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Environmental Impact Assessment Screening Report

Project Title:

R600 Bowen's Cross Upgrade
Scheme



Comhairle Contae Chorcaí
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Prepared by:

Cork County Council
Regional & Local Roads Design Office
Floor 3, County Library Building
Carrigrohane Road, Cork, T12 K335
Tel: +353 21 428 5287
Info.rlrdo@corkcoco.ie
www.corkcoco.ie

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1 Introduction

This document contains the Environmental Impact Assessment Screening Report in respect of the proposed R600 Bowen's Cross Upgrade Scheme.

1.1 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.

2 Legislative Context for Environmental Impact Assessment

EIA requirements derive from Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC, 2003/35/EC and 2009/31/EC. The Directive and its amendments were subsequently codified and replaced by Directive 2001/92/EU, as amended in turn by Directive 2014/52/EU. This amending Directive was transposed into national planning consent procedures in September 2018 through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

2.1 EIA Directive

The objective of the EIA Directive is to ensure a high level of protection of the environment and human health, through the establishment of minimum requirements for environmental impact assessment

prior to development consent being given, of public and private developments that are likely to have significant effects on the environment.

EIA is mandatory for certain projects and for other projects that meet or exceed a stated threshold as set out in Annexes I and II of the Directive (and Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended). Projects that do not meet or exceed a stated threshold are subject to a preliminary assessment for the requirement, or not, for 'sub-threshold' EIA.

2.2 Planning & Development Regulations 2001 (as amended)

The Proposed Development is a local authority own development and therefore, the requirement for sub-threshold EIA is addressed under Article 120 of the Planning and Development Regulations 2001-2019, which states:

- (a) Where a local authority proposes to carry out a subthreshold development, the authority shall carry out a preliminary examination of, at the least, the nature, size or location of the development.*
- (b) Where the local authority concludes, based on such preliminary examination, that—*
 - (i) there is no real likelihood of significant effects on the environment arising from the proposed development, it shall conclude that an EIA is not required,*
 - (ii) there is significant and realistic doubt in regard to the likelihood of significant effects on the environment arising from the proposed development, it shall prepare, or cause to be prepared, the information specified in Schedule 7A for the purposes of a screening determination, or*
 - (iii) there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—*
 - (I) conclude that the development would be likely to have such effects, and*
 - (II) prepare, or cause to be prepared, an EIAR in respect of the development.*

Schedule 5 Part 1, does not include any development types which are applicable to the proposed scheme whereas in Part 2 the only reference to road development is listed for “*All private roads which would exceed 2km in length*” and as such is not applicable to subject works on public road.

2.3 Roads Act 1993 (as amended).

The provision of the Roads Act 1993, as amended, has been considered for the proposed road development. Section 50 (1)(a) [Environmental Impact Assessment Report] requires a road development comprising any of the following road development types listed in Table 2.1 to be subject to an environmental impact assessment. For clarity, Cork County Council are considered to be the Road Authority for the purposes of Section 50 (1) of the Roads Act 1993, as amended.

Table 1 EIA Requirements under Section 50(1) of the Roads Act

Section 50 (1) Roads Act reference	EIA Requirement?
<i>(a)(i) Construction of a motorway</i>	No. The proposed development consists of improvements to an existing regional road.

