has limited capacity to absorb any additional impact to water quality. However, as the proposed scheme is the upgrading of a pedestrian and cycle way, i.e., reassigning the existing road space, it is not expected that it will result in additional run-off and there is minimal potential for hydrocarbon contamination in the run-off during operation.

#### 5.2.3.2 Mountain and forest areas

There are no mountain or forest areas affected by the proposed scheme.

#### 5.2.3.3 Nature reserves and park

There are no nature reserves or parks in proximity to the proposed scheme.

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

The screening for Appropriate Assessment process one SPA, Cork Harbour SPA (Site Code: 004030), with hydrological connectivity to the proposed scheme. The proposed site does not lie within nor is it adjoining the

boundaries of any European site; therefore, no direct impacts are likely to occur through land take or fragmentation of habitats. The development is not necessary for the management of any European site.

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.

#### 5.2.3.5 Areas within or around the scheme 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

#### 5.2.3.6 Densely Populated Areas

In 2016, there were 298,669 persons living in Cork city and suburbs area. The area of the proposed scheme is within Lehenagh, Cork. In 2016, there were 10,323 persons living in 3,376 permanent private household in the Electoral Division of Lehenagh. The density in the metropolitan area is considerably lower than the density of Cork City. In Cork, the population density is approximately 3,300 individuals per square kilometre in the city of Cork, and this density drops to about 480 per square km when looking at the metropolitan area.

#### 5.2.3.7 Landscape and sites of Historical, Cultural or Archaeological Significance

Ballycurreen is in the E.D of Lehenagh, Civil Parish of St Finbar's, Barony of Cork, County of Cork. The proposed scheme is not within a high value landscape. The landscape character type, as set out in the Draft Cork City Development Plan 2022 – 2028, is '*City Harbour and Estuary*'.

There are no National Monuments (state owned or vested in the care of the Local Authority) sites with Preservations Orders or Register of Historic Monument Sites within a 1km radius of the proposed road improvement scheme.

There are two recorded archaeological sites (RMP/SMR) sites located within 500m of the existing N27. Details of the sites are outlined in Table 5-8 Recorded Archaeological Sites**Table 5-8.**

The nearest sites of historical, cultural, or archaeological significance are shown in **Figure 5-9**.

**Table 5-8 Recorded Archaeological Sites**

| RMP Ref | Type | Townland | Description | Distance |
|---|---|---|---|---|
| CO 086-127 | Enclosure | Lehenaghbeg | Not currently available | 0.6 km |
| CO 086-069 | Mass Rock | Ballycurreen | On rock face, overlooking stream valley, to the W of Cork Airport Road. Metal cross pinned to rock face marks site. Sign explains mass said here in penal times. | 0.25 km |

There are 0 Record of Protected Structures (RPS) within 100m of the proposed scheme. The nearest site is Vernon Mount (RPS ID – 00480) c. 0.9 km east at Ballycurreen Junction. There are no sites recorded in the NIAH within 100m of the N27.

Stone walls are generally considered of cultural heritage significance, however, some stone walls along the route lack visibility or survive intermittently in various states of repair. They do not present a defining character at the roadside.

