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Report for the Screening of Appropriate Assessment

Project Title:

R613 Ballygarvan Traffic Calming
Scheme (TCS)

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Cork County Council

Completed by:

Regional & Local Roads Design Office

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1 Introduction

This document contains the Report for the Screening of Appropriate Assessment in respect of the proposed R613 Ballygarvan Traffic Calming Scheme (TCS). The determination is based on information provided by the desk study carried out during May 2022 and multiple site visits within the period between March 2017 and May 2022 and also based on the Screening for Appropriate Assessment Report carried out by Malachy Walsh and Partners engineering consultants carried out for Ballygarvan Bridge Rehabilitation works.

1.1 Name of the Project

R613 Ballygarvan Traffic Calming Scheme (TCS).

1.2 Description of the Project

The study area is situated in the centre of Ballygarvan village, approx. 9km south of Cork City, 3km south-east of Cork Airport just off the Cork-Kinsale Road R600 and along the regional road R613 heading for Carrigaline. The study area is within a 50 km/h speed limit zone. To the north west of Ballygarvan village there is Bowen's Cross at the confluence of R600 with local L2456 & L2457 roads. 1km further east along the R613 is the CRH Ballygarvan quarry that is one of the primary quarries supplying the Cork City hinterland.

The works will be carried out on the land owned by Cork County Council and lands owned by 3rd parties. The land acquisition is required to set back the bridge southern wall to provide room for a new footpath connecting areas of the village on opposite banks of the Annalicka Bridge Stream.

The scheme includes the following principle features:

- Alterations to existing footpaths.
- Construction of new footpaths linking existing footpaths on the south side of the road.
- Installation of a new raised table and a new controlled pedestrian crossing.
- Installation of speed ramps on R613 on exists from the village.
- Installation of concrete buildouts.
- Installation of new road markings and signage.
- Alterations to existing storm drainage and construction of a new drainage.
- Alterations to the existing Ballygarvan Bridge including:
 - Extension of the bridge to the southern side to accommodate new footpath [extension to bridge of approx 2 m]
 - Construction of new bridge retaining wall approx. 20 m in length, to allow for the footpath upgrade on the southern side
 - Riverbed repairs
 - Embankment repairs
 - Masonry repairs
- Trimming of existing vegetation to improve visibility sightlines.
- All ancillary works required to deliver the proposed upgrade works.

The project requires removal of an existing south parapet wall as well as excavation and removal of existing soil and other organic material and the laying down of new surfaces. Excavated material is to be removed off site and disposed of to licensed landfill. Refuelling of plant and machinery is to be undertaken at dedicated Contractor fuel stations on the route during delivery of the works.

1.3 Legislative Context for Appropriate Assessment

The European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, (hereinafter referred to as “The Habitats Directive”), provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. Article 6 of the Habitats Directive plays a crucial role in the management of the sites that make up the Natura 2000 network.

Regulation 250 of the Planning and Development Regulations 2000 (as amended) which derives from Article 6(3) of the Habitats Directive requires Local Authorities to carry out screening for appropriate assessment of proposed development to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with another plan or project is likely to have a significant effect on one or more European sites.¹ The Local Authority is required to determine that appropriate assessment of the proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on one or more European sites.

This report is to assist Planning Authority in their Screening of the proposed road improvement works for the need for Appropriate Assessment.

This report has been prepared in accordance with the following European Commission and National Guidance:

- EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC Commission Notice C (2018) 7621;
- DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (Revised 2010);
- March 2021, Office of the Planning Regulator (OPR) Practice Note PN01, Appropriate Assessment Screening for Development Management.

2 Project Description

The proposed scheme is located (in a straight line) approximately 5 km north-west of Owenboy River Estuary, approximately 7 km south-west of Douglas River Estuary and approximately 10.5 km South-West of Great Island Channel SPA (Cork Harbour).

The road project is not directly connected with or necessary to the management of any Natura 2000 site and the project is located in townlands: Ballygarvan, Ballyduhig South.

2.1 Existing Environment

Multiple site visits within the period between March 2017 and May 2022 and a site surveys have been carried out on 21st March 2017, 19th November 2019, 26th June 2020, 12th October 2020, 16th February 2021, 11th March 2021, and 14th July 2021 by Regional & Local Roads Design Office engineers. The Bridge related elements of the scheme have also been assessed by an independent consultant in November 2018. Survey results are presented below, and habitat codes are in accordance with Fossitt (2000).

¹ S.I. No. 476/2011 - Planning and Development (Amendment) (No. 3) Regulations 2011

The proposed site on most of the area (shown in Figure 1 below) is comprised of build land (BLR) with the exception of private land area necessary to be acquired which is classified as improved grassland (Fossitt code GAG).



Figure 1 Habitat Map of Proposed Study Area



Figure 2 Ballygarvan village centre looking east



Figure 3 Ballygarvan village centre looking west



Figure 4 View looking east on the bridge



Figure 5 View looking west on the bridge



Figure 6 View north onto the road (behind the vegetation) from inside the garden



2.2 Description of proposed works

The scheme includes the following principle features:

- Alterations to existing footpaths.
- Construction of new footpaths linking existing footpaths on the south side of the road.
- Installation of a new raised table and a new controlled pedestrian crossing.
- Installation of speed ramps on R613 on exists from the village.
- Installation of concrete buildouts.
- Installation of new road markings and signage.
- Alterations to existing storm drainage and construction of a new drainage.
- Alterations to the existing Ballygarvan Bridge including:

- Extension of the bridge to the southern side to accommodate new footpath [extension to bridge of approximately 2 m]
- Construction of new bridge retaining wall approx. 20 m in length, to allow for the footpath upgrade on the southern side
- Riverbed repairs
- Embankment repairs
- Masonry repairs
- Trimming of existing vegetation to improve visibility sightlines.

The works are expected to take place over a period of less than 3 months.