Section 50 (1) Roads Act reference	EIA Requirement?
<i>(ii) Construction of a busway</i>	No. The proposed development does not include a busway.
<i>(iii) Construction of a service area</i>	No. The proposed development does not include any service area.
<i>(iv) Any prescribed type of proposed road development consisting of the construction of a proposed public road or the improvement of a public road. The types of road development are prescribed under Article 8 the Roads Regulations 1994 (S.I. No. 119 of 1994), as comprising;</i>	No. The proposed development comprises overlay of an existing carriageway.
<i>The construction of a new road of four lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length on a rural area, or 500 metres or more in length an urban area</i>	Total proposed length of the improvement works is approx. 500m which falls below the 8,000m threshold for rural areas.
<i>The construction of a new bridge or tunnel which would be 100 metres or more in length</i>	There are no bridges or tunnels proposed.
<i>(b) Where an An Bord Pleanála (ABP) considers that a proposed road development would be likely to have significant effects on the environment it shall direct the road authority to prepare an EIS</i>	The proposed development is being made under Part 8 (Requirements in Respect of Specified Development by, on behalf of, or in Partnership with Local Authorities) of the Planning and Development Regulations 2001, as amended.
<i>(c) Where a road authority considers that a proposed road development would be likely to have significant effects on the environment it shall inform ABP in writing and where ABP concurs it shall direct the road authority to prepare an EIS</i>	No. Not applicable based on the outcome of this screening assessment.
<i>(d) Where a proposed road development would be located on certain environmental sites the road authority shall decide whether the proposed road development would be likely to have significant effects on the environment. The sites concerned are:</i>	No. The proposed development is not within or proximate to any European Site or any site listed under the Wildlife Act.
<i>(i) a European Site within the meaning of Regulation 2 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No.477 of 2011),</i>	The Report for Screening of Appropriate Assessment prepared for this application confirms no significant effects to European Sites within proximity to the proposed road development.
<i>(ii) land established or recognised as a nature reserve within the meaning of section 15 or 16 of the Wildlife Act 1976 (No. 39 of 1976),</i>	Sites designated under the Wildlife Act are not adversely or significantly impacted by the proposed development.
<i>(iii) land designated as a refuge for fauna or flora under section 17 of the Wildlife Act 1976 (No. 39 of 1976), or</i>	
<i>(iv) land designated a natural heritage area under section 18 of the Wildlife (Amendment) Act 2000,</i>	
<i>(v) A Nature Reserve within the meaning of sections 15 or 16 of the Wildlife Act, 1976</i>	
<i>the road authority or the Authority, as the case may be, proposing the development shall decide whether or not the proposed development would be likely to have significant effects on the environment.</i>	
<i>(e) Where a decision is being made pursuant to this subsection on whether a road development that is proposed would or would not be likely to have significant effects on the environment, An Bord Pleanála, or</i>	No. Not applicable based on the outcome of this screening which has been assessed

Section 50 (1) Roads Act reference	EIA Requirement?
<i>the road authority or the Authority concerned (as the case may be), shall take into account the relevant selection criteria specified in Annex III.</i>	against the criteria specified in Annex III.

Proposed road development also does not meet any descriptions or thresholds set out in Section 50(1) of the Roads Act 1993 (as amended) therefore there is no mandatory requirement for EIA to be completed.

3 Environmental Impact Assessment (EIA) Screening

3.1 Sub-Threshold EIA Screening Considerations

Sub-threshold projects in Schedule 5 Part 2 of the Planning and Development Regulations 2001, as amended, require screening for EIA, except in cases where the likelihood of significant effects can be readily excluded. Schedule 7 sets out the following criteria for determining whether development listed on Part 2 of Schedule 5 should be subject to an EIA:

- Characteristics of the proposed development
- Location of the proposed development
- Types and characteristics of potential impacts

Table 2 Sub-Threshold EIA Screening Criteria

Criteria	Sub-Criteria
<i>Characteristics of the proposed development</i>	<p><i>The characteristics of projects must be considered, with particular regard to:</i></p> <ul style="list-style-type: none"> <i>a. the size and design of the whole project;</i> <i>b. cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,</i> <i>c. the nature of any associated demolition works;</i> <i>d. the use of natural resources, in particular land, soil, water and biodiversity;</i> <i>e. the production of waste;</i> <i>f. pollution and nuisances;</i> <i>g. the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge; and</i> <i>h. the risks to human health (for example due to water contamination or air pollution)</i>
<i>Location of the proposed development</i>	<p><i>The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:</i></p> <ul style="list-style-type: none"> <i>a. the existing and approved land use;</i> <i>b. the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;</i> <i>c. the absorption capacity of the natural environment, paying particular attention to the following areas:</i> <ul style="list-style-type: none"> <i>i. wetlands, riparian areas, river mouths;</i> <i>ii. coastal zones and the marine environment;</i> <i>iii. mountain and forest areas;</i> <i>iv. nature reserves and parks;</i>

Criteria	Sub-Criteria
	<ul style="list-style-type: none"> v. <i>areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;</i> vi. <i>areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;</i> vii. <i>densely populated areas; and</i> viii. <i>landscapes and sites of historical, cultural or archaeological significance.</i>
<i>Types and characteristics of potential impacts</i>	<p><i>The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, with regard in particular to the impact of the project on the factors specified in Article 3(1), taking into account:</i></p> <ul style="list-style-type: none"> <i>a. the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);</i> <i>b. the nature of the impact;</i> <i>c. the transboundary nature of the impact;</i> <i>d. the intensity and complexity of the impact;</i> <i>e. the probability of the impact;</i> <i>f. the expected onset, duration, frequency and reversibility of the impact;</i> <i>g. the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and</i> <i>h. the possibility of effectively reducing the impact.</i>

Schedule 7A of the Planning and Development Regulations 2001, as amended, sets out the following information to be provided by the Applicant or Developer for the purposes of screening sub-threshold development for EIA.