**Figure 5-1 CORINE Land Use**

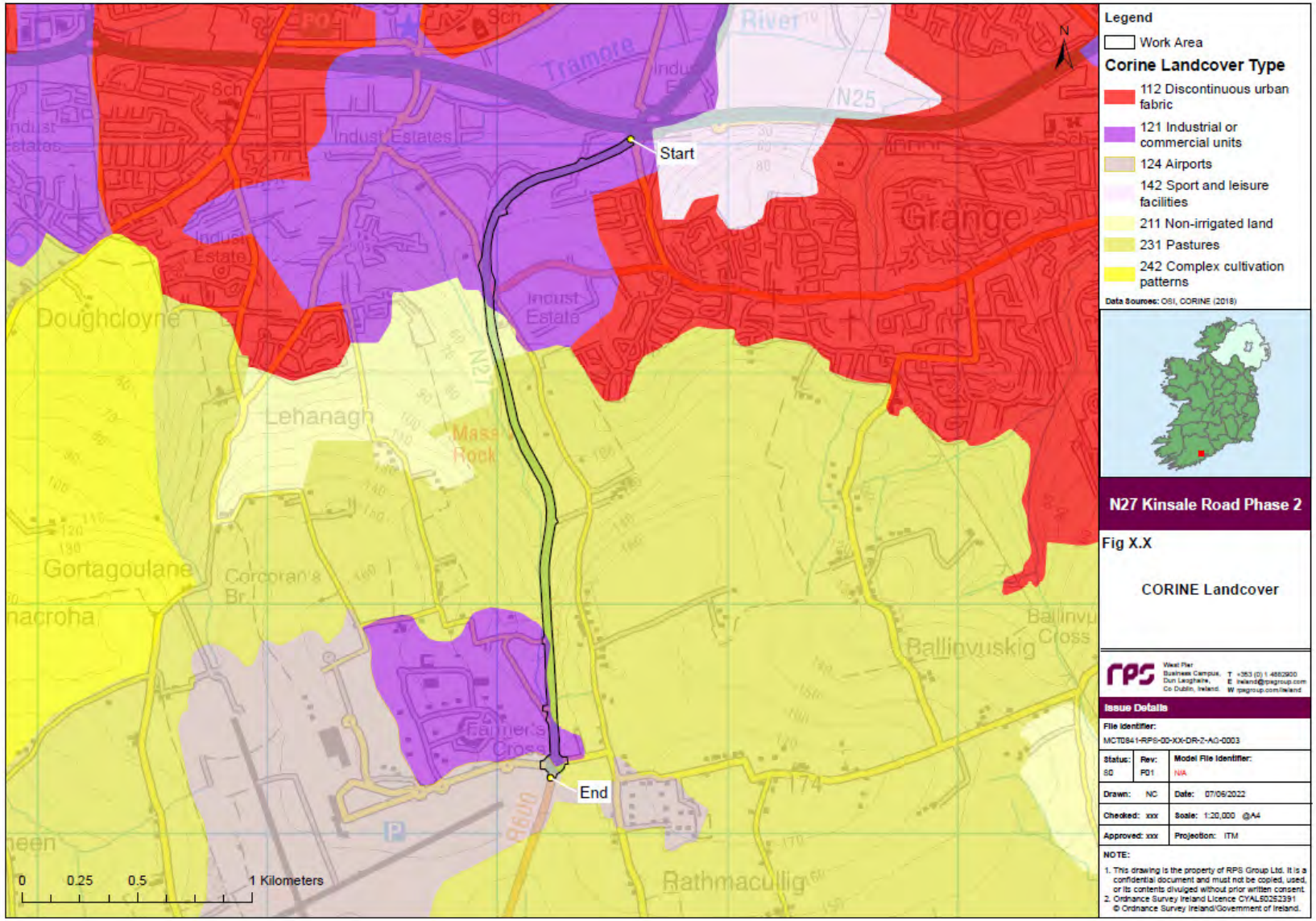


**Figure 5-2 Bedrock Geology**

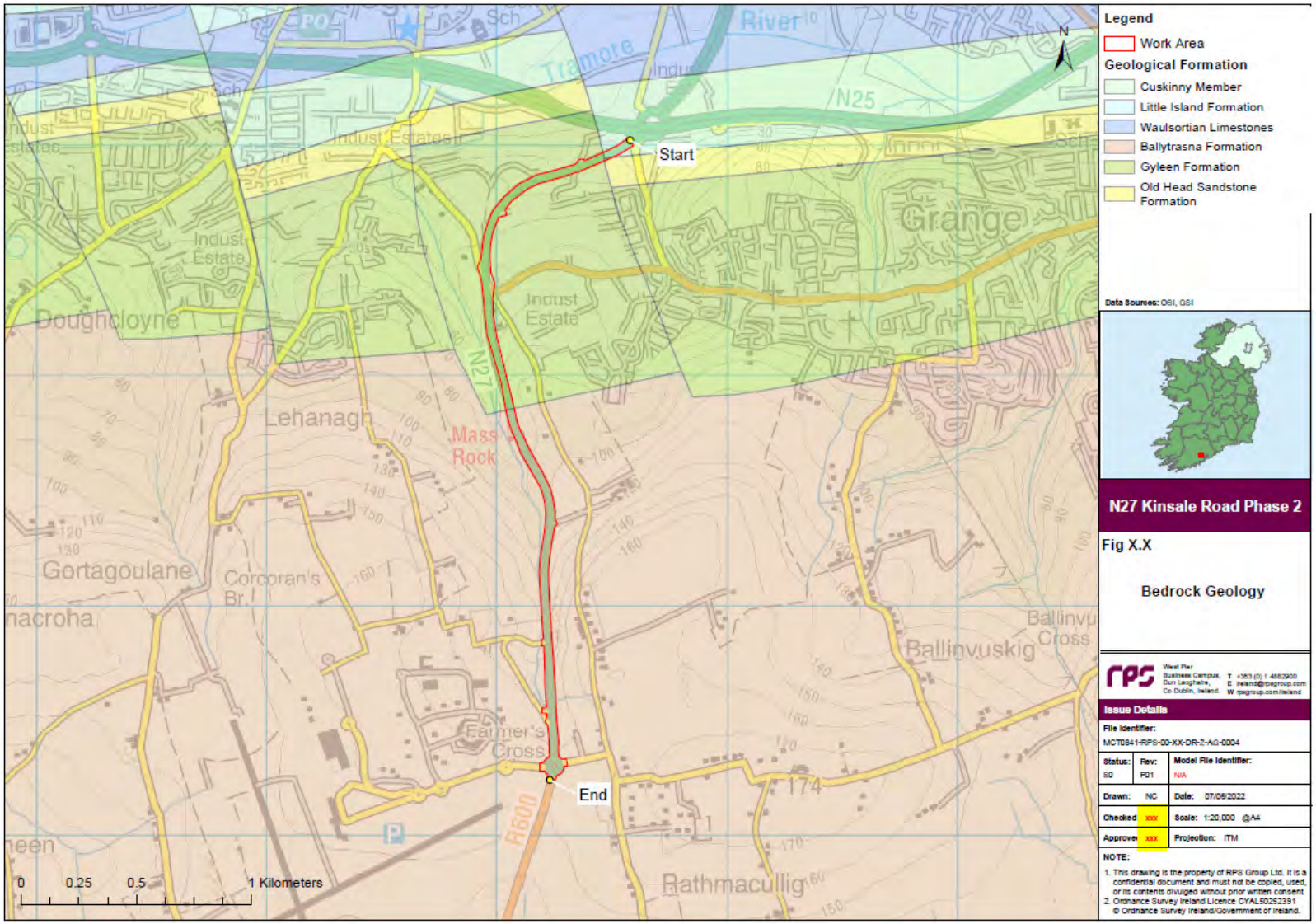


**Figure 5-3 Quaternary Sediments**

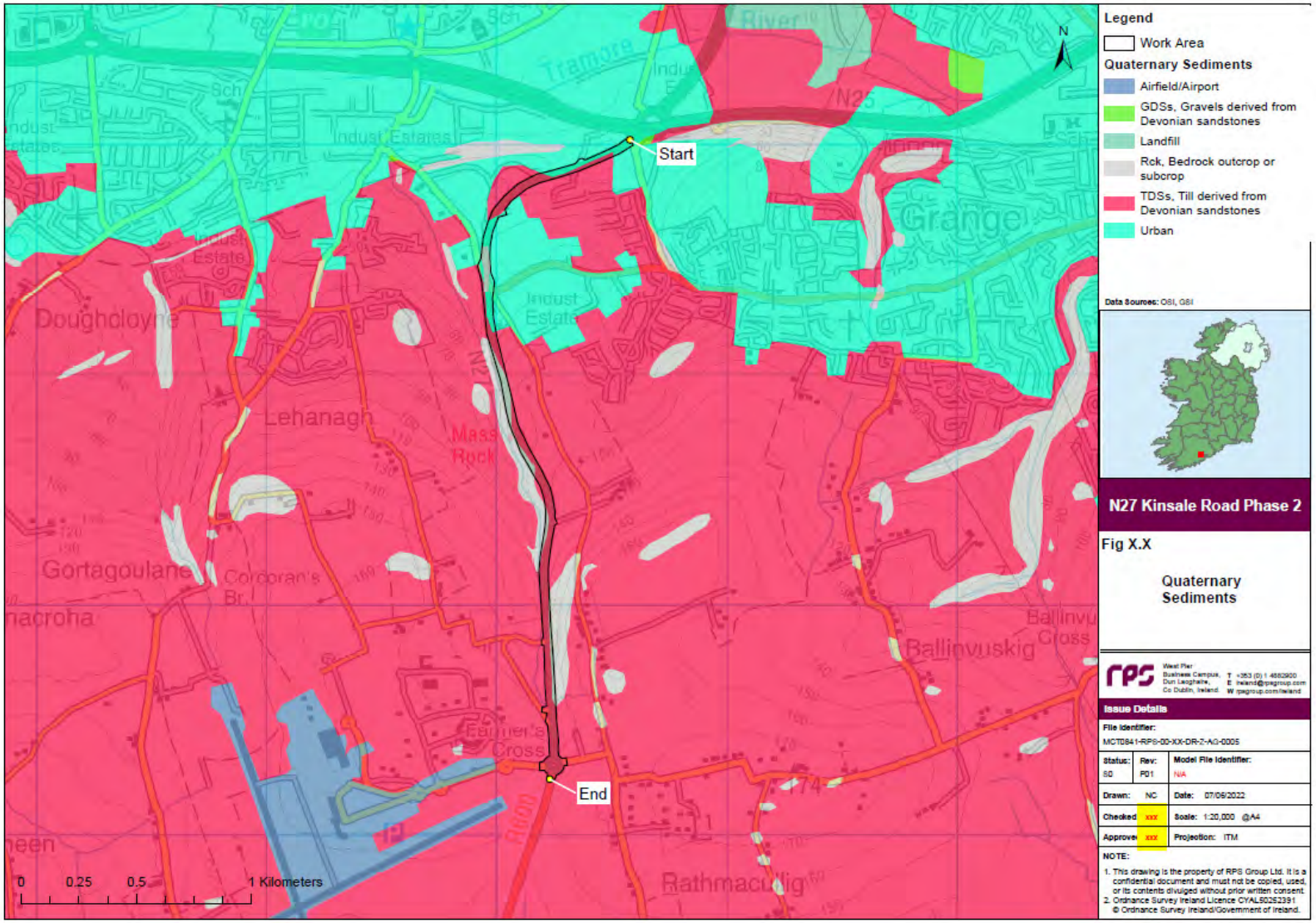


**Figure 5-4 Soils**

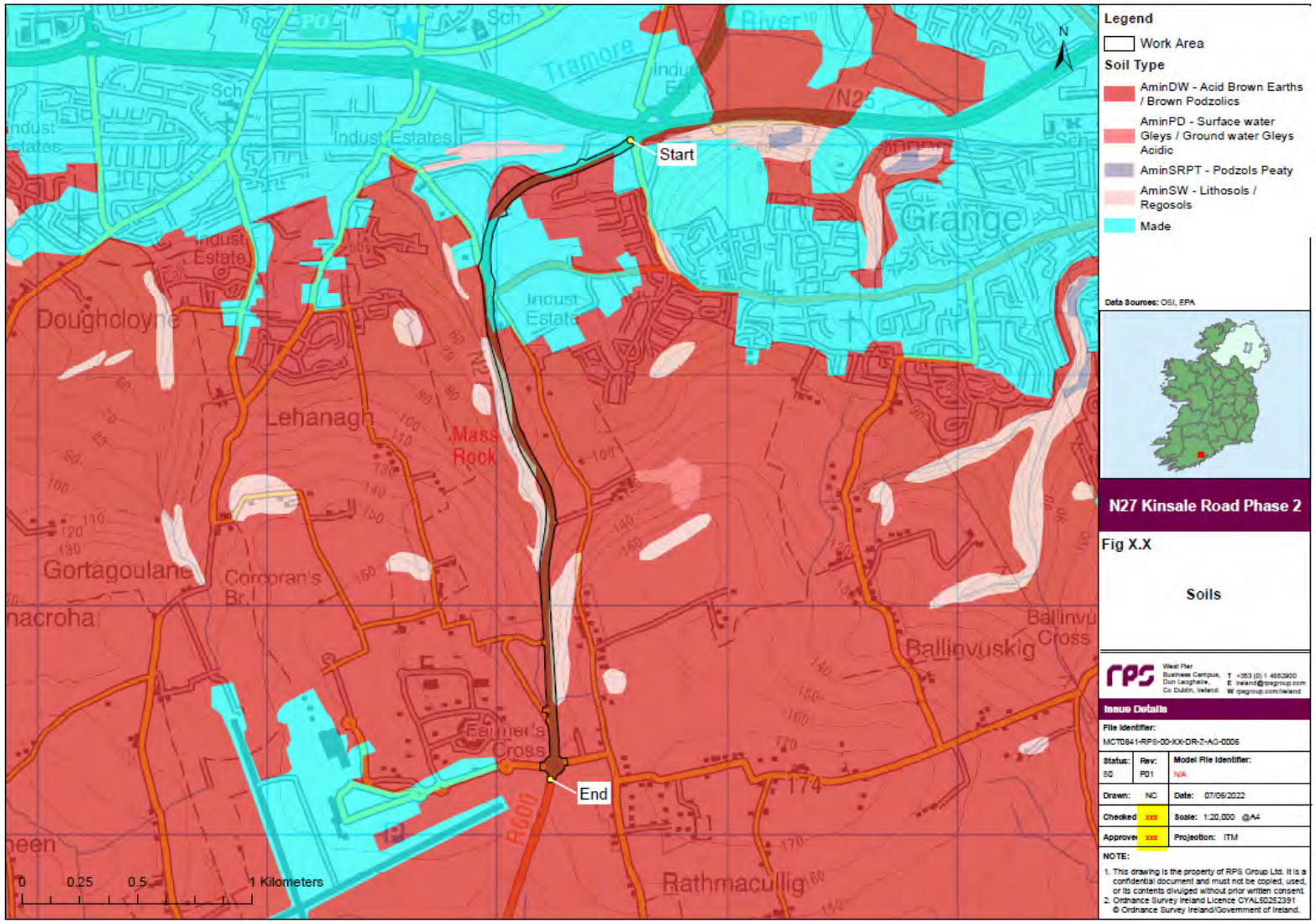


**Figure 5-5 Groundwater Vulnerability**

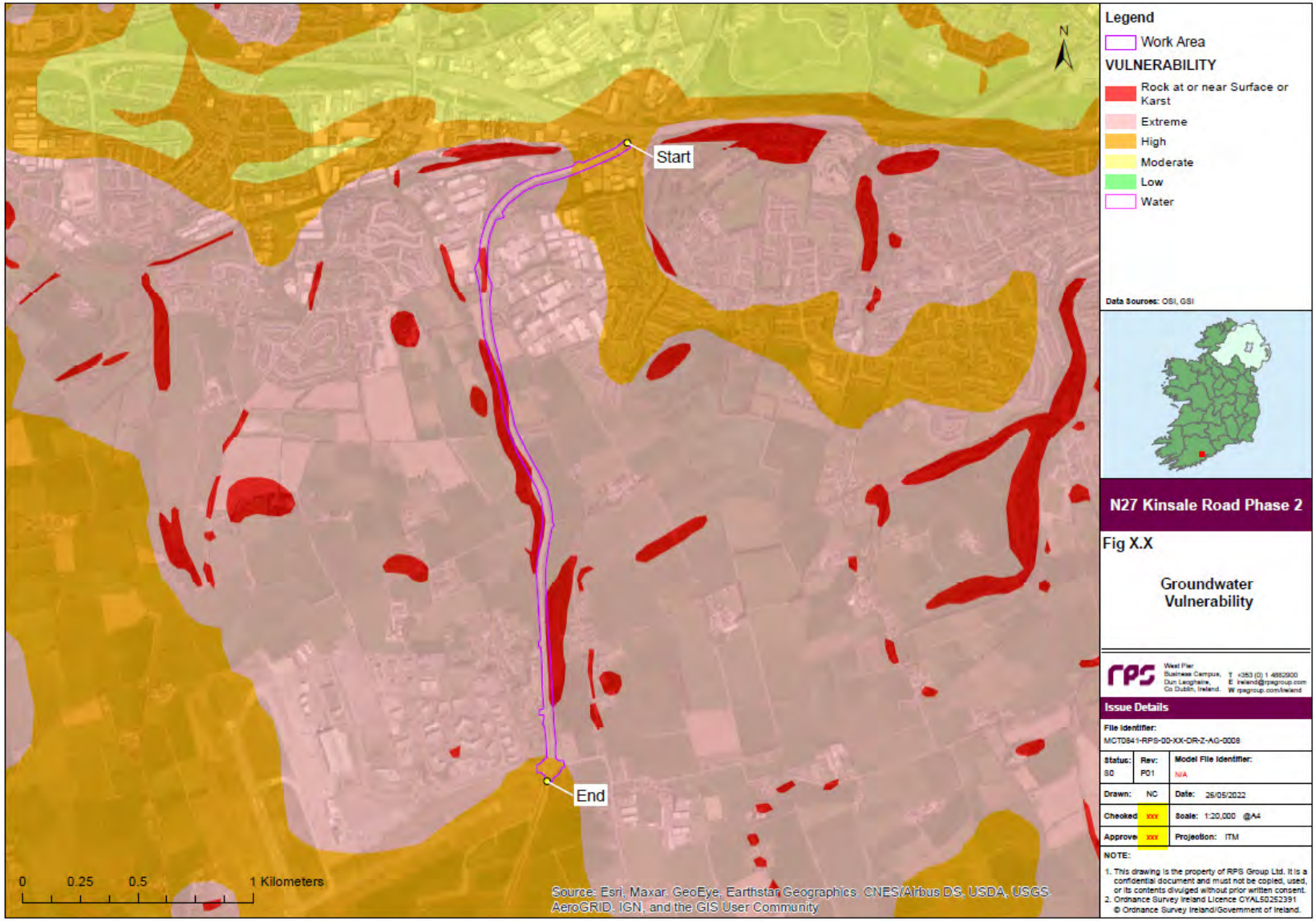


**Figure 5-6 Aquifer**

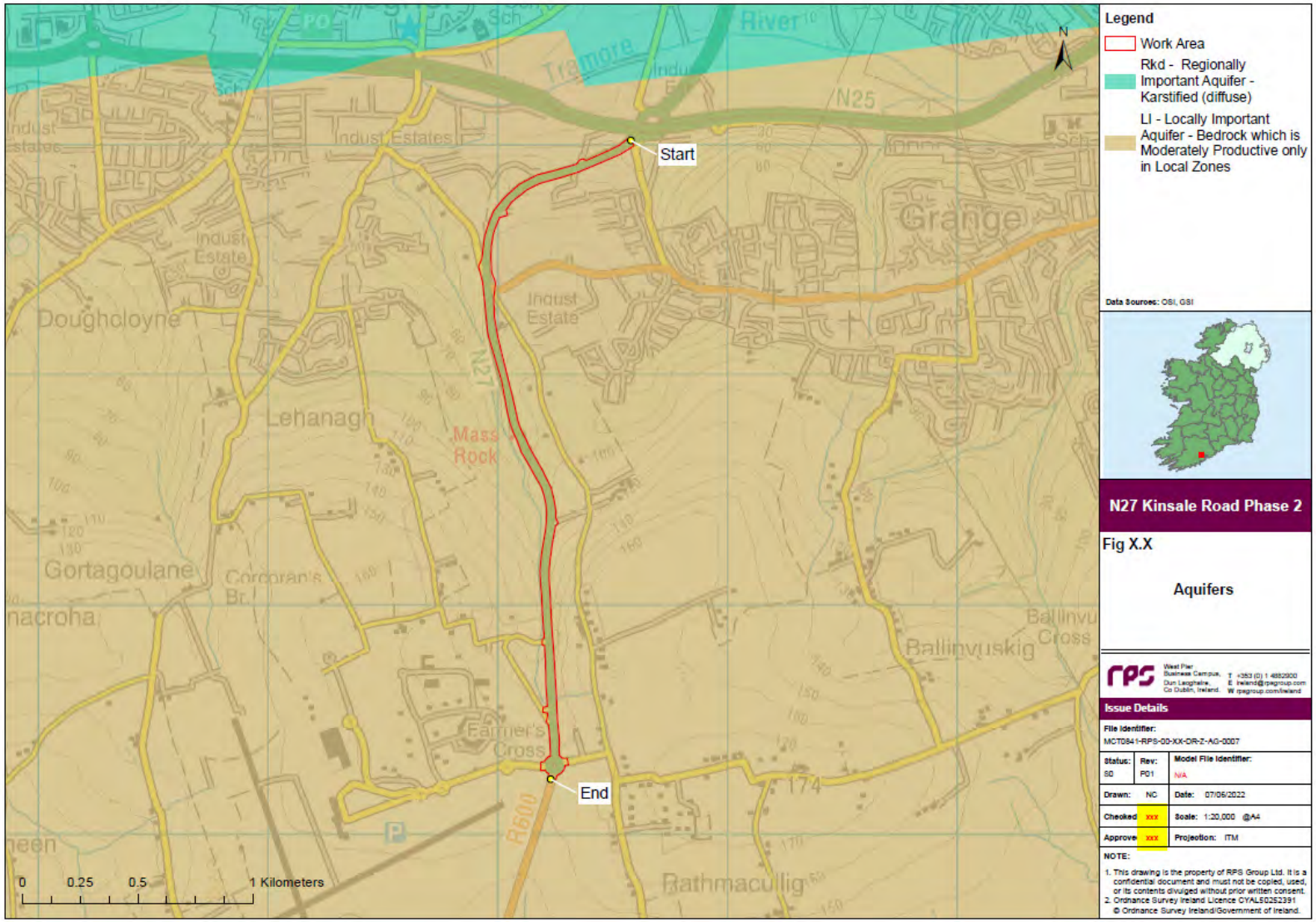


**Figure 5-7 Water Quality**

**Figure 5-8 Designated Sites**

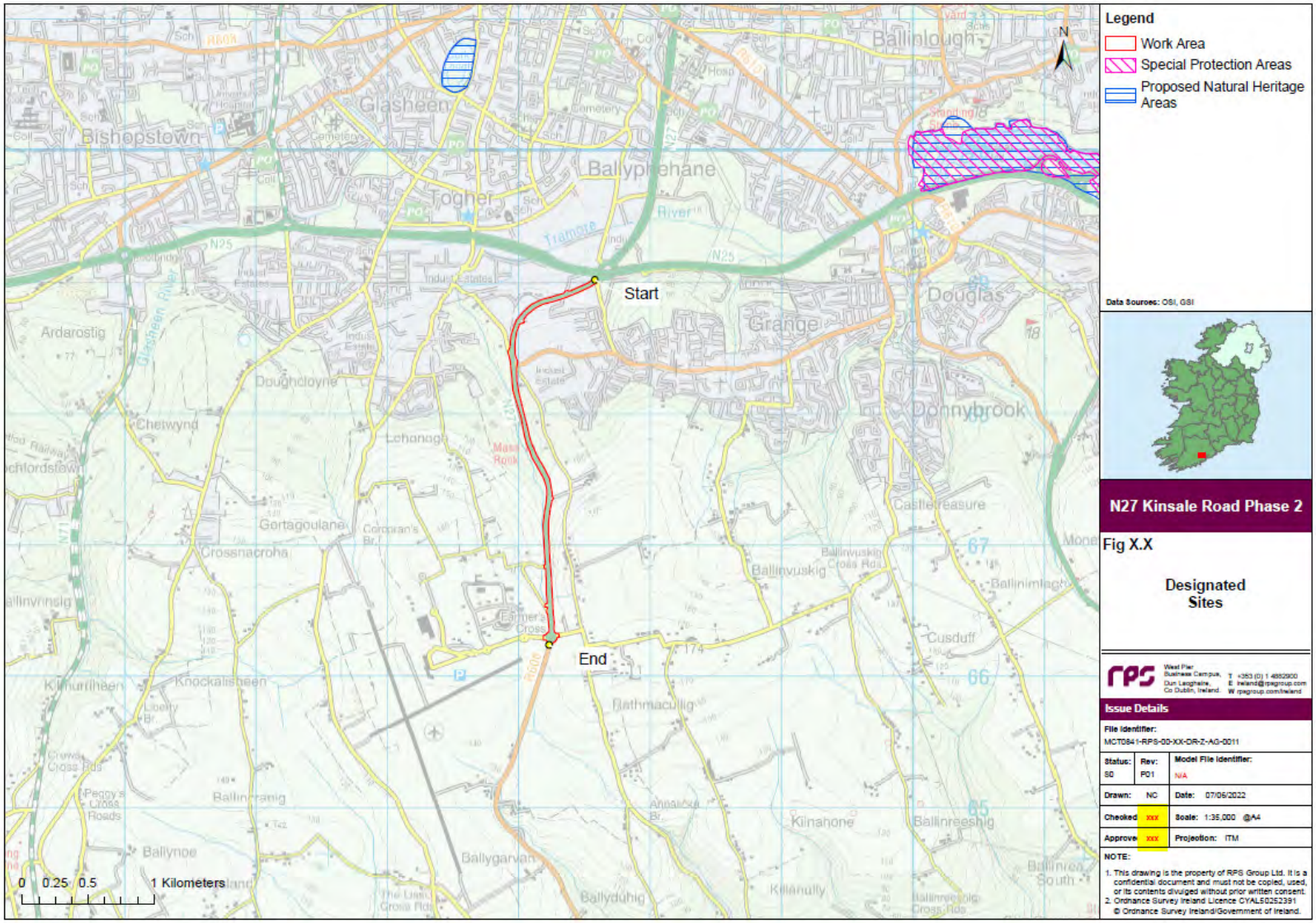
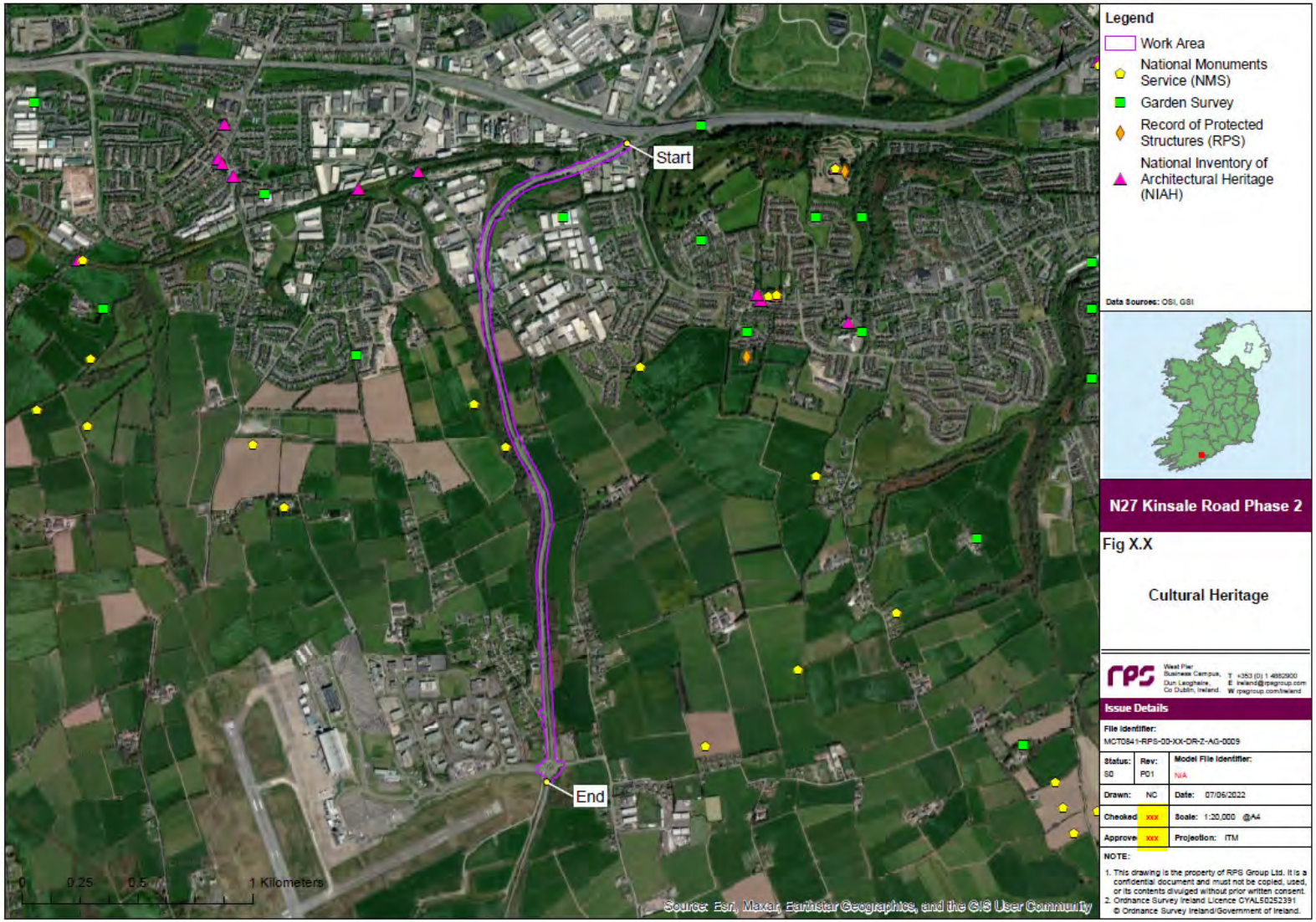


**Figure 5-9 Cultural Heritage**



## 5.3 Type and Characteristics of the Potential Impacts

The proposed scheme is considered in the context of potential impacts. The topic area which may potentially be impacted upon are outlined below with reference to Section 171A of the Act (as amended by the EIA Regulations). The proposed scheme is considered in the context of potential impacts on these in **Section 5.3.2**.

