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Report for the Screening of Appropriate Assessment

Project Title:

R600 Bowen's Cross Upgrade
Scheme



Comhairle Contae Chorcaí
Cork County Council

Completed by:

Regional & Local Roads Design Office

CORK COUNTY COUNCIL

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1 Introduction

This document contains the Report for the Screening of Appropriate Assessment in respect of the proposed R600 Bowen's Cross Upgrade Scheme. The determination is based on information provided by the desk study carried out during May 2022 and multiple site visits within the period between April 2020 and May 2022.

1.1 Name of the Project

R600 Bowen's Cross Upgrade Scheme.

1.2 Description of the Project

Bowen's Cross is situated approx. 3km south of Cork Airport along the strategic R600, which is the most direct access to the Wild Atlantic Way from Cork City. The junction is in an 80km/h speed limit zone. To the south east of Bowen's Cross is the village of Ballygarvan on the R613. 1.5km 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 stagger L2456 minor road and realign the section of the main R600 to the north west.

The scheme includes the following principle features:

- Removal of an embankment over the length of approx. 500m on the north west side of existing road;
- Clearing up necessary vegetation to provide the room for the widening of the road and to provide for the visibility;
- Re-alignment of the R600 road carriageway to the north by approx. 17m;
- Introduction of an approx. 40m right-left stagger between the minor legs' centrelines;
- Introduction of a 2.5% plateau on the L2457 Ballygarvan road over a distance of approx. 12m;
- Introduction of the retaining structure in place of the cut back embankments;
- Reconstruction of the roadside drains/ditches;
- Extension to the existing culvert on the Kinsale side of the junction;
- All ancillary works required to deliver the proposed scheme.

The project requires 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 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 437 of 2011) (as amended) transposes Article 6 of the Habitats Directive (92/43/EEC) into Irish law. The

regulations require that before consent for a project is given, a screening for Appropriate Assessment of a project for which an application for consent is received (which is not directly connected with or necessary to the management of the site as a European Site), must be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.

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 townland Ballygravan.

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 28th April 2020, 1st May 2020, 28th January 2022, 23rd February 2022 by Regional & Local Roads Design Office engineers. Survey results are presented below, and habitat codes are in accordance with Fossitt (2000).

The proposed site on most of the area (*shown in Figure 1 below*) is comprised of build land (BLR, , BLB, BL3) with the exception of private land area necessary to be acquired which is classified as improved grassland (Fossitt codes GAG, GA1). There is also an insert of Highly Modified / Non-native woodland (WD1) area south of the road covering the existing stream bordering to the scheme extents.