1. A description of the proposed development, including in particular:
 - a. a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works; and
 - b. a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from
 - a. the expected residues and emissions and the production of waste, where relevant; and
 - b. the use of natural resources, in particular soil, land, water and biodiversity.
4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.

This information is provided in Paragraph 1.1 above and in the subsequent section of this report.

3.2 Criteria in Relation to Sub-Threshold Development

The following sections consider the criteria detailed in Schedule 7 of the Planning and Development Regulations 2001, as amended, for determining whether sub-threshold development listed on Part 2 of Schedule 5 should be subject to an EIA.

3.2.1 Characteristic of the Proposed Development

The characteristics of projects must be considered, with particular regard to:

Table 3 Characteristic of the Proposed Work Criteria

Criterion	Discussion	Is this likely to result in significant effects on the environment?
The size and design of the whole of the proposed development	The proposed development comprises of alternations to an existing road (overlay) over approx. 500m, re-alignment of the R600 road carriageway to the north west by approx. 17m and alterations to an existing drainage. Majority of works will be done within the footprint of existing road with the exception of 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 3 rd party.	The size of the entire proposed development is not considered significant. These types of works are common in Ireland. Impacts can be predicted, and effective mitigation can be readily implemented to ensure that significant adverse impacts are not likely.
Cumulation with other existing and/or approved projects	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 have adverse cumulative effect.	There are no functional interdependencies with any existing and/or approved projects that will give rise to potential impacts. There is no significant impact to the environment when the proposed scheme is considered cumulatively with other existing and/or approved projects.
The nature of any associated demolition works	There are no demolition works envisaged for the scheme with the exception of removal of milled bituminous material.	No, impact of the demolition works required are not anticipated to be significant and the zone of influence is assessed to be contained within the direct footprint of the demolition works. Resulting rubble will be disposed to licensed landfill.
The use of natural resources, in particular land, soil, water and biodiversity?	Other than construction materials (aggregate, sand, rock, bitumen), the volumes of natural resources will be limited for the proposed development.	The impacts in terms of natural resource use are not anticipated to be significant.
The production of waste	The project will require excavation and removal of existing topsoil and short section of masonry parapet wall. During construction solid waste will be generated however volumes requiring off-site management will not be significant. Waste requiring off-site	The appointed contractor shall implement a construction phase waste management plan which is in compliance with the Waste Management Act 1996, as amended, and associated Regulations to ensure that significant adverse effects in

Criterion	Discussion	Is this likely to result in significant effects on the environment?
	management will be sent off site for disposal to licensed landfill.	terms of waste management can be avoided.
Pollution and nuisance	<p>The proposed works will result in nuisance and disturbance relating to noise, dust and potential surface run-off caused by construction activities.</p> <p>Noise & Vibration: 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.</p> <p>Dust: The proposed works are likely to result in the temporary generation of dust.</p> <p>Surface Water Run-off: The proposed site has a hydrological connection to the Cork Harbour SPA. At the closest point the distance from the work site to the boundary of the SPA will be approximately 6,000m. There is potential for run-off associated with the works. This can arise from cementitious materials due to concrete works, toxic contamination of hydrocarbons due to accidental spills and leaks, and sediment laden waters due to instream and bankside works.</p>	<p>Construction phase impacts will be of temporary to short-term duration. The development and implementation of a Construction Regulations will ensure that those impacts are minimised.</p> <p>The Contractor will ensure ongoing compliance with the recognised Environmental Management System Standard to which it is registered (e.g. EN ISO 14001 or equivalent European Standards). The Contractor will develop Environmental Procedures to control the potential impacts from the construction phase of the development. These procedures will be made available in the main site office and at the main Environment, Health and Safety information points on site.</p> <p>It is not anticipated that significant impacts relating to pollution and nuisance are likely and that the above minimum control measures will be implemented prior to commencement and throughout the duration of the proposed works.</p>
The risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge	Due to the small nature and location the proposed works are not subject to any risks related to major accidents and/or disasters.	There are no significant risks associated with this scheme.
The risks to human health (for example due to water contamination or air pollution)?	<p>Small amounts of dust may be generated during the construction phase and the implementation of standard construction control measures will ensure that dust deposition is minimised or eliminated.</p> <p>There are no identified public drinking water supplies therefore the overall risk to human health is low.</p>	Given the nature of the proposed development and measures that will be implemented in relation to containment and storage of materials, the impacts associated with substances or materials which could be harmful to human health, to the environment or raise concerns about actual or perceived risks to human health.