### 5.3.1 The Magnitude and Spatial Extent of the Impact

The magnitude and spatial extent of impacts is limited to the existing site boundary, its immediate vicinity, road users and residential and commercial properties in the area. The proposed scheme is approximately 3 km in length and is located in Lehenagh, Co. Cork. The predominant land cover type is 'discontinuous urban fabric'. The human population affected by the proposed is relatively small given the proximity to the N27, light industry and the airport.

### 5.3.2 The Nature of the Impact

In accordance with Directive 2014/52/EC, the nature of the impact has been assessed on the following factors:

a) Population and human health;

b) Biodiversity, with particular attention to species and habitats protected under Directive 92/42/EEC and Directive 2009/147/EC;

c) Land, soil, water, air and climate;

d) Material assets, cultural heritage and the landscape

#### 5.3.2.1 Population and Human Health

##### Construction Phase

The construction phase of the proposed scheme may give rise to a **slight positive** effect within the broader receiving environs associated with a temporary increase in the number of construction workers employed over the construction period. The construction phase is also likely to have a **temporary positive** indirect effect on ancillary support services at a local and regional level in the building supply services and technical professions. It is also anticipated that the increase in construction workers will have the potential to impact positively on businesses within the general local area or in a similar manner to that of ancillary construction support services. This is considered a minor **local positive** effect of a **temporary** nature.

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**.

Access to properties along the N27 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.

##### Operation Phase

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 significant impact on population and human health in the operation phase.

### Mitigation

- Best practice and implementation of a Health and Safety Plan will be required to ensure works are carried out in a safe manner and no risks to the population working on the site or working adjacent to the site during construction;
- Implementation of a Traffic Management Plan which outlines measures for traffic during construction to minimise accidents, nuisance, and disruption;
- Implementation of a Construction Environmental Management Plan (CEMP) to define the approach to environmental management implementation for the proposed scheme will be prepared and will include measures to be implemented during construction to minimise nuisance such as from noise and dust.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are **temporary**, and **no significant** effects are anticipated on population and human health from the construction or operation of the proposed scheme.

