

**Cork County Council**

## Carrigaline TPREP Phase 1B

Appropriate Assessment Screening Report

Reference: 285392-00

Issue 08 November 2023

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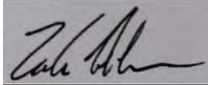


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# 1. Introduction

## 1.1 Overview

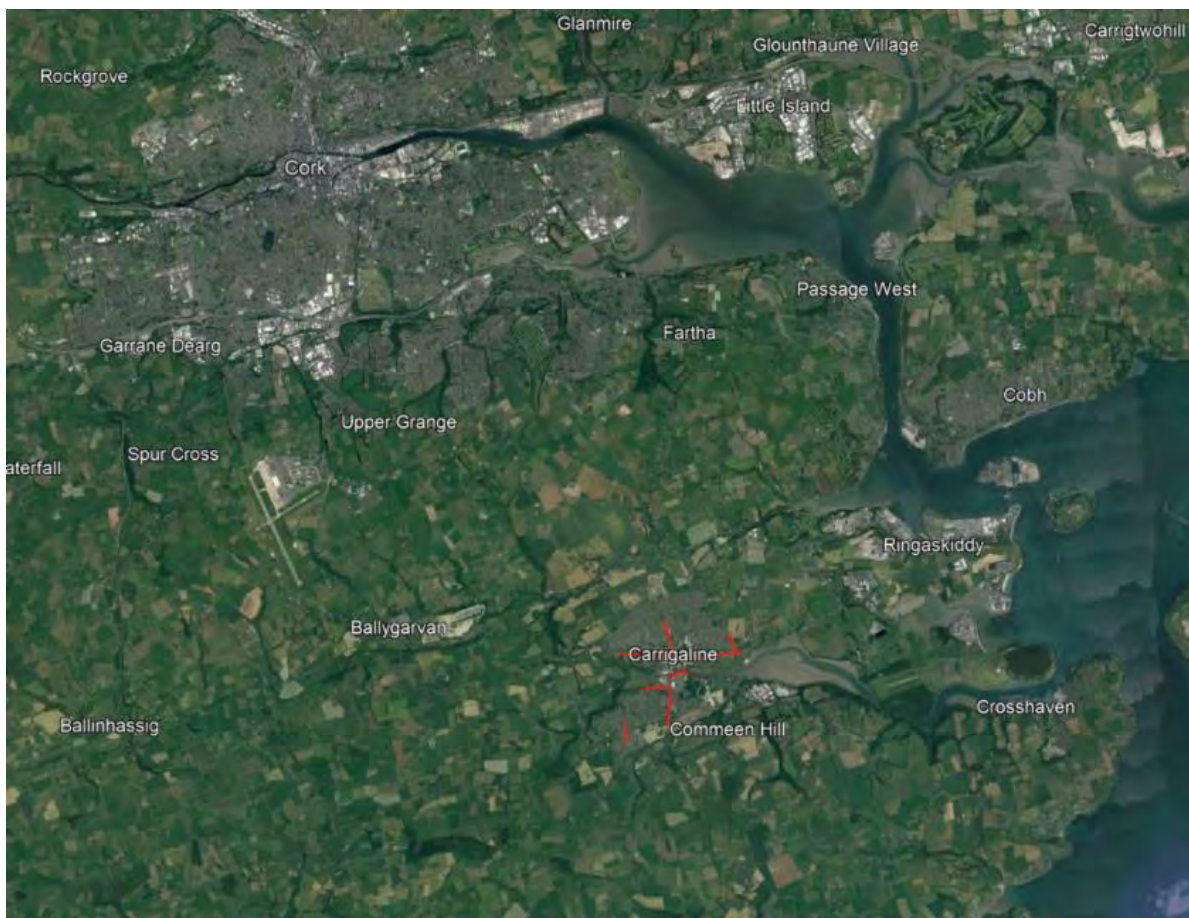
This report contains information required for Cork County Council (CCC) to undertake screening for Appropriate Assessment (AA) for the proposed Carrigaline Transportation and Public Realm Enhancement Plan (TPREP) Phase 1B (hereafter referred to as the ‘Proposed Development’) in Carrigaline, Co. Cork.

## 1.2 Background

The Proposed Development will improve the safety of pedestrians and cyclists by enhancing the existing pedestrian and cycle network within Carrigaline. The Proposed Development has been prepared following the Part 8 planning application of Phase 1A.

## 1.3 Proposed Development Site Location

The Proposed Development is situated within Carrigaline, which is located approximately 10km south-east of Cork City Centre. Refer to Figure 1 for the location of the Proposed Development. The study area of the Proposed Development comprises roads, footpaths and other areas of hardstanding in Carrigaline with the boundaries illustrated in Figure 2. The Proposed Development is situated along Cork Road, Rose Hill, Ballea Road, Church Road, Kilmoney Road and Strand Road in Carrigaline. Detailed descriptions of the works to be undertaken on each road are provided in Section 4.



**Figure 1: The Proposed Development in the Context of the wider Cork Area (Source: Google Earth)**





**Figure 2: Indicative Red Line Boundary of the Proposed Development | Not To Scale (Source: Google Earth)**

## 1.4 Aims and Objectives

The aims of this report are to:

- provide information on, and assess the potential for the Proposed Development site to significantly impact on Natura 2000 sites (also known as European sites);
- determine whether the Proposed Development site is directly connected with, or necessary to, the conservation management of any Natura 2000 sites; and
- determine whether the Proposed Development, alone or in combination with other projects, is likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

## 1.5 Competent Expert Evidence

The environmental team which has prepared this report included:

Donncha Madden (Biodiversity Lead) (BSc, MCIEEM, CEcol) is a senior consultant with over 17 years' experience carrying out Ecological Impact Assessment (EcIA). He is an experienced leader (Project Manager) of technical projects including high profile projects and has provided expertise internationally. He holds NIEA licences for a number of protected species and has surveyed habitats and protected species in

Northern Ireland for eight years. Donncha has a strong track record in delivering reports to inform AA Screening and full AA Natura Impact Statements on complex projects.

Amy Sproule is an environmental consultant with Arup and has experience in AA and Habitat Regulation Assessment (HRA) for both plans and projects. Amy has undertaken a range of ecological surveys focusing on habitat and several protected species. She has experience in working across various regions and statutory requirements. Amy is a Qualifying Member of the CIEEM.

Zak Henderson is an environmental consultant with 1.5 years of experience. Zak is a graduate member of the Institute of Environmental Management and Assessment (IEMA) and the Chartered Institution of Water and Environmental Management (CIWEM). He has experience working across various sectors including renewable energy and town planning for EIA and AA.

## 1.6 Report Layout

This report contains information required for the competent authority, CCC to undertake screening for Appropriate Assessment (AA) for the Proposed Development in Carrigaline.

This report is based on a desk study, validated by a series of site visits carried out by the environmental team on the 6<sup>th</sup> and 7<sup>th</sup> of July and 6<sup>th</sup> September 2023. The screening information presented in this report comprises:

- summary of the relevant legislation (Section 2);
- overview of the baseline information and the proposed development environment (Section 3 and 4);
- ecological overview (Section 5) and identification of relevant Natura 2000 sites (Section 6) within the zone of influence of the proposed development;
- consideration of any potential Likely Significant Effect (LSE) (Section 7)
- assessment of significant effects on Natura 2000 sites (Section 8); and
- conclusions and screening statement (Section 9).

## 1.7 Guidance and Data Sources

This report has been prepared with regard to the following guidance documents, where relevant:

- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10;
- Department of Environment, Heritage and Local Government. Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (2010 revision);
- European Commission Environment Directorate-General [hereafter referred to as MN 2000], Managing Natura 2000 sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC (2000);
- European Commission Environment Directorate-General. Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodical Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2021);
- European Commission Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC (2007);
- European Commission. Communication from the Commission on the precautionary principle (2000);
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011); and
- Office of the Planning Regulator Practice Note PN01 – Appropriate Assessment Screening for Development Management (2021).

Sources of information that were used to collect data on the Natura 2000 network of sites and on the existing ecological environment comprise:

- [Catchments.ie](http://catchments.ie)<sup>1</sup>;
- Cork County Development Plan 2022-2028<sup>2</sup>;
- Cork County Planning Application Map<sup>3</sup>;
- Environmental Protection Agency (EPA) Online Map Viewer<sup>4</sup>;
- Google aerial photography (viewed in May 2023);
- National Parks and Wildlife Service (NPSW) online data on designated sites<sup>5</sup>;
- Carrigaline UDF and Public Realm Screening for Appropriate Assessment (16-08-23)<sup>6</sup>
- NPWS online data on protected flora and fauna<sup>7</sup>.

Guidance which has assisted in determining whether impacts are likely to be significant include:

- Environmental Protection Agency. Guidelines on the Information to be Contained in Environmental Impact Statements (2022);
- Flood Maps IE: Layer - Past Flood Events. <https://www.floodinfo.ie/map/floodmaps/> (Viewed May 2023);
- Institute of Ecology and Environmental Assessment. Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine (September 2018).
- Invasive Alien Species in Ireland – [www.invasives.ie](http://www.invasives.ie) (Viewed May 2023)
- Irish Wetland Bird Survey (I-WeBS) (accessed June 2023)<sup>8</sup>
- Natura Impact Statement published on behalf of the proposed Bóthar Guidel Pedestrian and Cycle Bridge planning application (Viewed May 2023)
- Cork Harbour SPA Conservation Objectives (accessed May 2023)<sup>9</sup>.

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<sup>1</sup> [Catchments.ie](http://catchments.ie). Available on [www.catchments.ie](http://www.catchments.ie). Accessed May 2023

<sup>2</sup> Cork County Council. Available <https://www.corkcoco.ie/en/resident/planning-and-development/cork-county-development-plan-2022-2028>. Accessed May 2023

<sup>3</sup> Cork County Council. Available <https://corkcoco.maps.arcgis.com/apps/webappviewer/index.html?id=03a3b83db76c46fd9b66178f8d407e0d>. Accessed May 2023.

<sup>4</sup> EPA. Information on environmental quality data. EPA Online Environmental Map Viewer. Available <https://gis.epa.ie/EPAMaps/>. Accessed May 2023

<sup>5</sup> NPSW. Designated site data. Available on <https://www.npws.ie/maps-and-data/designated-site-data>. Accessed May 2023

<sup>6</sup> Cork County Council. Part 8 planning documents available to view online at [Public Consultations | Cork County Council \(corkcoco.ie\)](https://www.corkcoco.ie/en/resident/planning-and-development/public-consultations)

<sup>7</sup> NPSW. Designated site data. Available on <https://www.npws.ie/maps-and-data/habitat-and-species-data>. Accessed May 2023.

<sup>8</sup> Irish Wetland Bird Survey (I-WeBS), Site Summary Table for 0L403 Cork Harbour, available on <https://c0amf055.caspio.com/dp/f4db30005dbe20614b404564be88> (Accessed June 2023)

<sup>9</sup> [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO004030.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004030.pdf) (accessed May 2023)



## 2. Legislation

### 2.1 Legislative Background

Pursuant to either Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477 of 2011) or other such legislation as determined by CCC (the competent authority) applicable in the case of the proposed works, a screening for AA is required to be carried out on a project or plan that “*individually or in combination with other plans or projects is likely to have a significant effect on the European site*”. AA is a process required under Article 6(3) of the EU Habitats Directive. Article 6(3) is transposed in Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), as amended, and by Part XAB of the Planning and Development Act, 2000, as amended.

All plans and projects which are not directly connected with or necessary to the management of a European site, but which either individually or in combination with other plans or projects, are likely to have a significant effect on “a European site,” require an AA of these effects to determine if they will adversely affect the integrity of these sites. The proposed development is considered to fall under the requirements of AA as applied to all plans and projects.

The AA screening process scrutinises the plan or project to determine if there are LSEs either individually or in combination with other plans or projects, on a European site. European sites are part of the Natura 2000 network and include those designated as Special Areas of Conservation (SACs), Candidate SACs or Special Protection Areas (SPAs).

SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and all migratory birds and their habitats. The Annex habitats and species, for which each site is selected, are the *qualifying interests* (QI) for SACs and *special conservation interests* (SCI) for SPAs of each site. *Conservation objectives* for the site are defined for these QI.

A key requirement of the Habitats Directive is that the effects of any plan or project, which is not directly connected with or necessary to the management of a European site, but which alone, or in combination with, other plans or projects, are likely to have a significant effect on a European site, should be assessed before any decision is made to allow that plan or project to proceed. The obligation to undertake a screening for AA, and if necessary, an AA, derives from Article 6(3) of the Habitats Directive (92/43/EEC) and both involve a number of steps and tests that need to be applied in sequential order.

Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances.

Article 6(3) of the Habitats Directive states:

*“Any plan or project not directly connected with, or necessary to, the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site concerned and if appropriate, after having obtained the opinion of the general public”.*

Article 6(4) states:

*“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

*Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission to other imperative reasons of overriding public interest.”*

## **2.2 Assessment Methodology**

The competent authority is required to carry out a screening for AA, and if necessary, an AA as required by Article 6(3) of the Habitats Directive. If the competent authority determines that the plan or project will adversely affect the integrity of a European site, it may only authorise that plan or project by following the Article 6(4) procedure. The Article 6(3) and 6(4) procedures are outlined as follows:

**Stage 1 – Screening for Appropriate Assessment** – to assess, in view of best scientific knowledge, if the project or plan, individually or in combination with another plan or project is likely to have a significant effect on the Natura 2000 site.

**Stage 2 – Appropriate Assessment** – This is required if it cannot be excluded, on the basis of objective information, that the project or plan, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site. The AA must include a final determination by the competent authority as to whether or not a proposed project would adversely affect the integrity of a Natura 2000 site. In order to reach a final determination, the competent authority must undertake examination, analysis and evaluation, followed by findings, conclusions and a final determination. The appropriate assessment must contain complete, precise and definitive findings and conclusions, and may not have lacunae or gaps.

**Stage 3 – Assessment of alternative solutions** – the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

**Stage 4 – Assessment where no alternative solutions exist and where adverse impacts remain** – an assessment of compensatory measures were, in the light of an assessment of imperative reasons of overriding public interest (IROPI) it is deemed that the project or plan should proceed.

Each stage determines whether the next stage in the process is required. If, for example, it is concluded, with thorough reasoning and justification that, at the end of Stage 1 there will be no significant impacts on Natura 2000 sites, there is no requirement to proceed to Stage 2.

## 3. Baseline Conditions

### 3.1 Air Quality

The Proposed Development is situated within an urban area with commercial and residential developments located in the immediate vicinity. The baseline environment is already a well-developed network of busy roads throughout Carrigaline.

The proposed development site is located within Air Zone B as Carrigaline falls within the boundaries of Cork Conurbation, as defined in the *Air Quality Standards Regulations, 2011*<sup>10</sup>. Background levels from 2021 provided by the EPA's yearly report; *Air Quality in Ireland*<sup>11</sup> outlined air quality monitoring results of NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> in Zone B which demonstrated good compliance with air quality standards. There were no exceedances in Zone B of limits set by the European Environment Agency as per the Air Quality Clean Air For Europe Directive (2008/50/EC) in 2021.

There is an air quality monitoring station located in Carrigaline<sup>12</sup>, this was commissioned in January 2023. The site is operated by Cork County Council. Monitoring is carried out using continuous monitors for particulate matter (PM<sub>2.5</sub>). Historic data can be gathered from the next nearest site located at Cobh approximately 7.3km east of the Proposed Development which also has an AQIH rating of 1. Historic monitoring of Cobh indicates that PM<sub>2.5</sub> levels from January 2023 to June 2023 remain below recorded emission levels in 2010 with a reading of approximately 7.45µg/m<sup>3</sup>.

### 3.2 Land and Soils

#### 3.2.1 Geology

A review of the Geological Survey of Ireland (GSI) database<sup>13</sup> indicates that the 'White Strand Formation' which consists of sandstone and interbedded pyritic mudstone, 'Waulsortian Limestones' which are classified as Massive unbedded lime-mudstone, and 'Cuskinny Member' which is classified as Flaser-bedded sandstone and mudstone underly the Proposed Development and surrounding area.

#### 3.2.2 Soils

The soils at the proposed development and in the surrounding area are shown on the GSI database to be entirely made ground. The made ground is likely to have a variable permeability dependant on the proportions of coarse materials in it. GSI database states that the groundwater subsoil permeability is a mix of low and moderate.

#### 3.2.3 Lands

The land use across the area of the proposed development is classified as 'artificial surfaces' according to the EPA Coordination of Information on the Environment Land Cover classification (CORINE).

The majority of the Proposed Development area consists of hardstanding consisting of road surface and footpath. The Proposed Development lies within an area which is zoned as Town Centre/Neighbourhood Centres with the objective to '*conserve and enhance the quality and character of established residential communities and protect their amenities*', and Existing Residential/Mixed Residential and Other Uses with the objective to '*maintain and build on the accessibility, vitality and viability of existing town centres*'. There will be no change of land use within the Proposed Development.

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<sup>10</sup> Irish Statutory Book S.I. No. 180/2011 (2011) *Air Quality Standards Regulations 2011*.

<sup>11</sup> Environmental Protection Agency (EPA) (2021) *Air quality in Ireland 2021*

<sup>12</sup> Station 88 (51.8153°N, -8.3875°E)

<sup>13</sup> Geological Survey Ireland (GSI) Spatial Resources. Available on <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228>. Accessed May 2023.

### 3.3 Hydrology

#### 3.3.1 Ground Water

The GSI data<sup>14</sup> shows the Proposed Development is situated over a locally important karstified aquifer. It is moderately productive only in local zones. The groundwater vulnerability of the site is classified between Extreme and High. The groundwater recharge for the site is considered to be high in the majority of the Proposed Development with some areas classified as extreme. Groundwater flow direction is likely to be to the southeast toward the Celtic Sea. As mentioned in Section 3.2.2, the permeability is low.

The groundwater recharge for the site is considered to be low. According to GSI, there are no groundwater abstractions present on the proposed development and no drinking water protection areas in the surrounding area. There is one borehole location (unverified) located within 1.3km south-east of the proposed development.

#### 3.3.2 Surface Water

The primary water features located adjacent to the Proposed Development are the Owenboy River (IE\_SW\_19O011400) and the Owenboy Estuary (IE\_SW\_060\_1200). The Owenboy River flows east into the Owenboy Estuary near the junction of Strand Road and Main Street and continues to flow east into Cork Harbour (IE\_SW\_060\_0000). The risk status of the Owenboy River is classified as 'at risk' and has a 'Moderate River Waterbody WFD Status 2016-2021'. The Owenboy Estuary is classified as 'at risk' and has a 'moderate' Transitional Waterbody WFD Status 2016-2021.

There is a history of single and recurring flood events occurring flooding within the Proposed Development along Strand Road according to Flood Maps<sup>15</sup>. A Flood Risk Assessment (FRA) was prepared for Phase 1A of the Carrigaline TPREP (Arup, 2022) which found that the Lee catchment Flood Risk Assessment Management Study (CCC, 2014) noted that sections of the land where the Proposed Development is situated are within 1:1000 or 0.1% AEP Flood Extent for fluvial flooding.

The FRA also indicates that the Proposed Development is not within an area at high risk of pluvial flooding or groundwater flooding. However, the Proposed Development is partially located within the 0.5% and 0.1% AEP Flood Extent for tidal flood risks.

#### 3.3.3 Stormwater

The existing surface water currently drains into existing surface water drainage systems, some of which is transported for treatment at Shanbally Wastewater Treatment Plant (WwTP). The Shanbally WwTP has an estimated population equivalent (PE) capacity for 65,000 with the capability to expand to 80,000 PE.

There are also existing stormwater drainage systems throughout the Proposed Development and at Strand Road which drain into the Owenboy River and Owenboy Estuary. Rainwater falls on exposed surfaces and is drained to the lowest point i.e., the river. There is some natural settlement and filtration of suspended particles within the drainage network prior to discharge to the River and Estuary.

### 3.4 Noise and Disturbance

All streets within the Proposed Development are mapped as part of the CCC Agglomeration Strategic Noise Maps. Lden values along the streets within the Proposed Development predominately range from 50-55dB and 70-74dB on the Strategic Noise Maps. Lnight values range from 55-54dB throughout the majority of the Proposed Development to 60-64dB within the boundaries of the road corridor. Considering the above levels, the baseline noise associated with traffic on the nearby roads is considered to be already quite high.

There are a high number of sensitive receptors within the locality. These receptors are already exposed to urban air quality consistent with the level of development. Those in direct proximity to the Proposed

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<sup>14</sup> Geological Survey Ireland (GSI) Spatial Resources. Layer: Groundwater resources (Aquifers), Groundwater drinking water protection areas, Groundwater recharge and groundwater vulnerability. Available on <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228>. Accessed 10 October 2022.

<sup>15</sup> Flood Maps. Layer: past Flood Events. Available on <https://www.floodinfo.ie/map/floodmaps/>. Accessed 25 October 2022.

Development include the Owenabue Medical Centre and Carrigaline United AFC adjacent to Ballea Road. The Carrigaline Playground, St Mary's Church and the Church of our Lady and Saint John are adjacent to Church Road. The Kingdom Hall of Jehovah's Witnesses is adjacent to Kilmoney Road. Tots and Co Childcare is approximately 30m east of Rose Hill and the Carrigaline Community Centre is approximately 50m south of Church Road. There is also the Carrigaline Fire Station, Dunnes Stores and a Lidl which are all adjacent to Strand Road.



## 4. The Proposed Development

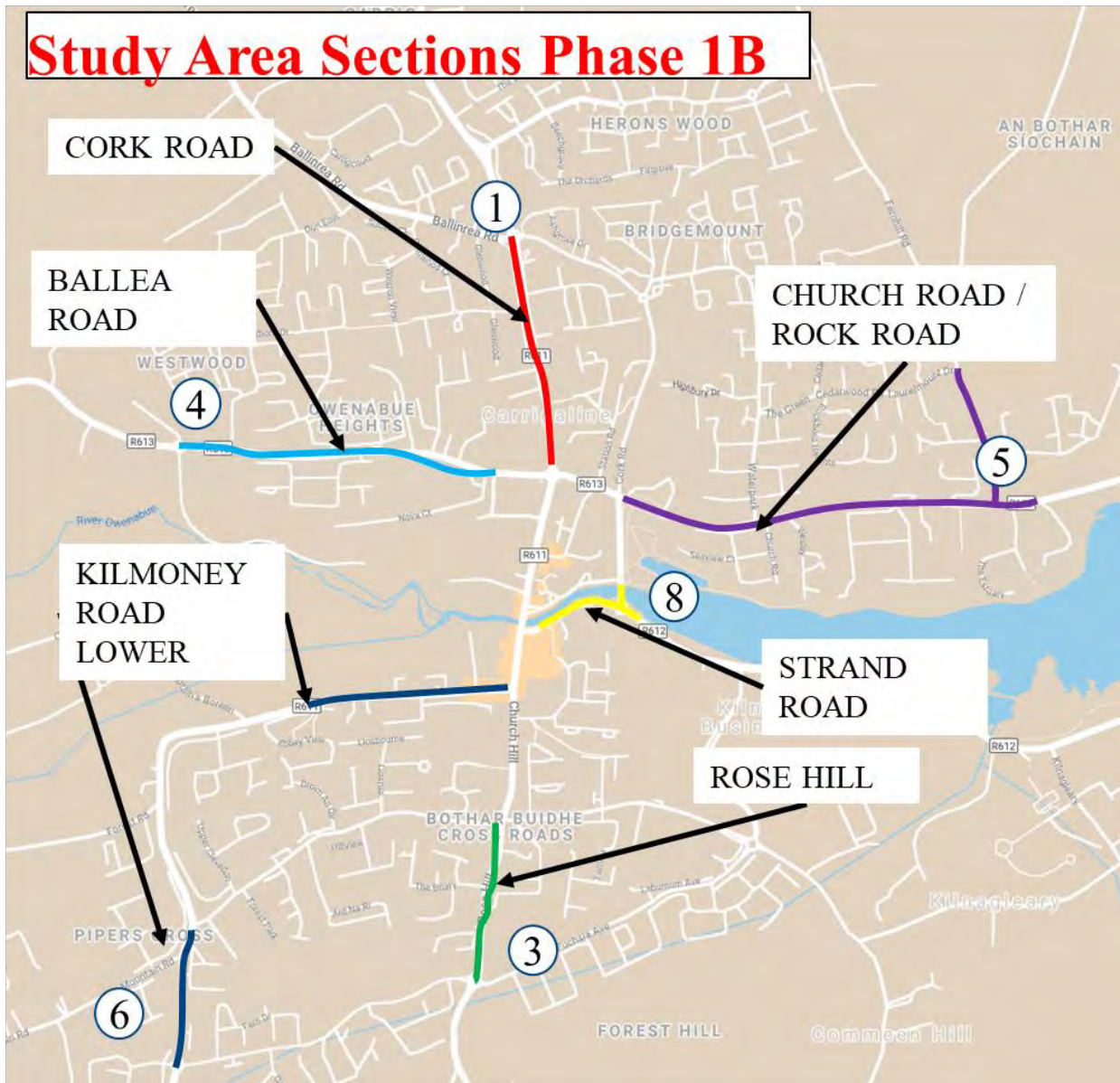
### 4.1 Summary of the proposed works

The Proposed Development is situated along six roads within the town of Carrigaline. The roads included within the Proposed Development include the following:

- Cork Road from the Ballinrea Road Roundabout at the northern edge south to the Ballea Road Roundabout;
- Rose Hill from the Kilmoney Road Upper Junction in the north to the Rose Hill Junction to the south;
- Ballea Road from the Mill Road Roundabout (to the west) to Cork Road Junction (in the east);
- Church Road from the Cork Road/R612 Junction (to the west) to the Junction with an unnamed road east of The Estuary. This section also extends from the Junction at Church Road and Rock Road in the south to the Junction of Fernhill Road and Laurelmount Drive in the north;
- Kilmoney Road Lower between the entrance to Dairygold Co Op Superstore and Abbey View, and between Castle Heights and Upper Kilmoney Road; and
- Strand Road from Dunnes Stores to the southern edge of Bóthar Guidel Bridge and east to Owenabue Sail Garden.

The description of the Proposed Development and associated upgrades at each of the above locations is described in Table 1 below.

**Table 1: Description of the Proposed Development**



**Area 1 – Along Cork Road**

**Area 1: Project Description**

Along Cork Road:

- Provision of a quiet street treatment<sup>16</sup> along Glenwood Estate;
- Provision of a segregated shared space on the western side of the road;
- Provision of entry treatment at the junction of Main Street / Ballea Road / Church Road and Cork Road; and
- Provision of raised entry treatments <sup>17</sup>along Cork Road.

**Area 2 – Along Rose Hill**

**Area 2: Project Description**

<sup>16</sup> A quiet street is using existing residential streets with low vehicle volumes as a cycle route by providing sign posts and road markings to indicate that it is a cycle route.

<sup>17</sup> A raised entry treatment consists of a speed table which is an elevated section built across the width of a side road to provide a level crossing surface for pedestrians or cyclists

<ul style="list-style-type: none"> <li>• Provision of a segregated cycle track southbound on Rose Hill;</li> <li>• Adjustment to roundabout to negate northbound traffic from travelling on to Rose Hill;</li> <li>• Provision of raised entry treatments along Rose Hill; and</li> <li>• Provision of a quiet street treatment along Whiteoaks / Clover Hill</li> </ul>
<b>Area 3 – Along Ballea Road</b>
<p><b>Area 3: Project Description</b></p> <ul style="list-style-type: none"> <li>• Provision of segregated cycle tracks on both sides of the road;</li> <li>• Introduction of formalised car parking outside Carrigaline AFC;</li> <li>• Provision of raised entry treatments along Ballea Road; and</li> <li>• Provision of continuous footpaths on both sides of road for entire Ballea Road section.</li> </ul>
<b>Area 4 – Along Church Road / Rock Road</b>
<p><b>Area 4: Project Description</b></p> <ul style="list-style-type: none"> <li>• Provision of segregated cycle tracks on both sides of the road for majority of route, including provision of shared space infrastructure at pinch points on Church Road;</li> <li>• Provision of continuous footpaths on both sides of road for Church Road section and majority of Rock Road section;</li> <li>• Introduction of formalised and reconfigured car parking outside Church and School on Church Road;</li> <li>• Provision of raised entry treatments along Church Road / Rock Road; and</li> <li>• Introduction of formalised parking along Kilmoney Road Lower.</li> </ul>
<b>Area 5 – Kilmoney Road Lower</b>
<p><b>Area 5 - Project Description</b></p> <ul style="list-style-type: none"> <li>• Provision of segregated cycle tracks on both sides of the road from the entrance to Dairygold Co Op Superstore to Abbey View and from Castle Heights to Upper Kilmoney Road, including provision of shared space infrastructure at pinch points on Kilmoney Road Lower;</li> <li>• Provision of continuous footpaths on both sides of road along Kilmoney Road Lower from the entrance to Dairygold Co Op Superstore to Abbey View and from Castle Heights to Upper Kilmoney Road;</li> <li>• Provision of raised entry treatments along Kilmoney Road Lower from the entrance to Dairygold Co Op Superstore to Abbey View and from Castle Heights to Upper Kilmoney Road; and</li> <li>• Provision of protected style junction on Kilmoney Road Lower / Pottery Road</li> </ul>
<b>Area 6 – Strand Road</b>
<p><b>Area 6 - Project Description</b></p> <ul style="list-style-type: none"> <li>• Provision of segregated cycle track on north side of the road for majority of route, including provision of shared space infrastructure upon entry on to Main Street; and</li> <li>• Provision of signalised junction at Owenabue Bridge / Strand Road junction.</li> </ul>

## 4.2 Construction

### 4.2.1 Construction Strategy

Construction works for the Proposed Development will include excavation of the street surfacing and sub-base, removal of existing surface materials and repaving of the street to include installation of new footpaths and cycle-tracks. This will also enable to installation of new utilities including additional drainage into the existing drainage network, street lighting and the planting of trees and native plants to enhance biodiversity.