2.3 Identification of European Sites

There are two European sites (*Figure 7*) located within 15 km distance to the study area:

- **Great Island Special Area of Conservation – Site Code 001058**
- **Cork Harbour Special Protection Area – Site Code 004030**

The Source-Pathway-Receptor model have been analysed and it was determined that the proposed site has a single hydrological connection to European site via the tributary stream of Owenboy River. At the closest point the distance from the work site to the boundary of the Special Protection Area (SPA) will be approximately 5 km.

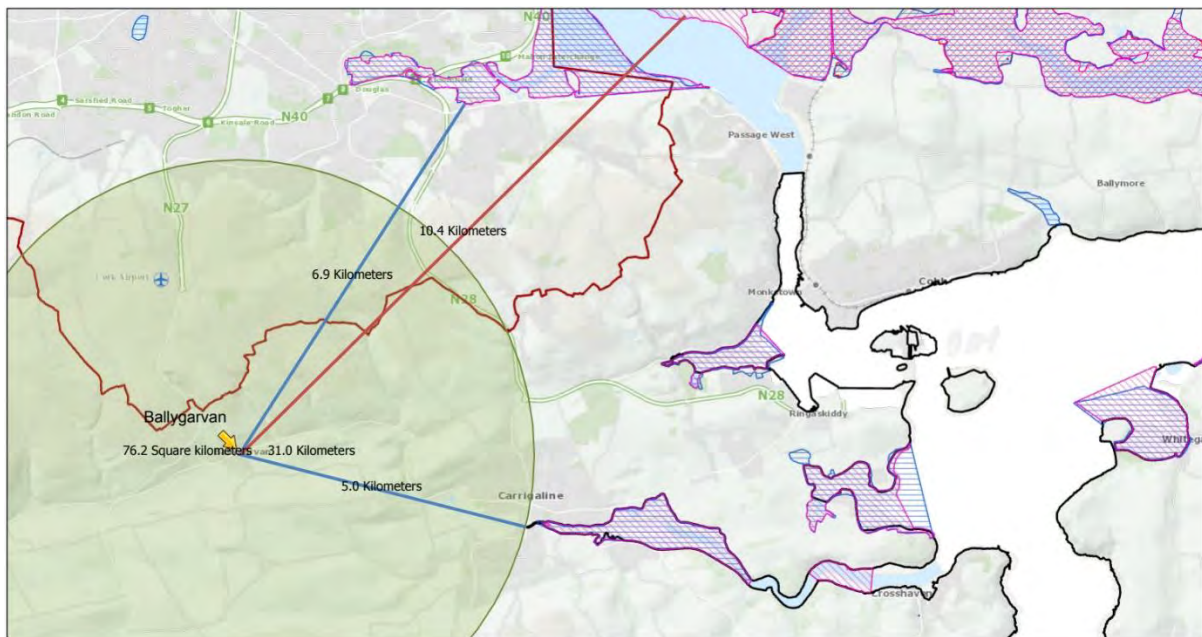


Figure 7 National Parks & Wildlife Service (NPWS) Designated Areas within the zone of influence of proposed works

Consideration is given in this report to the potential for the proposed development to give rise to significant effects on SPA site.

2.4 Description of European Sites

There is one other European site which is located within 15 km of the proposed project. This is the **Great Island Channel Special Area of Conservation (SAC)**. This site is over 10 km from the proposed development at its closest point and is located in a separate hydrological catchment. No potential for negative effects arising from the proposed development on this site is identified.

The **Cork Harbour Special Protection Area (SPA)** is an estuarine complex which is primarily comprised of intertidal habitats, mainly mudflats as well as some other coastal and marine habitats. These

habitats support very high numbers of wintering waterfowl. The Harbour regularly supports in excess of 20,000 wintering birds, making it an internationally important site and the fifth most important wintering waterfowl site in the country. The qualifying interests for this SPA are set out in the table below, as are the Conservation Objectives which apply to the site. This site is located 5 km east of the study area.

Qualifying Interests

A004	Little Grebe (<i>Tachybaptus ruficollis</i>)	A141	Grey Plover (<i>Pluvialis squatarola</i>)
A005	Great Crested Grebe (<i>Podiceps cristatus</i>)	A142	Lapwing (<i>Vanellus vanellus</i>)
A017	Cormorant (<i>Phalacrocorax carbo</i>)	A149	Dunlin (<i>Calidris alpine</i>)
A028	Grey Heron (<i>Ardea cinerea</i>)	A156	Black-tailed Godwit (<i>Limosa limosa</i>)
A048	Shelduck (<i>Tadorna tadorna</i>)	A157	Bar-tailed Godwit (<i>Limosa lapponica</i>)
A050	Wigeon (<i>Anas penelope</i>)	A160	Curlew (<i>Numenius arquata</i>)
A052	Teal (<i>Anas crecca</i>)	A162	Redshank (<i>Tringa tetanus</i>)
A054	Pintail (<i>Anas acuta</i>)	A179	Black-headed Gull (<i>Chroicocephalus ridibundus</i>)
A056	Shoveler (<i>Anas clypeata</i>)	A182	Common Gull (<i>Larus canus</i>)
A069	Red-breasted Merganser (<i>Mergus serrator</i>)	A183	Lesser Black-backed Gull (<i>Larus fuscus</i>)
A130	Oystercatcher (<i>Haematopus ostralegus</i>)	A193	Common Tern (<i>Sterna hirundo</i>)
A140	Golden Plover (<i>Pluvialis apricaria</i>)	A999	Wetland and Waterbirds