## 5.3.2.2 Biodiversity

A description on the biodiversity at the site of the proposed scheme is provided in **Section 5.2** above. The Appropriate Assessment Screening (Mayfly Ecology, 2022) for the proposed scheme provides further details on the ecological baseline and value. The potential for ecological impacts has been assessed considering the habitats and species that are likely to be affected by the road development taking into account guidelines on ecological assessment.

### Construction Phase

The bulk of the works are linear in nature and taking place on made ground within the existing road corridor Impacts within the site boundary may be considerable in the construction stage due to the changes in vegetation composition, notable scrub and verge vegetation, including loss of trees to accommodate the required alignment of the proposed scheme. But, due to the fact that the site is poor in species diversity and no species of conservation importance were found these impacts would be **limited, localised** and **reversible** depending on the planting regime.

There is not considered to be an appreciable loss of habitat as a result of the proposed scheme. Most of the habitats, by virtue of their location, are considered of Local (Lower) importance. The majority of animal and bird species directly affected by habitat loss in this way will simply disperse and establish new territory in the surrounding environs.

There will be some **temporary**, **minor negative** impact to biodiversity arising from site clearance and excavation during the construction phase. There are a significant number of trees across the scheme. It is proposed that approximately 5 no. trees are to be removed, at the location of the derelict house. All other trees and hedgerows are to be retained. Vegetation clearance of linear features such as hedgerows, no matter how limited, must be planned and carried out outside of the bird breeding season from 1st March to 31st August.

The trees currently form the main area of conservation importance, not by the presence of protected species, or individual trees of particular ecological importance, but by the provision of a wildlife corridor within the scheme and surrounding area. Protective barriers should be put in place to exclude any harmful construction activity that may damage the Root Protection Area (RPA) and may protect the stem of the tree. The impact to trees is considered **minor negative** and **not significant.**

The retaining of all other existing trees and hedgerows on-site in addition to the planting, or replacement will assist in mitigation 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.

There is a risk of direct disturbance to nesting birds in trees and hedgerows. A Blue tit (*Cyanistes caeruleus)* is noted nesting in a utility pole at the Airport Roundabout. A bird box is to be installed in the adjacent tree ahead of construction works if this utility pole is to be relocated to accommodate the proposed scheme layout. With the inclusion of the mitigation, the impact to birds is considered **minor negative** of a **temporary** duration.

The five-point scale bat habitat suitability index available from NBDC online mapping was utilised to assess the importance of the study area for bat species. This index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. For all bat species an Index number of 28.22 was returned indicating Moderate potential. The soprano pipistrelle (*Pipstrellus pygmaeus*) returned the highest score at 43 while the score for the Annex II bat lesser horseshoe bat (*Rhinolophus hipposideros*) is 0. Additional lighting is not proposed for the scheme that has potential to impact bats or nocturnal animals. Impacts to bats and nocturnal animals is considered **negligible**.

The ecological survey noted three invasive plant species listed as Third Schedule within or adjacent to the proposed scheme site: Japanese knotweed (*Fallopia japonica)*, Three-cornered garlic (*Allium triquetrum*) and Rhododendron (*Rhododendron ponticum)*. In accordance with S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011 measures must be taken to avoid the spread of any Third schedule species.

Japanese knotweed (*Fallopia japonica)* can spread easily when its underground rhizomes are disturbed. Rhizomes can grow up to 7m from the plant and the knotweed identified during the ecology survey is located within 7m of proposed works. During construction there is potential for disturbance of rhizomes (machinery, human disturbance). The closest knotweed record to the Kinsale Road Stream is 52m and 1.4km from where the stream intersects the N27. No instream or bankside works are required for the proposed scheme. The most likely mode of dispersal of disturbed knotweed is considered to be via excavations and the road drainage system. The Parks Department of Cork City Council have an invasive species management plan for Japanese knotweed (*Fallopia japonica)* already in place separate to the proposed scheme. Coordination with the Parks Department of Cork City Council will be required in advance of any works taking place on site and a method statement agreed in areas where knotweed has been identified.

Three-cornered garlic (*Allium triquetrum*) has been noted along the edge of grassy verges outside of the proposed works area therefore, it is unlikely that bulbs will be disturbed. However, there is potential for spread of seeds should they be present during works. The likely mode of dispersal is soil disturbance in excavations and the existing road drainage system.

There is a risk of local spread of Winter heliotrope (*Petasites fragrans)* along the verge at the Airport Roundabout which would outcompete native natural regeneration. Winter heliotrope (*Petasites fragrans)* is a low-risk invasive species. It is not a not listed in the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011. Winter heliotrope will be treated pre-construction and the verge will be reseeded with grass seed or appropriate pollinator-friendly species.

The proposed scheme is not located within the vicinity of a designated site, European or National sites, the proposed project, alone or in combination, is not to have likely significant effects on European sites or National Sites.

## Operation Phase

During operation there is also potential for disturbance of knotweed (e.g. machinery during landscaping activities, human disturbance). The planting regime following construction would be important to mitigate the impacts of the spread of invasive species, if not improve on the biodiversity importance of the site, particularly in relation to native planting, wildflower meadows and treelines to reinstate foraging routes for species that currently use the site and surrounding area.

## Mitigation

Site clearance will be carried in accordance with Specification for Road Works Series 200 – Site Clearance CC-SPW-00200, TII, December 2010 and will be subject to the following:

- Vegetation clearance of linear features such as hedgerows, no matter how limited, must be planned and carried out outside of the bird breeding season from 1st March to 31st August.
- At the Airport Roundabout, a bird box is to be installed in the adjacent tree prior to construction works if the telephone pole is to be relocated.
- Coordination with the Parks Department of Cork City Council will be required in advance of any works taking place on site and a method statement agreed in areas where knotweed has been identified.

Works should be undertaken in accordance with '*Guidelines for the protection and preservation of trees, hedgerows and scrub prior to, during the construction of National Road Schemes'* (NRA) and should include the following:

- Adequate provisions will be made for the incorporation of protective measures for trees during the detailed design and construction phases.
- Vertical barriers and/or ground protection must protect trees that are being retained in affected area of works on site. These provisions are to be put in place prior to any development work or soil excavations are carried out.
- There are occasions when vehicular and pedestrian traffic will occur within the calculated RPA. In these circumstances and where it is feasible, the RPA should be protected with suitable ground protection.

In accordance with S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011 measures must be taken to avoid the spread of any Third schedule species.

- Construction and maintenance works should be carried out in accordance with the '*Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Road Schemes,*' TII, 2010.
- Contaminated soils should be managed at a licenced facility to prevent the spread of invasive alien species.

Following the completion of the footpath and cycleway, the following measures should be implemented:

- The verge is to be reseeded with grass seed or pollinator-friendly species to reduce the competitive advantage of Winter heliotrope regrowth.
- 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.
- Planting should consist of native and pollinator-friendly species to enhance biodiversity potential.
- Coordination with the Parks Department of Cork City Council will be required in advance of any works taking place on site and a method statement agreed in areas where knotweed has been identified.

### Conclusion

With the inclusion of the above mitigation, no significant ecological impacts would be foreseen outside the immediate vicinity of the proposed scheme.

## 5.3.2.3 Land and Soils

### Construction Phase

The magnitude and spatial extent of potential impacts to land and soils will be limited to the immediate receiving environment of the proposed scheme. The works will be largely contained within the existing road corridor. The design of the proposed scheme seeks to avoid demolition and repurposes existing structures along the scheme length.

