OCSC

O'CONNOR · SUTTON · CRONIN

MULTIDISCIPLINARY CONSULTING ENGINEERS

D805: HILLCREST ROAD IMPROVEMENT SCHEME

PART 8 REPORT

For

Dún Laoghaire-Rathdown County Council

28 March 2025

NOTICE

This document has been produced by O'Connor Sutton Cronin & Associates for its client, Dún Laoghaire-Rathdown County Council. It may not be used for any purpose other than that specified by any other person without the written permission of the authors.

DOCUMENT CONTROL & HISTORY

OCSC Job No: D805	Project Code	Originator	Zone Volume	Level	File Type	Role Type	Number	Status / Suitability Code	Revision
	D805	OCSC	XX	XX	RP	C	0008	S4	P01

Rev.	Status	Authors	Checked	Authorised	Issue Date
P01	S4	Zainab Bhamjee	Jocelyn Mendoza	Colin Wilson	28/03/2025
P02	S4	Zainab Bhamjee	Jocelyn Mendoza	Colin Wilson	31/03/2025
P03	S4	Zainab Bhamjee	Jocelyn Mendoza	Colin Wilson	16/04/2025

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

1.1 PROJECT BACKGROUND

O'Connor Sutton Cronin (OCSC) were appointed by Dún Laoghaire-Rathdown County Council (DLRCC) for the provision of consulting engineering services for the upgrade of the Hillcrest Road from Lambs Cross junction to Kilgobbin Road junction (660m approx.) to include facilities for pedestrians and cyclist, promoting safer use of the same for drivers, pedestrians and cyclists using most recent and best practice guidance.

The Hillcrest Road scheme seeks to make improvements for vulnerable road users with the provision of adequate footpaths and cycle lanes, enabling pedestrian and cycling linkages to commercial premises and connections to Council's cycling network improvements for Residents, creating improvements for drivers with improved lane widths and sightlines and encouraging sustainable modes of transport. This requires addressing the infrastructure deficiencies along Hillcrest Road by:

- Widening of the existing road, including footpaths and cycle tracks on both sides,
- Walls, retaining walls, fencing and other boundary treatments.
- Accommodation works to existing properties.
- Diversion of existing utilities and provision of new utilities/services.
- Public lighting.
- Associated landscaping works encouraging sustainable modes of transport.

During the concept and development phase of the project an options selection report was produced, which was submitted to DLRCC for approval. A multi-criteria analysis of 4 'Do-Something' options was undertaken, and the options and assessment criteria were agreed with DLRCC before the assessment. The methodology for the options assessment is in accordance with the Department of Transport Tourism and Sport (DTTaS) Appraisal Guidelines for Regional and Local Roads Capital Projects. The Multi Criteria Analysis was included in the Options Report.

Following the *NTA Phase 3 – Preliminary Design* guidance, OCSC has produced the Gateway 3 Report which includes the following documentation: Preliminary Design Report, Cost Estimate Report, NTA Preliminary Cost Estimate, Procurement Strategy, Road Safety Audit, EIAR and AA Screening Report.

1.2 SITE OVERVIEW

An overview of the site location can be found in ***Appendix A***.