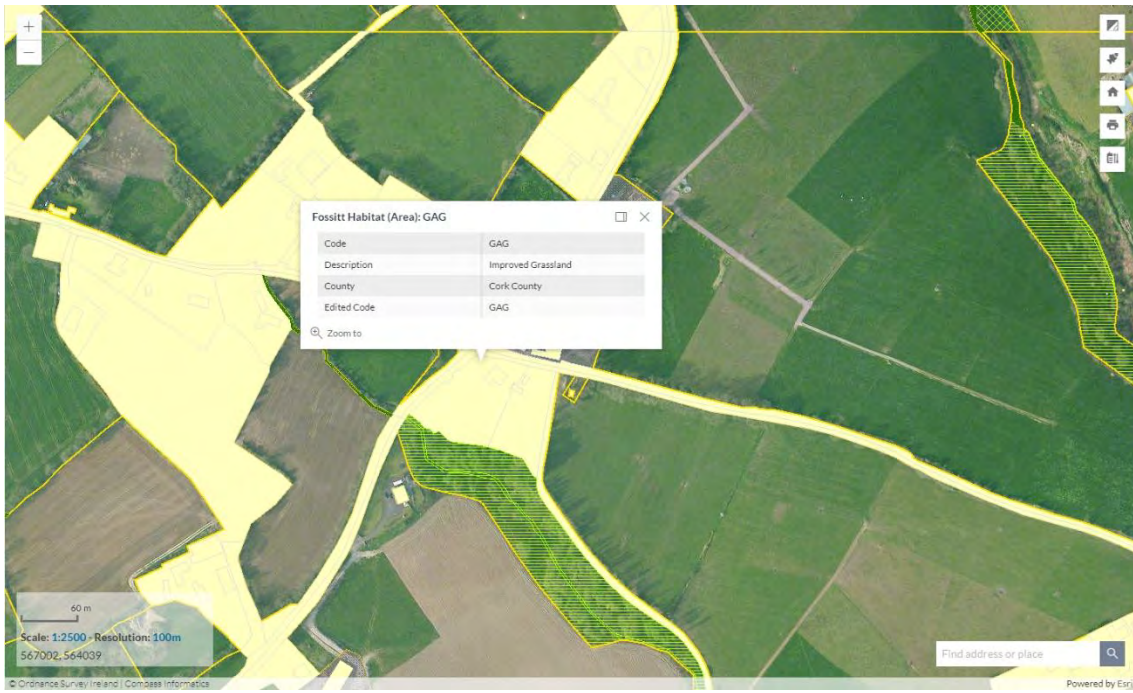


Figure 1 Habitat Map of Proposed Study Area



Figure 2 View looking East from Bowen's Cross into the L2457 Ballygarvan Road



Figure 3 View looking West from Bowen's Cross into L2456 Togher Road



Figure 4 View looking South at the R600 Bowen's Cross



Figure 5 View looking South along R600 with Bowen's Cross at a distance



Figure 6 Aerial Views at R600 Bowen's Cross

2.2 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**

Also, there are two proposed National Heritage Areas within same radius which are:

- **Douglas River Estuary – Site Code 001046**
- **Owenboy River – Site Code 001990**

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) and proposed Natural Heritage Area (pNHA) will be approximately 6,000 m.

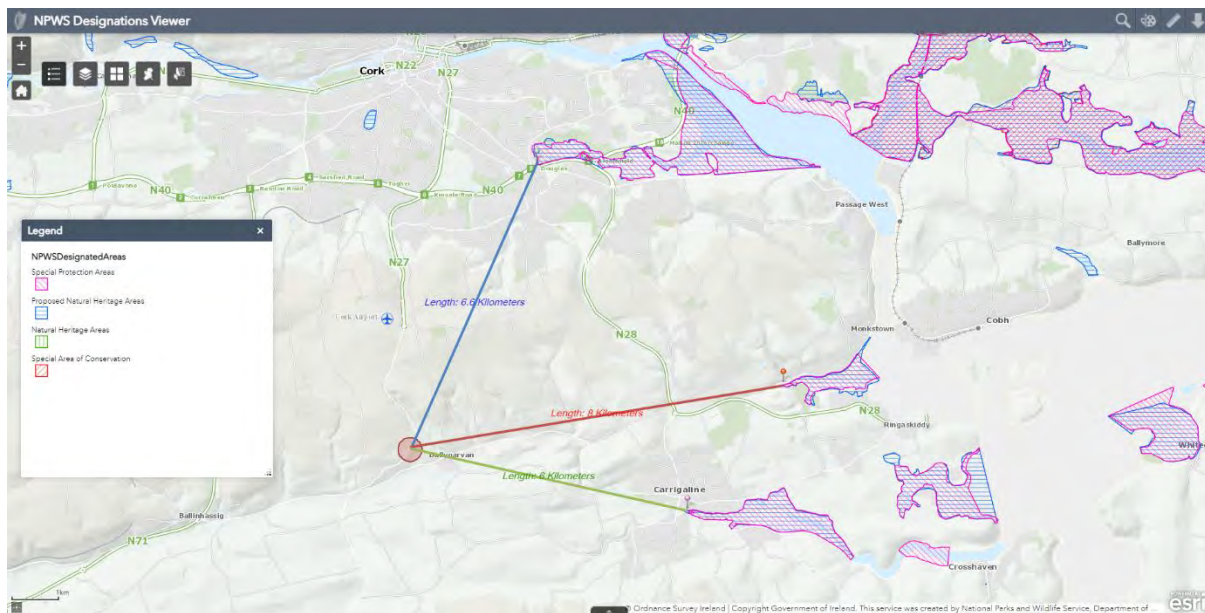


Figure 7 National Parks & Wildlife Service (NPWS) Designated Areas within the zone of influence of proposed works

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

2.3 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 alpina</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

The **Owenboy River** proposed Natural Heritage Area (pNHA) is the most southerly of narrow estuaries running E-W in line with the ridge structure of Cork Harbour on the western side and runs from Carrigaline to Crosshaven. It consists of two expanded sections with extensive mudflats at low tide, separated by a much narrower channel. Only the upper part is included in the NHA because it is here that the great majority of birds congregate in winter. Outline of this pNHA aligns with the Cork Harbour SPA and is located 5 km east of the study area. There is a hydrological connection between both SPA and pNHA via the Owenboy River and its left tributary unassigned water body (IE_SW_19O011000).

Douglas River Estuary (pNHA) is a large site situated in the north-west corner of Cork Harbour, stretching from Blackrock to Passage West. It is an integral part of Cork Harbour, which contains several other N.H.A.'s. This site occurs within the upper harbour and consists of extensive mudflats, formed from fine silts, bisected by the Douglas River. Damp grassland occurs on part of the southern side, extending to some low islands which are inundated in extreme tides. This site is nearly 7 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.