The proposed scheme requires materials for the new layout, and it is anticipated that all material will be imported for the construction. Exact quantities have not been generated at this time, but the quantities are small due to the scale and size of the proposed scheme.

There will be some impact on soils arising from site clearance and excavation during the construction phase. Treatment of Winter heliotrope (*Petasites fragrans*) will result in localised **slight negative** impact to the surrounding soil. Waste soils arising during the treatment of Winter Heliotrope (*Petasites fragrans*) and the construction phase in affected areas will be transferred to a licensed waste disposal facility.

During the construction stage, the underlying soils and aquifer may be at risk from accidental spillages of oils and chemicals that could contaminate soils and groundwater. Given the use of appropriate secondary containment for the storage of fuels, oils, paints and other potentially hazardous materials on the site during the construction phase, the risk of accidental release of these compounds to the soil environment will be greatly reduced. Without mitigation, the impacts to soils and groundwater are considered **moderate**.

Any waste produced as part of the project will be dealt with in a sustainable manner and in accordance with the Waste Management Act 1996. The production of any waste associated with the development will not cause unusual, significant or adverse effects of a type that would, singly or in combination, require an Environmental Impact Assessment.

A Waste Disposal Plan that should be prepared by the contractor. It will outline methods to achieve waste prevention, maximum reuse, recycling and recovery of waste and provides recommendations for the management of the various anticipated waste streams. It will include source segregations, storage and collection of all wastes generated in the construction phase of the proposed scheme. The plan will also provide guidance on collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g., contamination of soil or water resources). It is considered there will be no significant effects on the environment given the implementation of the Waste Disposal Plan.

Best practice construction techniques, and adherence to the standard construction mitigation measures outlined below, will prevent sediments and pollutant releases to land and soils during the construction phase.

### Operation Phase

The proposed scheme is a footpath and cycleway and therefore are not considered to generate an increase in pollutants such as hydrocarbons as to result in likely significant effects to soils and geology.

### Mitigation

- Waste arisings from excavated areas where invasive species have been identified or present will be transferred to a licensed waste disposal facility in accordance with the Waste Management Act 1996.
- Implementation of a Waste Disposal Plan which sets out measures for prevention, maximum reuse, recycling and recovery of waste and provides recommendations for the management of the various anticipated waste streams. It will include source segregations, storage and collection of all wastes generated in the construction phase of the proposed scheme. The plan will also provide guidance on collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g., contamination of soil or water resources). The Waste Disposal Plan should consider the standards on the '*Management of Waste from Nation Road Construction Projects,*' TII, 2017.
- Appropriate secondary containment for the storage of fuels, oils, paints and other potentially hazardous materials on the site.
- Fuelling of plant is anticipated to be in a designated fuelling area within the site compound.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are temporary, and no significant effects are anticipated on soils or groundwater from the construction or operation of the proposed scheme.

## 5.3.2.4 Water

### Construction Phase

The potential for pollutants (sediment and/or other toxic material) to enter the Frankfield Road Stream and the Kinsale Road Stream during construction phase is considered. The works footprint is narrow and is largely confined to the existing road corridor. No instream or bankside works are required. Soil stripping and vegetation removal at the start of a project can increase the volume of contaminated surface water run-off. 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 high risk of causing pollution.

The existing road drainage discharges to the Frankfield Road Stream and the proposed scheme will utilise this drainage system. The Kinsale Road Stream intersects the N27 and flows parallel to the proposed scheme to the west. The Kinsale Road Stream is separated from the works via grassy road verge, treelines and broadleaf woodland. Toward the Airport Roundabout there is also a grassy berm. It is considered that these features would separate the pathway from the development works to the Kinsale Road Stream. The grassy verges, treelines and woodland provide an area of filtration for any pollutants in the event of any surface water runoff.

Implementation of good practice construction techniques, and adherence to the standard construction mitigation measures outlined below, will prevent sediments and pollutant releases to the surface water network during the construction phase

### Operation Phase

During operation the proposed scheme will utilise the existing road drainage system. The proposed scheme is a footpath and cycleway and therefore are not considered to generate any increase in pollutants such as hydrocarbons as to result in likely significant effects,

### Mitigation

- The Contractor will be required to implement industry best practice pollution prevention measures in accordance with guidance documents (for example, CIRIA 2001 Guideline Document C532 Control of Water Pollution from Construction Sites, during construction in order to control the risk of pollution to surface waters);
- 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 fuelling 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;
- Plant and wheel washing should be undertaken in designated area of hardstanding at least 10m from any watercourse.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are temporary, and no significant effects are anticipated on Water from the construction or operation of the proposed scheme.

## 5.3.2.5 Air and Climate, Noise

The results of the air quality baseline show that all levels are in compliance with the appropriate legislative limit values and air quality may be classed as “good” in the area. The main sources of pollutants include traffic and space heating (domestic and commercial).

### Construction Phase

In the first instance, the design of the proposed scheme seeks to avoid demolition and repurposes existing structures the scheme length. The reuse of existing structures preserves the embodied energy expended in the original construction, minimises waste and reduces the use of new material in line with the circularity objectives of the draft Cork City Development Plan 2022-2028.

The potential for dust to be emitted depends on the type of construction activity being carried out in conjunction with environmental factors including levels of rainfall, wind speeds and wind direction. The potential for impact from dust depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. The proposed scheme is not in proximity to any sensitive receptors. If the construction contractor adheres to good working practices and the required dust mitigation measures, the levels of dust generated are assessed to be minimal and are unlikely to cause an environmental nuisance. With the proposed mitigation in place and given the proximity of the scheme to sensitive receptors, the predicted impact of dust is localised, **slight** and **temporary**.

In terms of noise, the construction phase may lead to a temporary increase in background noise levels through operation of plant machinery. The Contractor shall employ the best practical means to minimise noise produced by his activities and shall comply with the contents and recommendations of BS 5228: Code of Practice for Noise Control on Construction and Open Sites and European Communities (Construction Plant and Equipment) Permissible Noise Regulations 1988. Therefore, no significant noise impact on commercial or residential properties is anticipated.

### Operation Phase

The operation of the proposed scheme will not give rise to any residues or emissions to humans or impact during the operational phase as it is a pedestrian and cycleway. The proposed scheme will provide a positive impact for pedestrians through provision of a safer and sustainable transport mode.

The proposed pedestrian and cycleway are not likely to result in significant increase of traffic and traffic related pollutants such as $PM_{10}$, Ozone ($O_3$), Nitrogen Dioxide ($NO_2$), Sulphur Dioxide ($SO_2$), and Carbon Monoxide (CO) above the current figures on the N27. No impacts are anticipated from the operation of the proposed scheme.

There will be no resultant emissions to air, climate, or noise from the operation of the proposed scheme. Traffic levels are not predicted to increase due to the proposed pedestrian and cycleway. The design has potential to reduce traffic speeds on the road which would reduce traffic related noise on the N27. This would result in a **slight positive** impact to noise on the N27.

### Mitigation

- Public roads shall be regularly inspected for cleanliness and cleaned as necessary;
- Appropriate dust control measures will be identified and put in place;
- Measures will include operating hours, limiting construction to daytime periods between 08:00-19:00, Monday to Friday and Saturday 08:00-16:00. No work shall be planned for outside these hours including weekend or Public Holidays;
- The Contractor shall employ the best practical means to minimise noise produced by his activities and shall comply with the contents and recommendations of BS 5228: Code of Practice for Noise Control on Construction and Open Sites and European Communities (Construction Plant and Equipment) Permissible Noise Regulations 1988.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are temporary, and no significant effects are anticipated on Air, Climate and Noise from the construction or operation of the proposed scheme.