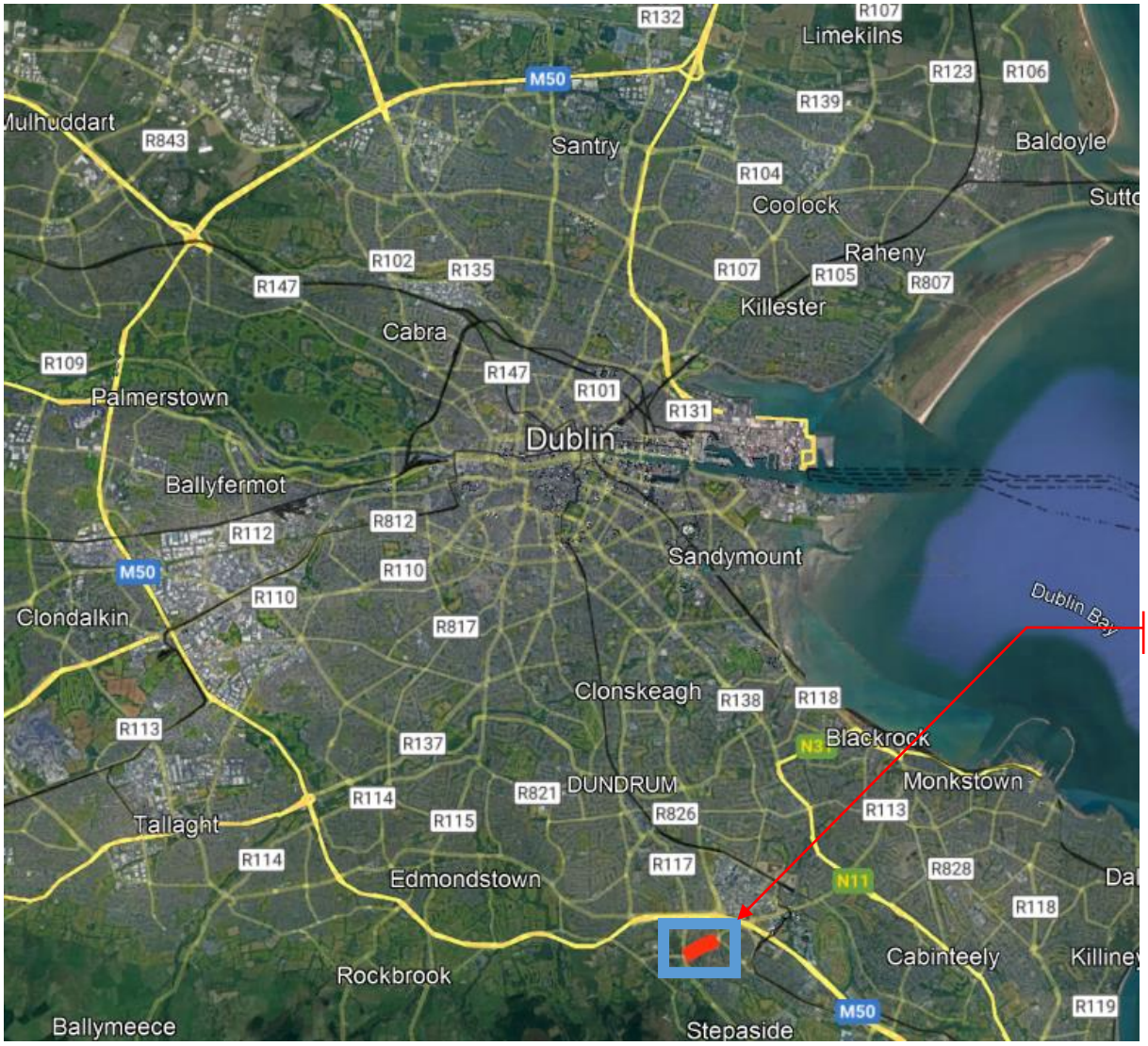

Figure 1: Site Location

Figure 2: Subject Site Aerial View

2 PLANNING AND DEVELOPMENT CONTEXT

Based on the project scope and specific objectives outlined in the brief, listed below are the key objectives from a high-level or national perspective and from a regional and local level perspective.

2.1 THE HIGH-LEVEL OBJECTIVES OF THE SCHEME ARE:

- Increase the share of trips taken by walking and cycling to 20% of all trips by 2030, and to 30% by 2040, as outlined in the National Development Plan and Project Ireland 2040.
- Provide safe and high-quality infrastructure for walking and cycling, including segregated cycle lanes, footpaths, and pedestrian crossings, as well as traffic calming measures to improve safety and reduce speeds.
- Develop an integrated network of active travel routes, connecting key destinations such as residential areas, schools, workplaces, shops, and tourist attractions, as outlined in the Sustainable Mobility Plan.
- Encourage behaviour change through public awareness campaigns, education, and incentives for active travel, as outlined in the Climate Action Plan.
- Promote the use of e-bikes and other low-carbon forms of transportation as a viable alternative to private cars and provide infrastructure and facilities to support the use of these modes, as outlined in the Sustainable Mobility Plan.
- Ensure that active travel schemes are integrated with public transport, including the provision of bike parking and bike-sharing facilities at transport hubs, and the development of seamless connections between active travel modes and public transport services, as outlined in the Sustainable Mobility Plan.
- Monitor and evaluate the effectiveness of the active travel schemes, using data on mode share, travel behaviour, and health outcomes, and adjust the schemes as necessary to ensure its continued success, as outlined in the National Development Plan.