The maximum depth of excavation will be 1,000mm below existing surface level, with the majority of the excavations approximately 500mm below the existing surface level. The detailed design stage will inform

the exact location of trees and structural supports (i.e., for street lighting). This will ensure that existing utilities or other underground structures are not impacted during the installation of the necessary foundations.

Barriers and hoardings will be installed to restrict access and to provide safety measures for workers and pedestrians. Excavation works will be carried out on a phased basis to limit the impact on the activity of the street. This phasing will be set out in detail in an agreed Construction & Environmental Management Plan (CEMP) and Traffic Management Plan (TMP), which will be prepared by the contractor prior to construction and implemented for the duration of the construction phase.

Access to the properties where construction works are proposed will be maintained at all times during the construction phase. This may require night works for final surfacing, utility installation in the vicinity of property entrances, etc. Details of this scheduling will be confirmed as part of the CEMP and TMP.

The scale of construction proposed will require the temporary closure of traffic lanes to facilitate a safe working area. However, to limit the impact, the road closure will occur in sections and one lane will always be available for traffic.

Existing bus routes will be maintained. However, some temporary diversions may need to be accommodated for part of the works. Temporary relocation of bus stops will be required to facilitate construction works at their existing locations.

Some localised dust, surface-water and noise emissions may be generated during the construction phase however these will not be significant due to the relatively short duration of the works (approximately six to eight months), the low level of construction vehicles/plant and construction staff required to carry out the works, the nature of the works proposed and the narrow construction footprint along trafficked roads.

It is envisaged that a construction compound which will operate as the main compound with associated office space. The exact location of the construction compound will be established during detailed design and will be agreed with CCC and restrictions on the location included in the CEMP. It is envisaged that this will be located away from the Owenboy river and the Cork Harbour Special Protection Area (SPA).

Noisier activities will be phased and planned to ensure that the nearest noise sensitive receptors do not experience significant disturbance.

Surface water run-off will enter the existing surface water drainage system or will be discharged via the stormwater network. The extent of the works (in an urbanised area) is relatively small, excavations are shallow (max 1,000mm), dewatering is not envisaged and any construction run-off that is generated will be minor. The type of construction works proposed are not complex in nature, they are well understood, therefore significant environmental emissions are not predicted.

The Contractor will be required to develop and implement the CEMP at the outset to ensure that environmental impacts are managed and kept to a minimum. The measures set will be formulated in accordance with current best practice and are not in place to mitigate against a LSE on a Natura 2000 site.

#### 4.2.2 Construction Sequence

It is expected that construction will commence in Quarter 3 2024, subject to planning approval. The expected duration of the construction works will be approximately six to eight months.

The type of construction works proposed are not complex and non-invasive in nature, they are well understood, therefore significant environmental emissions are not predicted.

#### 4.2.3 Demolition and Excavation

During the construction phase, the breaking of kerbs will be undertaken. Excavations are shallow (maximum of 1,000mm in depth), and dewatering is not envisaged. Aside from these activities, there are no demolition works required for the completion of the Proposed Development.

#### 4.2.4 Land-Use Requirements

The Proposed Development is located within an urbanised area which is characterised by residential, amenity and commercial uses. All land take required for the Proposed Development will be fulfilled by land within the Proposed Development boundary (see Appendix A). There are small sections of residential land that will

be purchased and converted for the Proposed Development and are indicated within the site boundaries. The site consists of hardstanding throughout the Proposed Development comprising road surface and footpath. As part of the construction phase, there will be some vegetation removal to accommodate the active travel infrastructure. However, there is no vegetation removal required to complete the works along Strand Road and no vegetation removal will take place within the boundaries of any Natura 2000 sites.

An Ecological Impact Assessment<sup>18</sup> was carried out by Arup and concluded that the habitats within the Proposed Development boundary include Flower Beds and Borders (BC4), Stone Walls and Other Stonework (BL1), Buildings and Artificial Surfaces (BL3), Tidal Rivers (CW2), Amenity Grassland (Improved) (GA2), Dry Meadows and Grassy Verges (GS2), Scattered Trees and Parklands (WD5), Hedgerow (WL1), Treeline (WL2), Riparian Woodland (WN5), and Ornamental Non Native Shrub (WS3) under Fossitt Habitat Classification<sup>19</sup>. No habitat loss will occur within any Natura 2000 site during the construction phase.

As mentioned in Section 4.2.1, it is envisaged that the construction compound and welfare facilities will be located in an area of existing hardstanding situated away from the Owenboy River on CCC lands.

#### 4.2.5 Lighting

Limited construction lighting will be required given the hours of work will be predominantly within daylight hours. However, where night working is required, artificial lighting will be required, and this will be agreed in advance with CCC. It is anticipated that any lighting required for night working will be managed in line with best practice methods to reduce the visual disturbance to residential receptors within the Proposed Development boundaries. These measures are not proposed to provide mitigation for any LSE on a Natura 2000 site.

#### 4.2.6 Noise and Vibration

Noise will be generated during the construction of the Proposed Development due to construction traffic, construction machinery, excavation works etc. There are several residential receptors located near or adjacent to the Proposed Development area, as mentioned in Section 3.4.

Noise emissions will be controlled by the implementation of best construction practice. Examples of measures to be employed include the selection of quiet plant, not leaving plant idling and maintenance of plant to minimise noise generation. A full list of measures will be proposed within the CEMP and implemented by the contractor in advance of the construction works. These measures are not proposed to provide mitigation for any LSE on a Natura 2000 site.

Significant rock breaking is not required, however where localised kerb breaking is required this will be managed appropriately. The main vibration source during the construction phase will be from the proposed excavation/milling works. A variety of potential vibration causing items of plant are likely to be used such as excavators, lifting equipment and dumper trucks.

Vibration effects will be controlled by the implementation of best construction practice. Examples of measures to be employed include the use of suitable vibration isolators in equipment mountings and ensuring that materials are lowered rather than dropped from heights. A full list of proposed measures will be proposed within the CEMP and implemented by the contractor in advance of the construction works. These measures are not proposed to provide mitigation for any LSE on a Natura 2000 site.

Construction operations as part of the Proposed Development, deliveries to site and construction shift times will be managed to ensure minimal disruption and noise. Working hours will be limited to the hours of 0700 – 1800 Monday to Friday and 0800-1400 on Saturday will apply to all works. Night-time and Sunday working may be required to facilitate street works that cannot be undertaken during daytime / evening conditions.

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<sup>18</sup> Arup (2023) *Carrigaline Transportation and Public Realm Enhancement Plan (TPREP) – Phase 1b: Ecological Impact Assessment*

<sup>19</sup> Fossitt (2000) *A Guide To Habitats In Ireland*.



## 4.2.7 Resources and Waste Management

### **Construction and Demolition (C&D) Waste**

Construction and Demolition (C&D) waste will be generated from the Proposed Development in the form of some asphalt and/or concrete.

### **Municipal Waste**

If a construction compound and welfare facilities are required, municipal waste will also be generated on site during the construction phase.

### **Water**

There may be some requirement for water usage at the site; for welfare facilities or indeed for dust prevention, in the event that there is any stockpiling of material on site. However, any water use on site is not expected to be significant and would not be outside what would usually be expected for works of this nature.

### **Underground Electrical Cables**

Services will be diverted within the road as required with minimum disturbance to sensitive receptors.

## 4.2.8 Water Management

Excavations are shallow (max 1,000mm) and dewatering is not envisaged. Any construction run-off that is generated will enter the existing drainage systems and will be diluted as it travels approximately 2.5km northeast before treatment at Shanbally WwTP or filtered through the stormwater drainage and ground prior to entering the Owenboy River. Best practice construction measures such as silt and sediment controls will be detailed with the CEMP and installed prior to the commencement of any construction works.

Although these best practice construction measures will involve the removal of contaminants and therefore may have the effect of reducing harmful effects of the Proposed Development, these measures have been incorporated into that Proposed Development as standard features, inherent the project and irrespective of any effect on the Cork Harbour SPA<sup>20</sup>. This includes:

### ***Construction Machinery***

No fuels will be stored on site. All fuels will be stored within a bunded compound within the construction compound. Best practice construction practices will be implemented throughout the duration of the construction phase.

### ***Construction Site Drainage***

Depth of any excavation works is shallow (maximum 1,000mm) so ground water infiltration is not expected. Wastewater collected from the Proposed Development will be discharged to Shanbally WwTP, with treated effluent discharged to Cork Lower Harbour, as is currently the normal practice. As noted in Section 3.3.3, there are existing stormwater drainage systems in place on Strand Road. However, where excess surface water is discharged via the stormwater drainage system, any remaining minimal pollutants will be adequately diluted and dispersed resulting in no significant effects.

In the unlikely event that groundwater is encountered during the excavations, this will be collected from the Proposed Development will be discharged via the existing stormwater drainage network.

## 4.2.9 Traffic Management

All roads within the Proposed Development are heavily trafficked roads and existing traffic will need to be facilitated during the works. As such, the Contractor will be required to develop and implement a detailed Construction Traffic Management Plan (CTMP).

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<sup>20</sup> As per the Court of Justice Ruling on the Irish High Court: Case C-721/21 Eco Advocacy, these measures are not considered mitigation measures (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62021CJ0721>. Accessed June, 2023)

## **4.3 Operation**

### **4.3.1 Air and Dust Management**

During the operational phase, there will be no negative impact to air quality as the proposed development is located on a pre-existing road. The Proposed Development will serve to extend cycling and pedestrian facilities that will not emit dust or reduce air quality. Such operation aims to reduce motorised vehicle use and thus reduce carbon emissions.

### **4.3.2 Land-Use Requirements**

As mentioned in Section 4.2.4, all land take required for the operational phase of the proposed development site will be fulfilled by land within the red-line boundary (Appendix A). The Proposed Development site will operate on already developed land and is surrounded by residential, commercial and amenity land. No habitat loss will occur within any Natura 2000 site during the operational phase.

### **4.3.3 Lighting**

The only structures which will be placed above ground as part of the proposed development will be a number of street columns. The proposed lighting will replicate the existing lighting in the area and these structures will be approx. 10m high and will not be increased above the existing baseline.

### **4.3.4 Noise Management**

The Proposed Development will improve cycling and pedestrian facilities to encourage active travel, potentially reducing noise from motorised vehicles.

### **4.3.5 Resources and Waste Management**

During the operational phase, there will be no change to waste or resources as a result of the Proposed Development. No impacts on land use or material assets are predicted during the operation phases of the proposed development.

### **4.3.6 Water Management**

Surface water run-off will be managed as is currently in place. Any surface run-off that is generated will be minor and will enter the existing stormwater drainage system and will be diluted before eventual discharge to the Owenabue River or Estuary. Due to the implementation of Sustainable Urban Drainage Systems (SuDS) including raingardens and tree pits throughout the Proposed Development (refer to the landscape drawings which were developed for the proposed development), it is anticipated there will be a decrease in surface water runoff during operation.

## 5. Ecological Overview

### 5.1 Introduction

Online species records provide, when considered in combination with other available data, including site walkovers by the environmental team on the 6<sup>th</sup> and 7<sup>th</sup> of July and 6<sup>th</sup> September 2023, an indication of the general ecological baseline for the site. Whilst most of the habitat and species listed in Section 5.3 and Section 5.4 will not be qualifying interests of relevant sites, records of their presence does provide a picture of the ecological baseline and therefore whether there are any pathways for effects on a site or any qualifying interests (QI<sup>21</sup>) or the conditions that support the conservation objectives of a site.

### 5.2 General Landscape

The landscape in the immediate vicinity of the Proposed Development is low-lying and well developed. However, within the Cork County Development Plan, the eastern boundaries of Carrigaline are designated as High Value Landscape as noted in Figure 3 below. Additionally, there is a Scenic Route (S58) which connects Carrigaline to Cross Haven and commences on Strand Road within the Proposed Development. The Owenboy River is situated adjacent to the Proposed Development which flows into the Owenboy Estuary.

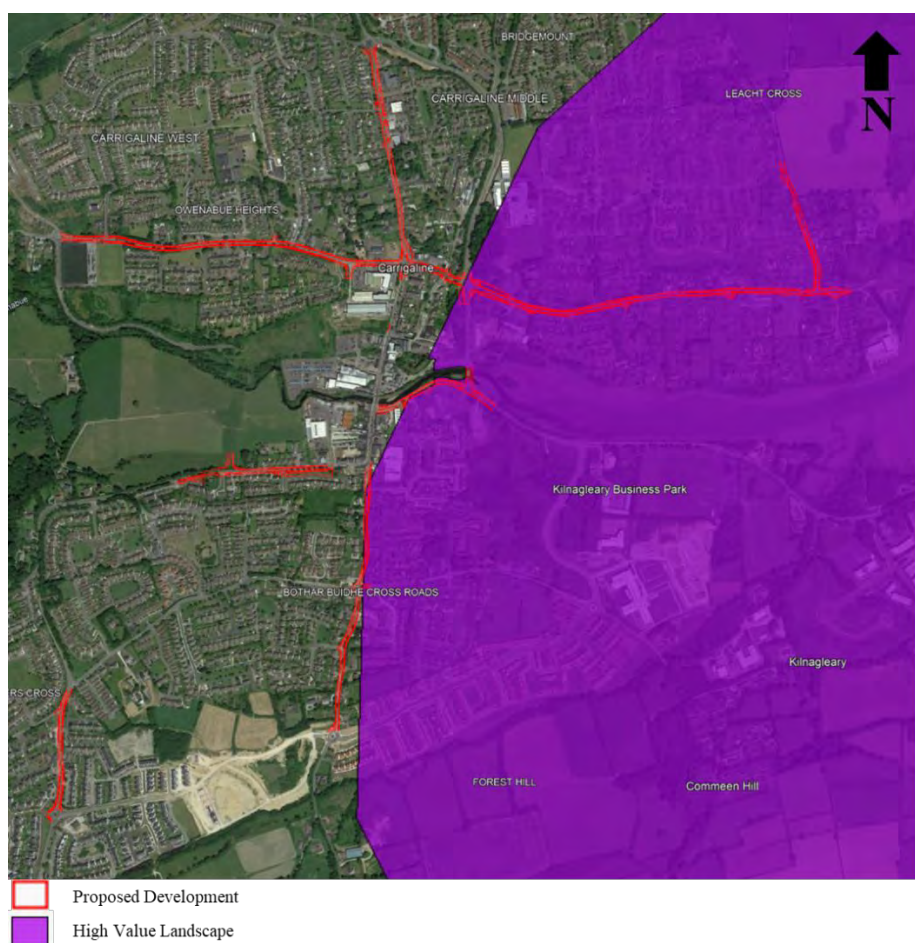


Figure 3: High Value Landscape (Source: Cork County Development Plan 2022-2028)

<sup>21</sup> A Qualifying Interest relates to the habitats and/or (non-bird) species for which an SAC or SPA is selected (source: OPR Practice Note PN01, Appropriate Assessment Screening for Development Management. Available at: <https://www.opr.ie/wp-content/uploads/2021/03/9729-Office-of-the-Planning-Regulator-Appropriate-Assessment-Screening-booklet-15.pdf>)

## 5.3 Habitats

The Proposed Development is surrounded by an urbanised environment within Carrigaline. The existing land within the Proposed Development predominantly comprises hardstanding with scattered immature trees, immediately surrounded by commercial developments and residential dwellings. The proposed works at Strand Road are situated approximately 15m to the Cork Harbour SPA.

As noted in Section 4.2.4, the habitats in proximity to the Proposed Development include Flower Beds and Borders (BC4), Stone Walls and Other Stonework (BL1), Buildings and Artificial Surfaces (BL3), Tidal Rivers (CW2), Amenity Grassland (Improved) (GA2), Dry Meadows and Grassy Verges (GS2), Scattered Trees and Parklands (WD5), Hedgerow (WL1), Treeline (WL2), Riparian Woodland (WN5), and Ornamental Non Native Shrub (WS3).

The Natura 2000 Network Viewer<sup>22</sup> was used to review Natura 2000 Habitat Types i.e., Annex 1 habitats that are QIs for Natura 2000 Sites in May 2023. There were no Annex 1 habitat types that are QIs for Natura 2000 Sites within the study area for the Proposed Development.

## 5.4 Species

Species records from the National Biodiversity Data Centre (NBDC) were reviewed in May 2023. Any records over ten years old were omitted from analysis as these were not considered to reflect the current species assemblage of the proposed development site and surrounding area.

The proposed development is located within three 2km grid square W76F, W76G, AND W76L using the NBDC Web Viewer<sup>23</sup>. These areas are shown in Figure 4. A report was generated to search for further records of mobile QI or SCI species, such species are listed in Table 7, Table 8 and Table 9 respectively. The full species list produced by NBDC can be found in Appendix C, and further details on the QI species in the vicinity of Strand Road are included in Section 6.3.1.

The Carrigaline UDF and Public Realm AA Screening report notes the following with regard to invasive species in the vicinity of the Strand Road section of the Proposed Development.

*“No invasive plant species listed on the 3rd Schedule of the Natural Habitats Regulations S.I (477/2011) were recorded within the red line boundary. However, an infestation of young Japanese Knotweed (Fallopia japonica) is present immediately adjacent to the eastern boundary in the verge along Bóthar Guidel road (‘Do not cut’ sign present). Other invasives present at the site include Butterfly bush (Buddleja davidii), Winter heliotrope (Petasites pyrenaicus), Cherry laurel (Prunus laurocerasus) and Traveller’s Joy (Clematis vitalba); Cherry laurel is classed as a High Impact invasive; Butterfly bush and Traveller’s Joy are classed as Medium Impact invasives while Winter heliotrope is a Low Impact invasive. All of the aforementioned species are noted to be prevalent within the red line boundary, along the riverbanks and within hedgerows. A single area of Medium Impact invasive, Himalayan Honeysuckle (Leycesteria formosa) was recorded on the southern bank of the Owenboy.” (p24)*

In addition, the report notes the following with regard to bird species:

*“At the western end of proposed works site at the bridge, a kingfisher (Alcedo atthis) was recorded, as where two foraging mute swans (Cygnus olor). A grey wagtail (Motacilla cinerea) was also seen at the water’s edge. Within the channel of the Owenboy within the red line boundary, other bird species identified include little egret (Egretta garzetta), mallard (Anas platyrhynchos), magpie (Pica pica), herring gull (Larus argentatus), grey heron (Ardea cinerea) and black headed gull (Larus ridibundus); the latter two of which are species of Qualifying Interest for Cork Harbour SPA.” (p26)*

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<sup>22</sup> European Commission (2022). Natura 2000 data and maps. Available at: [https://ec.europa.eu/environment/nature/natura2000/data/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/data/index_en.htm) (accessed 04/01/2023)

<sup>23</sup> [National Biodiversity Data Centre Web Viewer Map](#)

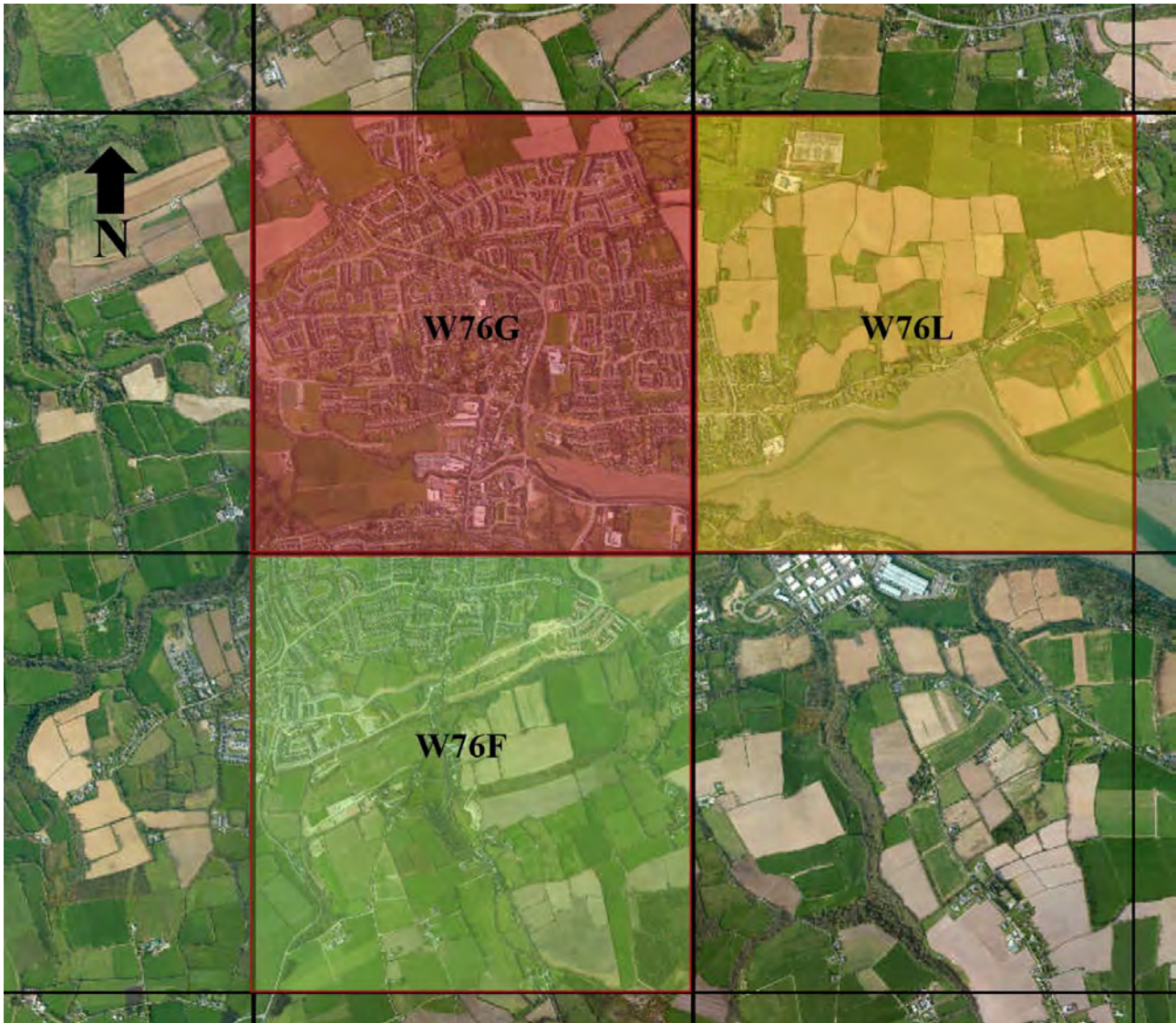


The swans are known to nest and breed locally, but no nest site was identified in the vicinity of the Proposed Development during the site visits.

The Owenabue River is tidal at this location. The substrate consists of mud and stone with more extensive areas of mudflats further downstream as the channel widens out. Within the study area the river is strongly tidal with fucoid species such as Spiral Wrack *Fucus spiralis* evident along the upper shoreline. Other species typical of marine/estuarine environments along the upper shoreline include Scurvy Grass *Cochlearia* sp., Red Fescue *Festuca rubra*, Sea Beet *Beta vulgaris subsp. maritima* and Sea Plantain *Plantago maritima*.

There will be no direct impact/habitat loss on this habitat as part of the proposed development.

Tidal river (CW3) have links with Annex I: Corresponds loosely to the annexed habitat, ‘estuaries (1130)’. This habitat is within the Cork Harbour SPA and of international importance.



**Figure 4: Grid Squares W76G, W76L and W76F (2km<sup>2</sup>)**

**Table 2: QIs and SCIs Species of Natura 2000 Sites within the Zone of Influence Recorded by the NBDC in Grid Square O1834**

Species	Grid reference	Date of most recent record
Black-headed Gull ( <i>Larus ridibundus</i> )	W76G	2017
	W76L	2017



Species	Grid reference	Date of most recent record
Eurasian Curlew ( <i>Numenius arquata</i> )	W76G	2019
	W76L	2016
Great Cormorant ( <i>Phalacrocorax carbo</i> )	W76G	2016
	W76L	2017
Black-tailed Godwit ( <i>Limosa limosa</i> )	W76L	2017
Common Shelduck ( <i>Tadorna tadorna</i> )	W76L	2016
Dunlin ( <i>Calidris alpina</i> )	W76L	2016
Eurasian Oystercatcher ( <i>Haematopus ostralegus</i> )	W76L	2017
Eurasian Teal ( <i>Anas crecca</i> )	W76L	2016
Little Egret ( <i>Egretta garzetta</i> )	W76L	2017
Northern Lapwing ( <i>Vanellus vanellus</i> )	W76L	2016

Japanese Knotweed (*Reynoutria japonica*) was recorded six times in W76L. The most recent record is dated from 2016. Japanese Knotweed is listed on the Third Schedule list of the European Communities (Birds and Natural Habitats) Regulations 2011<sup>24</sup>. A non-native species originating from Asia, the Japanese knotweed inhabits a wide range of habitat types including riverbanks, roadsides and waste ground. Japanese knotweed poses a threat to developments and agricultural land due to rapid growth and resiliency.

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<sup>24</sup> Irish Statutory Book. Third Schedule list of the European Communities (Birds and Natural Habitats) Regulations. Available on [S.I. No. 477/2011 - European Communities \(Birds and Natural Habitats\) Regulations 2011. \(irishstatutebook.ie\)](#) Accessed 23<sup>rd</sup> May 2023.

## 6. Identification of Natura 2000 Sites within the Potential Zone of Influence Associated with the Proposed Development

### 6.1 Identifying the Zone of Influence

This report started with an initial consideration of whether any Natura 2000 sites were within approximately 15km of the proposed development site. The distance from the site is precautionary and was determined by ecological and excavation effect features, such as species mobility, and distances at which air and hydrological pollution events could have a significant effect. There is no recommended zone of influence, and guidance from the National Parks and Wildlife Service (NPWS) recommends that the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative).

The zone of influence focusses on Natura 2000 sites with certain species where their foraging ranges, home ranges, nesting/roosting sites (and connections between same) may extend beyond the SAC/SPA site boundaries. It is independent of the absence of any hydrological or hydrogeological pathways between the Natura 2000 sites and site which could be subject to LSEs. These Natura 2000 sites would then have been considered in this report.

### 6.2 Source Pathway Receptor Model

Natura 2000 sites are only at risk from significant effects where a source-pathway-receptor link exists between a proposed development site and a Natura 2000 site(s). This can take the form of a direct impact (e.g., where the proposed development site and/or associated construction works are located within the boundary of the Natura 2000 site(s)) or an indirect impact where impacts outside of the Natura 2000 site(s) affect ecological receptors within (e.g., impacts to water quality which can affect riparian habitats at a distance from the impact source). Consideration is therefore given to the source-pathway-receptor linkage and associated risks between the proposed development site and Natura 2000 sites.

The identification of risk does not automatically mean that an effect will occur, nor that it will be significant. The identification of these risks means that there is a possibility of environmental or ecological damage occurring. The level and significance of the effect depends upon the nature of the consequence, likelihood of the risk and characteristics of the receptor.

The precautionary principle is applied for the purposes of screening to ensure that consideration and pre-emptive action is undertaken where there is a lack of scientific evidence.

Table 3 highlights a theoretical pathway between the Proposed Development and a Natura 2000 site, it is considered that the Zone of Influence should encompass those sites for which there is a hydrological link with the development site.

### 6.3 Natura 2000 Sites

A total of two Natura 2000 sites are considered within the zone of influence for the AA process, comprising one SAC and one SPA. In order to identify those sites that could be potentially affected, it was necessary to describe the European sites in the context of why they have been designated i.e., their QIs. These Natura 2000 sites which fall within 15km of the project are detailed in Table 3 and shown in Appendix A.2.

The simple presence of a Natura 2000 site within this area of search does not provide sufficient evidence to justify its scrutiny under subsequent stages of the AA as the characteristics of the site and the project with inevitably exert a strong influence on the outcome. The net result of Table 3 and benefit to the AA is that the list of issues and sites potentially affected can be reduced, making for a shorter and more focused Screening for AA than would otherwise be the case.

**Table 3: Natura 2000 Sites within 15km of the Proposed Development**

Site Name	QIs or SCIs	Approximate Distance from the Proposed Development at Nearest Point	Potential Pathway
Cork Harbour SPA	<p>Little Grebe (<i>Tachybaptus ruficollis</i>)</p> <p>Great Crested Grebe (<i>Podiceps cristatus</i>)</p> <p>Cormorant (<i>Phalacrocorax carbo</i>)</p> <p>Grey Heron (<i>Ardea cinerea</i>)</p> <p>Shelduck (<i>Tadorna tadorna</i>)</p> <p>Wigeon (<i>Anas penelope</i>)</p> <p>Teal (<i>Anas crecca</i>)</p> <p>Pintail (<i>Anas acuta</i>)</p> <p>Shoveler (<i>Anas clypeata</i>)</p> <p>Red-breasted Merganser (<i>Mergus serrator</i>)</p> <p>Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>Lapwing (<i>Vanellus vanellus</i>)</p> <p>Dunlin (<i>Calidris alpina</i>)</p> <p>Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>Curlew (<i>Numenius arquata</i>)</p> <p>Redshank (<i>Tringa totanus</i>)</p> <p>Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</p> <p>Common Gull (<i>Larus canus</i>)</p> <p>Lesser Black-backed Gull (<i>Larus fuscus</i>)</p> <p>Common Tern (<i>Sterna hirundo</i>)</p> <p>Wetland and Waterbirds</p>	Adjacent to the Proposed Development at Strand Road	<p>There is an indirect surface water pathway between the Proposed Development and the Cork Harbour SPA via existing stormwater drains. Surface water that falls on Strand Road has the potential to drain into the stormwater drainage system which is then discharged into the Owenboy Estuary from the proposed works on Strand Road.</p> <p>The section of the Owenboy Estuary from the proposed works at Strand Road is referred to as Subsite B (See Figure 5). The section of the estuary within Subsite B would be considered within the zone of influence for disturbance to bird species.</p> <p>Air may also be a pathway for pollutants to reach Cork Harbour due to the proximity of the Proposed Development.</p> <p>Any of the SCIs could be potentially impacted by the Proposed Development.</p>
Great Island Channel SAC	<p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Atlantic salt meadows</p>	Approximately 8km northeast of the Proposed Development	<p>There is a very weak theoretical hydrological connection between the Proposed Scheme and Great Island Channel SAC. The Owenabue River flows into Cork Harbour near Curraghbinny close to where Cork Harbour discharges to the Atlantic, approximately 10km south of the Great Island Channel SAC. The</p>

Site Name	QIs or SCIs	Approximate Distance from the Proposed Development at Nearest Point	Potential Pathway
			<p>flushing of the Cork Harbour to the Atlantic would mean that any discharges to the Owenabue would not be transported to the Great Island Channel SAC and therefore there is no aquatic pathway for likely significant effects.)</p> <p>Given the nature of the Proposed Development and the distance between Carrigaline and the Great Island Channel SAC, there are no aerial pathways for likely significant effects.</p>

Given the scale and the nature of the proposed development site and taking into consideration the distance to qualifying features of the Natura 2000 sites and the lack of ecological connectivity, the Great Island Channel SAC has been scoped out at this stage.