Table 1 Cork Harbour Special Protection Area Qualifying Interests

2.5 Connectivity Assessment & Potential for Significant Effects Assessment

Qualifying Interest(s)	Conservation Objective	Targets	Connectivity (Source-Pathway-Receptor)	Considered further due to Potential Significant Effects
<p>Little Grebe Great Crested Grebe Cormorant Grey Heron Shelduck Wigeon Teal Pintail Shoveler Red-breasted Merganser Oystercatcher Golden Plover Grey Plover Lapwing Dunlin Black-tailed Godwit Bar-tailed Godwit Curlew Redshank Black-headed Gull, Common Gull Lesser Black-backed Gull</p>	<p>To maintain the favourable conservation condition of these species in Cork Harbour SPA.</p>	<p>Population Trend: Long term population trends for these species are stable or increasing. (<i>Water bird population trends are presented in part four of the Cork Harbour SPA (004030) Conservation Objectives supporting document, National Parks & Wildlife Service (NPWS), November 2014</i>).</p> <p>Distribution: No significant decrease in the range, timing or intensity of use of areas by these species other than occurring from natural patterns of variation. (<i>Water bird distribution from the 2010/2011 Water bird survey programme is discussed in part five of the Cork Harbour SPA (004030) Conservation Objectives supporting document, National Parks & Wildlife Service (NPWS), November 2014</i>)</p>	<p>Annalicka Bridge Stream crosses the study area and flows under the Ballygarvan Bridge which is to be extended by 2 m to provide for the footpath. The stream discharges to Owenboy River approx.450 m south of Ballygarvan village. The closest hydrologically connected point from the work site to the boundary of the Special Protection Area (SPA) is approx. 5 km. Given the location of the works relative to the SPA any surface water emissions will have dissipated prior to reaching the SPA boundary.</p>	<p>Given the nature, scale, and location of the works, there is no potential for significant impact to Cork Harbour SPA.</p>
<p>Common Tern</p>	<p>To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA.</p>	<p>Breeding population abundance: No significant decline in apparently occupied nests (AONs). Measures based on standard tern survey methods (<i>Seabird Monitoring handbook, P.M. Walsh et al., 1995</i>). In 2012 the total population of common terns that nested within the wider Cork Harbour was between 85 and 95 pairs, a proportion of which now breeds outside the</p>	<p>Annalicka Bridge Stream crosses the study area and flows under the Ballygarvan Bridge which is to be extended by 2 m to provide for the footpath. The stream discharges to Owenboy River approx.450 m south of Ballygarvan village.</p>	<p>Given the nature, scale, and location of the works, there is no potential for significant impact to Cork Harbour SPA.</p>

Qualifying Interest(s)	Conservation Objective	Targets	Connectivity (Source-Pathway-Receptor)	Considered further due to Potential Significant Effects
		<p>SPA (<i>Ringaskiddy Port Redevelopment. Environmental Impact Statement (EIS), RPS, 2014</i>).</p> <p>Productivity rate: No significant decline in fledged young per breeding pair. Measure based on standard tern survey methods (<i>Seabird Monitoring handbook, P.M. Walsh et al., 1995</i>). The Seabird Monitoring Programme (SMP) Database (<i>JNCC, 2014</i>) provides population data for this species.</p> <p>Distribution: breeding colonies: No significant decline in location, number and area (hectares) of breeding colonies. The Common Tern harbour colony now largely breeds on artificial structures in at least two locations.</p> <p>Prey biomass available: No significant decline in availability of key prey items (Small fish, crustaceans, insects and occasionally squid. Key habitats: common tern forage in/over shallow coastal waters, bays, inlets, shoals, tidal-tips, drift lines, beaches, saltmarsh creeks, lakes, ponds or rivers. Foraging range max 37 km, mean max. 33.81 km, mean 8.67 km.</p> <p>Barriers to connectivity: No significant increase. Seabirds species can make extensive use of marine waters adjacent to their breeding colonies. Foraging range: max. 37 km, mean max 33.81 km, mean 8.67 km (<i>BirdLife International</i></p>	<p>The closest hydrologically connected point from the work site to the boundary of the Special Protection Area (SPA) is approx. 5 km. Given the location of the works relative to the SPA any surface water emissions will have dissipated prior to reaching the SPA boundary.</p>	

Qualifying Interest(s)	Conservation Objective	Targets	Connectivity (Source-Pathway-Receptor)	Considered further due to Potential Significant Effects
		<p><i>Seabird Ecology and Foraging Range Database, BirdLife International, 2014).</i></p> <p>Disturbance at the level of impact breeding site: Human activities should occur at levels that do not adversely affect the breeding common tern population. In the Cork Harbour area, this species largely breeds on artificial structures (<i>Common terns Sterna hirundo on Cork Harbour, J. Wilson et al., 2000 and Ringaskiddy Port Redevelopment. Environmental Impact Statement, RPS, 2014).</i></p>		
Wetlands	To maintain the favourable conservation condition of wetland habitats in Cork Harbour SPA, as a resource for the regularly – occurring migratory waterbirds that utilise it.	<p>Habitats Area: The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 hectares, other than that occurring from natural patterns of variation. The wetland habitat area was estimated as 2,587 ha using OSI data and relevant orthophotographs.</p>	The closest hydrologically connected point from the work site to the boundary of the Special Protection Area (SPA) is approx. 5 km. Given the location of the works relative to the SPA any surface water emissions will have dissipated prior to reaching the SPA boundary.	Given the nature, scale, and location of the works, there is no potential for significant impact to Cork Harbour SPA.

Table 2 NPWS (2014) Conservation Objectives for Cork Harbour SPA {4030}. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

The Cork Harbour SPA is of major ornithological significance for a population of *Black-tailed Godwit* and *Redshank* and additionally, it supports a breeding colony of *Common Tern*. Several species such as: *Whooper Swan, Little Egret, Golden Plover, Bar-tailed Godwit, Ruff, Mediterranean Gull, Pintail, Shoveler and Common Tern* occur regularly, and the SPA provides both feeding and roosting sites.

Site trends for the following species which qualifying interests of the SPA are *Unfavourable: Shelduck, Wigeon, Teal, Grey Heron, Great Crested Grebe, Oystercatcher, Curlew, Dunlin, Redshank.*

Site trends for the following species which qualifying interests of the SPA are *Favourable: Little Grebe, Golden Plover, Black-tailed Godwit, Bar-tailed Godwit.*

3 Assessment of Likely Significant Effects

3.1 Management of European Site.

Appropriate Assessment (AA) is not required where the proposed development is connected with, or necessary to the management of a European site. The Proposed Site is not directly connected with or necessary to the management of a European Site and therefore AA Screening is required.