The project scope is also in line with the following objectives from the National Planning Framework and Climate Action Plan:

National Policy Objectives

- ***Objective 26:*** Support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan, through integrating such policies, where appropriate and at the applicable scale, with planning policy.
- ***Objective 27:*** Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments and integrating physical activity facilities for all ages.
- ***Objective 64:*** Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of

energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions.

Climate Action Plan

From a Transport perspective, one of the key objectives outlined in the Climate Action Plan is to reduce by 20% total vehicle kilometres, reduce fuel consumption and to increase significantly sustainable transport trips and modal share. Also, advance roll-out of 1,000 km walking/cycling infrastructure is listed in the Climate Action Plan as one of the actions for the year of 2023.

Sustainable Mobility Plan:

- ***Goal 1:*** Improve mobility safety.
- ***Goal 4:*** Expand availability of sustainable mobility in regional and rural areas.
- ***Goal 5:*** Encourage people to choose sustainable mobility over the private car.
- ***Goal 6:*** Take a whole of journey approach to mobility, promoting inclusive access for all.
- ***Goal 9:*** Better integrate land use and transport planning at all levels.

2.2 LISTED BELOW ARE THE LOCAL LEVEL OBJECTIVES OF THE SCHEME.

From the Dun Laoghaire-Rathdown County Development County 2022-2028:

- To adopt the 'Avoid-Shift-Improve Approach' to transport.
- To integrate land use and transport policies.
- To support the demand management approach which focuses on moving people from the private car to more sustainable modes.
- To improve permeability for the pedestrian and cyclist.
- To provide attractive high-quality inclusive and connected walking and cycling networks with direct routes to local destinations and public transport hubs.
- To adopt a balanced approach to road and street design in accordance with the four core principles of the 'Design Manual for Urban Roads and Streets' (2019) (DMURS)

In conclusion, the following is a list of measurable and specific objectives for the scheme:

- Making improvements for vulnerable road users with the provision of adequate footpaths and cycle lanes along Hillcrest Road.
- Enabling pedestrian and cycling linkages to commercial premises and connections to Council's cycling network improvements for Residents.
- Creating improvements for drivers with improved lane widths and sightlines.
- Encouraging sustainable modes of transport.

The upgrade of the Hillcrest Road will therefore include the following:

- Widening of the existing road, including footpaths and cycle tracks on both sides.
- Walls, retaining walls, fencing and other boundary treatments.
- Accommodation works to existing properties.
- Diversion of existing utilities and provision of new utilities/services.
- Public lighting.
- Associated landscaping works.

3 ALTERNATIVES CONSIDERED

As part of the Design Process OCSC reviewed the options associated with the scheme considering all required factors in the production of an Options Report. This included a multi-criteria analysis of four options and the effects the different design options would have on the area and the adjacent properties connected to Hillcrest Road. As part of the scope of the Options Report, a total of four potential "Do-Something" options were assessed against one "Do-nothing" option, which served as a base case for comparison.

3.1 ASSESSMENT OF OPTIONS

As part of the Options Assessment, each of the options were assessed following the main and sub criteria as shown in the Table 1:

Table 1: Main criteria and Sub criteria.

Main Criteria:	Sub Criteria:
1 - Economy	Transport Efficiency and Effectiveness
	Wider Economic Impact
	Transport Reliability and Quality
2 - Safety	Collision Reduction
	Security
3 - Environment	Air quality
	Noise and Vibration
	Landscape and Visual Qty
	Biodiversity
	Cultural, Archaeological, Architectural Heritage
	Land Use
	Water Resources
4 - Accessibility and social inclusion	Vulnerable groups
	Deprived areas
5 - Integration	Transport Integration
	Land Use Integration
	Geographic Integration
	Integration with other Government Policies
6 - Physical Activity	Health Benefits

A score value of between 1 and 7 was provided for each option against the main criteria. The range of scoring was determined by the level of impact of each option under the respective main criteria against the Do-Nothing option:

- 1 – Major or highly negative impact compared to the baseline.
- 2 – Moderately negative impact compared to the baseline.
- 3 – Minor negative impact compared to the baseline.
- 4 – No significant impact or neutral.
- 5 – Minor or slightly positive impact compared to the baseline.
- 6 – Moderately positive impact compared to the baseline.
- 7 – Major or highly positive impact compared to the baseline.

A total score of each of the options were provided. The 'Do-Nothing' option was given a neutral rating for each option to be compared against.