### 6.3.1 Cork Harbour SPA

The desk study in Section 5.4.1 returned ten records of QIs from Natura 2000 sites within the Zone of Influence which are all QIs for Cork Harbour SPA. The conservation objectives<sup>25</sup> for the site state that the favourable condition of the non-breeding waterbird Special Conservation Interest species listed for Cork Harbour SPA shall be maintained. This requires that waterbird populations and their wetland habitats are maintained at, or restored to, favourable conservation condition. This includes, as an integral part, the need to avoid deterioration of habitats and significant disturbance. Factors that can negatively impact this include habitat modification or anthropogenic disturbance.

A second conservation objective includes the maintenance of the favourable conservation condition of the wetland habitat at Cork Harbour SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. The report notes that 2,587ha of wetland habitat currently exist within the boundaries of the SPA<sup>26</sup>.

However, of the QI species listed in Table 2, the Black-headed Gull was recorded the most with 4 no. counts and the Eurasian Curlew was recorded most recently in 2019. Due to the existing level of disturbance at the border of the Cork Harbour SPA at Strand Road and the lack of quality habitat throughout the boundaries of the Proposed Development, it can be assumed that the species do not reside within the boundaries of the Proposed Development or utilise the habitats therein. However, to achieve an accurate reflection of how such birds use the Cork SPA and Owenboy Estuary, further data sources have been consulted.

Data sources reviewed include Cork Harbour SPA Conservation Objectives, Irish Wetland Bird Survey (I-WeBs) data, and the Natura Impact Statement published on behalf of the proposed Bóthar Guidel Pedestrian and Cycle Bridge planning application.

#### ***Irish Wetland Bird Survey (I-WeBS)***

Table 11 in Appendix D illustrates the average counts recorded on the I-WeBS for 0L403 Cork Harbour from 2011-2021. A variety of bird species were recorded with several red and amber listed species of Birds

<sup>25</sup> NPWP (2017) Wicklow Mountains SAC Conservation Objectives Series. Available on [https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO004030.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004030.pdf) Accessed 23 May 2023.

<sup>26</sup> Ibid

of Conservation Concern (BOCC). Largest count records included teal (BOCC amber listed), black-tailed godwit and dunlin (BOCC red list).

### ***Bóthar Guidel Pedestrian and Cycle Bridge, Carrigaline (NIS)***

The Natura Impact Statement (NIS), prepared by DixonBrosnan environmental consultants<sup>27</sup> provides bird data recorded for the Proposed Bóthar Guidel Pedestrian and Cycle Bridge, Carrigaline, Co. Cork which links directly to the Proposed Development at Strand Road. This report included the I-WeBS subsite 0L454 (Owenboy Estuary), Wintering Bird Survey Data 2020/2021 and Breeding Bird Survey 2020/2021.

The study area was divided into four subsites as shown in Figure 5. These subsites, which were divided based on their habitat types, are as follows:

- Subsite A. Upstream of the existing Bóthar Guidel Bridge. This includes a relatively narrow tidal river channel with little exposed mudflat.
- Subsite B. Immediately downstream of the existing Bóthar Guidel Bridge. The Owenabue River widens into estuarine habitat. This includes small/moderate areas of exposed mudflat at low tide along the northern and southern banks as well as a small island to the north of the subsite.
- Subsite C. Here the estuary widens with larger areas of mudflat at low tide. An area to the north of the island is also included here, which has a small freshwater outfall from the Carrigaline Skatepark ponds
- Subsite D. Carrigaline Skatepark and Pond. Includes large tidal pond, amenity grassland/parkland and skatepark.



**Figure 5: Wintering Bird Survey Subsites (Source: DixonBrosnan environmental consultants. Report in Support of Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Proposed Bóthar Guidel Pedestrian and Cycle Bridge, Carrigaline, Co. Cork on Behalf of Arup October 2021)**

Subsite B of the estuary in Figure 5 covers the area adjacent to Strand Road and the Cork Harbour SPA boundary. Section B has Wintering Bird Survey records of black-headed gull, cormorant, great black-backed gull, common gull, grey heron, herring gull, mallard, moorhen, mute swan, oystercatcher, redshank, snipe,

<sup>27</sup> Dixon Brosnan environmental consultants. *Report in Support of Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Proposed Bóthar Guidel Pedestrian and Cycle Bridge, Carrigaline, Co. Cork on Behalf of Arup October 2021*. Accessed 20.06.2023



dunlin, and little egret. Dunlin, grey heron, oystercatcher, redshank, common gull, black-headed gull, and cormorant are SCIs of Cork Harbour SPA. The Proposed Development will not extend to the boundaries of Subsite C.

The wintering bird surveys found: *‘The most valuable habitat for wintering birds in the study area is located in Subsite C with large areas of exposed mudflat at low tide and has the lowest level of disturbance within the site. Relatively few birds were recorded near Subsite B. The habitats here are less valuable for waterbirds with smaller areas of foraging habitat largely confined to the margins of the river. Disturbance from road traffic and walkers may be a factor in the distribution of birds in this area. However, it is noted that birds forage in close proximity to walkers to the north of the island, where a small patch of mudflat foraging habitat is located along the outfall from the pond and this may suggest that birds which forage within this section of the Owenabue Estuary are habituated to existing levels of human activity.’* (Source: DixonBrosnan 2021)

## 7. Consideration of Potential LSE

### 7.1 Introduction

This assessment considers whether the proposed development site is directly connected with or necessary to, the management of the Natura 2000 sites listed in Table 3 for nature conservation.

This section also assesses various aspects of the Proposed Development which could potentially cause LSE on a Natura 2000 site. A Natura 2000 site will only be at risk from LSE where the Source-Pathway-Receptor (S-P-R) link exists between the site and the Natura 2000 site.

### 7.2 LSE from Loss of Habitat

There will be no land take from any Natura 2000 site as part of the proposed development during both the construction and operation phase. Therefore, there is no viable pathway from source to receptor.

Land take will be from hard surfaces, hedgerows and treelines, and grassy verges within the planning boundaries of the Proposed Development. The habitats recorded within the site of the proposed development do not correspond to habitats listed on Annex I of the Habitats Directive. As mentioned in Section **Error! Reference source not found.**, habitat do not appear to be utilised by any QI or SCI species of the Natura 2000 sites within the zone of influence. There will be no habitat loss from any Natura 2000 site.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of habitat loss.**

### 7.3 LSE from Direct Emissions to Water

There is a risk, as in any construction site for a pollution event to occur resulting in contamination. In general, pollutants can include hydrocarbons from fuel, construction materials, silt and other harmful chemicals. Accidental spills, washing of vehicles and surface run-off from the site can all lead to these substances being transported in surface run-off. These can impact the aquatic elements by lowering water quality and ultimately lead to negative effects on QI habitat and SCI species.

However, due to the nature of the proposed works there will not be a resultant significant source of pollutants.

There will be a low intensity and frequency level of construction vehicles and plant machinery required to complete construction work. All construction machinery and fuel will also be stored in bunded areas within a construction compound.

Construction activities will be limited to a narrow footprint and of temporary duration (six to eight months). The proposed works to be carried out along Strand Road are not anticipated to last for longer than one month. The nature of the construction works will involve standard routine construction methodologies, that are not complex in nature. In addition, best practice construction practices will also be implemented throughout the construction phase by the appointed contractor which include measures to control surface water runoff. These measures are not included to protect any Natura 2000 site.

There is a theoretical hydrological connection between source and receptor. Surface water drainage from the proposed development will connect into existing drainage networks during the construction and operational phase with any excess rainfall flowing into the stormwater drainage system. Currently, pollutants in surface water are either diluted in the surface water network or surface runoff overflow will be discharged into the Owenboy River via the stormwater drainage system. At its nearest point, the Owenboy River flows adjacent to Strand Road. As a result, local storm water at this location will flow through the storm water network into the Owenboy River approximately 2m away.

As mentioned in Section 3.3.2, the baseline data shows the Owenboy River and Owenboy Estuary are both classified as 'Moderate' WFD status. Any pollutants arising from the construction would be minor and localised which would be diluted in the existing surface water network. However, where water is discharged via the stormwater drainage system, any remaining pollutants that have not been settled-out or filtered out will be adequately diluted and dispersed resulting in no significant effects.

As outlined in Section 4.2.3, the excavation work will occur to a depth of 1,000mm (maximum). Dewatering is not envisaged, therefore there is no requirement to pump ground water from the excavation or risk of groundwater connection between the proposed development and Natura 2000 sites.

Despite the nearest theoretical hydrological connection being from works at Strand Road to the Cork Harbour SPA, pollutants from construction are considered very unlikely to enter the Owenboy River via surface water run-off near the Bóthar Guidel Bridge. Even in the event that minimal pollutants entered the Owenboy River or Estuary, it is considered that these would not have likely significant effects on Cork Harbour SPA as pollutants as they would readily be diluted and dispersed across a wide area.

In addition, due to the nature of the proposed works, a significant source of pollutants is unlikely and consequently, significant impacts arising from emissions to water are not anticipated.

The operational phase does not envisage an increase of direct emissions to the surface water drainage. The implementation of the SuDS will serve to decrease the volume surface water runoff during the operational phase. As noted in Case C-712/21<sup>28</sup> (see Section 4.2.8), the design features relating to surface water runoff management during the operational phase are inherent within the Proposed Development and are not included as mitigation measures.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of direct emissions to surface water.**

#### **7.4 LSE from Direct Emissions to Air**

During construction there is potential for some localised emissions to air through construction dust and construction vehicles/machinery dust. However, the emission is not significant due to short duration (three to four months), the low level of construction vehicles/plant, nature of the works and the narrow construction footprint along a busy trafficked road. Any particulate matter arising from the construction phases is not expected to be in exceedance of environmental standards set out in relevant Directives<sup>29</sup>.

The employment of good construction management practices for the Proposed Development will serve to minimise the risk of dust emissions. Examples of measures to be employed include the spraying of exposed earthworks during dry periods, the provision of wheel washes and sweeping of roads. A full list of proposed measures will be proposed and implemented by the Contractor in the preparation of a CEMP in advance of the construction works. These measures are not included to protect any Natura 2000 site.

As outlined in Section 4.2.9, the Contractor will also be required to develop and implement a detailed CTMP at the outset to ensure that traffic disruption is kept to a minimum.

The operational phase will have no significant negative impact to air emissions. The proposed development aims to improve active travel facilities and reduce the use of motorised vehicles, potentially reducing vehicle emissions during operation.

Whilst there is a theoretical air pathway for pollutants to reach Cork Harbour SPA, there are no significant impacts to air quality anticipated from the construction phase of the Proposed Development. As a result, any air quality impacts are unlikely to occur to any receptor.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of direct emissions to the air.**

#### **7.5 LSE from Noise and Vibration Disturbance**

As mentioned in Section 4.2.6 noise will be generated during the construction of the proposed development due to construction traffic, construction machinery, excavation works etc.

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<sup>28</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62021CJ0721> (Accessed June 2023)

<sup>29</sup> 2008/50/EC and 2004/107/EC

The Institute of estuarine & Coastal Studies (IECS) University of Hull 2013 has developed a Waterbird Disturbance Mitigation Toolkit<sup>30</sup>. This toolkit provides information on the disturbance effects from a range of construction works to commonly encounters waterbirds. The toolkit summarises construction activities and waterbird disturbance response in Figure 6 below.

<b>Personnel and plant on mudflat:</b>	High (and should be restricted at all times)
<b>Third party on mudflat:</b>	High (but difficult to restrict)
<b>Personnel and plant on seaward toe and face:</b>	High to Moderate
<b>Intermittent plant and personnel on crest:</b>	High to Moderate
<b>Third party on bank:</b>	High to Moderate
<b>Irregular piling noise (above 70db):</b>	High to Moderate
<b>Long-term plant and personnel on crest:</b>	Moderate
<b>Regular piling noise (above 70db):</b>	Moderate
<b>Irregular noise (50db - 70db):</b>	Moderate
<b>Regular noise (50db - 70db):</b>	Moderate to Low
<b>Occasional movement of crane:</b>	Moderate to Low
<b>Noise below 50db:</b>	Low
<b>Long-term plant only on crest:</b>	Low
<b>Activity behind flood bank (inland):</b>	Low

**Figure 6: Generic Waterbird Response to Construction Activities - Standard Distance Decay Rate (Source: Institute of estuarine & Coastal Studies (IECS) University of Hull 2013)**

As mentioned in, Section 4.2.6 the main vibration source during the construction phase will be from the proposed excavation/milling works. A variety of potential vibration causing items of plant are likely to be used such as excavators, lifting equipment and dumper trucks. Vibration effects will be controlled by the implementation of best construction practice. Examples of measures to be employed include the use of suitable vibration isolators in equipment mountings and ensuring that materials are lowered rather than dropped from heights.

The worst-case scenario assumes that the majority of the noise from construction activity will promote a low noise level effect with the potential for moderate noise at times of drilling/excavation. This can be characterised as low-level disturbance stimuli as there could be moderate levels of disturbance that have a reduced impact due to habituation.

Different species will vary in their tolerance to noise disturbance. Section 6.3.1 refers to species identified as using estuary that covers the area adjacent to Strand Road and the Cork Harbour SPA boundary. The toolkit categorises species sensitivity to disturbance (high, moderate and low). The species identified in this area and that are SCIs of Cork Harbour SPA, there were both low, moderate and highly sensitive species (for example: redshank would be highly sensitive, oystercatcher moderate and dunlin low).

Despite the presence of a pathway noise from construction is not considered a source for LSE on QIs due to the following:

- QIs of Cork Harbour SPA that may utilise the estuary adjacent to Strand Road and the Cork Harbour SPA boundary are likely to be habituated to noise disturbance given the current noise baseline levels (see Section 3.4);
- The presence of suitable habitat downstream, further distant from the areas of work;
- Given the lack of habitat within the Proposed Development, QIs are unlikely to be present within the Proposed Development Site. Therefore, as noise travels it will attenuate to a lower level than at the source;

<sup>30</sup> Institute of Estuarine & Coastal Studies (IECS) University of Hull (2013) Waterbird Disturbance Mitigation Toolkit Informing Estuarine Planning & Construction Projects. Available on [Slide 1 \(divio-media.org\)](#). Accessed June 2023.

- There will be no demolition or piling noise. Construction noise is considered low level but any noisier activities will be phased and planned. This is not to prevent disturbance to any QI or SCI due to the separation distance from any designated sites, instead it is to ensure sensitive residential receptors do not experience significant construction disturbance;
- It is expected that there will be a low level of construction vehicles/plant and construction staff required, the nature of the works proposed and the narrow construction footprint along a busy trafficked road;
- Standard working hours of 0700 – 1800 Monday to Friday and 0800-1400 on Saturday will apply to all works. A limited amount of night-time and Sunday working may be required to facilitate street works that cannot be undertaken during daytime / evening conditions;
- The construction works proposed for Strand Road are short term, anticipated to be completed within a month; and
- A full list of proposed best practice measures will be proposed and implemented by the contractor in advance of the construction works. These measures are not included to protect any Natura 2000 site. Best practice construction measures taken to manage noise and vibration include;
  - ensuring maintenance of plant to minimise noise generation;
  - ensuring that materials are lowered rather than dropped from heights;
  - noisier activities will be phased and planned to ensure that the nearest noise sensitive receptors;
  - not leaving plant idling;
  - selection of quiet plant equipment; and
  - use of suitable vibration isolators in equipment mountings.

Therefore, it is unlikely for a LSE from noise disturbance to any QI species. In addition, at the time of writing, it is understood the phasing of works includes the undertaking of all construction works on Strand Road outside the wintering bird season (October-March).

The Proposed Development aims to facilitate an increased uptake of active travel alternatives throughout Carrigaline. As a result, during the operational phase, there will be an increased number of cyclists and pedestrians and a theoretical decrease in vehicular use. As a result, it is anticipated that there will be a positive effect on the baseline noise and vibration environment within the vicinity of the Proposed Development.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of noise and visual disturbance.**

## **7.6 LSE from Visual Disturbance and Lighting**

Lighting will be limited throughout the construction phase due to limited requirements for night-time working. New lighting is proposed as part of the operational phase of the proposed development. As mentioned in Section 4.3.3, the proposed lighting will replicate the existing lighting in the area. Therefore, this is not expected to light levels for the area. Species within the surrounding area will already be habituated to the baseline levels of light.

In addition, there are no Natura 2000 sites within the Zone of Influence that are designated for bat species, which are particularly sensitive to light disturbance.

Visual disturbances associated with construction include plant equipment, high vibration tools, lighting, or workers in high vis clothing. During operation, an increase in human activity and presence can be a visual disturbance for some species.

The works along Strand Road pose the most potential for visual disturbance during construction due to the proximity with Cork Harbour SPA. However, the works on Strand Road will be short in duration, estimated to last approximately one month. Work will occur during day-light hours with no night-time working. No significant increase in lighting will be required for day light working. In addition, the area is already exposed to high levels of disturbance through traffic, commercial activities and pedestrians. Other activities including the delivery of foodstuffs to Lidl and the presence of fire engines. Therefore, visual disturbances are not likely to occur as a result of the construction works at Strand Road.



In addition, Subsite B from the AA Screening & NIS Bóthar Guidel Pedestrian and Cycle Bridge (see Section 6.3.1) encompasses the section adjacent to the works at Strand Road. The Bóthar Guidel Bridge AA describes Subsite B as the widening of the Owenboy river into estuarine habitat. This includes small/moderate areas of exposed mudflat at low tide along the northern and southern banks as well as a small island to the north of the subsite. The presence of more suitable habitat downstream resulted in fewer birds recorded in Subsite B. The most valuable habitat for wintering birds is located in Subsite C (located approximately 100m downstream). High levels of human activity on Strand Road would suggest that bird species are already habituated to the existing level of human activity. Visual disturbance is already generated by traffic, pedestrians, fire and garda stations and frequent deliveries to the Lidl supermarket on Strand Road and it is considered that additional walkers and cyclists would not have a significant impact as a visual stimulus given this existing level of tolerance of relatively low numbers of birds.

Research evidence on visual disturbance to waterbirds from construction work by Cutts et al. (2013)<sup>31</sup> suggests typical response distances to visual disturbance impacts of 275m for Curlew, 250m for Redshank, 163m for Bar-tailed Godwit, 117m for Dunlin, and 110.5m for Oystercatchers. These are distances at which alert responses occur in birds that are not habituated to disturbance, and disturbance response distances are highly variable within species.

As noted above, the proposed works are short in duration and are not anticipated to impact visually on the existing baseline. In the longer term the low number of birds within 100m of the proposed development as well as the habituation to existing stimuli indicates that increased cyclists and walkers will not result in likely significant effects. In addition, whilst there were records of redshank, dunlin and oystercatchers within Subsite B adjacent to the Proposed Development at Strand Road, construction activities will not take place during the wintering bird season.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of light and visual disturbance.**

## 7.7 LSE from Invasive Species

New plans and projects have the potential to spread invasive species outside a works area, particularly in the vicinity of a watercourse. Disturbance of invasive species within the Proposed Development area could lead to the dispersal of scheduled invasive species either via machinery, materials, clothing or wild animals.

The desk study (see Section **Error! Reference source not found.**) returned records of Japanese knotweed within W76L. This is an invasive species listed under S.I 477/2011. More recent ecology surveys also identified other invasive species in the vicinity of Strand Road, as described in Section 5.4. The Proposed Development will not directly impact on any of the identified stands of invasive species, and there is no pathway from this section of the Proposed Development to the Cork Harbour SPA. As a matter of good practice, strict biosecurity measures will be implemented on site during construction.

**Therefore, there will be no LSE on the conservation objectives of any Natura 2000 site within the Zone of Influence as a result of invasive species.**

## 7.8 Cumulative Effects

Amharcóir Pleanála Planning Viewer<sup>32</sup>, CCC Planning Applications<sup>33</sup> and An Bord Pleanála's website<sup>34</sup> were consulted in May 2023 to identify other recently permitted (and under construction) developments in the area local to the Proposed Development. The projects considered of relevance are outlined in Table 4. In addition, the recently-advertised Part 8 proposal for the Carrigaline Village Public Realm and Waterfront

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<sup>31</sup> Cutts, N., Hemingway, K. and J Spencer (2013). Waterbird Disturbance Mitigation Toolkit Informing Estuarine Planning & Construction Projects. Institute of Estuarine & Coastal Studies (IECS) University of Hull.

<sup>32</sup> Amharcóir Pleanála Planning Viewer: <https://corkcoco.maps.arcgis.com/apps/webappviewer/index.html?id=03a3b83db76c46fd9b66178f8d407e0d> (accessed May 2023)

<sup>33</sup> CCC: [http://planning.corkeoco.ie/ePlan/searchresults/application\\_status](http://planning.corkeoco.ie/ePlan/searchresults/application_status) (accessed May 2023)

<sup>34</sup> ABP: <https://www.pleanala.ie/en-ie/home> (accessed May 2023)

River Park was reviewed, to identify the potential for any in-combination effects at both the construction phase and the post-construction phases of the Proposed Development.

**Table 4: Planning applications in proximity to the Proposed development with potential for in-combination effects**

PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
194642	Conditional	22/08/2019	Kilmoney and Carrigaline West, Carrigaline, Co. Cork	Adjacent to Ballea Road	Construction of a wastewater pumping station and foul rising main including emergency storage tank, welfare kiosk, control kiosk, services, lighting and all ancillary site works.	Construction activities to occur. There has been a Natura Impact Statement (NIS) prepared for this application <sup>35</sup> .  It concludes: <i>“With the implementation of recommended mitigation measures, it can be concluded, on the basis of objective scientific information, that the proposed plan, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site”</i>
217464	Conditional	19/05/2022	Carrigaline Town Centre, Carrigaline, Carrigaline West, Carrigaline, Co. Cork	Adjacent to Strand Road	The construction of a single storey discount food store (1,819sq/m gross floor area, 1,315 sq./m net floor area) including the sale of alcohol for consumption off the premises; loading bay; rooftop solar panels; external plant enclosure; bin store; trolley bay; signage; single storey café unit; single storey DRS unit; substation; plaza areas; sculpture; security barriers; 119 no. car parking spaces (including EV, disabled and parent and child spaces), of which 30 no. spaces will function as a public car park; new junction with the Carrigaline Western Relief Road (under construction) and internal access road; pedestrian and cycle connection to Main Street; and all associated boundary treatment, landscaping, drainage and site development works. A Natura Impact Statement will be submitted to the Planning Authority with the application. On a site at Carrigaline Town Centre,	There has been an AA Screening report and NIS prepared for this application <sup>36</sup> .  The NIS concludes: <i>“the project, alone or in-combination with other plans or projects, will not result in significant adverse effects to the integrity and conservation status of European Sites in view of the Conservation objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion”</i>

<sup>35</sup> Barry & Partners Consulting engineers. Southern Pumpstation Carrigaline WRP Natura Impact Statement.

<sup>36</sup> Doherty Environmental Consultants Ltd. Aldi Discount Food store, Carrigaline Natura Impact Statement

PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
					bound by Main Street and the Carrigaline Western Relief Road ( under construction ), Carrigaline West, Carrigaline, Co. Cork.	
214818	Application finalised – extension of duration to 156753	25/05/2021	Carrigaline West, Carrigaline, Co. Cork	Adjacent to Ballea Road	A residential development consisting of 72 no. two-storey houses and all ancillary car parking, landscaping and site development works. The Proposed Scheme development works include the construction of a pumping station, underground tank, welfare kiosk/building, control kiosk/building and fencing. Access to the Proposed Scheme will be via Ballea Roundabout and the existing road permitted by Planning Ref: 06/11262- Extension of duration of permission granted under Planning Reference: 15/6753	An AA Screening for 156753 concluded that there will be no risk of significant negative effects on any European site arising from the project.
ABP: JP04.312041	Conditional	13/07/2022	Carrigaline Co. Cork	Adjacent to Strand Road	<p>Section 177AE Planning Application for Bóthar Guidel Pedestrian and Cycle Bridge.</p> <p>The Scheme involves the construction of a dedicated pedestrian and cycle bridge on the eastern side and downstream of the existing Bóthar Guidel road bridge (R612) and includes the following:</p> <ul style="list-style-type: none"> <li>• construction of a single-span pedestrian and cycle bridge (effective width of 5m) over the Owenabue River downstream of the existing Bóthar Guidel Road Bridge in Carrigaline, Co. Cork</li> <li>• alterations to existing stone masonry wall on the southern approach to the bridge to facilitate the footpath and approach spans to the proposed bridge</li> <li>• new ducting and LED lighting</li> <li>• new 6m long slatted timber bench on the proposed pedestrian and cycle bridge</li> </ul>	<p>Construction activities are underway as of June 2023.</p> <p>There has been an AA Screening and NIS prepared for this application<sup>37</sup>.</p> <p>CCC have prepared a Habitats Directive Appropriate Assessment Screening Determination Report<sup>38</sup>. This concluded “<i>In accordance with Section 177S of the Planning and Development Act 2000 (as amended) and on the basis of the objective information provided in the report of Dixon Brosnan, it is concluded that the proposed project poses a risk of causing significant negative impact to the Cork Harbour Special Protection</i></p>

<sup>37</sup> Dixon Brosnan Environmental Consultants. Report in Support of Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) for Proposed Bóthar Guidel Pedestrian and Cycle Bridge, Carrigaline, Co. Cork. Available on <https://www.corkcoco.ie/sites/default/files/2021-11/aa-screening-and-nis.pdf> (Viewed June 2023)

<sup>38</sup> CCC Habitats Directive Appropriate Assessment Screening Determination Proposed Bóthar Guidel Pedestrian & Cycle Bridge, Carrigaline, Co. Cork. Available on <file:///global/europe/Cork/285000/285392-00/4.%20Internal/4-04%20Reports/4-04-02%20Consulting/Environment/AA/Incombination%20effects/B%C3%B3thar%20Guidel%20Pedestrian%20and%20Cycle%20Bridge/aa-determination.pdf> (Viewed June 2023)

PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
					<ul style="list-style-type: none"> <li>new uncontrolled pedestrian crossing across Bóthar Guidel road (R612)</li> <li>upgrading of existing footpaths at the tie in points at Crosshaven Road and Bóthar Guidel Road and a tie-in to the public amenity area on Owenabue River embankment</li> <li>all associated site development and landscaping works</li> </ul>	<p><i>Area. It is therefore determined that a Stage 2 Appropriate Assessment under Section 177V of the Planning and Development Act 2000 is required.”</i></p> <p>The NIS sets out mitigation measures to ensure that any effects on the conservation objectives of the Cork Harbour SPA will be avoided during the proposed development such that there will be no risk of adverse effects on the integrity of these European sites. The NIS concludes: <i>“following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted effects from the Proposed Scheme and with the implementation of the mitigation measures proposed, that the construction and operation of the Proposed Scheme will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects. There is no reasonable scientific doubt in relation to this conclusion. The competent authority will make the final determination in this regard”</i></p>



PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
Part 8 Application to CCC	Granted	26/09/2022	Carrigaline Middle	Adjacent to Cork Road, Strand Road and Kilmoney Road	<p>1. Main Street (R-611), Strand Road (L-2547), Lower Kilmoney Road (R-611), Ballea Road (R-613), Church Hill (L-2495), &amp; Cork Road (R-611) Public Realm Works comprising of the following:</p> <p>a) The provision of enhanced public realm to include new street furniture, improved public lighting, on-street spill out areas for bars and restaurants, removal of overhead utilities (where practical), provision of raised loading bays and set down parking bays, cycle parking, street trees and rain gardens along with other ancillary works;</p> <p>b) Enhanced pedestrian and cycle facilities at the junction of the Western Inner Relief Road/ Cork Road;</p> <p>c) Dedicated cycle facilities on both sides of Ballea Road between Cork Road and the Western Inner Relief Road;</p> <p>d) The removal of the existing roundabout at the junction of Cork Road/ Ballea Road (Heron's Roundabout) and its replacement with a signalised junction with dedicated pedestrian and cycle facilities;</p> <p>e) The provision of a southbound bus lane on Cork Road from its junction with Ballea Road to Old Waterpark replacing the existing southbound general traffic lane;</p> <p>f) The provision of a northbound dedicated cycle facility on Cork Road between Old Waterpark and the junction of Cork Road/ Ballea Road;</p> <p>g) Upgraded bus stop facilities and improved pedestrian facilities on Cork Road;</p> <p>h) The provision of a southbound bus lane on Main Street between Old Waterpark and Strand Road replacing the existing southbound general traffic lane;</p> <p>i) The provision of a pedestrian priority zone on Main Street between Strand Road and the entrance to the Super Valu, with the removal of some on-street parking bays;</p> <p>j) Upgraded bus stop facilities and wider pedestrian footpaths on Main Street;</p>	An AA Screening for Phase 1a of the Carrigaline TPREP was prepared. It concluded that <i>“the Proposed Scheme, individually or in-combination with other plans or projects, would not have likely significant effects on any European site, in view of sites’ conservation objectives”</i> . CCC confirmed the approach that an AA was not required.

PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
					<p>k) The removal of the existing traffic signals at the junction of Main Street/ Strand Road and their replacement with informal pedestrian crossings;</p> <p>l) The narrowing of the road carriageway approaching the junction of Main Street/ Strand Road and the widening of the pedestrian facilities;</p> <p>m) The provision of wider footpaths and enhanced public realm on both sides of Main Street between Lower Kilmoney Road and Strand Road and the removal of some on-street parking;</p> <p>n) The realignment of the Lower Kilmoney Road/ Main Street Junction to provide priority to traffic on Main Street - Church Hill;</p> <p>o) The widening and enhancement to the footpaths along Lower Kilmoney Road between the entrance to the Top oil Service station and Main Street;</p> <p>p) The provision of a new footpath on Church Hill between Mount Rivers and Ferney Road;</p> <p>q) The provision of a southbound cycle facility from Main Street to Ferney Road;</p> <p>r) The introduction of traffic management measures restricting access to Church Hill in the northbound direction from Upper Kilmoney Road, Ferney Road and Rose Hill;</p> <p>s) Upgrade and resurface the road carriageway along the section of Ballea Road, Cork Road, Main Street, Lower Kilmoney Road, Strand Road and Church Hill and install new road markings and street signs;</p> <p>t) All associated site development and landscaping works.</p> <p>2. Bridgemount to Herons Wood Pedestrian and Cycle Link comprising of the following:</p> <p>a) The provision of a shared pedestrian/cycle facility connecting Bridgemount (at the entrance to Heatherfield Lawn) to Heron's Wood (at The Walk);</p> <p>b) The shared pedestrian/ cycle facility follows the alignment of the old railway line to the rear of properties along Heatherfield Lawn and The Pines; and</p>	

PA No.	Decision type	Grant Date	Address	Approximate location to Proposed Development (km)	Description	Discussion for In-combination effects
					<p>c) The shared pedestrian/ cycle facility is routed within the existing amenity space in front of Firgrove Mews and The Walk, Heron's Wood.</p> <p>d) Provide new street lighting and enhanced landscaping along the shared pedestrian/ cycle facility.</p> <p>e) All associated site development and landscaping works.</p>	
Not applicable	Out for public consultation at the time of preparation of this report	Not yet available	The northern bank of the Owenabue River, Carrigaline Town	Adjacent	<p>The proposed development consists of environmental improvement works and enhancement of public realm and outdoor living to provide 'a civic identity to the new public realm strongly connected with the water and the river ecology'.</p> <p>New waterfront public space (reclaimed from the existing car park) will encourage community activities and connection to the water.</p> <p>Enhanced public space to include inclusive street furniture (universal), waterfront seating, rain gardens, trees and shrubs and a covered pavilion.</p> <p>High quality urban design and material finishes are proposed incl. Biodiversity/Pollinator Planting and Sustainable Urban Drainage systems.</p> <p>Enhanced pedestrian connectivity and accessibility.</p> <p>A multifunctional Public Pavilion will provide a sheltered performance stage for community events, connected to the waterfront.</p> <p>Upgrade of public lighting and other ancillary works.</p> <p>Additional carparking near the Bóthar Guidel / Lidl Roundabout to replace parking reclaimed from the existing Owenboy car park.</p> <p>Alteration of entrance to the carpark near the Bóthar Guidel / Lidl Roundabout to increase pedestrian safety.</p>	<p>This project is predicted to have a construction phase programme of six to 12 months. The Proposed Development in the immediate vicinity of this project will have a construction duration of less than a month, and the works are currently scheduled to be carried out outside of the wintering bird season. The works will also be restricted to the roadside of the existing wall at Strand Road. The limited duration, scale and nature of the works mean that there is no potential for in-combination effects arising from the concurrent construction of the two projects. In operation, the potential for disturbance arising from the use of both projects will be similar or less significant than that which currently pertains, with likely long-term reductions in car traffic in the vicinity of the SPA.</p>

As part of the Ballincollig Carrigaline Municipal District Local Area Plan<sup>39</sup> plans to update public realm for the town include the introduction of new public spaces to accommodate a number of community functions including a market space, festival space, meeting place, seating area. One of these areas include should be the site of the existing car park adjoining the Main Street and the Owenboy River. Due to the location of this site and the proximity to the river there is the potential for in-combination effects to occur. However, an incomplete planning application was submitted and at the time of writing, no complete application has been completed. Once this project has a developed design and is submitted for planning through whatever appropriate mechanism, an AA Screening will have to take place, and this will take into account the potential for in-combination effects arising from this development.

Given the scale and nature of the Proposed Development, it is considered that there is no possibility for likely significant effects arising from in-combination effects on Cork Harbour SPA.

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<sup>39</sup> CCC, *Ballincollig Carrigaline Municipal District Local Area Plan (2017) Volume 2 Environmental Reports on Proposed Amendments, Proposed Amendments to the Draft Plan*, <http://corklocalareaplans.com/wp-content/uploads/2017/08/Ballincollig-Carrigaline-MD-LAP.pdf> (Viewed May 2023)

## 7.9 Summary of Effects

A summary of assessment of LSE is provided in Table 5. Identification of any potential direct and indirect impacts are considered in the context of their potential to cause LSE on the conservation objectives of Natura 2000 sites with consideration of the information provided in Table 6.

**Table 5: Likely Significant Effects Summary**

Impacts:	Significance of impacts (duration/magnitude/etc)
<p><b>Construction Phase e.g.,</b></p> <p>Access to site</p> <p>Dust, noise, vibration</p> <p>Impact on groundwater/dewatering</p> <p>Lighting disturbance</p> <p>Pests or invasive species</p> <p>Storage of excavated/construction materials</p> <p>Surface water runoff from soil excavation/infill/landscaping (including borrow pits)</p> <p>Visual disturbance</p> <p>Vegetation disturbance</p>	<p>The only effects considered during construction stage are loss of habitat, noise disturbance, visual disturbance, surface water runoff and spread of invasives.</p> <p>There will be no land take from Natura 2000 sites or suitable habitat that supports SCIs or QIs. There will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of habitat loss or fragmentation during construction.</p> <p>There is a theoretical pathway for pollutants in surface water to impact on SCIs. In the event that minimal pollutants entered the Owenboy River or Estuary, it is considered that these would not have likely significant effects on Cork Harbour SPA as pollutants as they would readily be diluted and dispersed across a wide area. In addition, due to the nature of the proposed works, a significant source of pollutants is unlikely. Therefore, there will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of surface water run-off during construction.</p> <p>SCI species appear to use habitat in the mudflats near the Proposed Development at Strand Road. SCI species are habituated to high levels of visual disturbance. There will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of visual disturbance during construction.</p> <p>SCI species appear to use habitat in the mudflats near the Proposed Development at Strand Road. SCI species are habituated to high levels of noise disturbance. There will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of noise disturbance during construction.</p> <p>There are no invasive species of concern recorded on site. There will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of the spread of invasive species during construction.</p> <p><b>The construction phase of the Proposed Development will not result in likely significant effects on any Natura 2000 sites.</b></p>
<p><b>Operational phase e.g.,</b></p> <p>Changes to water/groundwater due to drainage or abstraction</p> <p>Direct emission to air and water</p> <p>Lighting disturbance</p> <p>Noise/vibration</p> <p>Physical presence of structures (e.g., collision risks)</p> <p>Potential for accidents or incidents</p> <p>Presence of people, vehicles and activities</p> <p>Surface water runoff containing contaminant or sediment</p>	<p>The only effects considered during the operational stage are lighting disturbance, noise and vibration, presence of people, vehicles and activities, and surface water runoff containing contaminant or sediment.</p> <p>SCI species are habituated to high levels of visual disturbance and are noted to prefer more suitable habitats to the east of the Proposed Development. Lighting is proposed along Strand Road. However, there are no light sensitive QIs (i.e., bats) or SCIs listed by the Natura 2000 sites within proximity to Strand Road. There will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of visual disturbance during operation.</p>



Impacts:	Significance of impacts (duration/magnitude/etc)
	<p>SCI species are habituated to high levels of noise and vibration and the presence of people and are noted to prefer more suitable habitats to the east of the Proposed Development. An objective of the Proposed Development is to facilitate a greater uptake of active travel alternatives. As a result, there is the potential for a reduction of vehicles throughout the Proposed Development site which represents a slight positive impact to noise and vibration. Therefore, there will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of noise and vibration.</p> <p>SCI species are habituated to the presence of people along Strand Road and are noted to prefer more suitable habitats to the east of the Proposed Development. It is unlikely that there will be a significant change in the volume of people along Strand Road as a result of the Proposed Development. Therefore, there will be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island Channel SAC as a result of the presence of people, vehicles or activities.</p> <p>Surface water will use the existing drainage network along Strand Road and incorporates the provision of addition SuDS to further control any surface water run-off. The Proposed Development will reduce the number of cars and pollutants entering the surface water system. There will therefore be no likely significant effect on the conservation objectives of the Cork Harbour SPA or Great Island SAC as a result of surface water run-off during operation.</p> <p><b>The operational phase will not result in likely significant effects on any Natura 2000 sites.</b></p>
In-combination/Other	<p><b>Given the scale, nature and location of the Proposed Development, it is considered that there is no potential for in-combination likely significant effects on any Natura 2000 site.</b></p>

## 8. Assessment of Significance

Whilst best practice construction methods will be used during construction, these are not required to avoid or reduce any effects on a European site. These measures are not relied upon for the formulation of a conclusion of no likely significant effects on any European sites.

Further, the following information has been relied upon to determine whether significant effects are likely:

- All project activity will take place within the site works boundary;
- No works will take place within any Natura 2000 site;
- No material or spoil from the works will be deposited in any Natura 2000 site;
- There will be no direct or indirect impacts on the habitats or species of any Natura 2000 sites;
- There will be no loss of Natura 2000 site habitat area, no fragmentation of the habitats of Natura 2000 sites, no disturbance to the qualifying species of the Natura 2000 sites, no effects on population density of these species, no effects on water resources and no effects on water quality of the Natura 2000 sites;
- There will be no significant emissions to air, water or soil during construction or operation; and
- There will be no significant noise emissions during the construction or operational phase.

**Table 6: Significant Impacts Checklist**

Does the project have the potential to	Yes or No
reduce the area of key habitats?	No
reduce the population of key species?	No
change the balance between key species?	No
reduce diversity of the site?	No
result in disturbance that could affect population size or density or the balance between key species?	No
result in fragmentation?	No
result in loss or reduction of key features (e.g., tree cover, tidal exposure, annual flooding)?	No
cause delays in progress towards achieving the conservation objectives of the site?	No
interrupt progress towards achieving the conservation objectives of the site?	No
disrupt those factors that help to maintain the favourable conditions of the site?	No
interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	No
cause changes to the vital defining aspects (e.g., nutrient balance) that determine how the site functions as a habitat or ecosystem?	No
change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	No

Does the project have the potential to	Yes or No
interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	No

## 9. Screening Statement and Conclusions

The aims of this report were as follows:

- provide information on and assess the potential for the Proposed Development site to significantly impact on Natura 2000 sites (also known as European sites).
- determine whether the Proposed Development site is directly connected with, or necessary to the conservation management of any Natura 2000 sites; and
- determine whether the Proposed Development, alone or in combination with other projects, is likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

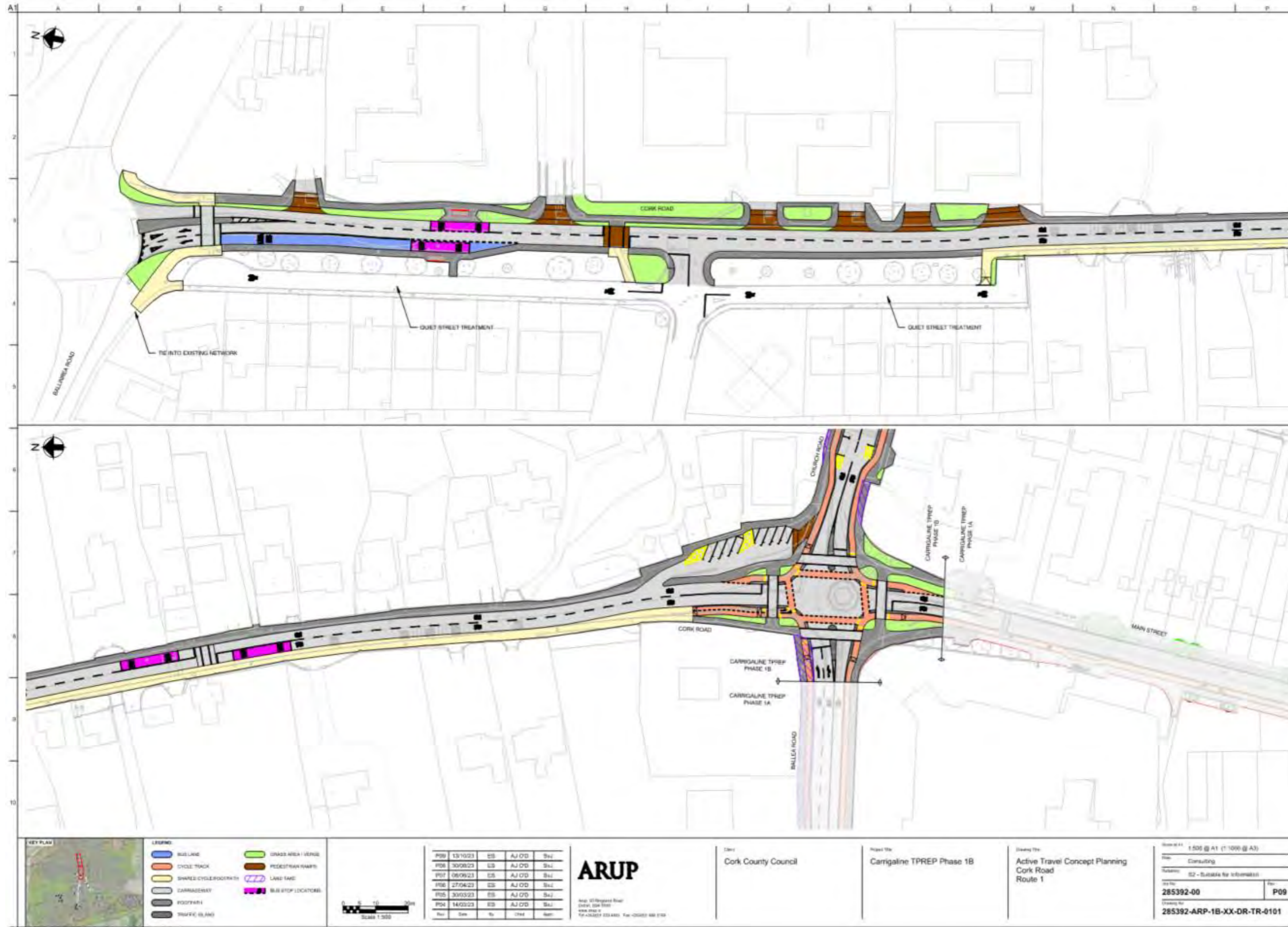
It has been objectively concluded by Arup that:

- there is no potential for the Proposed Development site to significantly impact on Natura 2000 sites.
- the Proposed Development site is not directly connected with, or necessary to the conservation management of any Natura 2000 sites; and
- the Proposed Development, alone or in combination with other projects, is not likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

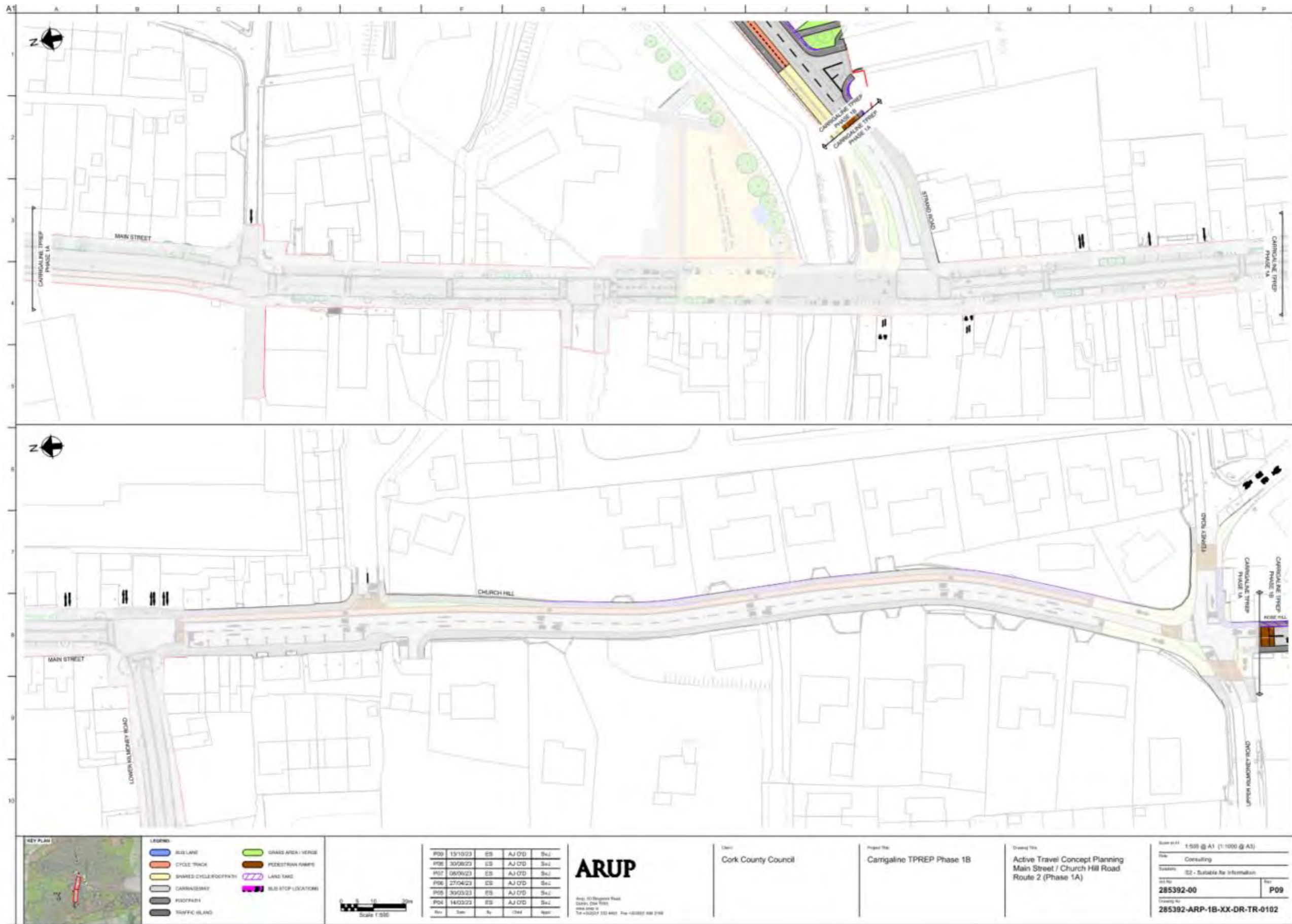
It has been determined by Arup that it is possible to rule out LSE on any Natura 2000 sites. It is the view of Arup that it is not necessary to undertake any further stage of the Appropriate Assessment process.

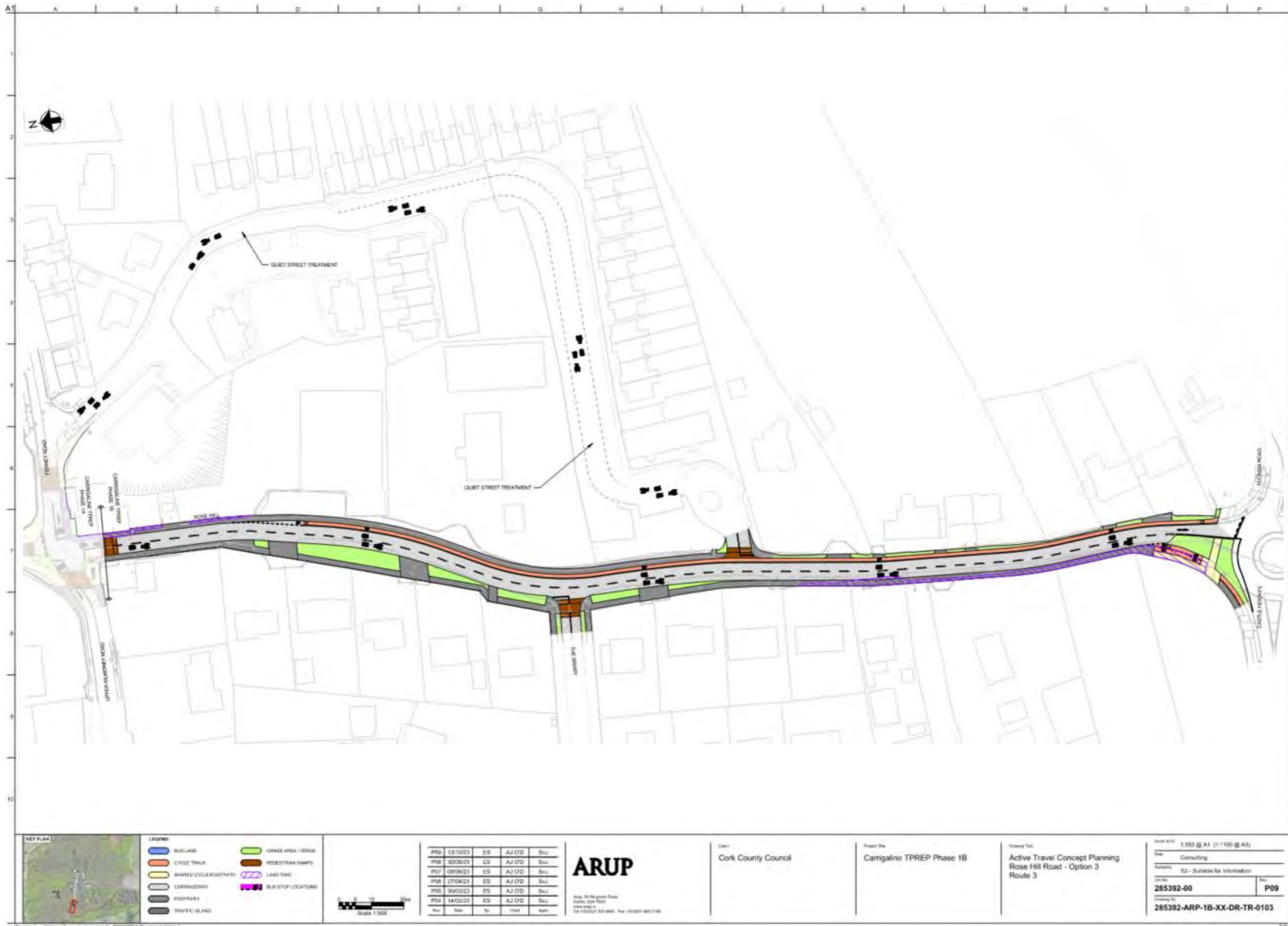
# Appendix A: Maps and Drawings

## A.1 Carrigaline TPREP Phase 1B Drawings









**LEGEND**

	BUS LANE		GRASS AREA / VERGE
	CYCLE TRACK		PEDESTRIAN RAMP
	SHARED CYCLE/FOOTPATH		LAND TAKE
	CARRIAGEWAY		BUS STOP LOCATOR
	FOOTPATH		
	TRAFFIC ISLAND		



PS#	Date	By	Check	Appr.
PS0	13/10/23	CS	AJ O'D	SAJ
PS6	30/09/23	CS	AJ O'D	SAJ
PS7	09/06/23	CS	AJ O'D	SAJ
PS8	27/04/23	CS	AJ O'D	SAJ
PS5	30/03/23	PS	AJ O'D	SAJ
PS4	14/03/23	CS	AJ O'D	SAJ



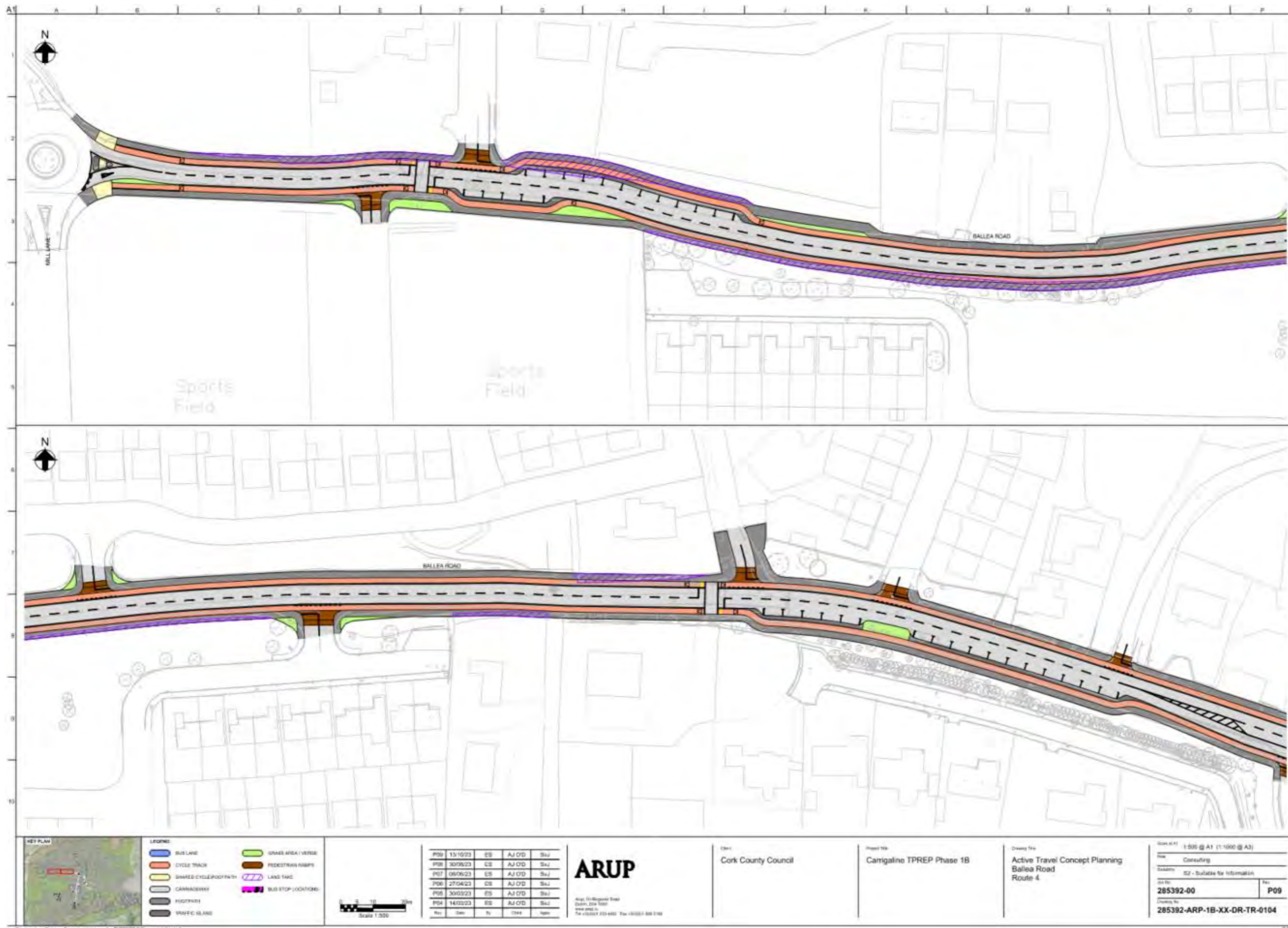
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Project Site: Carrigaline TPREP Phase 1B