2.4 Connectivity Assessment & Potential for Significant Effects Assessment

Qualifying Interest(s)	Conservation Objective	Targets	Connectivity (Source-Pathway-Receptor)	Considered further due to Potential Significant Effects
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	To maintain the favourable conservation condition of these species in Cork Harbour SPA.	<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>	Unnamed seasonal stream crosses the R600 at the south boundary of the study area. The stream discharges to Owenboy River approx.600m south of Bowen's Cross and west of Ballygarvan village. The closest hydrologically connected point from the work site to the boundary of the Special Protection Area (SPA) is approx. 6,000m. 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.
Common Tern	To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA.	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	Unnamed seasonal stream crosses the R600 at the south boundary of the study area. The stream discharges to Owenboy River approx.600m south of Bowen's Cross and west of Ballygarvan village. The closest hydrologically	Given the nature, scale, and location of the works, there is no potential for significant impact to Cork Harbour SPA.

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 37km, mean max. 33.81km, mean 8.67km.</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. 37km, mean max 33.81km, mean 8.67km (<i>BirdLife International</i></p>	<p>connected point from the work site to the boundary of the Special Protection Area (SPA) is approx. 6,000m. 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 2,587ha 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. 6,000m. 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) Screening is not required where the proposed development is connected with, or necessary to the management of any European site. The Proposed Site is not directly connected with or necessary to the management of any European Sites.

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

The habitats present at the proposed site are mostly of build land (BLR, BLB, BL3) with the exception of private land area necessary to be acquired which is classified as improved grassland (GAG, GA1). The proposed site is not suitable to support qualifying interest species for both SPA & pNHA therefore given the nature, scale, duration and location of the works, there is no potential for significant impact to Cork Harbour SPA and Owenboy River pNHA.

3.3 Construction Phase

The scheme includes the following principle features:

- Removal of an embankment over the length of approx. 500m on the north west side of existing road;
- Clearing up necessary vegetation to provide the room for the widening of the road and to provide for the visibility;
- Re-alignment of the R600 road carriageway to the north by approx. 17m;
- Introduction of an approx. 40m right-left stagger between the minor legs' centrelines;
- Introduction of a 2% plateau on the L2457 Ballygarvan road over a distance of approx. 18m;
- Introduction of the retaining structure in place of the cut back embankments;
- Reconstruction of the roadside drains/ditches;
- Extension to the existing culvert on the Kinsale side of the junction.

3.3.1 Site Clearance

The proposed works will require site clearance both in terms of existing topsoil/subsoil and bituminous/concrete material and removal of roadside trees over an approximate distance of 90m. The zone of influence is assessed to be contained within the direct footprint of the demolition works.

3.3.2 Noise and Vibration

There is a potential for a temporary increase in noise during the construction of the proposed works. Given the site comprises mainly of the main R600 road with extremely high volumes of traffic at peak hours, the surrounding environment is habitually subject to a degree of disturbance. Also, Cork International Airport runway is located 1.1km north west of the cross and noise analysis carried out for the airport indicate that the Bowen's Cross falls within 57dB noise contour.

3.3.3 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.

3.3.4 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. Given

the proximity of the main R600 road already consisting of street lighting the disturbance and impact of those is negligible.

3.4 Operation Phase

The works comprise of milling & overlay of existing carriageway, alterations to an existing road layout by removal of an embankment on the western side of the road, re-alignment of the R600 road carriageway to the north west by approx. 17m and alterations to an existing drainage. The only element of proposed works falling outside of the footprint of current road relates to works requiring re-alignment of the L2456 over an approximate distance of 100m and relocation of the junction with R600 40m north. These works require land acquisition from the 3rd party.

3.5 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 or the Owenboy River pNHA, which could be significant when considered in combination with impacts on this site that arise from other sources.

4 Screening Assessment

There will be no direct intervention within the SPA or pNHA, and therefore no direct loss of habitat within the SPA or pNHA 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; and
- risk of the activities associated with the project causing significant disturbance to birds.

Water Quality: 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.

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 or pNHA are naturally silty environments.

Activities associated with the construction of the proposed scheme are assessed to be at low risk of causing significant releases of pollutants to water for the following reasons:

- the majority of works are to be located within the footprint of an existing road;
- removal of organic and construction materials 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);
- refuelling of plant and machinery is to be undertaken at dedicated Contractor fuel stations on the route during delivery of the works.

Disturbance to Birds: The potential for activities associated with either the construction of the proposed scheme, or with its ongoing use, to give rise to disturbance related impacts to birds is ruled out for the following reasons:

- there is a sufficient separation distance from the Cork Harbour SPA, 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 background levels are required during the construction phase, therefore no noise related disturbance to birds are predicted.