3.2 PREFERRED OPTION

Option 4 which entailed the road to be upgraded and the centreline to be shifted to the South was highlighted as the preferred option. As the scheme aims to prioritise safety for pedestrians and cyclists, the inclusion of segregated facilities also greatly benefits drivers, since they will be able to make more efficient use of the road without the fear of colliding with other road users. The driveways being encroached on by the updated road corridor were found to have manageable effects and the ratios of erf size verse the land to be acquired is more favourable compared to the other options.

The provision of cycle and pedestrian facilities is crucial for achieving various objectives, such as promoting sustainable transportation, enhancing public health and well-being, reducing traffic congestion, and improving air quality. Option 4 is seen as the best alternative to achieve the key objectives of this scheme.

4 CONSULTATION

4.1 STATUTORY BODIES

As part of the Feasibility Design, Options Selection and Preliminary Design regular meetings were held with Dún Laoghaire-Rathdown County Council (the Client). These meetings consisted of progress updates, highlighting any issues that arose and discussing potential solutions or variations to the design. There have been no issues in relation to the works to date.

4.2 PUBLIC CONSULTATION

A Public Consultation evening was held on the 4th of September 2024 in St Mary Church Community Hall. At the meeting all members of the public were invited to hear a short presentation on the scheme and were able to give their comments or views on the proposals.

4.3 AFFECTED STAKEHOLDERS

Preliminary discussions have taken place with the potentially effected stakeholders including, but not limited to, the following:

- Landowners (Hillcrest Road Residents).
- Eircom.
- RPS (Tetra Tech).
- Uisce Éireann (formerly Irish Water).
- Office of Public Works (OPW).
- ESB
- DLRCC Public Lighting

5 EXTENTS OF PROPOSED WORKS

5.1 EXISTING LAYOUT

The study area is approximately 660m long and is situated between Lambs Cross intersection and Kilgobbin Road junction. The width varies along the Hillcrest Road. An overview of the existing site layout can be found in ***Appendix A***.

5.2 PROPOSED WORKS EXTENTS

As mentioned in the section *3 - Alternatives Considered* of this document, the Options Report developed by OCSC recommended Option 4, which consists of all proposed design work as outlined in the project scope along with increasing the width of the existing road and the existing pedestrian footpath. The road centreline was to be shifted Southwards to increase the impact on the Southern properties and decrease the impact on the Northern properties. In addition, a new footpath was to be added on the opposite side of the road as well as cycle lanes on both sides.

The following is a list of the main proposals of Option 4 (the preferred design option):

5.2.1 ROAD CARRIAGEWAY

The proposed carriageway width for both lanes along the scheme will have an average of 3.25m in width. The width has been selected due the fact that this is a suburban link and a common route for buses and large vehicles and are in line with recommendations from the Design Manual for Urban Roads and Streets (DMURS).

5.2.2 FOOTPATHS

All the footpaths along the scheme will have an average of 2.0m in width. The footpaths provided along the scheme are in line with recommendations from the Design Manual for Urban Roads and Streets (DMURS).

5.2.3 CYCLE INFRASTRUCTURE

The proposed scheme will provide off-road cycle facilities on both sides of the roadway, connecting to the existing infrastructure at both the northern and southern tie-ins. The width of cycle facilities was determined in accordance with recommendations from the Cycle Design Manual, achieving high-quality facilities by proposing 2.0m wide cycle tracks on both sides along the scheme.

The proposed cycle infrastructure will be separated from vehicular traffic by provision of 60mm kerb, flush with the cycle track as well as raised and bevelled kerbs at junctions and entrances. The separation between cyclists and pedestrians will be achieved by a 60mm kerb, flush with the pedestrian footpath and raised.

5.2.4 PUBLIC LIGHTING

The preliminary design envisages minor changes to the existing public lighting infrastructure, and these include but are not limited to the relocation of existing public lighting poles. The required lighting levels and the need to upgrade the existing infrastructure will be checked during the detailed design phase.

5.2.5 SURFACE DRAINAGE

The existing drainage infrastructure was assessed to determine the impact of the proposed works. The impact on the run-off will be managed with new proposed infrastructure as well as retaining, relocating and realigning what already is in place, this includes the outfall structure under the bridge (headwall, petrol interceptor, manholes and pipes) to avoid the proposed bridge wall.