## 5.3.2.6 Material Assets

The potential impacts on residential and commercial site have been considered.

### Construction Phase

#### Land

The areas of the new layout are described in **Section 2**. From a 'land' perspective, the proposed site is relatively minor with the proposed scheme primarily taking place within the existing road corridor of the N27. Minor parcels of land take are required for development for construction and operation and will be in agreement with the landowners. The result on land is considered localised **permanent** but **not significant**.

- Land take will directly impact 3 no. residential properties. At 1 no. derelict house, this will set back the boundary wall to achieve the required alignment. This impact is considered **moderate** and **permanent** and **not significant**.

#### Traffic and Transportation

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 **Section 5.1.6** and site access issues are predicted to generate a **minor negative** impact of **temporary** duration.

#### Utilities

Impacts on utilities are anticipated during the construction phase and the key impacts identified:

- 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.

### Operation Phase

The scheme is a footpath and cycleway and therefore are not considered to impact residential or commercial sites during the operation phase.

### Mitigation

- The contractor will maintain good communication with landowners at all times and particularly in relation to access issues.
- Where part of the curtilage of a property is to be acquired a boundary wall/fence will be provided as replacement.
- Where access to a property is disrupted due to works associated with the road, the contractor will be obliged to give notice to the affected party in advance of works commencing in the area.
- Temporary fencing will be erected as required to delineate the site boundary and to minimise disturbance to adjacent lands.
- If disruption to utility services is necessary for the completion of the works, it shall be kept to a minimum and shall take place, as far as possible, during off-peak use hours.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are temporary, and no significant effects are anticipated on Material Assets from the construction or operation of the proposed scheme.

## 5.3.2.7 Archaeology and Cultural Heritage

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 nearest cultural heritage sites are shown in **Figure 5-9**.

Stone walls are generally considered of cultural heritage significance, however, some stone walls along the route lack visibility or survive intermittently in various states of repair. They do not present a defining character at the roadside. The impact of the proposed is on cultural heritage is considered negligible.

The proposed scheme is not considered to have a significant impact on features of cultural heritage. Consequently, archaeological monitoring over the course of the construction of the proposed scheme is not required.

### Mitigation

No mitigation required.

### Conclusion

Significant impacts are not anticipated on features of cultural heritage.

## 5.3.2.8 Landscape and Visual Amenity

The site and its immediate context are primarily the N27. The proposed scheme would introduce an upgrade to footpath and cycleway largely within the existing road corridor but will require areas of the roadside verge to be developed. The loss of 5 no. trees will occur, however, these losses would in part be replaced as part of the landscape regime for the road improvement scheme. The landscape scheme has been designed to take account of the trees on site and in the surrounding area and provides for retention where possible.

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 our Transport Corridors for our pollinators and overall biodiversity.

Adherence to the mitigation measures outlined in **Section 5.3.2.2** will ensure the proposed scheme is away from the zones of mature trees retained on site and implement measures for biodiversity enhancement across the scheme.

### 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.

### Conclusion

With the inclusion of the above mitigation, any residual impacts are on the landscape and visual impact are temporary, and **no significant** effects are anticipated from the construction or operation of the proposed scheme.

### 5.3.3 Transboundary Nature of the Impact

No transboundary impacts are likely because of the proposed scheme.

### 5.3.4 The Intensity and Complexity of the Impact

The nature of the impact has been outlined in Section 5.3.2.

**Population and human health**: During construction, temporary negative impacts are predicted due to noise, dust and visual impacts. These impacts are temporary and not considered significant. There are considered to be long term positive impacts during the operation as a result of improved road infrastructure and road security.

**Biodiversity:**

During construction, temporary negative impacts are predicted due to site clearance which involves the removal of 5 no. trees and areas of the existing verge. These impacts are temporary and not considered significant.

**Land and Soils:** Small amounts of general waste will be generated during works. However, given the scale and size of the project, this is not considered to be significant.

**Water:** During construction, temporary negative impacts are predicted from sediment or pollutants entering the surface water network. These impacts are temporary and not considered significant.

**Air & Climate, Noise:** During construction, temporary negative impacts are predicted from dust and construction traffic. These impacts are temporary and not considered significant.

**Landscape and Visual: During construction t**he proposed scheme will result in changes to the landscape and visual baseline. These main proposed elements however have been designed having regard for the baseline landscape character and visual amenity. These impacts are temporary and not considered significant.

**Cultural Heritage:** Significant impacts are not anticipated on features of cultural heritage.

### 5.3.5 The probability of the Impact

The probability of impacts on the receiving environment is considered to be extremely low. Localised impacts such as dust generation and noise nuisance during construction of the residential development are probable but will cause a temporary impact, however the contractor will be required to implement a Health and Safety Plan to ensure no risks to the population working on the site or working adjacent to the site during construction.

The proposed scheme will have a long-term beneficial effect on the population of the wider area by protecting and improving pedestrian and cycling infrastructure and the enhancement of biodiversity in line with the draft Cork City Development Plan 2022 - 2028.

### 5.3.6 The Expected Onset, Duration, Frequency and Reversibility of the Impact

The construction phase for the proposed scheme is anticipated to last for a period of 6 months and temporary in nature. The duration and frequency of these effects will be carried out in accordance with construction work best practice to ensure that no significant effects on the environment arise. No significant impacts are predicted so there are no requirements for reversibility of these impacts.

The operational change will be long-term and continuous in nature. Onset will coincide with the end of construction and start of the operation phase.

### 5.3.7 The Cumulation of the Impact with Impact of Other Existing and/or Approved Projects

A review of the other projects and plans in the region was carried out and this is summarised in Section 5.1.2. The analysis considered other relevant project and plans in the region that have the potential to contribute to in-combination or cumulative impact with the proposed scheme.

### 5.3.8 The Possibility of Effectively Reducing the Impact

The majority of the impacts arising from the proposed scheme will be associated with construction phase. The construction impacts are likely to be once off and temporary in nature and not considered significant using standard construction methodologies, best practice construction management measures and implementation of a Health and Safety and Traffic Management Plan.

The design of the proposed scheme incorporates biodiversity enhancement measures which will effectively reduce the impact on biodiversity and the landscape.

# 6 CONCLUSIONS

The purpose of this EIA Screening Report is to provide Cork City Council with the information to allow a determination to be made on whether the proposed scheme is likely to have significant effects on the environment or not.

This Screening Report therefore provides an assessment of whether the development 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).

This EIA Screening Report has considered the proposed scheme in terms of (i) *Characteristics of Proposed Scheme*, (ii) *Location of Proposed Scheme* and (iii) *Characteristics of Potential Impacts*, in accordance with the DEHLG Guidance Document[3], 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 scheme would not be likely to have significant effects on the environment:

- The nature and scale of the proposed scheme, 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 screening for AA 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 design of the proposed scheme is to be incorporated into the existing N27;
- The types and characteristics of the potential impacts are such that no significant effects are predicted; and
- Appropriate mitigation measures will be proposed, and a CEMP will be prepared which will prevent / minimise impacts on the environment.

**Therefore, this EIA Screening Report concludes that that the proposed scheme individually and cumulatively with associated existing and approved development will not result in the potential for significant 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.**