3.2.2 Location of the Proposed Development

The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to:

Table 4 Location of the Proposed Work Criteria

Criterion	Discussion	Is this likely to result in significant effects on the environment?
<i>The existing and approved land use</i>	The proposed works are located within the footprint of an existing road with the exception of works requiring re-alignment of the L2456 over an approximate distance of 100m and relocation of the junction with R600 40m north. The land required for the proposed works is classified as improved grassland.	Given the nature of the proposed development, it is not anticipated that impacts in terms of land use will be significant.
<i>The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground</i>	Majority of the land comprises of build land except for private land necessary to be acquired classified as improved grassland. At the completion of works surrounding areas will be landscaped with similar material.	Impacts to natural resources are not anticipated to be significant and are anticipated to be localised and of temporary to short-term duration, with land use reinstated where possible after the works are completed.
<i>The absorption capacity of the natural environment, paying particular attention to the following areas:</i> <ul style="list-style-type: none"> • <i>wetlands, riparian areas, river mouths;</i> • <i>coastal zones and the marine environment;</i> • <i>mountain and forest areas;</i> • <i>nature reserves and parks;</i> • <i>areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;</i> • <i>areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;</i> • <i>densely populated areas; and</i> 	There is a significant distance between the works site and Cork Harbour SPA (approx. 6,000m) and a source-path-receptor analysis carried out as part of Screening for Appropriate Assessment concluded that impacts on the above SPA during construction or operational phases of the development will be negligible. The proposed site is located within a village and will not have any impact on the absorption capacity of the natural environment. There are no nearby sites of historical, cultural or archaeological significance.	The works are limited in scale and will not result in any significant adverse impact on the natural environment, in particular any area listed under Schedule 7 Paragraph 3(c) (i) to (viii) as listed herein.

Criterion	Discussion	Is this likely to result in significant effects on the environment?
<ul style="list-style-type: none">landscapes and sites of historical, cultural or archaeological significance.		

3.2.3 Type and Characteristics of the Proposed Development

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account:

Table 5 Type and Characteristic of the Proposed Work Criteria

Criterion	Discussion	Is this likely to result in significant effects on the environment?
<i>The magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected)</i>	The magnitude and spatial extent of the proposed works are limited to the existing road except for approx. 0.3ha area of improved grassland necessary to be acquired to stagger R600/L2456 junction.	The anticipated impacts will relate to the construction phase and will be of temporary and short-term in duration.
<i>The nature of the impact, the transboundary nature of the impact</i>	The impacts generated by the construction activities will occur over short duration construction period and is expected to be contained to the site.	The project will not result in transboundary impacts.
<i>The intensity and complexity of the impact</i>	Potential construction impacts are not considered to be significantly complex nor intense due to the nature of the works.	Given the transient and standardised nature of the proposals, the impacts are not anticipated to be particularly intense or complex.
<i>The probability of the impact</i>	During construction, conventional construction and best environmental practice techniques can be readily deployed. Impacts in relation to noise, vibration, dust and traffic nuisance will be associated with the construction stage only, these likely impacts are negative, temporary but not significant.	While impacts are likely to occur, it is anticipated that standard construction mitigation measures will be implemented to ensure that significant impacts are not likely.
<i>The expected onset, duration, frequency and reversibility of the impact</i>	Construction stage traffic impact and nuisances will be temporary and short-term coinciding with the construction phase of the project.	Impacts during the construction phase will be infrequent and can be anticipated to be insignificant, temporary and short-term. Once completed, effects will be insignificant and permanent.
<i>The cumulation of the impact with the impact of other existing and/or approved projects and the possibility of effectively reducing the impact.</i>	There are currently no known existing or permitted projects (including under other legislation that is subject to EIA) that could give rise to significant adverse cumulative effects. There will be habitat loss within the footprint of the works which is unable to be reduced as topsoil removal will be required for the footpath. Dust and noise raising during the construction phase will effectively reduce any such impacts on the local population/human health.	It is anticipated that standard construction mitigation measures will be implemented to minimise the risk of adverse cumulative effects related to nuisance and disturbance during the construction phase and adverse cumulative impacts post-construction.