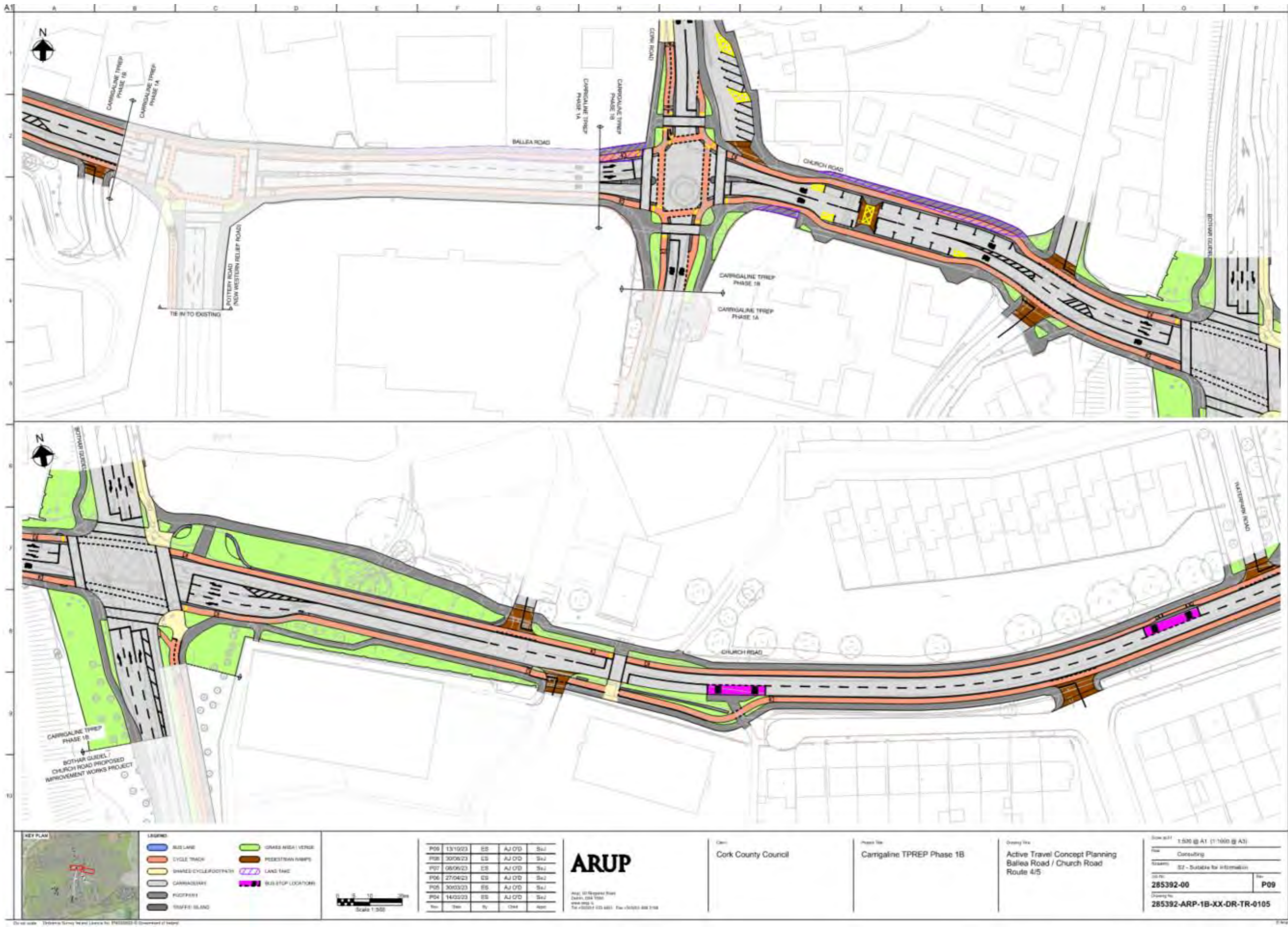
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Rose Hill Road - Option 3  
Route 3

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Role: Consulting	
Author: CS - Suitable for Information	
Job No: 285392-00	Rev: P09
Drawing No: 285392-ARP-1B-XX-DR-TR-0103	









**LEGEND**

BUS LANE	GRASS AREA / VERGE
CYCLE TRACK	PEDESTRIAN RAMPS
SHARED CYCLE/FOOTPATH	LAND TAKE
CARRAIGSARY	BUS STOP LOCATION
FUGGIFY	
TRAFFIC ISLAND	



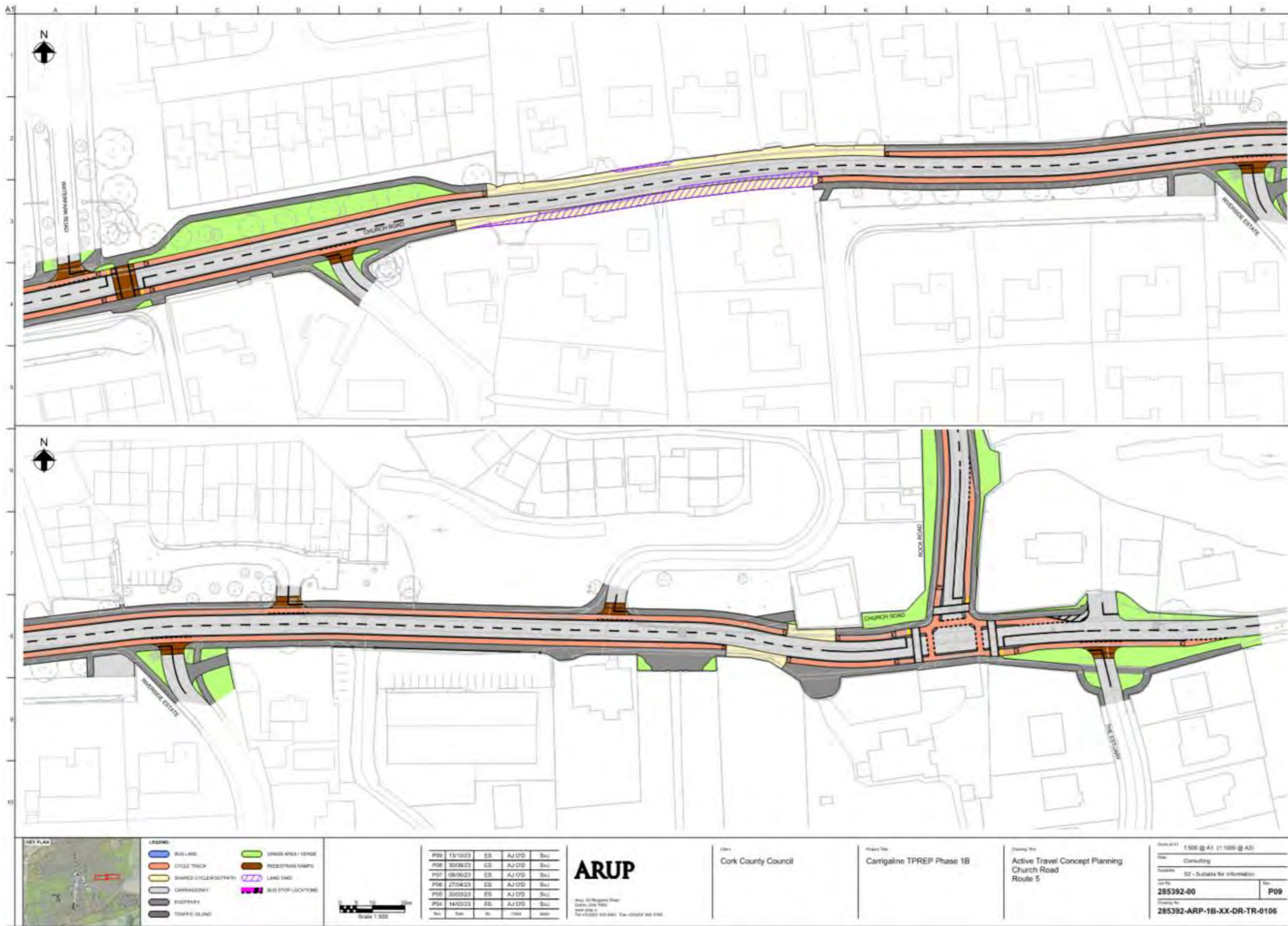
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P05	30/03/23	ES	AJ O'D	SeJ
P04	14/02/23	ES	AJ O'D	SeJ
Rev	Rev	By	Chkd	Appr



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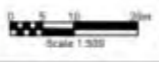
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Doc No: 285392-00	Rev: P09
Drawing No: 285392-ARP-1B-XX-DR-TR-0105	





**LEGEND**

BUS LANE	SPACES AREA / VERGE
CYCLE TRACK	PEDESTRIAN RAMPS
SHARED CYCLE/FOOTPATH	LAND TAKE
CARRAGEWAY	BUS STOP LOCATIONS
FOOTPATH	
TROTTING ISLAND	



POB	NO	DATE	BY	APP
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P08	30/08/23	ES	AJ DTD	Skj
P07	08/06/23	ES	AJ DTD	Skj
P06	27/04/23	ES	AJ DTD	Skj
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No.	Date	By	Appr	Appr



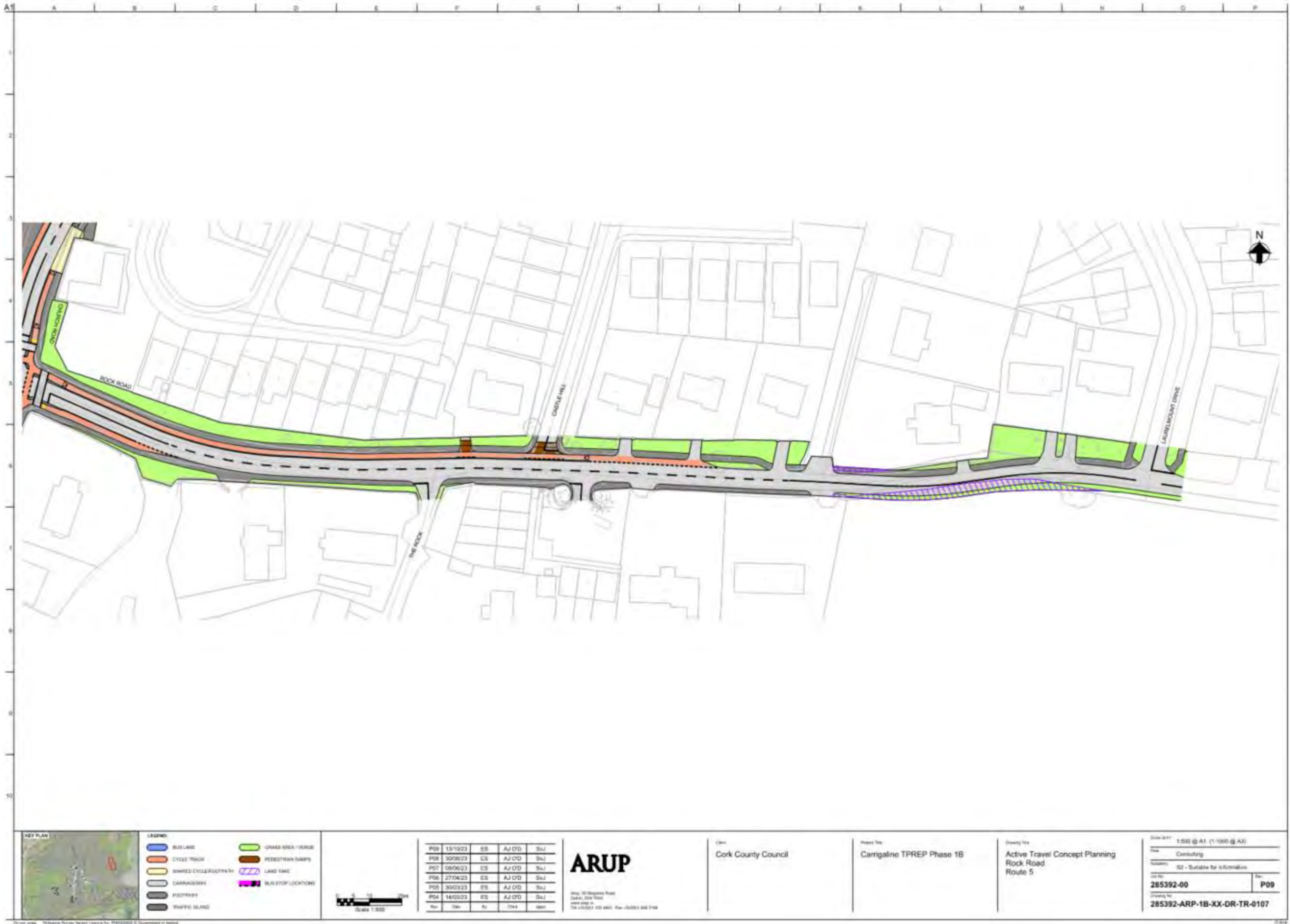
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Project Name: Carrigaline TPREP Phase 1B

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Job No.	285392-00
Drawing No.	285392-ARP-1B-XX-DR-TR-0106
	P09





**LEGEND:**

BUS LANE	QUAYS AREA / VERGE
CYCLE TRACK	PEDESTRIAN SANCTUARY
SHARED CYCLE/FOOTPATH	LAND FANE
CARRIAGEWAY	BUS STOP LOCATION
FOOTPATH	
RAFFLE ISLAND	



P03	13/10/23	CS	AJ	JD	SLJ
P08	30/08/23	CS	AJ	JD	SLJ
P07	08/06/23	CS	AJ	JD	SLJ
P06	27/04/23	CS	AJ	JD	SLJ
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Rev		Rev	17/4		00/01

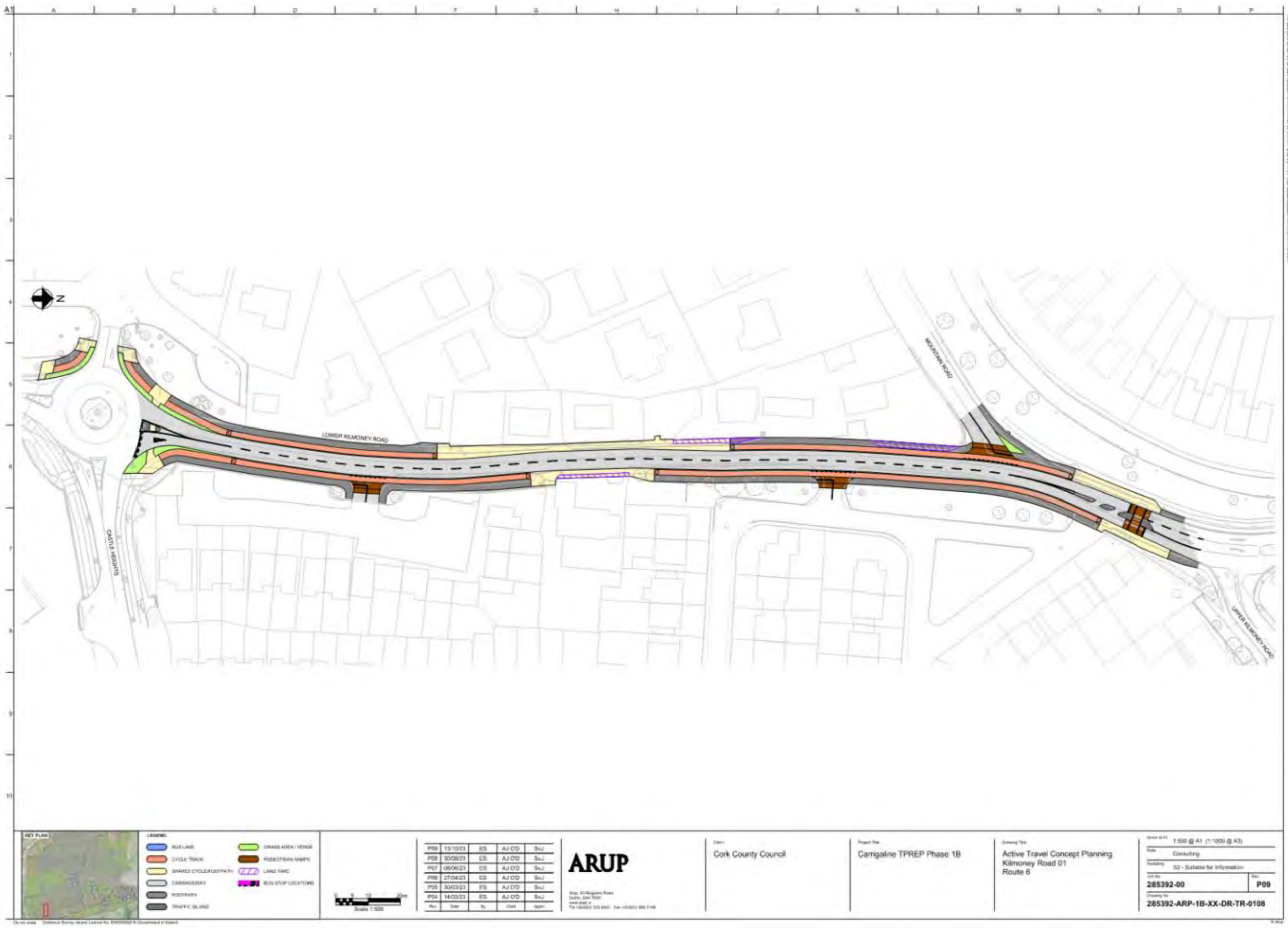


Client: Cork County Council

Project Name: Carrigaline TPREP Phase 1B

Drawing Title: Active Travel Concept Planning  
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Route 5

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Drawing No: 285392-ARP-1B-XX-DR-TR-0107	



**LEGEND**

BUS LANE	STORAGE AREA / VERGE
CYCLE TRACK	PEDESTRIAN PATHS
SHARED CYCLIST/FOOTPATH	LAND FENCE
CARRAIGEWAY	BUS STOP LOCATIONS
FOOTPATH	
TRAFFIC ISLAND	



Rev	Date	By	Check	Appr
PS9	13/10/23	ES	AJ OD	SkJ
PS8	30/08/23	ES	AJ OD	SkJ
PS7	06/06/23	ES	AJ OD	SkJ
PS6	27/04/23	ES	AJ OD	SkJ
PS5	30/03/23	ES	AJ OD	SkJ
PS4	14/03/23	ES	AJ OD	SkJ

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Client: Cork County Council

Project Title: Carrigaline TPREP Phase 1B

Drawing Title: Active Travel Concept Planning  
 Kilmoney Road 01  
 Route 6

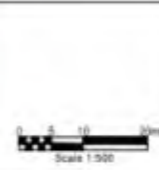
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**LEGEND**

BUS LANE	GRASS AREA / VERGE
CYCLE TRACK	PEDESTRIAN RAMPS
SHARED CYCLE/FOOTPATH	LAND TAKE
CAR/BIKEWAY	BUS STOP LOCATION
FOOTPATH	
TRAFFIC ISLAND	



Rev	Date	By	Check	Appr
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**ARUP**

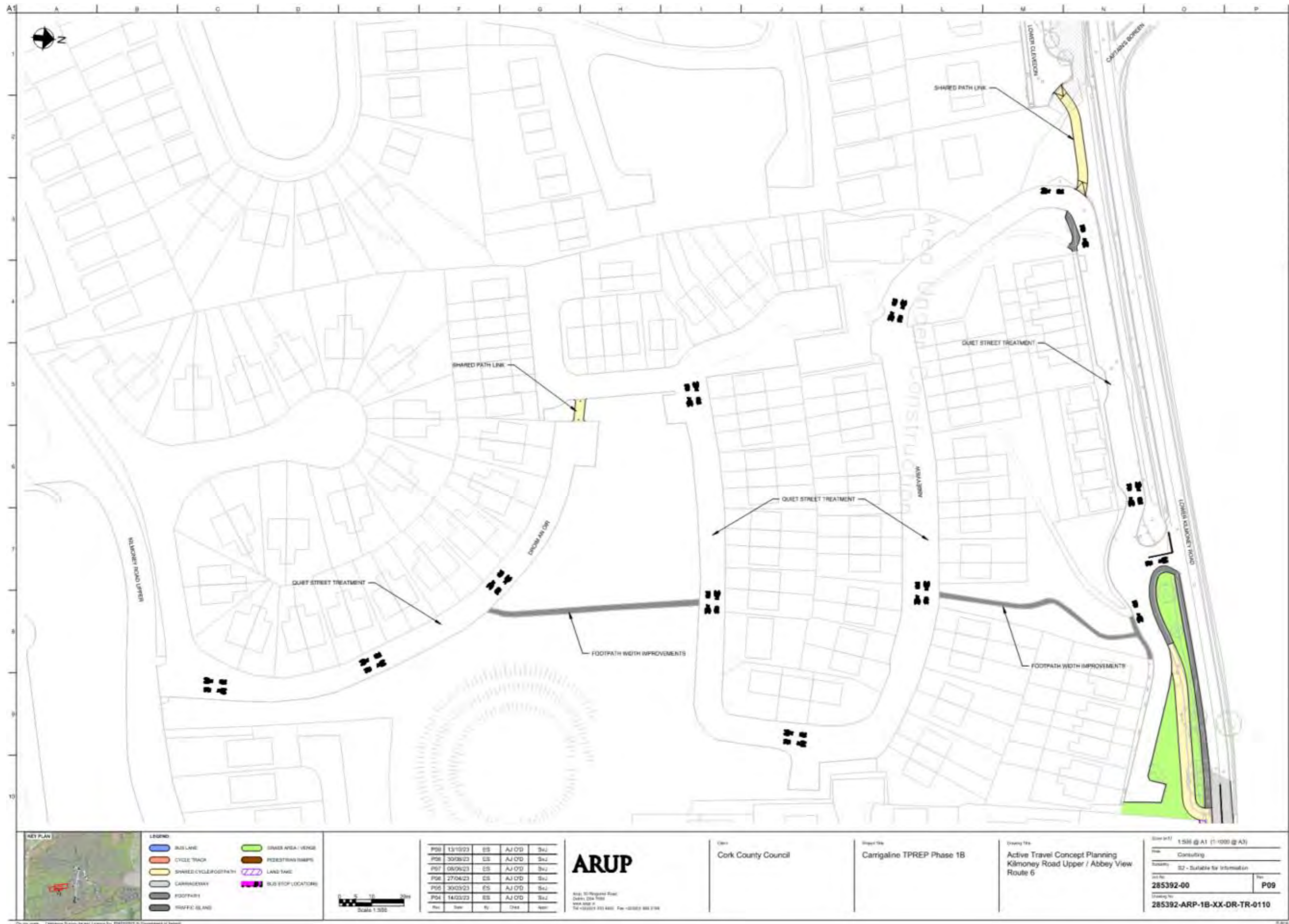
100, St. Stephen's Green  
 Dublin, D04 R7N2  
 www.arup.com  
 Tel: +353(0)1 234 4400 Fax: +353(0)1 464 7148

Client: Cork County Council

Project Title: Carrigaline TPREP Phase 1B

Drawing Title: Active Travel Concept Planning  
 Kilmoney Road 02  
 Route 6

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Revision:	32 - Suitable for Information
Job No:	285392-00
Drawn By:	P09
Checked By:	285392-ARP-1B-XX-DR-TR-0109



**LEGEND**

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	CYCLE TRACK		PEDESTRIAN RAMP
	SHARED CYCLE/FOOTPATH		LAND TAKE
	CARRAGEWAY		BUS STOP LOCATIONS
	FOOTPATH		
	TRAFFIC ISLAND		



P06	13/10/23	ES	AJ OD	3x2
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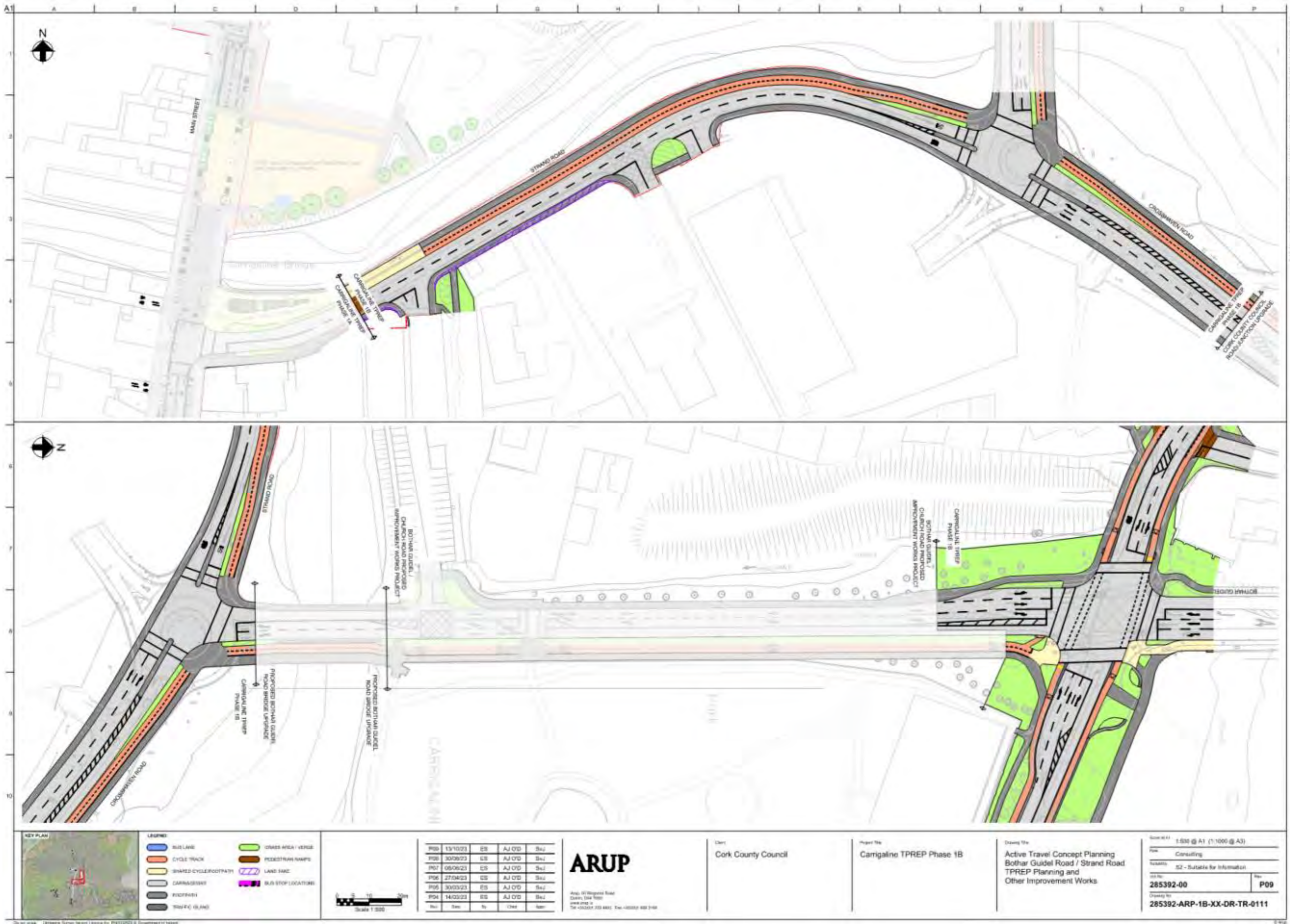


Client: Cork County Council  
 Project Title: Carrigaline TPREP Phase 1B

Drawing Title: Active Travel Concept Planning  
 Kilmoney Road Upper / Abbey View  
 Route 6

Sheet Ref:	1/50 @ A1 (1-1000 @ A3)
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Contents:	02 - Suitable for Information
Doc No:	285392-00
Rev:	P09
Drawing No:	285392-ARP-1B-XX-DR-TR-0110