3.2 Identification of Potential Direct and Indirect Impacts of the Project on European Site.

Potential likely ecological impacts arising from the project are identified below.

Description of elements of the project likely to give rise to potential ecological impacts.

The proposal has the potential to cause impacts to the freshwater reaches of the Annalicka Stream and Owenboy River downstream of Ballygarvan Bridge. The transitional habitats of the Cork Harbour SPA into which this watercourse flows are located ca. 7.5km downstream. The elements of the project likely to give rise to potential ecological impacts are as follows:

- The Annalicka Stream and Owenboy River is a potential pollution pathway to Cork Harbour for the duration of the works.
- Up to twelve-week duration of the works creates a risk window during which impacts could ensue. Demolition of the structure has the potential create dust and airborne particles which may enter the watercourse and be transported downstream.
- The damming and pumping of the stream has the potential to cause a negative impact on aquatic life.
- Use of concrete in close proximity to the river creates a limited risk of ingress of concrete to the habitats at the location and downstream.
- Use of fuel and oils in close proximity to the river creates a risk of ingress of fuel or oil by means of onsite spill to the habitats at the location and downstream.
- The works could potentially cause disturbance or displacement impacts to SCI bird species for which the Cork Harbour SPA is selected should they be present in any area adjacent to the bridge via fugitive emissions of noise from the use of machinery and human presence over the works period.

Describe any likely direct, indirect or secondary ecological impacts of the project (either alone or in combination with other plans or projects) by virtue of:

- *Size and scale;*
- *Land-take;*
- *Distance from Natura 2000 Site or key features of the Site;*

Size and scale and land take

Land take is required from private landowners for the bridge widening. The habitats present within the land to be acquired are mostly of built land (BLR) with the exception of an area of the garden necessary to be acquired classified as improved grassland (GAG). The proposed site is not suitable to support qualifying interest species for both SPA therefore given the nature, scale, duration and location of the works, there is no potential for significant habitat loss or alteration impacts to Cork Harbour SPA. The subject site is outside any Natura 2000 site.

Distance from Natura 2000 site or key features of the site

None expected. The proposal is not located within any Natura 2000 Site and the distance of 5 km that intervenes -the closest site is Cork Harbour SPA – will attenuate any impacts that might ensue.

Resource requirements

None expected. Resource requirements are minimal and are of no significance with respect to the Natura 2000 network in relation to background levels.

- *Resource requirements;*
 - *Emissions;*
 - *Excavation requirements;*
 - *Transportation requirements;*
 - *Duration of construction, operation etc.; and*
 - *Other.*
- Emissions**
No significant emissions to air are expected.
The primary emissions expected from the proposed works are fugitive emissions of noise from the use of machinery, equipment movement and the increase in human activity for the duration of the works.
- Emissions (to water)**
No significant emissions to water are expected. Emissions to water may result from disturbance of water and sediments in the Annalicka Stream, and during re-watering of the works area upon completion of the repairs. Any waters affected are not expected to carry deleterious material in any significant quantities or concentrations beyond the confluence with the Owenboy River, ca. 450m to the south / downstream.

4 Screening Assessment

There will be no direct intervention within the SPA, and therefore no direct loss of habitat within the SPA will arise as a result of this project.

Risk of activities associated with proposed works giving rise to negative effects on natural hydrological processes or patterns of sedimentation deposition can also be ruled out, as there will be no increase in rates or volumes of surface water run-off arising from the proposed development.

The primary considerations for this project are identified to be the following:

- risk of the project giving rise to deterioration of estuarine habitats, and thereby on their dependant marine communities, including invertebrate and bird communities. This risk is associated with the potential risk of release of toxic contaminants to surface water particularly associated with construction related activities;
- risk of the activities associated with the project causing significant disturbance to birds; and
- habitat or species fragmentation.

4.1 Deterioration of estuarine habitats

4.1.1 Habitat loss and habitat alteration

The proposed works are encompassed entirely within an area of highly modified man-made habitats. It is concluded that significant habitat loss or alteration impacts on Cork Harbour SPA and the Great Island Channel SAC as a result of the proposal are not likely.

4.1.2 Water Quality

Given the size, scale and characteristics of the proposed development, it is considered that the risk of adverse water quality impacts is restricted to the Annalicka Stream with impacts to the Owenboy River highly unlikely. Any small volumes of sediments or fines that may be released from the stream bed around the works will either fall out of the water column rapidly or will be dispersed along the channel of the river and will be attenuated to imperceptible levels over the course of the river that separates the bridge from the Cork Harbour SPA/Great Island Channel SAC downstream.

It is considered, therefore, that any possible impacts due to the release of sediment will be restricted to a relatively confined area near the replacement structure where some disturbance of stream bed sediments could occur. Concrete and mortar will be chemically inert by the time the water barrier is removed and flow resumes in the water course. Due to the scale and location of the proposal, water quality impacts of any significance on the Cork Harbour SPA/Great Island Channel SAC are not

envisaged. This evaluation takes into account the proposal to work in the dry and the distance between the Cork Harbour SPA/Great Island Channel SAC.

The accidental release on significant scale of toxic contaminants including fuels and/or cementitious materials could have negative effects. The run-off of suspended solids, unless on the significant scales will not have adverse impacts on habitats, or the species that they support as the intertidal habitats in the adjacent sections of the SPA are naturally silty environments.

4.1.3 Construction Phase

Activities associated with the construction of the proposed scheme could have the potential to give rise to the release of toxic contaminants and/or sediments to water courses linked to Cork Harbour site. Those activities are assessed to be at low risk of causing significant releases of pollutants to water. Standard best practice is going to be implemented throughout the construction period and works shall be carried out in accordance with (CIRIA Guidance No C532 - Control of Water Pollution from Construction Sites).

4.1.3.1 Site Clearance

The proposed works will require vegetation clearance and demolition of Ballygarvan Bridge parapet wall over an approximate distance of 20 m. The zone of influence is assessed to be contained within the direct footprint of the demolition works.

All vegetation attached to and in the vicinity of the structure will be removed using hand or power tools as required. All vegetation will be removed during the tree felling/hedge cutting season.