4 Overall Conclusion

It is concluded that impacts associated with the construction and operation of the proposed road improvement scheme are not considered to be significant in the context of Schedule 7 of the Planning and Development Regulations 2001, as amended, to the extent that an EIA is required. This conclusion is based on the findings of the analysis provided in the preceding sections in relation to:

- Characteristics of Project
- Location of Project
- Type and Characteristics of Potential Impact

As part of the above analysis, a broad range of environmental media have been assessed including soil, hydrology, ecology, air quality and noise in combination with planning and landuse considerations in the context of construction and operational phases. No potential impacts of significance were identified during either phase of the proposed development's lifetime.

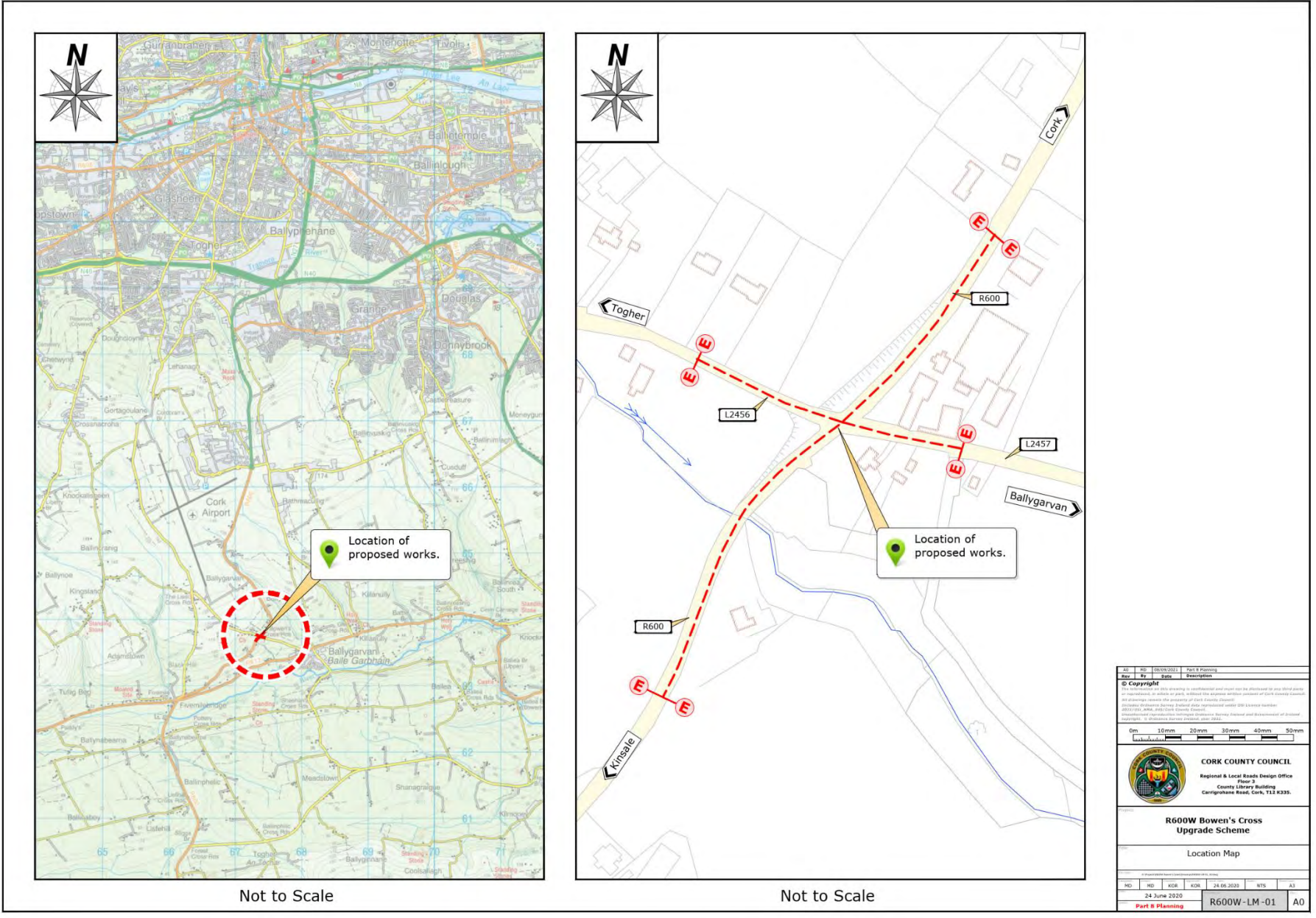


Figure 1 Project Location Map

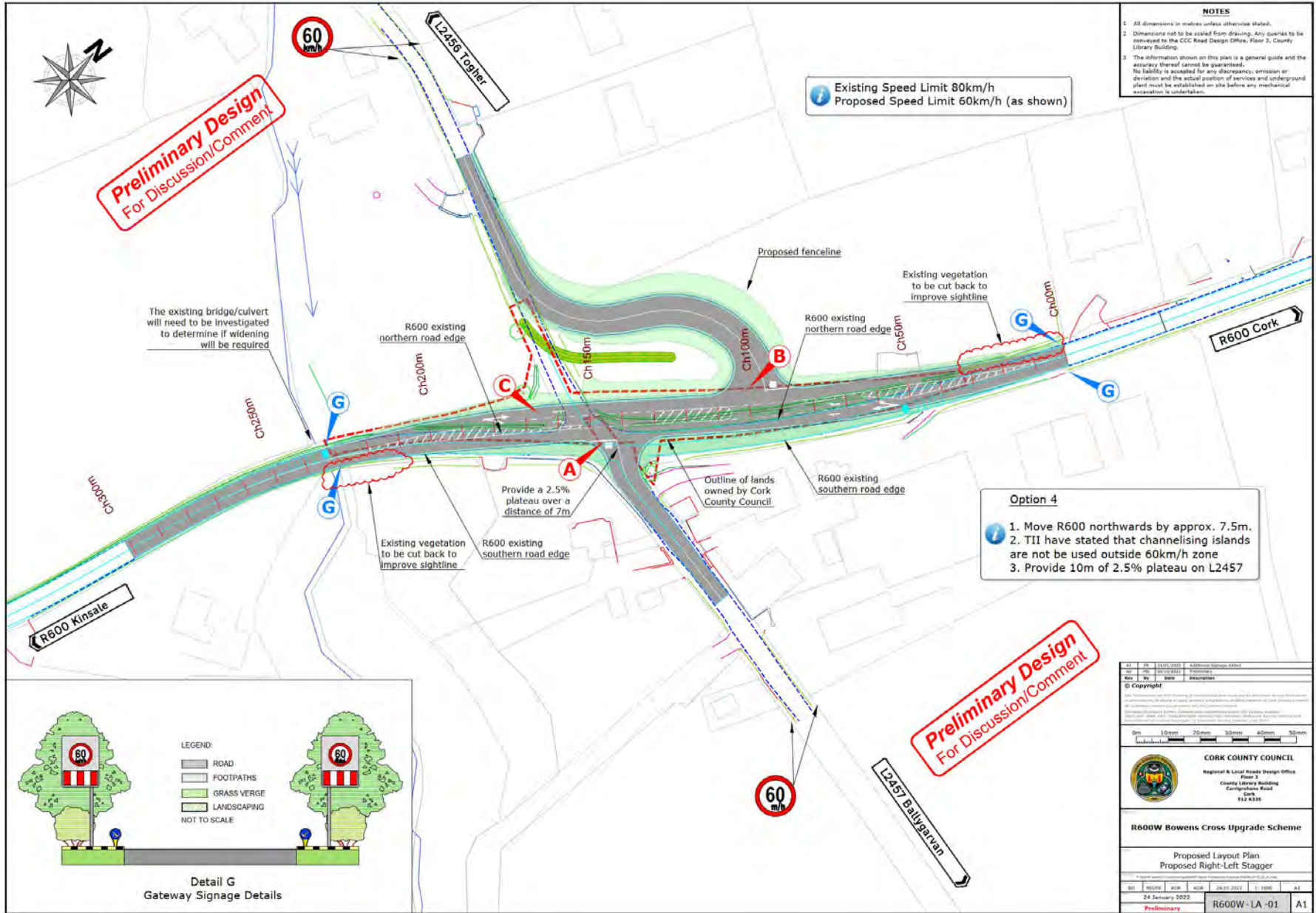


Figure 2 Project Overview Plan



Comhairle Contae Chorcaí
Cork County Council