## A.2 Natura 2000 Sites within 15km of the Proposed Development | Not To Scale | Background Mapping © Google Earth

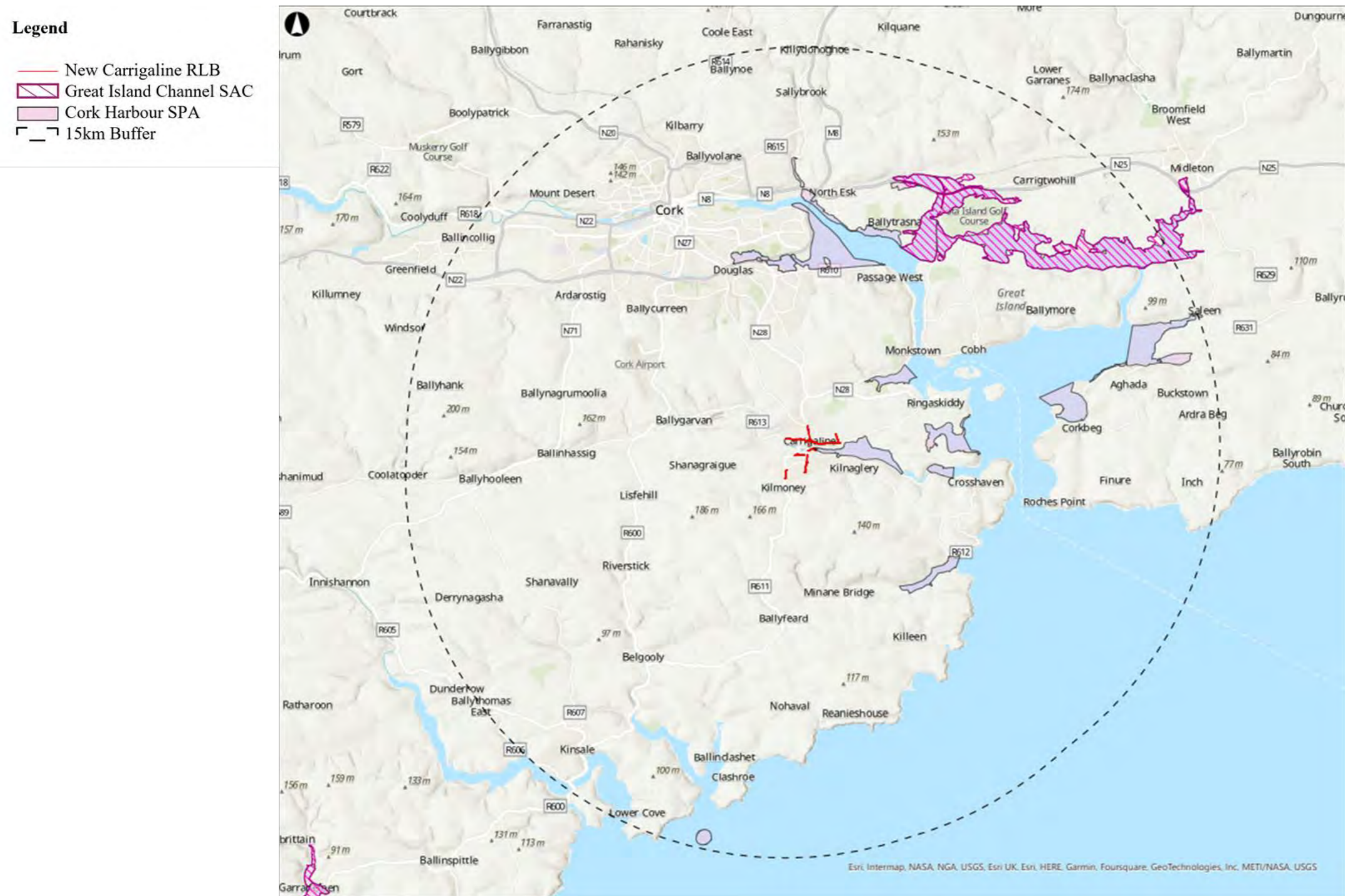
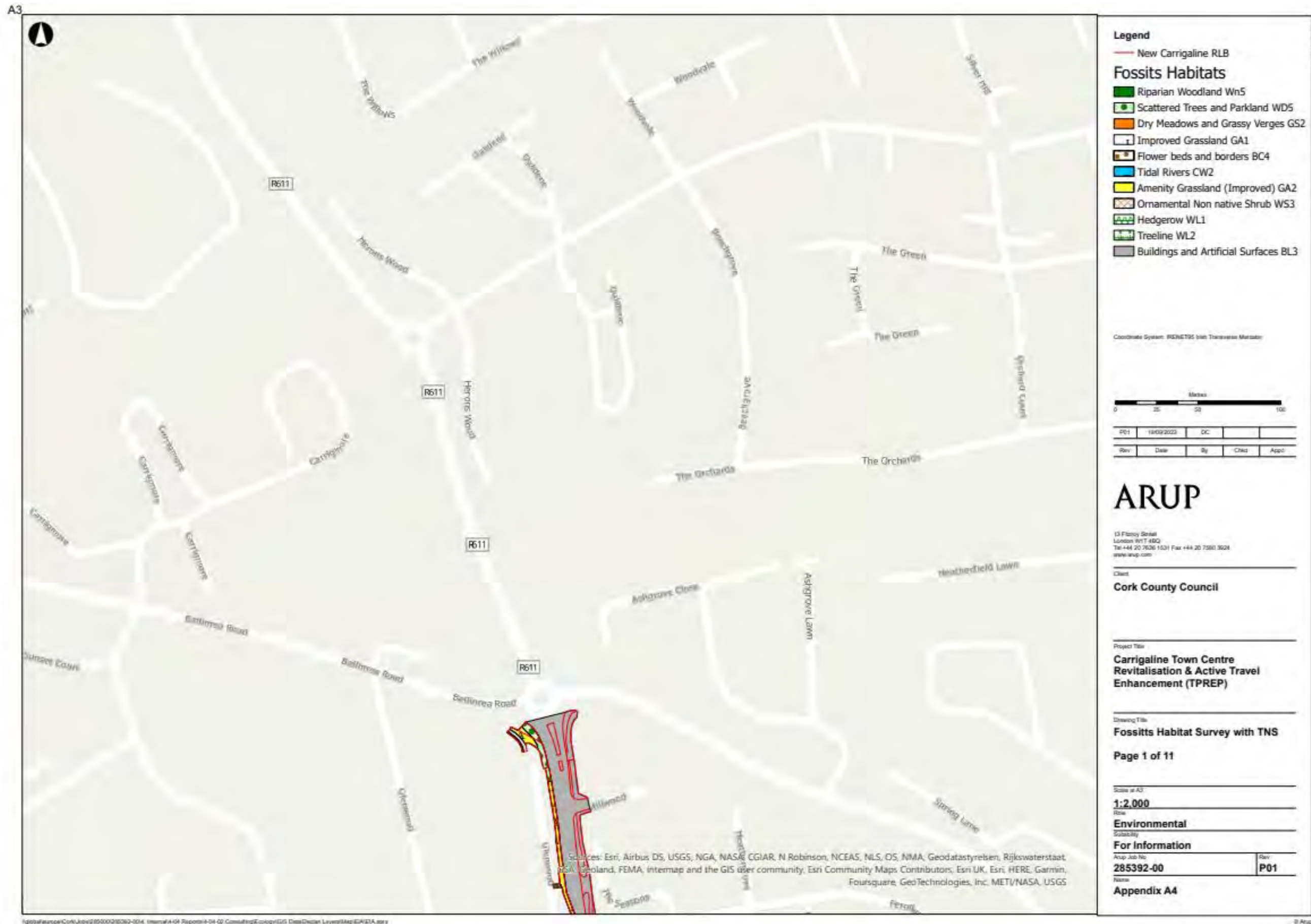


Figure 7: Natura 2000 Sites within 15km buffer to the Proposed Development

# A.3 Fossitts Habitat Map with Target Notes







**Legend**

- New Carrigaline RLB

**Fossitts Habitats**

- Riparian Woodland Wn5
- Scattered Trees and Parkland WD5
- Dry Meadows and Grassy Verges GS2
- Improved Grassland GA1
- Flower beds and borders BC4
- Tidal Rivers CW2
- Amenity Grassland (Improved) GA2
- Ornamental Non native Shrub WS3
- Hedgerow WL1
- Treeline WL2
- Buildings and Artificial Surfaces BL3

Coordinate System: WGS84 / Irish Transverse Mercator

Scale: 1:2,000

Rev	Date	By	Check	Appr

**ARUP**

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Project Title:  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title:  
**Fossitts Habitat Survey with TNS**

Page 2 of 11

Scale of A3:  
**1:2,000**

**Environmental**

For Information

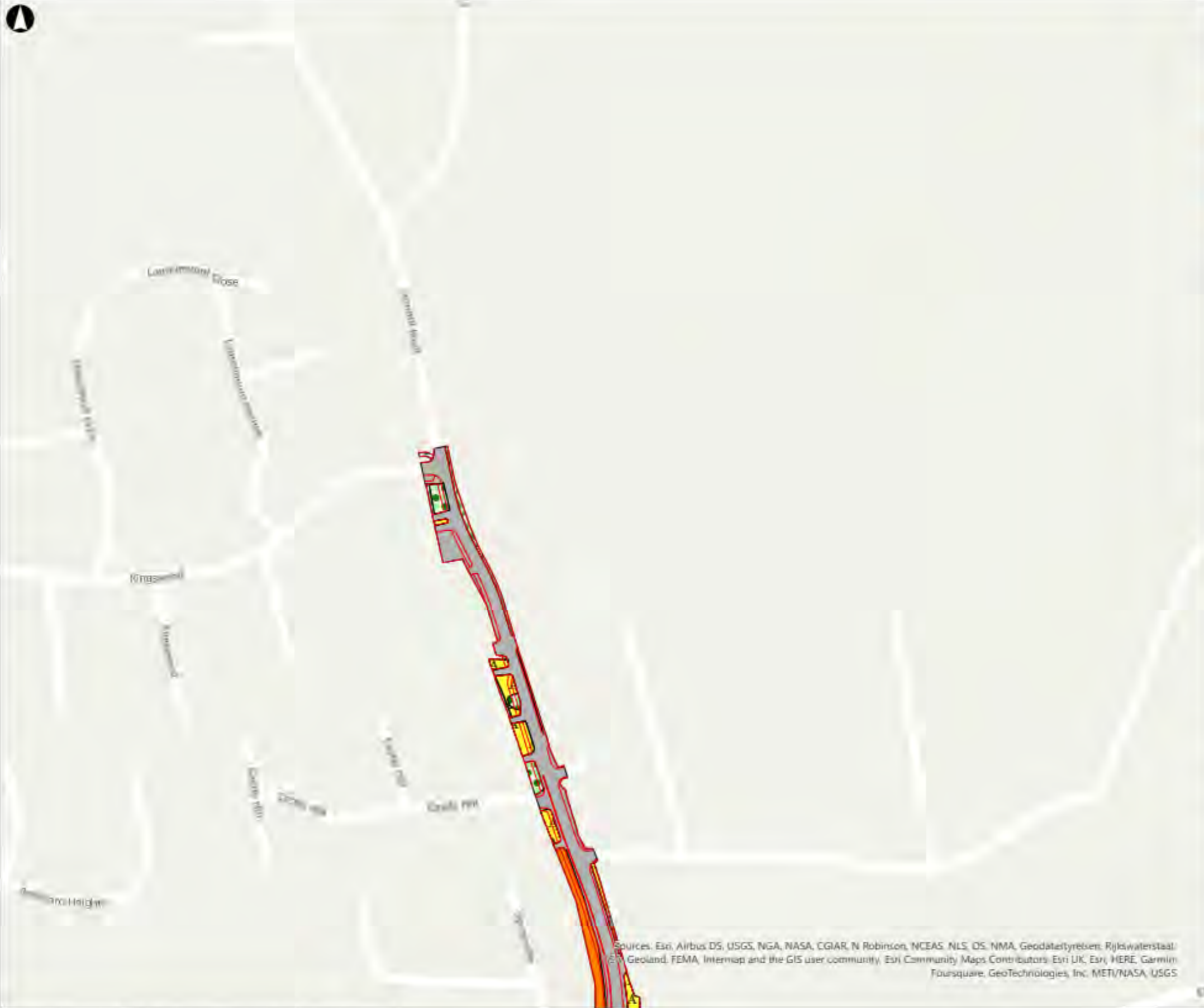
Drawn No: <b>285392-00</b>	Rev: <b>P01</b>
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Appendix A4

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, DeLorme, Swire, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS







**Legend**

- New Carrigaline RLB

**Fossitts Habitats**

- Riparian Woodland Wn5
- Scattered Trees and Parkland WD5
- Dry Meadows and Grassy Verges GS2
- Improved Grassland GA1
- Flower beds and borders BC4
- Tidal Rivers CW2
- Amenity Grassland (Improved) GA2
- Ornamental Non native Shrub WS3
- Hedgerow WL1
- Treeline WL2
- Buildings and Artificial Surfaces BL3

Coordinate System: IRENETIC (not Transverse Mercator)

Proj	IRNG2003	DC			
Rev		Drawn	By	Checked	Appd

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**Cork County Council**

Project Title:  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title:  
**Fossitts Habitat Survey with TNS**

Page 4 of 11

Scale at A3:  
**1:2,000**

Phase:  
**Environmental**

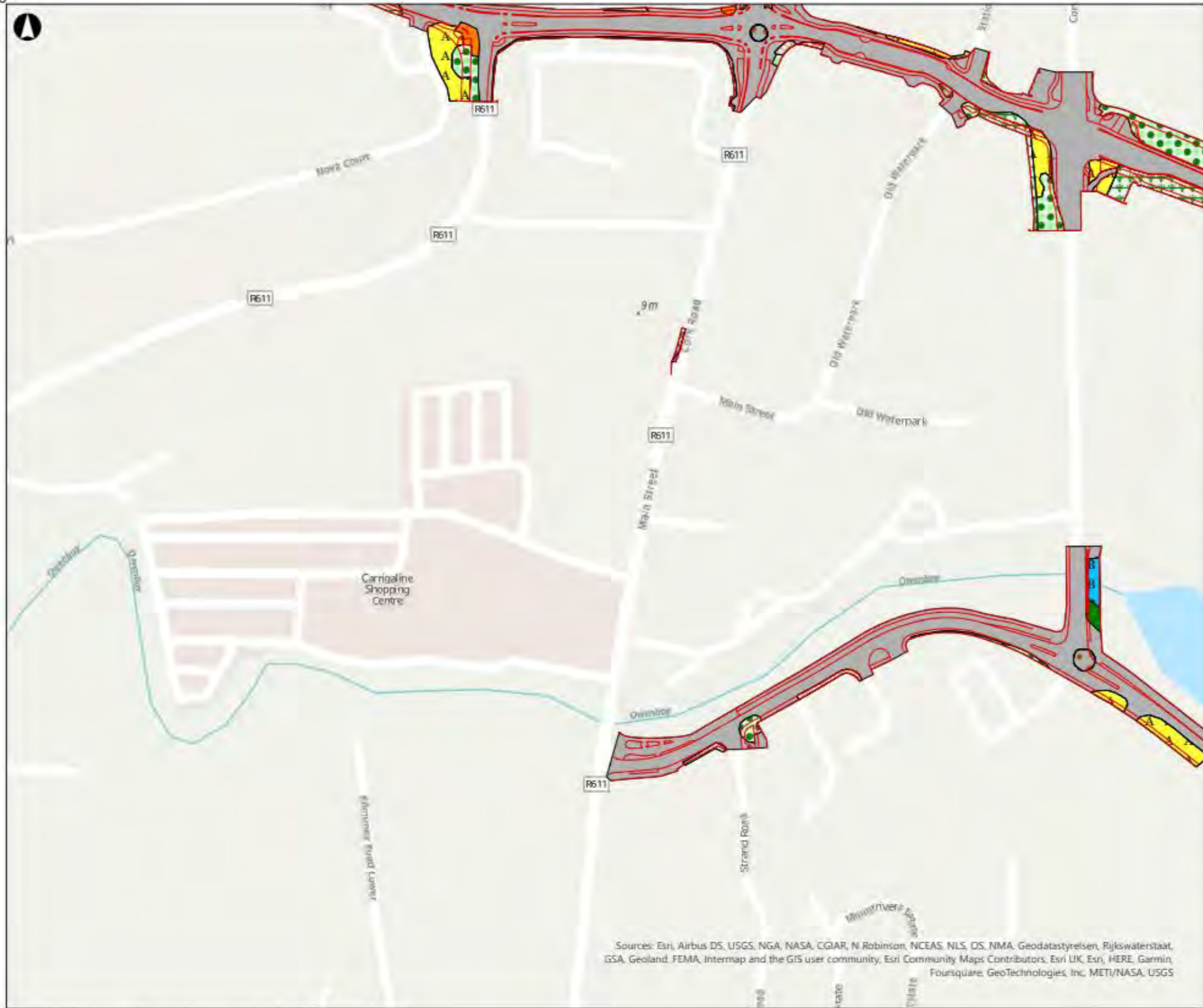
For Information

App. Job No: <b>285392-00</b>	Rev: <b>P01</b>
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**Appendix A4**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaal, E.ON Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, FourSquare, GeoTechnologies, Inc, METI/NASA, USGS





- Legend**
- New Carrigaline RLB
  - Fossitts Habitats**
  - Riparian Woodland Wn5
  - Scattered Trees and Parkland WD5
  - Dry Meadows and Grassy Verges GS2
  - Improved Grassland GA1
  - Flower beds and borders BC4
  - Tidal Rivers CW2
  - Amenity Grassland (Improved) GA2
  - Ornamental Non native Shrub WS3
  - Hedgerow WL1
  - Treeline WL2
  - Buildings and Artificial Surfaces BL3

Coordinates System: IRENET95 Irish Transverse Mercator

PO1	16/06/2023	DC		
Rev	Date	By	Chkd	Appd

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Client  
**Cork County Council**

Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

Page 5 of 11

Scale at A3  
**1:2,000**

Role  
**Environmental**

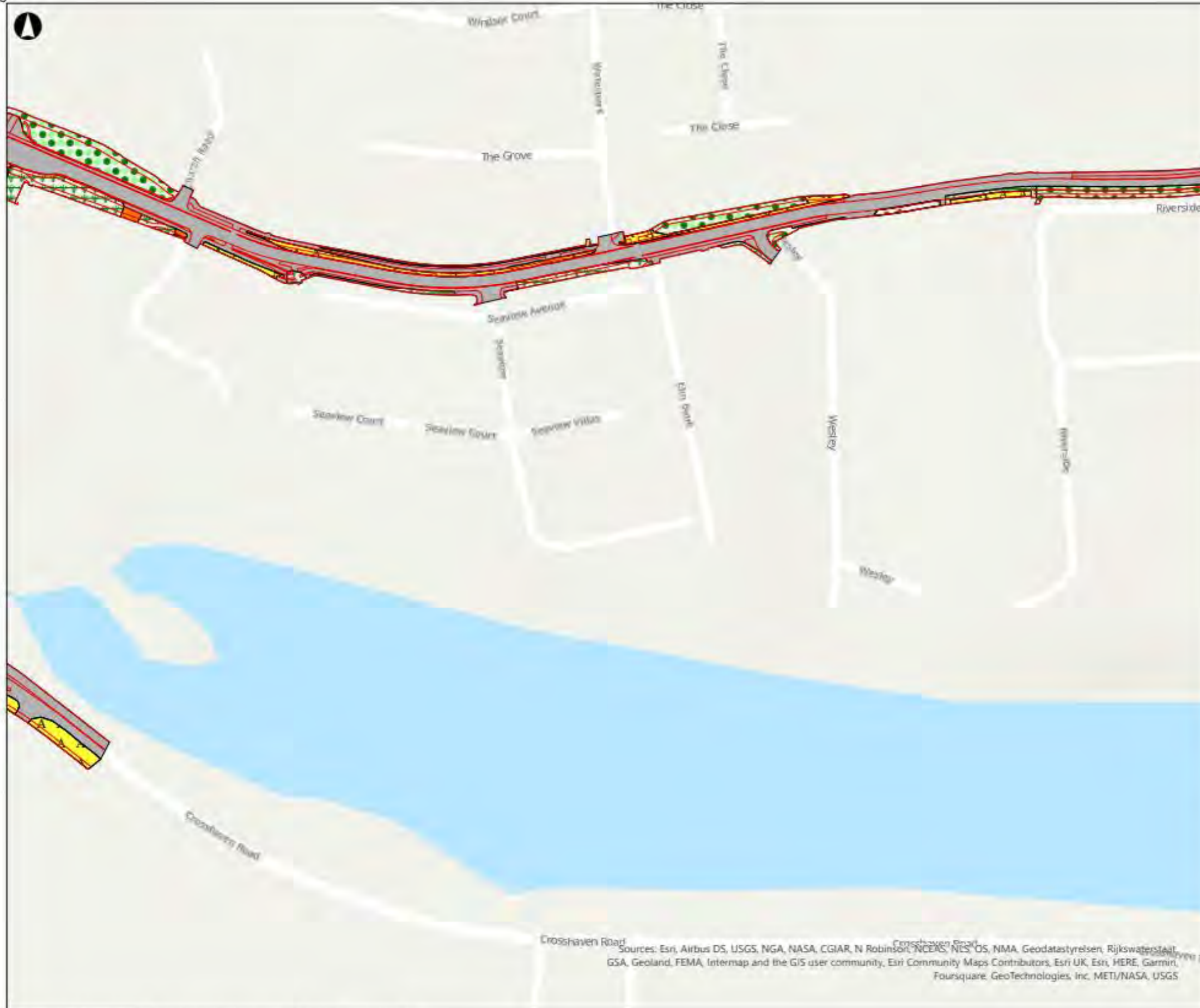
For Information

App Job No  
**285392-00**

Rev  
**P01**

Appendix A4

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS



- Legend**
- New Carrigaline RLB
  - Fossitts Habitats**
  - Riparian Woodland Wn5
  - Scattered Trees and Parkland WD5
  - Dry Meadows and Grassy Verges GS2
  - Improved Grassland GA1
  - Flower beds and borders BC4
  - Tidal Rivers CW2
  - Amenity Grassland (Improved) GA2
  - Ornamental Non native Shrub WS3
  - Hedgerow WL1
  - TreeLine WL2
  - Buildings and Artificial Surfaces BL3

Coordinate System: IRENET05 Irish Transverse Mercator

PG1	19/09/2023	DC			
Rev	Date	By	Chk	Appr	

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Client  
**Cork County Council**

Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

Page 6 of 11

Scale at A3  
**1:2,000**

Discipline  
**Environmental**

Subsidiary  
**For Information**

Arup Job No: **285392-00** Rev: **P01**

Name  
**Appendix A4**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCERS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS





**Legend**

- New Carrigaline RLB
- Riparian Woodland Wn5
- Scattered Trees and Parkland WD5
- Dry Meadows and Grassy Verges GS2
- Improved Grassland GA1
- Flower beds and borders BC4
- Tidal Rivers CW2
- Amenity Grassland (Improved) GA2
- Ornamental Non native Shrub WS3
- Hedgerow WL1
- Treeline WL2
- Buildings and Artificial Surfaces BL3

Coordinate System: IRENETUG Irish Transverse Mercator



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**Carrigaline Town Centre  
Revitalisation & Active Travel  
Enhancement (TPREP)**

**Fossitts Habitat Survey with TNS**

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Scale of A3

**1:2,000**

**Environmental**

**For Information**

Arup Job No:	285392-00	Rev	P01
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**Appendix A4**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodätische Anstalt, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc., METI/NASA, USGS



**Legend**

- New Carrigaline RLB

**Fossitts Habitats**

- Riparian Woodland Wn5
- Scattered Trees and Parkland WD5
- Dry Meadows and Grassy Verges GS2
- Improved Grassland GA1
- Flower beds and borders BC4
- Tidal Rivers CW2
- Amenity Grassland (Improved) GA2
- Ornamental Non native Shrub WS3
- Hedgerow WL1
- Treeline WL2
- Buildings and Artificial Surfaces BL3

Coordinate System: IRENET05 Irish Transverse Mercator

Scale: 0 25 50 100 Meters

PS1	19/09/2023	DC			
Rev	Date	By	Chk'd	App'd	

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**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

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Scale of A3  
**1:2,000**

Role  
**Environmental**

Subsidiary  
**For Information**

Asset Job No	Rev
<b>285392-00</b>	<b>P01</b>

Name  
**Appendix A4**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS





Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

**Legend**

- New Carrigaline RLB
- Riparian Woodland Wn5
- Scattered Trees and Parkland WDS
- Dry Meadows and Grassy Verges GS2
- Improved Grassland GA1
- Flower beds and borders BC4
- Tidal Rivers CW2
- Amenity Grassland (Improved) GA2
- Ornamental Non native Shrub WS3
- Hedgerow WL1
- Treeline WL2
- Buildings and Artificial Surfaces BL3

Coordinate System: IRENET05 Irish Transverse Mercator



Rev	Date	By	Check	Appd
P01	18/05/2023	DC		

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Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

Page 9 of 11

Scale at A3  
**1:2,000**

Role  
**Environmental**  
Suitability

**For Information**

Appr Job No.	Rev
<b>285392-00</b>	<b>P01</b>

Name  
**Appendix A4**



- Legend**
- New Carrigaline RLB
- Fossitts Habitats**
- Riparian Woodland Wn5
  - Scattered Trees and Parkland WD5
  - Dry Meadows and Grassy Verges GS2
  - Improved Grassland GA1
  - Flower beds and borders BC4
  - Tidal Rivers CW2
  - Amenity Grassland (Improved) GA2
  - Ornamental Non native Shrub WS3
  - Hedgerow WL1
  - Treeline WL2
  - Buildings and Artificial Surfaces BL3

Coordinate System: IRENET5 Irish Transverse Mercator



PR1	19/09/2023	DC		
Rev	Date	By	Check	Appd

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Project Title  
**Carrigaline Town Centre  
 Revitalisation & Active Travel  
 Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

Page 10 of 11

Scale at A3  
**1:2,000**

Role  
**Environmental**

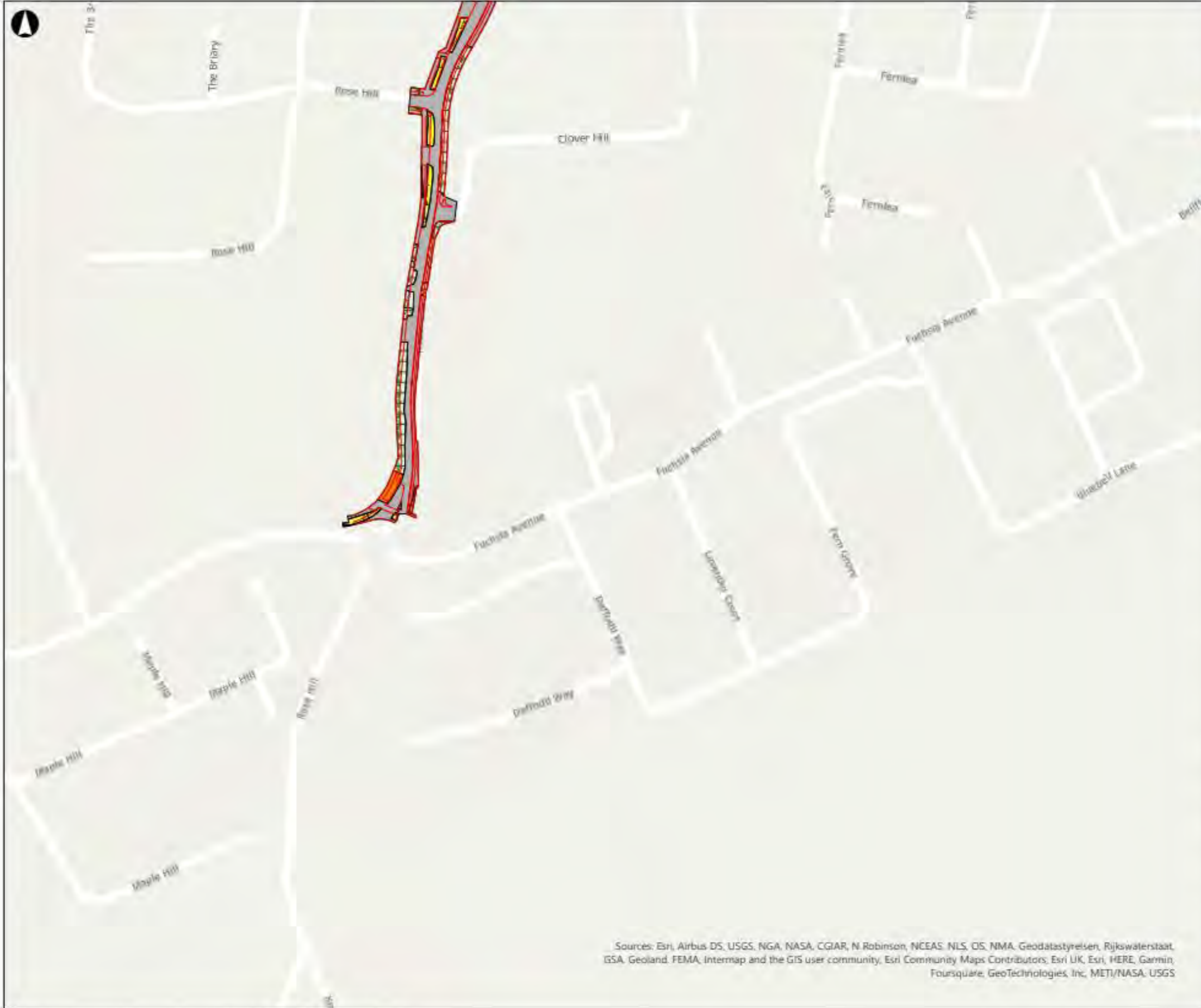
Subsidiary  
**For Information**

App Job No. <b>285392-00</b>	Rev <b>P01</b>
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Name  
**Appendix A4**

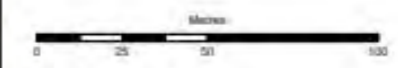
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS





- Legend**
- New Carrigaline RLB
  - Fossitts Habitats**
  - Riparian Woodland Wn5
  - Scattered Trees and Parkland WD5
  - Dry Meadows and Grassy Verges GS2
  - Improved Grassland GA1
  - Flower beds and borders BC4
  - Tidal Rivers CW2
  - Amenity Grassland (Improved) GA2
  - Ornamental Non native Shrub WS3
  - Hedgerow WL1
  - Treeline WL2
  - Buildings and Artificial Surfaces BL3

Coordinate System: IRI-NET105 Irish Transverse Mercator



Rev	Date	By	Check	Appd
P01	19/08/2023	DC		

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**Cork County Council**

Project Title  
**Carrigaline Town Centre  
Revitalisation & Active Travel  
Enhancement (TPREP)**

Drawing Title  
**Fossitts Habitat Survey with TNS**

Page 11 of 11

Scale at A3  
**1:2,000**

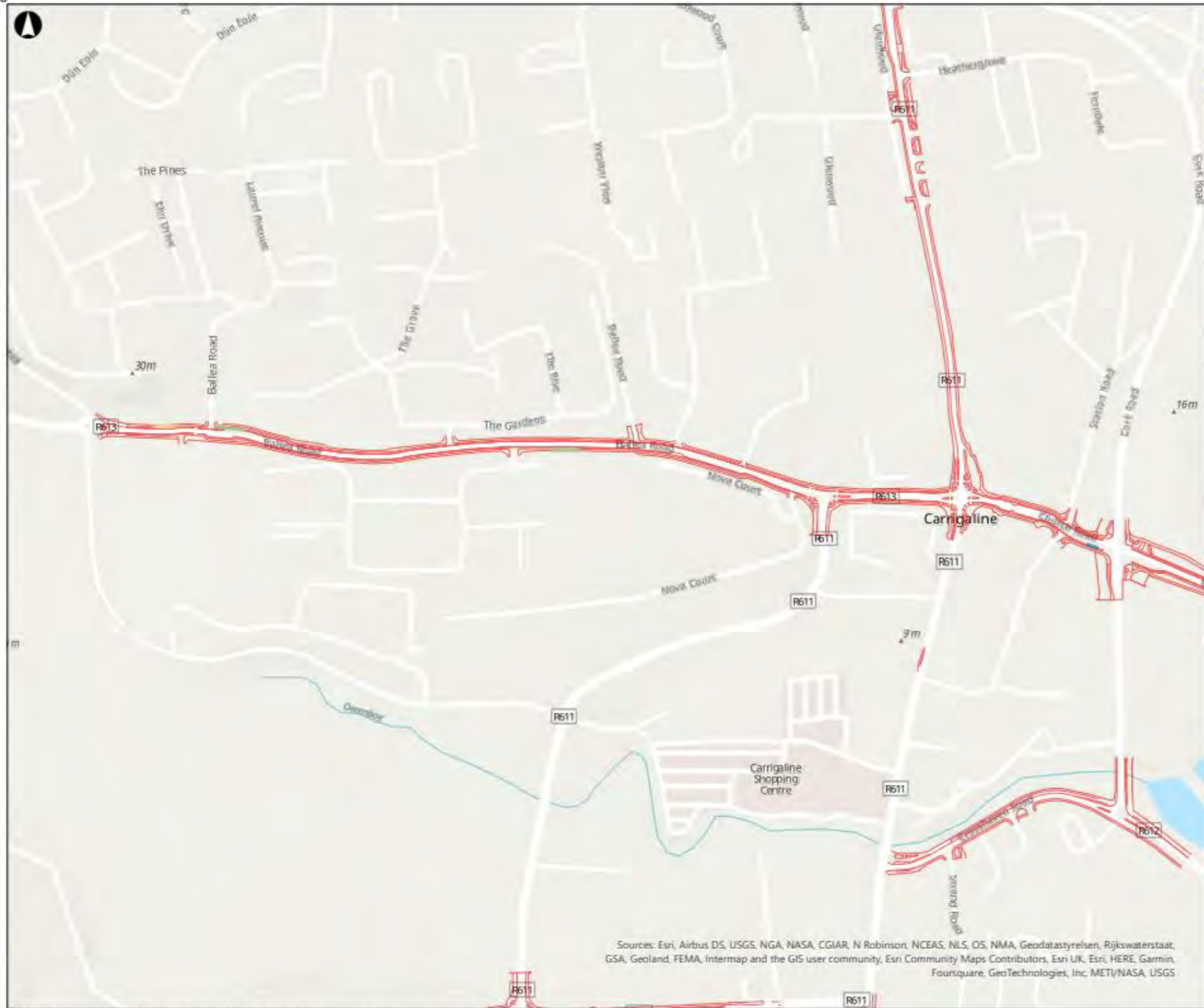
Environmental

For Information

App Job No: <b>285392-00</b>	Rev: <b>P01</b>
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Appendix A4