5 Overall Conclusion

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of 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 four identified European sites within the potential zone of influence of this project, only two - the Cork Harbour Special Protection Area (SPA) and Owenboy River proposed Natural Heritage Area (pNHA) – have 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 and Owenboy River pNHA have been identified for the following reasons:

- There will be no direct intervention within the Cork Harbour SPA or Owenboy River pNHA, and therefore no direct loss of habitat within the SPA or pNHA 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 Owneboy 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;
 - removal of organic and construction materials 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);
 - 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 cycleway/path, or with its ongoing use, are assessed to have no potential to cause significant negative impacts on species of bird which are qualifying interests of the Cork Harbour SPA or Owenboy River pNHA 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 are predicted.

Who carried out this assessment

The assessment was completed by Regional & Local Roads Design Office.

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; and
- the project drawings.

Level of assessment completed

Screening.

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

R600 Bowen's Cross Upgrade Scheme - Part 8 Documents Package.

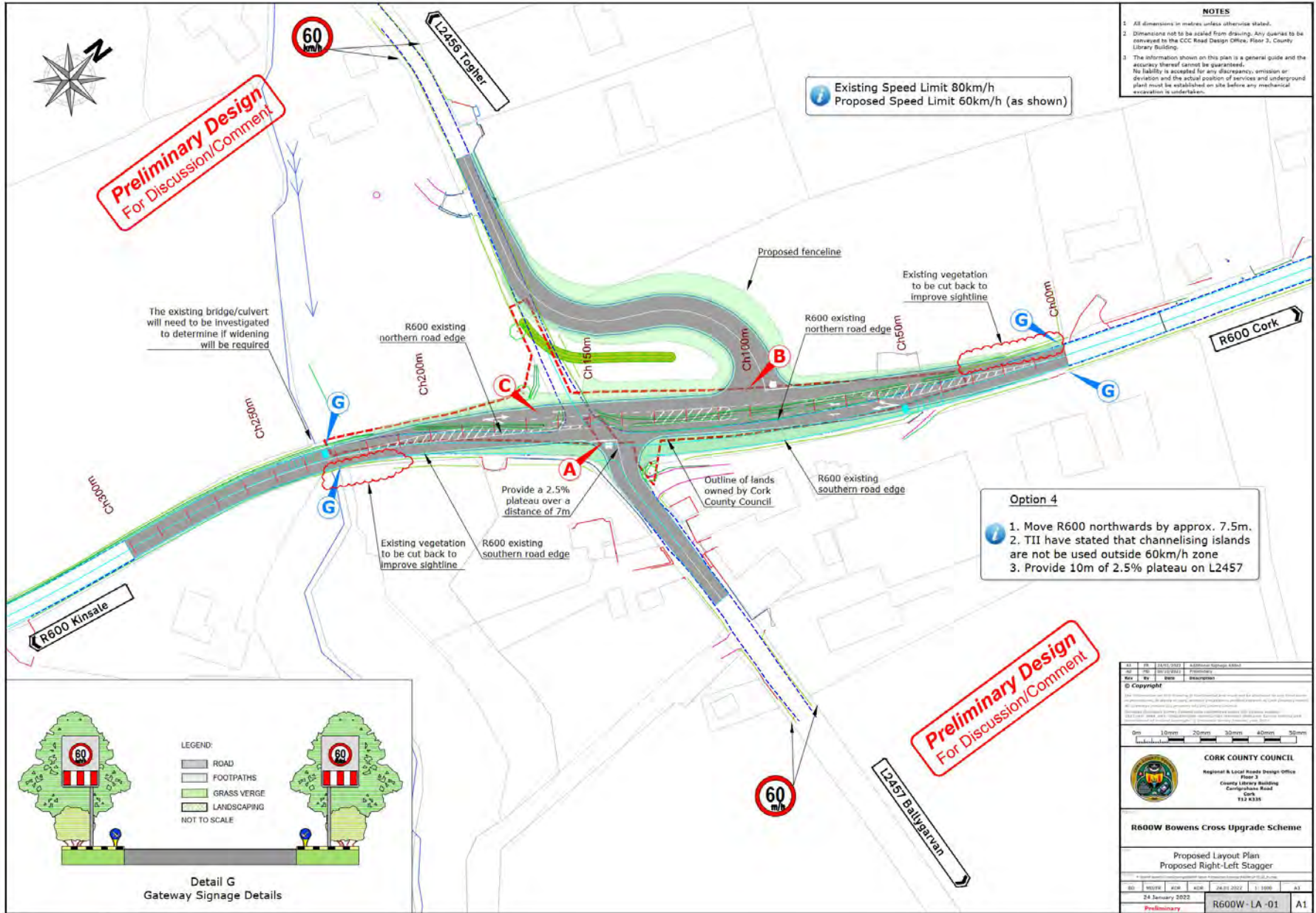


Figure 9 Project Overview Plan



Comhairle Contae Chorcaí
Cork County Council