4.1.3.2 Riverbed and masonry repairs

Approximately 5.5T of 500kg limestone rock armour will be placed at the downstream end of the new structure by an excavator on the adjacent bank after pouring of the concrete abutments. In order to avoid disruption instream, these works will be conducted in the dry areas in tandem with the water management. Concrete will be ready mix batched and mixed off site and delivered to site by ready mix truck.

4.1.3.3 Dust & Waste

The Proposed works are likely to result in the generation of construction noise and waste which will be disposed in accordance with waste legislation.

4.1.4 Operational Phase

The existing site conditions during the operation phase are not going to change therefore no disturbance or impact are expected.

4.2 Disturbance to Birds

Study area is unlikely to be of significant value to qualifying interest of the SPA having regards to habitat and given the distance to estuarine habitats.

While a hydrological connection exists between the proposed works are the Owenboy Estuary within Cork Harbour SPA via the Annialicka Stream and Owenboy River, there is no significant pathway between the proposed works and the Cork Harbour. This is due to the isolated nature of the proposed works (working in the dry). Additionally, the dilution provided by the Annialicka Stream and Owenboy River is considered significant, while the distance between the proposed development and the SPA is 6.5km via surface water connections. It is unlikely therefore that there will be any impacts caused by the works in relation to these mudflat habitats or to the open marine waters used by any of the bird species of conservation interest. It is considered that the proposed works will not result in the

alteration of any of the intertidal habitats within the Owenboy Estuary. The species of conservation interest in the SPA can utilise a wide range of the open water, tidal and intertidal habitats available within the SPA site and the larger Cork Harbour area (NPWS, 2014). Significant disturbance or displacement impacts on the foraging behaviours of these species are not expected. Therefore, direct or disturbance or displacement impacts due impacts on habitats are not expected for birds of conservation concern.

Significant disturbance or displacement of roosting behaviours are not likely particularly in light of the fact that construction works will be restricted to daylight hours and will not overlap with the dawn dusk period when roosting activity is concentrated.

It is concluded that significant disturbance and/or displacement impacts on the conservation objectives of either Cork Harbour SPA or Great Island Channel SAC site are not likely.

4.2.1 Construction Phase

4.2.1.1 Noise and Vibration

There is a potential for a temporary increase in noise during the construction of the proposed works. Given the proximity of the main R613 Ringaskiddy – N71 road with extremely high volumes of traffic at peak hours, the surrounding environment is habitually subject to a degree of disturbance. Works will be carried out in compliance with the British Standard (BS) 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites.

4.2.1.2 Lighting

There is potential for temporary lighting to be used during the construction phase and also the permanent low intensity lighting and Belisha beacons at the controlled pedestrian crossing. Study area is unlikely to be of significant value to qualifying interest birds of the SPA given the distance to estuarine habitats. Given the proximity of the main R613 road already consisting of street lighting the disturbance and impact of those is negligible.

4.2.2 Operational Phase

The existing conditions of the site during the operation phase are not going to change therefore no disturbance or impact are expected.

4.3 Habitat or species fragmentation

Habitat fragmentation has been defined as ‘reduction and isolation of patches of natural environment’ (Hall et al., 1997 cited in Franklin et al., 2002) which results in spatial separation of habitat areas which had previously been in a state of greater continuity. Adverse effects of habitat fragmentation on species or populations can include the increased isolation of populations which can detrimentally impact on the resilience or robustness of the populations thereby reducing overall species diversity and altering species abundance.

The preceding sections have concluded that significant habitat loss or alteration impacts to either Natura 2000 site are not likely, no significant water quality impacts are predicted and significant disturbance or displacement to any species are not expected to ensue. Having regard to the location, nature and scale of the proposed works and the conclusions of the preceding sections, it is considered that significant habitat or species fragmentation impacts are not reasonably foreseeable as a result of the proposal.

It is objectively concluded that significant habitat or species fragmentation impacts on the conservation objectives of either Cork Harbour SPA or Great Island Channel SAC site are not likely.

4.4 Cumulative Effects with Other Plans or Projects in the area

Cork County Council planning enquiry system has been searched for applications lodged in the vicinity of the proposed scheme. Small scale dwelling developments (construction/alteration/improvements) were found. These are small scale in nature and will not result in a cumulative impact on any of the European Sites.

This assessment has concluded that the proposed development will not impact surface water and will give no disturbance related impacts to birds. The project cannot therefore contribute to negative effects on the Cork Harbour SPA, which could be significant when considered in combination with impacts on this site that arise from other sources.

5 Overall Conclusion

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and based on the objective information provided in this report, it is concluded beyond reasonable scientific doubt that the proposed road upgrade works, individually or in combination with other plans/projects are not likely to have a significant effect on a European site (Natura 2000 site). It is therefore considered that a Stage 2 Appropriate Assessment under Section 177V of the Planning and Development Act 2000 (as amended), is not required.

Out of two identified European sites within the potential zone of influence of this project, only one - the Cork Harbour Special Protection Area (SPA) – has hydrological connection to the study area. No other European sites have been identified which have any physical, hydrological, or other ecological connectivity to this project.

No potential for impact on the Cork Harbour SPA has been identified for the following reasons:

- There will be no direct intervention within the Cork Harbour SPA, and therefore no direct loss of habitat within the SPA will arise as a result of this project.
- There will be no increase in rates or volumes of surface water run-off arising from the proposed scheme, and therefore no risk of interference with hydrological conditions or sediment deposition patterns in the Owenboy River.
- Activities associated with the construction of the proposed scheme are assessed to be at low risk of causing releases of toxic pollutants to water for the following reasons:
 - the majority of works are to be located within the footprint of an existing road.
 - demolition of the parapet wall will be done in compliance with the recognised Environmental Management System Standard to which it is registered (e.g. EN ISO 14001 or equivalent EU Standards).
 - reconstruction of the parapet wall will take the form of new precast concrete units, installed on a granular bed foundation.
 - refuelling of plant and machinery is to be undertaken at dedicated Contractor fuel stations on the route during delivery of the works.
- Activities associated with either the construction of the scheme, or with its ongoing use, will be carried out in line with best practice and are assessed to have no potential to cause significant negative impacts on species of bird which are qualifying interests of the Cork Harbour SPA for the following reasons:

- there is a sufficient separation distance from the estuary to be satisfied that activities associated with both proposed the construction and operation of the scheme do not pose a risk of causing any visual disturbance to birds using the estuary.
- no works which could generate significant noise above already occurring urban background levels are required during the construction phase, therefore no noise related disturbance to birds is predicted.