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodätystyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS



**Legend**

- New Carrigaline K12
- Hedgerow Appraisal
- No significance / feature altered to RL, type habitat should be 0
- Low Significance - 1-3
- Slightly Significant - 4-7
- Moderate Significance - 8-11
- Significant 12-15
- Highly Significant 16+

Coordinate System: IRDN2015 Irish Transverse Mercator

Meters  
0 50 100 200

Proj	18/06/2023	DC	DM	FM
Rev	Draw	By	Chkd	Appd

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**Cork County Council**

Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Map of hedgerow significance results**

Page 1 of 3

Scale at A3  
**1:4,000**

Role  
**Environmental**

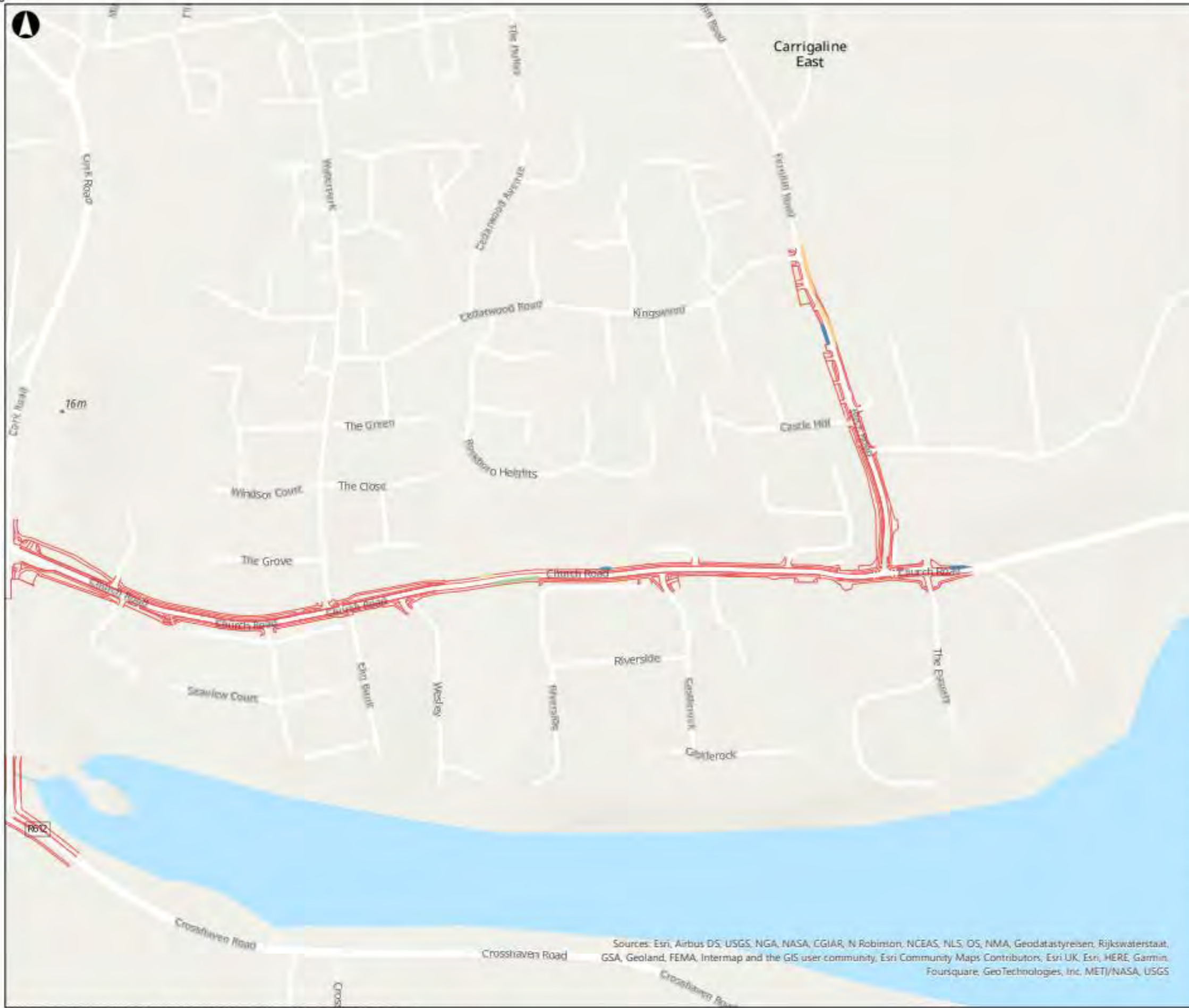
For Information

Asup Job No	Rev
<b>285392-00</b>	<b>P01</b>

Name  
**Appendix A5**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS





- Legend**
- New Carrigaline R13
  - Hedgerow Appraisal
  - No significance / features altered to RL type habitat should be 0
  - Low Significance - 1-3
  - Slightly Significant - 4-7
  - Moderate Significance - 8-11
  - Significant 12-15
  - Highly Significant 16+

Coordinate System: IRENET95 Irish Transverse Mercator

0 50 100 200 Metres

PD	18/09/2023	DC	DM	PM
Rev	Date	By	CHK	Appr

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Client  
**Cork County Council**

Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Map of hedgerow significance results**

Page 2 of 3

Scale of A3  
**1:4,000**

Route  
**Environmental**

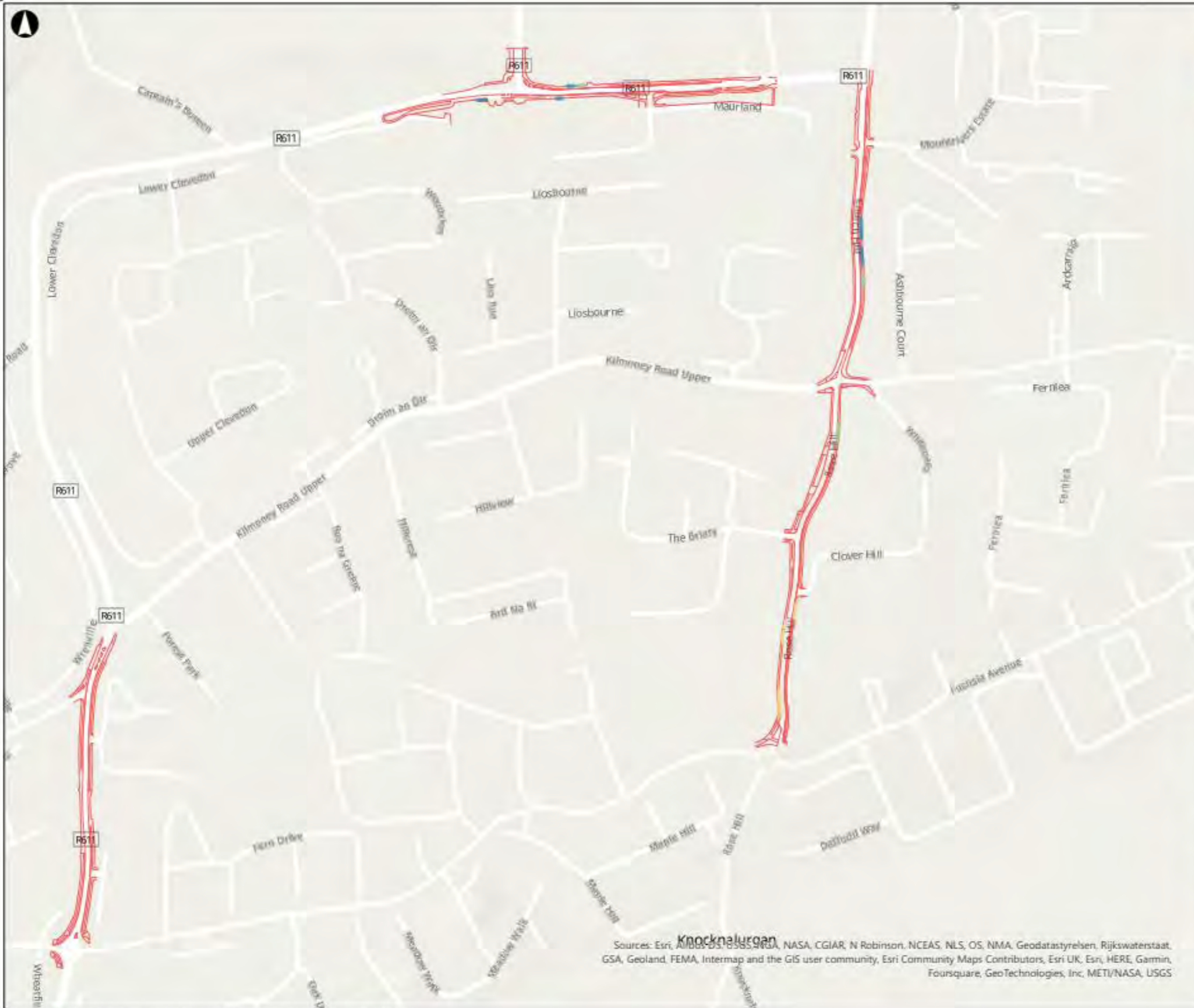
Sustainability  
**For Information**

Arup Job No. <b>285392-00</b>	Rev <b>P01</b>
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Name  
**Appendix A5**

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyreisen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS





- Legend**
- New Carrigaline R18
  - Hedgerow Approval
  - No significance / feature altered to B. type habitat should be 0
  - Low Significance - 1-3
  - Slightly Significant - 4-7
  - Moderate Significance - 8-11
  - Significant 12-15
  - Highly Significant 16+

Coordinate System: IRENET95 Irish Transverse Mercator

Meters

0 50 100 200

Rev	Date	By	Chkd	Appd
P01	18/08/2023	DC	DM	DM

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Client  
**Cork County Council**

Project Title  
**Carrigaline Town Centre Revitalisation & Active Travel Enhancement (TPREP)**

Drawing Title  
**Map of hedgerow significance results**

Page 3 of 3

Scale as A3  
**1:4,000**

Role  
**Environmental**

For Information

App. Job No. <b>285392-00</b>	Rev <b>P01</b>
----------------------------------	-------------------

Appendix A5

Sources: Esri, Airbus DS, USGS, NOAA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS

## Appendix B: National Biodiversity Data Centre Species List in Full (W76g, W76L, W76F)

**Table 7: W76G**

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	amphibian	Common Frog ( <i>Rana temporaria</i> )	7	14/02/2020	Amphibians and reptiles of Ireland	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex V    Protected Species: Wildlife Acts
Custom	annelid	<i>Heterochaeta costata</i>	1	31/12/2004	Aquatic Oligochaeta of Ireland	
Custom	annelid	<i>Tubificoides benedii</i>	1	31/12/2004	Aquatic Oligochaeta of Ireland	
Custom	annelid	<i>Tubificoides pseudogaster</i>	1	31/12/2004	Aquatic Oligochaeta of Ireland	
Custom	bird	Barn Swallow ( <i>Hirundo rustica</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Black-billed Magpie ( <i>Pica pica</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Blackcap ( <i>Sylvia atricapilla</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Black-headed Gull ( <i>Larus ridibundus</i> )	3	17/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Black-tailed Godwit ( <i>Limosa limosa</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Blue Tit ( <i>Cyanistes caeruleus</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Chaffinch ( <i>Fringilla coelebs</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Coal Tit ( <i>Parus ater</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Common Blackbird ( <i>Turdus merula</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Common Bullfinch ( <i>Pyrrhula pyrrhula</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Common Buzzard ( <i>Buteo buteo</i> )	1	27/04/2019	Birds of Ireland	
Custom	bird	Common Chiffchaff ( <i>Phylloscopus collybita</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Common Greenshank ( <i>Tringa nebularia</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Kingfisher ( <i>Alcedo atthis</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex I Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Linnet ( <i>Carduelis cannabina</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Moorhen ( <i>Gallinula chloropus</i> )	2	17/12/2017	Birds of Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Common Redshank ( <i>Tringa totanus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Common Starling ( <i>Sturnus vulgaris</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Swift ( <i>Apus apus</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Wood Pigeon ( <i>Columba palumbus</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species    Protected Species: EU Birds Directive >> Annex III, Section I Bird Species

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Eurasian Collared Dove ( <i>Streptopelia decaocto</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Eurasian Curlew ( <i>Numenius arquata</i> )	2	16/10/2019	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section II Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Eurasian Golden Oriole ( <i>Oriolus oriolus</i> )	1	05/05/1992	Rare birds of Ireland	
Custom	bird	Eurasian Jackdaw ( <i>Corvus monedula</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Eurasian Siskin ( <i>Carduelis spinus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Eurasian Sparrowhawk ( <i>Accipiter nisus</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	
Custom	bird	Eurasian Treecreeper ( <i>Certhia familiaris</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	European Goldfinch ( <i>Carduelis carduelis</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	European Greenfinch ( <i>Carduelis chloris</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	European Robin ( <i>Erithacus rubecula</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Fieldfare ( <i>Turdus pilaris</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Franklin's Gull ( <i>Larus pipixcan</i> )	1	30/01/2006	Rare birds of Ireland	
Custom	bird	Goldcrest ( <i>Regulus regulus</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Great Cormorant ( <i>Phalacrocorax carbo</i> )	2	03/12/2016	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Great Grey Shrike ( <i>Lanius excubitor</i> )	1	31/12/1844	Rare birds of Ireland	
Custom	bird	Great Tit ( <i>Parus major</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Grey Wagtail ( <i>Motacilla cinerea</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Hedge Accentor ( <i>Prunella modularis</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Hooded Crow ( <i>Corvus cornix</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	House Martin ( <i>Delichon urbicum</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	House Sparrow ( <i>Passer domesticus</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Lesser Black-backed Gull ( <i>Larus fuscus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Lesser Redpoll ( <i>Carduelis cabaret</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Little Egret ( <i>Egretta garzetta</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex I Bird Species

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Long-tailed Tit ( <i>Aegithalos caudatus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Mallard ( <i>Anas platyrhynchos</i> )	4	17/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species    Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Custom	bird	Meadow Pipit ( <i>Anthus pratensis</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	
Custom	bird	Mistle Thrush ( <i>Turdus viscivorus</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Mute Swan ( <i>Cygnus olor</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Northern Goshawk ( <i>Accipiter gentilis</i> )	1	09/05/2005	Rare birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Pied Wagtail ( <i>Motacilla alba subsp. yarrellii</i> )	1	17/12/2017	Birds of Ireland	
Custom	bird	Red-billed Chough ( <i>Pyrhacorax pyrrhacorax</i> )	1	11/07/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex I Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Redwing ( <i>Turdus iliacus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Reed Bunting ( <i>Emberiza schoeniclus</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	
Custom	bird	Rock Pigeon ( <i>Columba livia</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Custom	bird	Rook ( <i>Corvus frugilegus</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Rose-ringed Parakeet ( <i>Psittacula krameri</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Invasive Species: Invasive Species    Invasive Species: Invasive Species >>



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
						High Impact Invasive Species
Custom	bird	Song Thrush ( <i>Turdus philomelos</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Spotted Flycatcher ( <i>Muscicapa striata</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Stonechat ( <i>Saxicola torquata</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	White Wagtail ( <i>Motacilla alba</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Willow Warbler ( <i>Phylloscopus trochilus</i> )	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	
Custom	bird	Winter Wren ( <i>Troglodytes troglodytes</i> )	3	31/12/2011	Bird Atlas 2007 - 2011	
Custom	centipede	<i>Geophilus osquidatum</i>	1	01/09/1984	Centipedes of Ireland	
Custom	centipede	Lithobius ( <i>Lithobius melanops</i> )	1	01/09/1984	Centipedes of Ireland	
Custom	centipede	<i>Schendyla nemorensis</i>	2	01/09/1984	Centipedes of Ireland	
Custom	centipede	<i>Stigmatogaster subterraneus</i>	1	01/09/1984	Centipedes of Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	centipede	<i>Strigamia maritima</i>	1	01/09/1984	Centipedes of Ireland	
Custom	fern	Hart's-tongue ( <i>Phyllitis scolopendrium</i> )	1	17/03/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Alexanders ( <i>Smyrniolum olusatrum</i> )	1	11/03/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Annual Meadow-grass ( <i>Poa annua</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Black Medick ( <i>Medicago lupulina</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Bramble ( <i>Rubus fruticosus</i> agg.)	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Broad-leaved Helleborine ( <i>Epipactis helleborine</i> )	1	03/05/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Bush Vetch ( <i>Vicia sepium</i> )	1	28/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Common Field-speedwell ( <i>Veronica persica</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Common Nettle ( <i>Urtica dioica</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Creeping Buttercup ( <i>Ranunculus repens</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Cuckooflower ( <i>Cardamine pratensis</i> )	4	28/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Daisy ( <i>Bellis perennis</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Foxglove ( <i>Digitalis purpurea</i> )	1	01/07/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Groundsel ( <i>Senecio vulgaris</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Hairy Bitter-cress ( <i>Cardamine hirsuta</i> )	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Himalayan Honeysuckle ( <i>Leycesteria formosa</i> )	2	05/09/2021	National Invasive Species Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	flowering plant	Ragged-Robin ( <i>Lychnis flos-cuculi</i> )	2	28/05/2017	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	<i>Taraxacum aggregate</i>	1	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Wild Teasel ( <i>Dipsacus fullonum</i> )	2	05/03/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Winter Heliotrope ( <i>Petasites fragrans</i> )	34	27/01/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Wood Avens ( <i>Geum urbanum</i> )	1	26/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	harvestman (Opiliones)	<i>Dicranopalpus ramosus</i>	1	26/10/1998	Harvestmen (Opiliones) of Ireland	
Custom	harvestman (Opiliones)	<i>Phalangium opilio</i>	1	26/10/1998	Harvestmen (Opiliones) of Ireland	
Custom	insect - beetle (Coleoptera)	2-spot Ladybird ( <i>Adalia bipunctata</i> )	1	31/08/2014	Ladybirds of Ireland	
Custom	insect - beetle (Coleoptera)	7-spot Ladybird ( <i>Coccinella septempunctata</i> )	3	07/05/2017	Ladybirds of Ireland	
Custom	insect - beetle (Coleoptera)	<i>Augyles maritimus</i>	1	31/12/1855	Water Beetles of Ireland	Threatened Species: Data deficient
Custom	insect - beetle (Coleoptera)	Kidney-spot Ladybird ( <i>Chilocorus renipustulatus</i> )	2	07/04/2019	Ladybirds of Ireland	
Custom	insect - beetle (Coleoptera)	Lily Beetle ( <i>Lilioceris lili</i> )	1	04/07/2011	National Invasive Species Database	
Custom	insect - butterfly	Common Blue ( <i>Polyommatus icarus</i> )	4	31/05/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Dark Green Fritillary ( <i>Argynnis aglaja</i> )	1	30/07/2017	Atlas of Butterflies in Ireland 2021	Threatened Species: Vulnerable



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - butterfly	Gatekeeper ( <i>Pyronia tithonus</i> )	1	11/08/2020	Atlas of Butterflies in Ireland 2021	Threatened Species: Near threatened
Custom	insect - butterfly	Green-veined White ( <i>Pieris napi</i> )	5	20/04/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Holly Blue ( <i>Celastrina argiolus</i> )	15	24/04/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Large White ( <i>Pieris brassicae</i> )	7	12/09/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Meadow Brown ( <i>Maniola jurtina</i> )	3	11/07/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Orange-tip ( <i>Anthocharis cardamines</i> )	2	11/04/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Painted Lady ( <i>Vanessa cardui</i> )	5	19/08/2019	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Peacock ( <i>Inachis io</i> )	8	31/03/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Red Admiral ( <i>Vanessa atalanta</i> )	13	18/11/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Ringlet ( <i>Aphantopus hyperantus</i> )	3	13/07/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Small Copper ( <i>Lycaena phlaeas</i> )	1	18/08/2013	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Small Tortoiseshell ( <i>Aglais urticae</i> )	18	21/08/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Small White ( <i>Pieris rapae</i> )	5	13/05/2021	Atlas of Butterflies in Ireland 2021	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - butterfly	Speckled Wood ( <i>Pararge aegeria</i> )	6	01/06/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Wall ( <i>Lasiommata megera</i> )	1	16/05/2017	Atlas of Butterflies in Ireland 2021	Threatened Species: Endangered
Custom	insect - dragonfly (Odonata)	Azure Damselfly ( <i>Coenagrion puella</i> )	2	05/06/2014	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Black Darter ( <i>Sympetrum danae</i> )	2	26/08/2013	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Blue-tailed Damselfly ( <i>Ischnura elegans</i> )	5	05/06/2014	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Common Blue Damselfly ( <i>Enallagma cyathigerum</i> )	2	05/06/2014	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Common Darter ( <i>Sympetrum striolatum</i> )	5	14/10/2013	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Common Hawker ( <i>Aeshna juncea</i> )	1	26/08/2013	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Emerald Damselfly ( <i>Lestes sponsa</i> )	2	26/08/2013	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Emperor Dragonfly ( <i>Anax imperator</i> )	3	05/06/2014	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Four-spotted Chaser ( <i>Libellula quadrimaculata</i> )	4	05/06/2014	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Large Red Damselfly ( <i>Pyrhosoma nymphula</i> )	1	01/06/2020	Dragonfly Ireland 2019 to 2024	
Custom	insect - dragonfly (Odonata)	Migrant Hawker ( <i>Aeshna mixta</i> )	1	14/10/2013	Dragonfly Records	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - dragonfly (Odonata)	Ruddy Darter ( <i>Sympetrum sanguineum</i> )	1	18/08/2013	Dragonfly Records	
Custom	insect - dragonfly (Odonata)	Scarce Blue-tailed Damselfly ( <i>Ischnura pumilio</i> )	1	18/08/2013	Dragonfly Records	Threatened Species: Vulnerable
Custom	insect - dragonfly (Odonata)	Vagrant Emperor ( <i>Hemianax ephippiger</i> )	1	14/10/2013	Dragonfly Records	
Custom	insect - flea (Siphonaptera)	<i>Ctenophthalmus</i>	1	31/05/1964	Fleas (Siphonaptera) of Ireland	
Custom	insect - flea (Siphonaptera)	<i>Ctenophthalmus (Ctenophthalmus) nobilis subsp. vulgaris</i>	1	01/01/1983	Fleas (Siphonaptera) of Ireland	
Custom	insect - flea (Siphonaptera)	Human Flea ( <i>Pulex (Pulex) irritans</i> )	2	31/08/1970	Fleas (Siphonaptera) of Ireland	
Custom	insect - flea (Siphonaptera)	Nosopsyllus ( <i>Nosopsyllus) fasciatus</i>	1	01/01/1983	Fleas (Siphonaptera) of Ireland	
Custom	insect - flea (Siphonaptera)	Rabbit Flea ( <i>Spilopsyllus cuniculi</i> )	1	28/02/1970	Fleas (Siphonaptera) of Ireland	
Custom	insect - hymenopteran	Bombus ( <i>Bombus) terrestris</i>	5	23/04/2016	Bees of Ireland	
Custom	insect - hymenopteran	<i>Bombus lucorum agg.</i>	3	03/05/2016	Bees of Ireland	
Custom	insect - hymenopteran	Common Carder Bee ( <i>Bombus (Thoracombus) pascuorum</i> )	4	14/08/2022	Bees of Ireland	
Custom	insect - hymenopteran	Common Wasp ( <i>Vespula (Paravespula) vulgaris</i> )	2	06/04/2015	Wasps of Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - hymenopteran	Early Bumble Bee ( <i>Bombus (Pyrobombus) pratorum</i> )	5	23/04/2016	Bees of Ireland	
Custom	insect - hymenopteran	Heath Bumble Bee ( <i>Bombus (Pyrobombus) jonellus</i> )	1	22/05/2004	Bees of Ireland	
Custom	insect - hymenopteran	Large Red Tailed Bumble Bee ( <i>Bombus (Melanobombus) lapidarius</i> )	1	02/05/2020	Bees of Ireland	Threatened Species: Near threatened
Custom	insect - hymenopteran	Red Mason Bee ( <i>Osmia (Osmia) rufa</i> )	1	22/04/2017	Bees of Ireland	
Custom	insect - hymenopteran	Small Garden Bumble Bee ( <i>Bombus (Megabombus) hortorum</i> )	1	23/07/2014	Bees of Ireland	
Custom	insect - hymenopteran	Tree Wasp ( <i>Dolichovespula (Pseudovespula) sylvestris</i> )	1	23/07/2014	Wasps of Ireland	
Custom	insect - moth	Angle Shades ( <i>Phlogophora meticulosa</i> )	2	02/05/2019	Moths Ireland	
Custom	insect - moth	Apple and Plum Case-bearer ( <i>Coleophora spinella</i> )	1	08/06/1997	Moths Ireland	
Custom	insect - moth	Brimstone Moth ( <i>Opisthograptis luteolata</i> )	2	19/05/2018	Moths Ireland	
Custom	insect - moth	Buff-tip ( <i>Phalera bucephala</i> )	1	02/05/1986	Moths Ireland	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - moth	Burnished Brass ( <i>Diachrysia chrysitis</i> )	1	19/07/2017	Moths Ireland	
Custom	insect - moth	Canary-shouldered Thorn ( <i>Ennomos alniaria</i> )	1	19/08/2017	Moths Ireland	
Custom	insect - moth	Common Emerald ( <i>Hemithea aestivaria</i> )	1	28/06/2018	Moths Ireland	
Custom	insect - moth	Convolvulus Hawk-moth ( <i>Agrius convolvuli</i> )	2	21/10/1995	Moths Ireland	
Custom	insect - moth	Death's-head Hawk-moth ( <i>Acherontia atropos</i> )	1	08/11/1951	Moths Ireland	
Custom	insect - moth	Early Thorn ( <i>Selenia dentaria</i> )	3	08/07/2018	Moths Ireland	
Custom	insect - moth	<i>Emmelina monodactyla</i>	1	26/09/1999	Moths Ireland	
Custom	insect - moth	Humming-bird Hawk- moth ( <i>Macroglossum stellatarum</i> )	10	06/11/2022	Moths Ireland	
Custom	insect - moth	Large Yellow Underwing ( <i>Noctua pronuba</i> )	1	12/08/2020	Moths Ireland	
Custom	insect - moth	Magpie ( <i>Abraxas grossulariata</i> )	1	22/07/2020	Moths Ireland	
Custom	insect - moth	Pale Tussock ( <i>Calliteara pudibunda</i> )	1	04/10/2003	Moths Ireland	
Custom	insect - moth	<i>Parornix anglicella</i>	1	08/06/1997	Moths Ireland	
Custom	insect - moth	Peach Blossom ( <i>Thyatira batis</i> )	1	13/06/2017	Moths Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - moth	Peppered Moth ( <i>Biston betularia</i> )	1	26/06/2018	Moths Ireland	
Custom	insect - moth	<i>Phyllonorycter trifasciella</i>	2	26/12/2012	Moths Ireland	
Custom	insect - moth	Poplar Hawk-moth ( <i>Laothoe populi</i> )	3	25/07/2018	Moths Ireland	
Custom	insect - moth	Swallow-tailed Moth ( <i>Ourapteryx sambucaria</i> )	2	08/07/2018	Moths Ireland	
Custom	insect - true bug (Hemiptera)	Green Shieldbug ( <i>Palomena prasina</i> )	1	05/03/2022	True Bugs (Heteroptera) of Ireland	
Custom	insect - true fly (Diptera)	<i>Eristalis pertinax</i>	1	11/03/2023	Hoverflies (Syrphidae) of Ireland	
Custom	insect - true fly (Diptera)	<i>Eristalis tenax</i>	1	11/03/2023	Hoverflies (Syrphidae) of Ireland	
Custom	insect - true fly (Diptera)	<i>Melanostoma scalare</i>	1	17/03/2023	Hoverflies (Syrphidae) of Ireland	
Custom	insect - true fly (Diptera)	<i>Platycheirus albimanus</i>	1	17/03/2023	Hoverflies (Syrphidae) of Ireland	
Custom	marine mammal	Common Seal ( <i>Phoca vitulina</i> )	1	27/08/2017	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex II    Protected Species: EU Habitats Directive >> Annex V    Protected Species: Wildlife Acts