Who carried out this assessment

The assessment was completed by Regional & Local Roads Design Office and in relation to the bridge element of the project, based on the works of Malachy Walsh & Partners (MWP) Engineering and Environmental Consultants.

6 Sources of data

A desk study was carried out in May 2022. Sources of information used in the completion of this assessment, and accessed during May 2022 include the following:

- National Parks & Wildlife Service (NPWS) – www.npws.ie – in particular data relating to the Cork Harbour Special Protection Area (SPA);
- Natural Environment Research Council (NERC) Open Research Archive (NORA) – nora.nerc.ac.uk – in particular data relating to the Seabird Monitoring for Britain & Ireland;
- Seabird Monitoring Programme (SMP) Database - <https://jncc.gov.uk/our-work/seabird-monitoring-programme/>;
- Environmental Protection Agency (EPA) – www.epa.ie;
- Information on environmental water quality data available from (EPA, www.catchments.ie);
- National Biodiversity Data Centre – www.biodiversityireland.ie;
- Office of the Planning Regulator (OPR), Practice Note PN01 – Appropriate Assessment Screening for Development Management - www.opr.ie;
- Fossitt, J. (2000), A Guide to Habitats in Ireland. Dublin: The Heritage Council – www.npws.ie;
- Ordnance Survey Ireland (OSI) mapping and aerial photography – www.osi.ie;
- Google aerial photography and street view photos – www.google.com/maps;
- Bing aerial photography – www.bing.com/maps;
- Screening for Appropriate Assessment Report, Ballygarvan Bridge Rehabilitation – Malachy Walsh and Partners (MWP), Engineering & Environmental Consultants; and
- the project drawings.

Level of assessment completed

Screening.

Where can the full results of the assessment be accessed and viewed?

R613 Ballygarvan Traffic Calming Scheme (TCS) - Part 8 Documents Package.

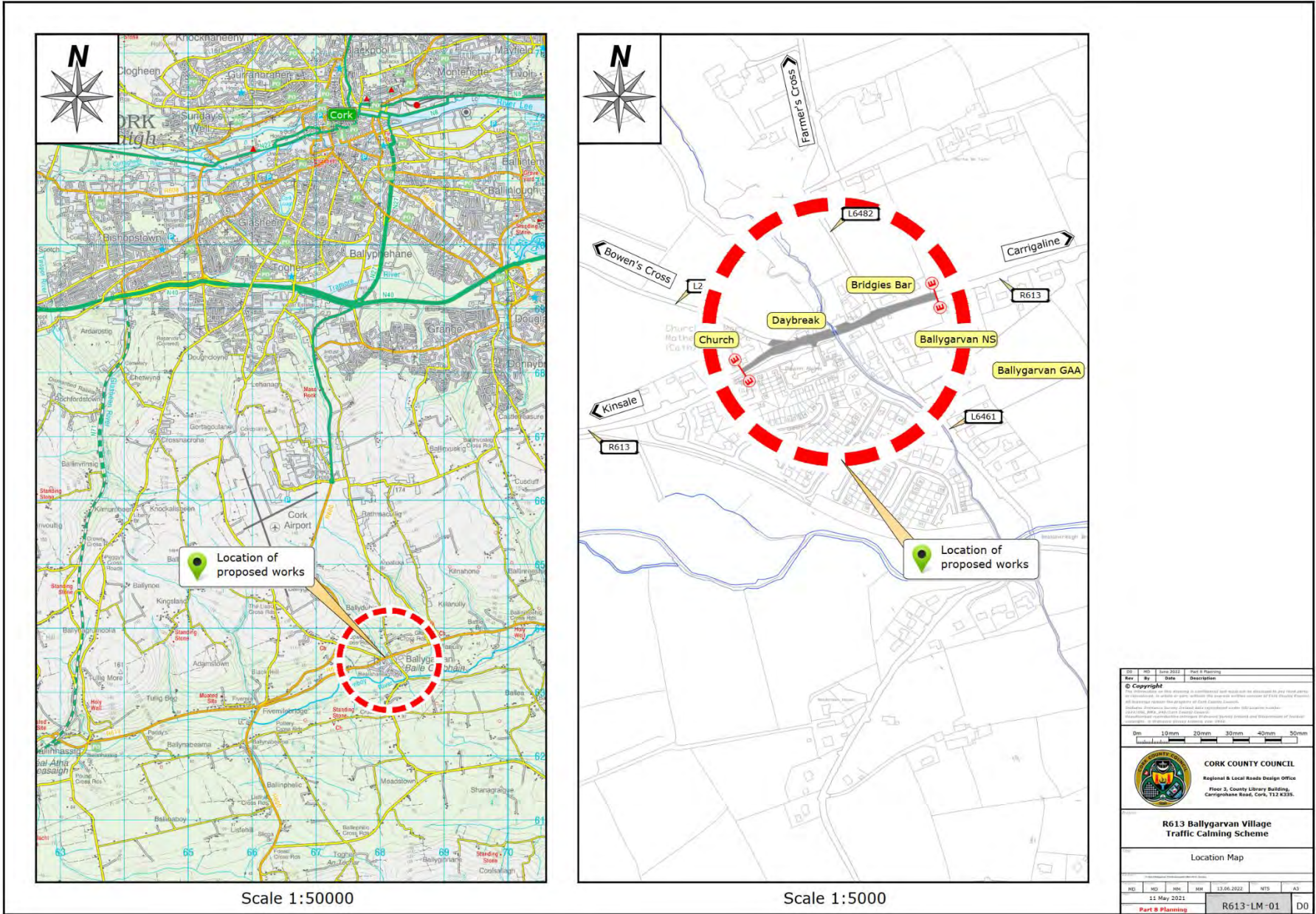


Figure 8 Project Location Map



Figure 9 Project Overview Aerial Map

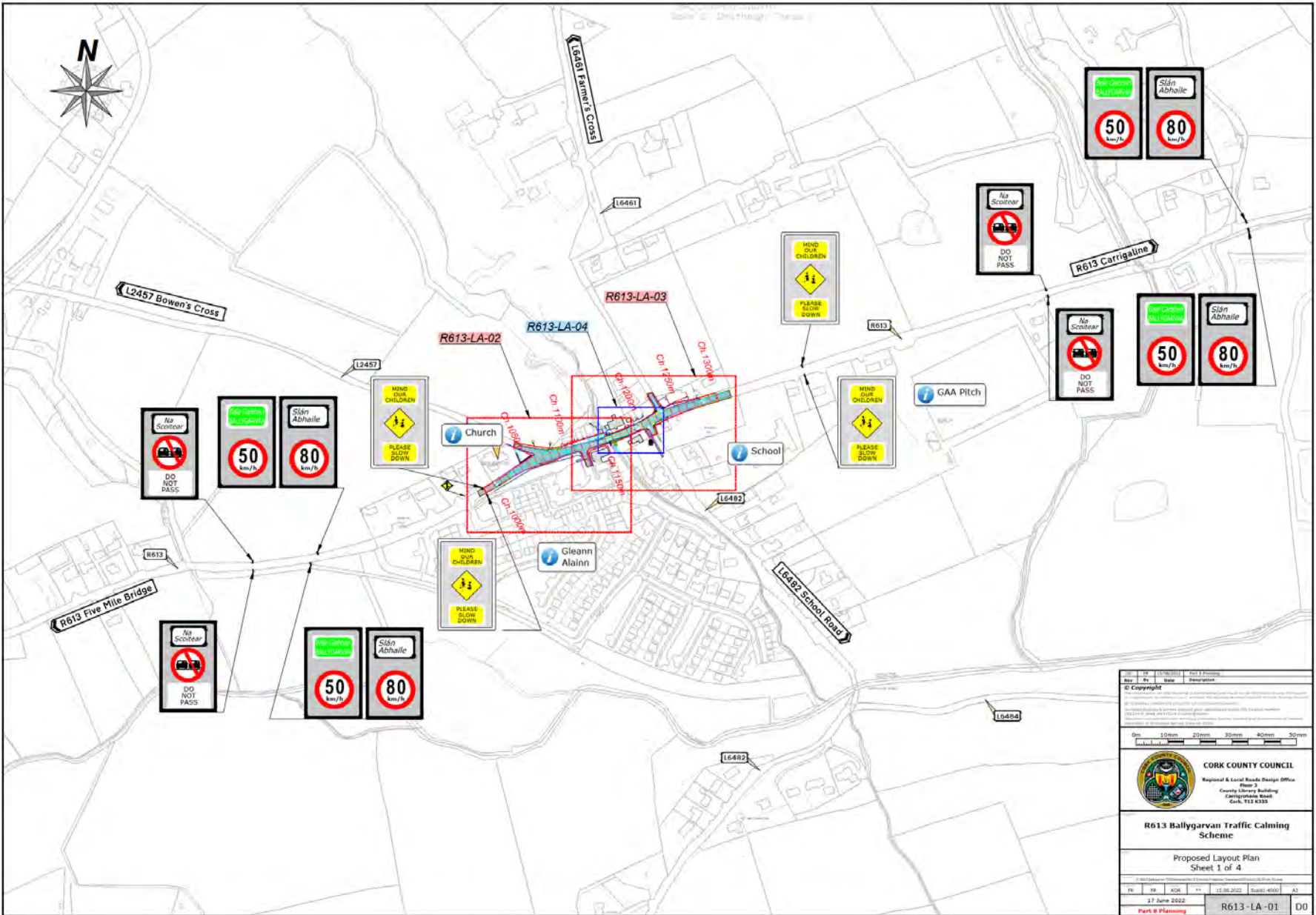
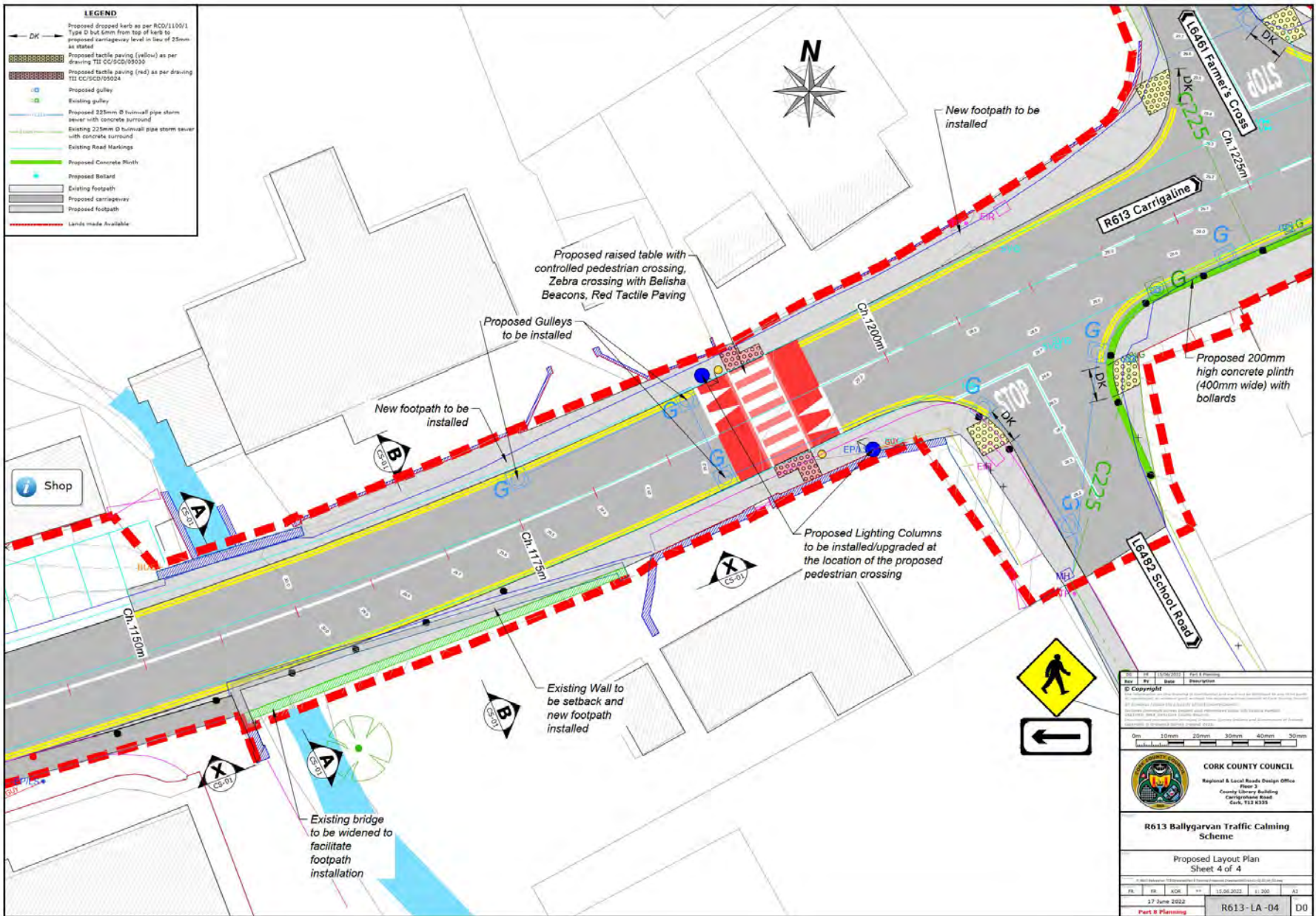