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	marine mammal	Grey Seal ( <i>Halichoerus grypus</i> )	1	19/11/2016	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex II    Protected Species: EU Habitats Directive >> Annex V    Protected Species: Wildlife Acts
Custom	mollusc	Arion ( <i>Arion</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Arion ( <i>Kobeltia</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Budapest Slug ( <i>Tandonia budapestensis</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	mollusc	Cellar Snail ( <i>Oxychilus (Oxychilus) cellarius</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Chestnut Slug ( <i>Deroceras (Deroceras) panormitanum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Common Chrysalis Snail ( <i>Lauria (Lauria) cylindracea</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Common Garden Snail ( <i>Cornu aspersum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	mollusc	Garlic Snail ( <i>Oxychilus</i> ( <i>Oxychilus</i> ) <i>alliarius</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Irish Yellow Slug ( <i>Limacus maculatus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Keeled Slug ( <i>Tandonia sowerbyi</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	mollusc	Netted Slug ( <i>Deroceras</i> ( <i>Deroceras</i> ) <i>reticulatum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Pellucid Glass Snail ( <i>Vitrina pellucida</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	<i>Peringia ulvae</i>	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Rounded Snail (Discus ( <i>Gonyodiscus</i> ) <i>rotundatus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Smooth Glass Snail ( <i>Aegopinella nitidula</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Smooth Jet Slug ( <i>Milax gagates</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Southern Garden Slug ( <i>Arion</i> ( <i>Kobeltia</i> ) <i>hortensis</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Strawberry Snail ( <i>Trochulus</i> ( <i>Trochulus</i> ) <i>striolatus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	mollusc	Tree Snail ( <i>Balea (Balea) perversa</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Custom	mollusc	Two-toothed Door Snail ( <i>Clausilia (Clausilia) bidentata</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	spider (Araneae)	<i>Salticus scenicus</i>	1	28/04/2019	Citizen Science Spider Records for Ireland	
Custom	terrestrial mammal	Eurasian Badger ( <i>Meles meles</i> )	3	05/07/2018	Mammals of Ireland 2016-2025	Protected Species: Wildlife Acts
Custom	terrestrial mammal	European Otter ( <i>Lutra lutra</i> )	3	01/06/2018	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex II    Protected Species: EU Habitats Directive >> Annex IV    Protected Species: Wildlife Acts
Custom	terrestrial mammal	European Rabbit ( <i>Oryctolagus cuniculus</i> )	1	12/07/2012	Road Kill Survey	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	terrestrial mammal	Irish Stoat ( <i>Mustela erminea subsp. hibernica</i> )	2	17/04/2017	Mammals of Ireland 2016-2025	
Custom	terrestrial mammal	Lesser Noctule ( <i>Nyctalus leisleri</i> )	1	01/08/2005	National Bat Database of Ireland	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex IV    Protected Species: Wildlife Acts

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	terrestrial mammal	Red Fox ( <i>Vulpes vulpes</i> )	3	22/01/2023	Mammals of Ireland 2016-2025	
Custom	terrestrial mammal	Soprano Pipistrelle ( <i>Pipistrellus pygmaeus</i> )	3	27/07/2012	National Bat Database of Ireland	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex IV    Protected Species: Wildlife Acts
Custom	terrestrial mammal	West European Hedgehog ( <i>Erinaceus europaeus</i> )	11	19/06/2021	Hedgehogs of Ireland	Protected Species: Wildlife Acts

**Table 8: W76L**

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	alga	Channelled Wrack ( <i>Pelvetia canaliculata</i> )	1	06/03/1988	Seaweeds of Ireland	
Custom	alga	<i>Fucus cottonii</i>	1	06/03/1988	Seaweeds of Ireland	
Custom	bird	Barn Swallow ( <i>Hirundo rustica</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Black-billed Magpie ( <i>Pica pica</i> )	1	19/11/2016	Birds of Ireland	
Custom	bird	Blackcap ( <i>Sylvia atricapilla</i> )	2	02/04/2021	Birds of Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Black-headed Gull ( <i>Larus ridibundus</i> )	4	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Black-tailed Godwit ( <i>Limosa limosa</i> )	2	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Blue Tit ( <i>Cyanistes caeruleus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Chaffinch ( <i>Fringilla coelebs</i> )	3	02/12/2017	Birds of Ireland	
Custom	bird	Common Blackbird ( <i>Turdus merula</i> )	3	02/12/2017	Birds of Ireland	
Custom	bird	Common Buzzard ( <i>Buteo buteo</i> )	1	04/07/2021	Birds of Ireland	
Custom	bird	Common Greenshank ( <i>Tringa nebularia</i> )	1	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Common Shelduck ( <i>Tadorna tadorna</i> )	1	19/11/2016	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Starling ( <i>Sturnus vulgaris</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Common Wood Pigeon ( <i>Columba palumbus</i> )	2	16/08/2017	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species    Protected Species: EU Birds Directive >> Annex III, Section I Bird Species



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Dunlin ( <i>Calidris alpina</i> )	2	19/11/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex I Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Eurasian Collared Dove ( <i>Streptopelia decaocto</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	Eurasian Curlew ( <i>Numenius arquata</i> )	2	19/11/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section II Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Eurasian Oystercatcher ( <i>Haematopus ostralegus</i> )	3	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
						>> Birds of Conservation Concern - Amber List
Custom	bird	Eurasian Siskin ( <i>Carduelis spinus</i> )	1	02/04/2021	Birds of Ireland	
Custom	bird	Eurasian Teal ( <i>Anas crecca</i> )	2	27/03/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species    Protected Species: EU Birds Directive >> Annex III, Section II Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Eurasian Tree Sparrow ( <i>Passer montanus</i> )	1	19/11/2016	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	European Goldfinch ( <i>Carduelis carduelis</i> )	1	02/12/2017	Birds of Ireland	
Custom	bird	European Robin ( <i>Erithacus rubecula</i> )	5	02/12/2017	Birds of Ireland	
Custom	bird	Great Black-backed Gull ( <i>Larus marinus</i> )	2	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Great Cormorant ( <i>Phalacrocorax carbo</i> )	3	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Grey Heron ( <i>Ardea cinerea</i> )	1	02/12/2017	Birds of Ireland	
Custom	bird	Herring Gull ( <i>Larus argentatus</i> )	1	19/11/2016	Birds of Ireland	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Hooded Crow ( <i>Corvus cornix</i> )	1	02/12/2017	Birds of Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	House Sparrow ( <i>Passer domesticus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Jack Snipe ( <i>Lymnocyptes minimus</i> )	2	11/01/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section I Bird Species    Protected Species: EU Birds Directive >> Annex III, Section III Bird Species
Custom	bird	Lesser Redpoll ( <i>Carduelis cabaret</i> )	1	02/04/2021	Birds of Ireland	
Custom	bird	Little Egret ( <i>Egretta garzetta</i> )	3	02/12/2017	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex I Bird Species



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Northern Lapwing ( <i>Vanellus vanellus</i> )	2	11/01/2016	Birds of Ireland	Protected Species: Wildlife Acts    Protected Species: EU Birds Directive    Protected Species: EU Birds Directive >> Annex II, Section II Bird Species    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Custom	bird	Pied Wagtail ( <i>Motacilla alba subsp. yarrellii</i> )	1	02/12/2017	Birds of Ireland	
Custom	bird	Rook ( <i>Corvus frugilegus</i> )	4	02/12/2017	Birds of Ireland	
Custom	bird	Song Thrush ( <i>Turdus philomelos</i> )	2	02/12/2017	Birds of Ireland	
Custom	bird	Stock Pigeon ( <i>Columba oenas</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Winter Wren ( <i>Troglodytes troglodytes</i> )	1	19/11/2016	Birds of Ireland	
Custom	flowering plant	Bee Orchid ( <i>Ophrys apifera</i> )	1	08/06/2017	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Blackthorn ( <i>Prunus spinosa</i> )	1	14/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Bulrush ( <i>Typha latifolia</i> )	1	14/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Cuckooflower ( <i>Cardamine pratensis</i> )	1	07/05/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Hawthorn ( <i>Crataegus monogyna</i> )	1	14/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Japanese Knotweed ( <i>Reynoutria japonica</i> )	6	04/07/2016	National Invasive Species Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> High Impact Invasive Species    Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Custom	flowering plant	Lesser Celandine ( <i>Ranunculus ficaria</i> )	1	14/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Lords-and-Ladies ( <i>Arum maculatum</i> )	1	27/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Ragged-Robin ( <i>Lychnis flos-cuculi</i> )	1	07/06/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Winter Heliotrope ( <i>Petasites fragrans</i> )	6	12/12/2017	National Invasive Species Database	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - beetle (Coleoptera)	14-spot Ladybird ( <i>Propylea quattuordecimpunctata</i> )	2	18/08/2021	Ladybirds of Ireland	
Custom	insect - beetle (Coleoptera)	7-spot Ladybird ( <i>Coccinella septempunctata</i> )	3	02/04/2021	Ladybirds of Ireland	
Custom	insect - butterfly	Common Blue ( <i>Polyommatus icarus</i> )	13	20/06/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Gatekeeper ( <i>Pyronia tithonus</i> )	1	01/08/2004	Atlas of Butterflies in Ireland 2021	Threatened Species: Near threatened
Custom	insect - butterfly	Green-veined White ( <i>Pieris napi</i> )	2	15/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Holly Blue ( <i>Celastrina argiolus</i> )	4	25/04/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Large White ( <i>Pieris brassicae</i> )	3	05/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Meadow Brown ( <i>Maniola jurtina</i> )	5	20/06/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Orange-tip ( <i>Anthocharis cardamines</i> )	1	22/04/1985	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Painted Lady ( <i>Vanessa cardui</i> )	2	18/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Peacock ( <i>Inachis io</i> )	6	02/04/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Red Admiral ( <i>Vanessa atalanta</i> )	3	02/04/2021	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Ringlet ( <i>Aphantopus hyperantus</i> )	4	20/06/2020	Atlas of Butterflies in Ireland 2021	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - butterfly	Small Tortoiseshell ( <i>Aglais urticae</i> )	4	11/04/2009	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Small White ( <i>Pieris rapae</i> )	2	15/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Speckled Wood ( <i>Pararge aegeria</i> )	7	20/06/2020	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Wall ( <i>Lasiommata megera</i> )	1	01/09/1991	Atlas of Butterflies in Ireland 2021	Threatened Species: Endangered
Custom	insect - dragonfly (Odonata)	Ruddy Darter ( <i>Sympetrum sanguineum</i> )	1	11/08/2021	Dragonfly Ireland 2019 to 2024	
Custom	insect - hymenopteran	Bombus ( <i>Bombus terrestris</i> )	1	14/04/2022	Bees of Ireland	
Custom	insect - hymenopteran	Common Carder Bee ( <i>Bombus (Thoracombus) pascuorum</i> )	1	14/04/2022	Bees of Ireland	
Custom	insect - moth	<i>Agapeta hamana</i>	1	05/07/1976	Moths Ireland	
Custom	insect - moth	<i>Caloptilia syringella</i>	1	12/04/2015	Moths Ireland	
Custom	insect - moth	<i>Celypha lacunana</i>	3	07/06/2020	Moths Ireland	
Custom	insect - moth	Common Carpet ( <i>Epirrhoe alternata</i> )	1	15/07/2022	Moths Ireland	
Custom	insect - moth	Common Grass-veneer ( <i>Agriphila tristella</i> )	1	01/09/1991	Moths Ireland	
Custom	insect - moth	Common Marbled Carpet ( <i>Chloroclysta truncata</i> )	1	11/06/1995	Moths Ireland	
Custom	insect - moth	<i>Cosmiotes consortella</i>	1	14/03/1981	Moths Ireland	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - moth	<i>Emmelina monodactyla</i>	1	05/11/1995	Moths Ireland	
Custom	insect - moth	Feathered Thorn ( <i>Colotois pennaria</i> )	1	05/11/1995	Moths Ireland	
Custom	insect - moth	Firethorn Leaf Miner ( <i>Phyllonorycter leucographella</i> )	1	14/10/2012	Moths Ireland	
Custom	insect - moth	Garden Grass-veneer ( <i>Chrysoteuchia culmella</i> )	2	05/07/1976	Moths Ireland	
Custom	insect - moth	Humming-bird Hawk-moth ( <i>Macroglossum stellatarum</i> )	1	18/07/2019	Moths Ireland	
Custom	insect - moth	Lunar Hornet Moth ( <i>Sesia bembeciformis</i> )	1	04/07/2018	Moths Ireland	
Custom	insect - moth	Shaded Broad-bar ( <i>Scotoperyx chenopodiata</i> )	1	01/08/2004	Moths Ireland	
Custom	insect - moth	Silver Y ( <i>Autographa gamma</i> )	3	07/08/2020	Moths Ireland	
Custom	insect - moth	Six-spot Burnet ( <i>Zygaena filipendulae</i> )	1	22/07/2001	Moths Ireland	
Custom	insect - moth	Straw Dot ( <i>Rivula sericealis</i> )	2	18/08/2021	Moths Ireland	
Custom	insect - moth	Timothy Tortrix ( <i>Aphelia paleana</i> )	1	07/06/2020	Moths Ireland	
Custom	insect - moth	<i>Udea lutealis</i>	1	05/07/1976	Moths Ireland	
Custom	insect - moth	Vestal ( <i>Rhodometra sacraria</i> )	1	01/09/1991	Moths Ireland	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	insect - moth	White Ermine ( <i>Spilosoma lubricipeda</i> )	1	05/07/1976	Moths Ireland	
Custom	insect - moth	White Plume Moth ( <i>Pterophorus pentadactyla</i> )	1	26/09/1999	Moths Ireland	
Custom	insect - true bug (Hemiptera)	<i>Calocoris (Grypocoris) sysi</i>	2	07/06/2020	True Bugs (Heteroptera) of Ireland	
Custom	insect - true bug (Hemiptera)	Dock Bug ( <i>Coreus marginatus</i> )	1	18/08/2021	True Bugs (Heteroptera) of Ireland	
Custom	insect - true bug (Hemiptera)	Potato Capsid ( <i>Closterotomus norwegicus</i> )	2	20/06/2020	True Bugs (Heteroptera) of Ireland	
Custom	insect - true fly (Diptera)	<i>Eristalis pertinax</i>	1	16/05/2013	Hoverflies (Syrphidae) of Ireland	
Custom	insect - true fly (Diptera)	<i>Platycheirus albimanus</i>	1	16/05/2013	Hoverflies (Syrphidae) of Ireland	
Custom	liverwort	Hemisphaeric Liverwort ( <i>Reboulia hemisphaerica</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	liverwort	Wall Scalewort ( <i>Porella platyphylla</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Bird's-claw Beard-moss ( <i>Barbula unguiculata</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Common Aloe-moss ( <i>Aloina aloides</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Don's Thread-moss ( <i>Bryum donianum</i> )	1	23/03/2006	Bryophytes of Ireland	Threatened Species: Least concern

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	moss	Elegant Grimmia ( <i>Schistidium elegantulum</i> )	1	23/03/2006	Bryophytes of Ireland	
Custom	moss	Fallacious Beard-moss ( <i>Didymodon fallax</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Fox-tail Feather-moss ( <i>Thamnobryum alopecurum</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Green-tufted Stubble-moss ( <i>Weissia controversa</i> )	1	24/03/2006	Bryophytes of Ireland	
Custom	moss	Intermediate Screw-moss ( <i>Syntrichia intermedia</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	moss	Red Beard-moss ( <i>Bryoerythrophyllum recurvirostrum</i> )	1	24/03/2006	Bryophytes of Ireland	Threatened Species: Least concern
Custom	terrestrial mammal	European Otter ( <i>Lutra lutra</i> )	1	22/11/1980	Otter Survey of Ireland 1982	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex II    Protected Species: EU Habitats Directive >> Annex IV    Protected Species: Wildlife Acts
Custom	terrestrial mammal	Pine Marten ( <i>Martes martes</i> )	1	23/02/2020	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive    Protected Species: EU Habitats Directive >> Annex V    Protected Species: Wildlife Acts

**Table 9: W76F**

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	bird	Common Buzzard ( <i>Buteo buteo</i> )	1	21/12/2017	Birds of Ireland	
Custom	bird	Eurasian Sparrowhawk ( <i>Accipiter nisus</i> )	2	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	House Sparrow ( <i>Passer domesticus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts    Threatened Species: Birds of Conservation Concern    Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Custom	bird	Redwing ( <i>Turdus iliacus</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	bird	White Wagtail ( <i>Motacilla alba</i> )	1	31/12/2011	Bird Atlas 2007 - 2011	
Custom	centipede	<i>Lithobius (Sigibius) microps</i>	1	01/09/1984	Centipedes of Ireland	
Custom	centipede	<i>Stigmatogaster subterraneus</i>	1	01/09/1984	Centipedes of Ireland	
Custom	flowering plant	Blackthorn ( <i>Prunus spinosa</i> )	1	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Bulbous Buttercup ( <i>Ranunculus bulbosus</i> )	1	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	



Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Coltsfoot ( <i>Tussilago farfara</i> )	2	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Common Nettle ( <i>Urtica dioica</i> )	1	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Daisy ( <i>Bellis perennis</i> )	2	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Gorse ( <i>Ulex europaeus</i> )	2	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Greater Bird's-foot-trefoil ( <i>Lotus pedunculatus</i> )	1	05/07/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Hairy Bitter-cress ( <i>Cardamine hirsuta</i> )	2	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Marsh Woundwort ( <i>Stachys palustris</i> )	1	05/07/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Red Dead-nettle ( <i>Lamium purpureum</i> )	2	11/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Shining Crane's-bill ( <i>Geranium lucidum</i> )	1	17/04/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	flowering plant	Winter Heliotrope ( <i>Petasites fragrans</i> )	1	20/02/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	flowering plant	Yarrow ( <i>Achillea millefolium</i> )	1	05/07/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	
Custom	insect - beetle (Coleoptera)	7-spot Ladybird ( <i>Coccinella septempunctata</i> )	1	23/04/2021	Ladybirds of Ireland	
Custom	insect - butterfly	Meadow Brown ( <i>Maniola jurtina</i> )	1	08/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Peacock ( <i>Inachis io</i> )	1	08/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Red Admiral ( <i>Vanessa atalanta</i> )	2	08/08/2017	Atlas of Butterflies in Ireland 2021	
Custom	insect - butterfly	Small Tortoiseshell ( <i>Aglais urticae</i> )	1	20/08/2018	Atlas of Butterflies in Ireland 2021	
Custom	insect - hymenopteran	<i>Bombus lucorum</i> agg.	1	19/05/2016	Bees of Ireland	
Custom	insect - moth	Fox Moth ( <i>Macrothylacia rubi</i> )	1	08/08/2017	Moths Ireland	
Custom	insect - moth	Humming-bird Hawk-moth ( <i>Macroglossum stellatarum</i> )	2	25/05/2017	Moths Ireland	
Custom	mollusc	<i>Ancylus fluviatilis</i>	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Arion ( <i>Carinarion</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Arion ( <i>Carinarion circumscriptus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Arion ( <i>Kobeltia</i> )	2	26/09/1984	All Ireland Non-Marine Molluscan Database	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	mollusc	Bourguignat's Slug ( <i>Arion (Carinarion) fasciatus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Brown Lipped Snail ( <i>Cepaea (Cepaea) nemoralis</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Brown Snail ( <i>Zenobiella subrufescens</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Custom	mollusc	Cellar Snail ( <i>Oxychilus (Oxychilus) cellarius</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Chestnut Slug ( <i>Deroceras (Deroceras) panormitanum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Common Chrysalis Snail ( <i>Lauria (Lauria) cylindracea</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Common Garden Slug ( <i>Arion (Kobeltia) distinctus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Common Garden Snail ( <i>Cornu aspersum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species    Invasive Species: Invasive Species >> Medium Impact Invasive Species
Custom	mollusc	Copse Snail ( <i>Arianta arbustorum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Custom	mollusc	Darparnaud's Glass Snail ( <i>Oxychilus (Oxychilus) draparnaudi</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	

Grid square	Species group	Species name	Record count	Date of last record	Title of dataset	Designation
Custom	mollusc	Jenkins' Spire Snail ( <i>Potamopyrgus antipodarum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species    Invasive Species >> Medium Impact Invasive Species
Custom	mollusc	Netted Slug ( <i>Deroceras (Deroceras) reticulatum</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Point Snail ( <i>Acicula fusca</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Custom	mollusc	Slippery Moss Snail ( <i>Cochlicopa cf. lubrica</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Smooth Glass Snail ( <i>Aegopinella nitidula</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Strawberry Snail ( <i>Trochulus (Trochulus) striolatus</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	mollusc	Two-toothed Door Snail ( <i>Clausilia (Clausilia) bidentata</i> )	1	26/09/1984	All Ireland Non-Marine Molluscan Database	
Custom	terrestrial mammal	European Rabbit ( <i>Oryctolagus cuniculus</i> )	2	09/06/2015	Atlas of Mammals in Ireland 2010-2015	Invasive Species: Invasive Species    Invasive Species >> Medium Impact Invasive Species
Custom	terrestrial mammal	Red Fox ( <i>Vulpes vulpes</i> )	1	09/06/2015	Atlas of Mammals in Ireland 2010-2015	
Custom	terrestrial mammal	West European Hedgehog ( <i>Erinaceus europaeus</i> )	4	26/04/2021	Hedgehogs of Ireland	Protected Species: Wildlife Acts

# Appendix C: Finding of No Significant Effects Report

## Name of Project:

Carrigaline Transportation and Public Realm Enhancement Plan, Phase 1B

## Names of Natura 2000 sites of relevance to the proposed development site:

There will be no direct or indirect significant negative effects on any Natura 2000 sites as a result of the Proposed Development.

The nearest Natura 2000 site to the Proposed Development is the Cork Harbour SPA which is located adjacent to Strand Road. All Natura 2000 sites located within 15km of the Proposed Development are illustrated in Figure 7.

Cork Harbour SPA site is designated primarily for bird populations. The site of the Proposed Development does not provide significant foraging or breeding or community habitats for any mobile QI.

There is a weak hydrological connection between the Proposed Development site and the Cork Harbour SPA via surface run-off into the Owenboy River and Owenboy Estuary. However, it is considered unlikely that there will be any significant pollutants as a result of the Proposed Development. In the event that minimal pollutants entered the Owenboy River or Estuary, it is considered that these would not have likely significant effects on Cork Harbour SPA as pollutants as they would readily be diluted and dispersed across a wide area.

**Table 10: Natura Sites and Codes within a 15km radius of the Proposed Development**

Site Name	Site Code
Cork Harbour SPA	004030
Great Island Channel SAC	001058

## Is the project or plan directly connected with or necessary to the management of the site?

No

## Are there other projects or plans that together with the project or plan being assessed could affect the site?

No



## **THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS**

### **Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.**

It has been determined by Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites.

### **Explain why these effects are not considered significant.**

All development activity will take place within the proposed development site works boundary. No works will take place within any Natura 2000 site. No material or spoil from the works will be deposited in any Natura 2000 site. There will be no encroachment on the habitats or qualifying species of any Natura 2000 site.

There will be no loss of Natura 2000 site habitat area, no fragmentation of the habitats of Natura 2000 sites, no disturbance to the qualifying species of the Natura 2000 sites, no impacts on population density of these species, no impacts on water resources and no impacts on water quality of the Natura 2000 sites.

There will be no significant emissions to air, soil or water during construction or operation. Thus, significant impacts on the receiving environment are not predicted to occur.

## **DATA COLLECTED TO CARRY OUT THE ASSESSMENT**

### **Who carried out the assessment?**

The assessment was supervised, checked and completed by Donncha Madden and Daniel Garvey.

## Sources of Data:

This report has been prepared with regard to the following guidance documents, where relevant:

- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10;
- Department of Environment, Heritage and Local Government. Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (2010 revision);
- European Commission Environment Directorate-General [hereafter referred to as MN 2000], Managing Natura 2000 sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC (2000);
- European Commission Environment Directorate-General. Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodical Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2021);
- European Commission Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC (2007);
- European Commission. Communication from the Commission on the precautionary principle (2000);
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011); and
- Office of the Planning Regulator Practice Note PN01 – Appropriate Assessment Screening for Development Management (2021).

Sources of information that were used to collect data on the Natura 2000 network of sites and on the existing ecological environment comprise:

- [Catchments.ie](http://catchments.ie)<sup>40</sup>;
- Cork County Development Plan 2022-2028;
- Cork County Planning Application Map<sup>41</sup>;
- Environmental Protection Agency (EPA) Online Map Viewer<sup>42</sup>;
- Google aerial photography (viewed in May 2023);
- National Parks and Wildlife Service (NPSW) online data on designated sites<sup>43</sup>;
- NPWS online data on protected flora and fauna<sup>44</sup>.

Guidance which has assisted in determining whether impacts are likely to be significant include:

- Environmental Protection Agency. Guidelines on the Information to be Contained in Environmental Impact Statements (2022);
- Flood Maps IE: Layer - Past Flood Events. <https://www.floodinfo.ie/map/floodmaps/> (Viewed May 2023);
- Institute of Ecology and Environmental Assessment. Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine (September 2018).

## OVERALL CONCLUSIONS

Based on the information provided above, and by applying the precautionary principle, it has been determined by Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites and therefore it is the view of Arup that it is not necessary to undertake any further stage of the Appropriate Assessment process

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<sup>40</sup> [Catchments.ie](http://catchments.ie). Available on [www.catchments.ie](http://www.catchments.ie). Accessed May 2023

<sup>41</sup> Cork County Council. Available <https://corkcoco.maps.arcgis.com/apps/webappviewer/index.html?id=03a3b83db76c46fd9b66178f8d407e0d>. Accessed May 2023.

<sup>42</sup> EPA. Information on environmental quality data. EPA Online Environmental Map Viewer. Available <https://gis.epa.ie/EPAMaps/>. Accessed May 2023

<sup>43</sup> NPSW. Designated site data. Available on <https://www.npws.ie/maps-and-data/designated-site-data>. Accessed May 2023

<sup>44</sup> NPSW. Designated site data. Available on <https://www.npws.ie/maps-and-data/habitat-and-species-data>. Accessed May 2023.

# Appendix D: Irish Wetland Bird Survey Results

**Table 11: Site Summary Table for 0L403 Cork Harbour (Source: Irish Wetland Bird Survey I-WeBS)<sup>45</sup>**

Species	Mean peak counts (2010-2021)	Peak Months
Unidentified duck	0	Jan, Feb, Dec
Unidentified tern	0	Sep
Hybrid shelduck	0	Nov
Mute Swan	48	Dec
Whooper Swan	0	Oct
Pink-footed Goose	0	Mar
Canada Goose	4	Nov
Barnacle Goose	0	Jan, Feb, Dec
Light-bellied Brent Goose	62	Jan
Shelduck	773	Feb
Wigeon	1342	Jan
Gadwall	9	Jan, Feb
Teal	1384	Jan
Mallard	341	Sep
Pintail	27	Dec
Shoveler	18	Jan, Feb
Pochard	0	Jan
Tufted Duck	24	Feb, Mar
Scaup	0	Oct, Nov
Long-tailed Duck	0	Jan
Eider	0	Feb, Nov
Common Scoter	1	Nov
Goldeneye	3	Feb
Red-breasted Merganser	58	Dec
Red-throated Diver	0	Jan, Nov
Black-throated Diver	0	Mar

<sup>45</sup> Bird Watch Ireland. Irish Wetland Bird Survey (I-WeBS), Site Summary Table for 0L403 Cork Harbour, available on <https://c0amf055.caspio.com/dp/f4db30005dbe20614b404564be88>. Accessed 19/06/20023

Species	Mean peak counts (2010-2021)	Peak Months
Great Northern Diver	9	Jan
Little Grebe	75	Nov, Dec
Great Crested Grebe	129	Jan
Slavonian Grebe	0	Nov
Cormorant	256	Sep, Nov
Shag	8	Dec
Little Egret	120	Sep
Grey Heron	101	Sep
Water Rail	2	Feb
Moorhen	19	Sep
Coot	2	Mar, Sep
Oystercatcher	1136	Sep
Ringed Plover	38	Sep
Golden Plover	861	Nov
Grey Plover	12	Jan
Lapwing	1114	Dec
Knot	56	Feb
Little Stint	0	Sep, Nov
Curlew Sandpiper	0	Oct
Dunlin	2738	Dec
Ruff	0	Nov
Snipe	69	Dec
Black-tailed Godwit	2782	Sep
Bar-tailed Godwit	297	Jan
Whimbrel	4	Sep
Curlew	942	Sep
Spotted Redshank	1	Feb, Mar, Nov
Redshank	1517	Oct
Greenshank	97	Oct
Green Sandpiper	1	Sep, Dec
Common Sandpiper	2	Sep



Species	Mean peak counts (2010-2021)	Peak Months
Turnstone	95	Nov
Kingfisher	1	Sep
Black-headed Gull	3711	Sep
Common Gull	218	Nov
Lesser Black-backed Gull	164	Sep, Nov
Herring Gull	171	Sep
Great Black-backed Gull	131	Sep
Mediterranean Gull	130	Sep
Sandwich Tern	71	Sep
Common Tern	3	Sep
Arctic Tern	0	Apr
Ruddy Shelduck	0	Jan
American Wigeon	0	Dec
Green-winged Teal	0	Mar
Surf Scoter	0	Nov
Black-necked Grebe	0	Feb, Dec
Wilson's Phalarope	0	Sep
Kittiwake	0	Sep
Little Gull	0	Oct
Ring-billed Gull	1	Mar
Glaucous Gull	0	Mar
Yellow-legged Gull	1	Sep
Glossy Ibis	0	Feb
Cattle Egret	3	Mar, Oct, Dec
Great White Pelican	1	Oct