Figure 10 Project Overview Layout Plan



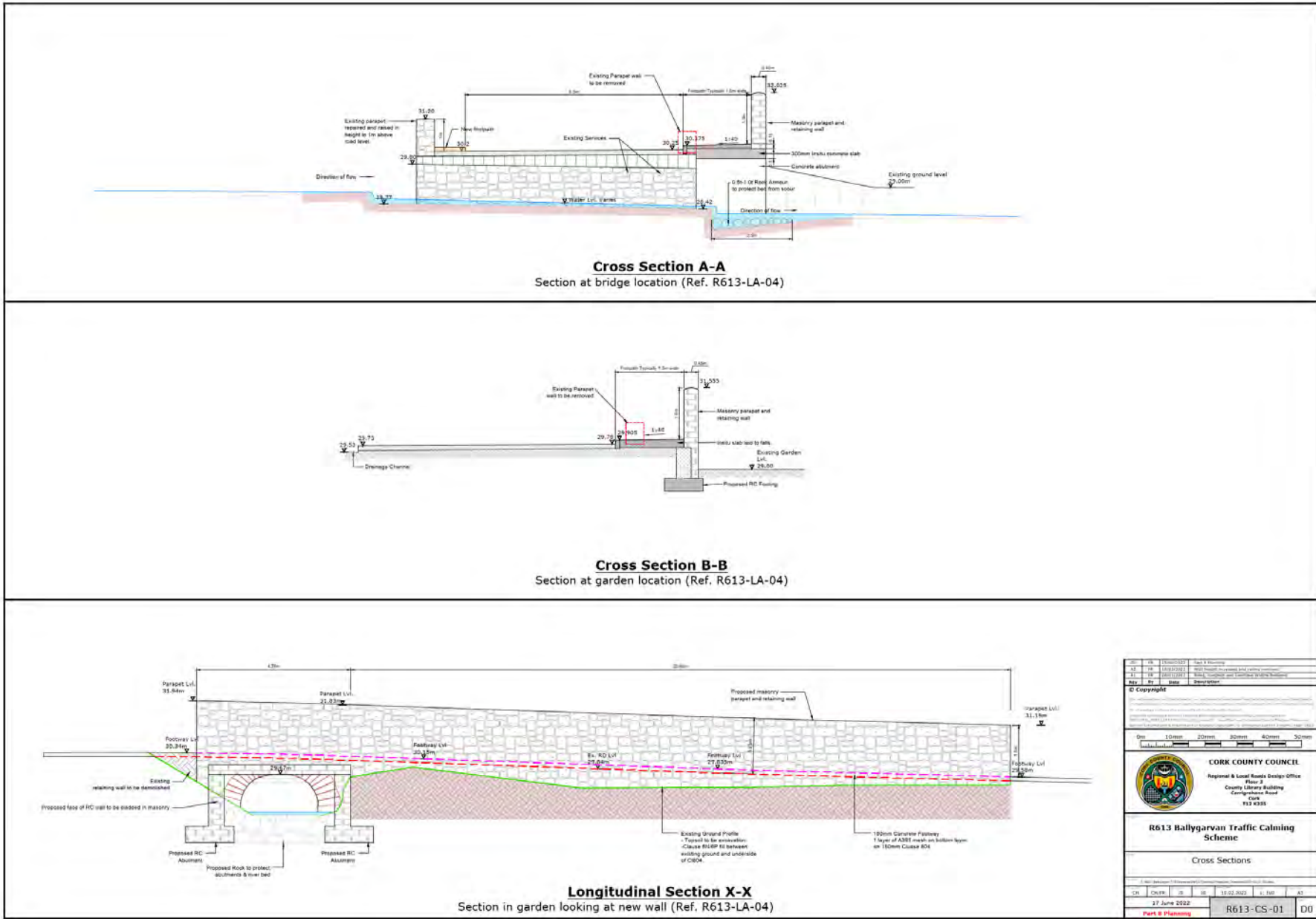


Figure 12 Ballygarvan Bridge Sections



Comhairle Contae Chorcaí
Cork County Council