5.2.6 UTILITIES AND SERVICES

The existing Utilities and Services were assessed to determine the impact of the proposed works. The existing water main is to be retained and a 100mm waterline provided on each side of the road. A new foul drainage line is proposed and will tie back into the existing system. Utility ducts for other services such as Eircom were also identified, and their service provider is being liaised with ahead of any proposed works. All existing infrastructure are to be identified on site to confirm its location.

5.2.7 ROAD MARKING AND SIGNAGE

Indicative positions of road markings and signage are also included in the preliminary design drawings. These items may change during detailed design phase if required.

5.2.8 VEGETATION / TREES

During the preliminary design phase, the design team has identified trees along the scheme being impacted by the proposed layout and will be removed and disposed of according to best practice standards. The indicative positions of the impacted trees are shown in ***Appendix B*** while the Baseline Tree Report can be found in ***Appendix F***.

5.2.9 ACCOMODATION WORKS

The available road space and the level of Quality of Service that could be achieved for cycle infrastructure and pedestrian footpaths along the route was assessed by identifying the impact of each option on the adjacent properties. The preferred option had the least impact on the existing driveway gradients and the land area to be acquired. Each property to be affected has been provisionally identified and the extents of the impacts presented to the respective property owners. The required extents of the accommodation works will be further developed during the detailed design phase of the project.

5.2.10 WALLS, RETAINING WALLS, FENCING AND OTHER BOUNDARY TREATMENTS

The masonry bridge wall is to be relocated to accommodate the increased road corridor. All affected property boundaries will be reinstated like for like. Indicative positions and details of walls, retaining walls, fences and boundary treatments are included in the preliminary design drawings. These items will be further developed during detailed design phase if required.

The drawings showing the full extents of the preferred option design are shown in the ***Appendix B*** of this document.

A Stage 1 Road Safety Audit on the preliminary design has been produced and can be found in ***Appendix C***.

5.3 CONSTRUCTION METHODOLOGY

All construction activities will be controlled within the site construction compound. Materials, waste handling and storage will be within the confines of the site. Temporary traffic management will be put in place.

All traffic management proposals will be agreed with the local authority in advance of the works being conducted.

Vehicles associated with the construction will rest on the worked lane of the road and this lane will be closed off to public traffic. Pedestrians will have a designated walkway provided. A stop-go system will be in place to direct the traffic.

Adequate warning signs will be on display to illustrate the required PPE and risks associated with the works. Signs will be used to warn oncoming traffic of ongoing roadworks.

It will be imperative that access is maintained to all properties, businesses, and lands during the construction stage of the project.

The construction of the Hillcrest Road scheme will require one main site compound for the duration of the Construction works. A suitable location for the compound will be identified and chosen by Dún Laoghaire-Rathdown County Council within close proximity to the site.

5.4 ACCESS TO SITE

There are potentially two points of access to the site location. The site can be accessed from the western end by the Lambs Cross Junction and from the eastern end by the Kilgobbin Road Junction. A map showing the routes to access the site location is included in ***Appendix D***.

6 IMPACT OF PROPOSED WORKS

6.1 ENVIRONMENTAL ASSESSMENT

This EIA screening process has considered potential effects which may arise during the construction and operation phases as a result of the implementation of the project. Based on the duration, nature, and scale of the proposed improvement of the Hillcrest Road, it is considered that the overall impact on the receiving environment will be unlikely, temporary, and not significant subject to implementation of all mitigation measures detailed in the site-specific CEMP.

In addition, an AA Screening Report and an Ecological Impact Assessment Report was prepared by OCSC. Through an assessment of the pathways for effects and an evaluation of the project characteristics, considering the processes involved and the distance of separation from European sites, it has been evaluated that there are no likely significant adverse effects on the qualifying interests, special conservation interests, or the conservation objectives of any designated European site. It's been concluded that the proposed project is not likely to give rise to adverse effects on the ecology of the site and any designated European sites, alone or in combination with other plans or projects. The EcIA report includes specific mitigation measures for the construction and operational phase of the Proposed Development.

Based on this assessment, the preparation of an EIA is not recommended for the Proposed Development. However, the final determination with regard to the need for an EIA will be undertaken by the competent authority.

The environmental assessment reports conducted on the preliminary design has been produced and can be found in ***Appendix E***.

6.2 ARCHAEOLOGICAL ASSESSMENT

An archaeological impact assessment was carried out on the site at Hillcrest Road, Sandyford, Dublin, in relation to Hillcrest Road Improvement Scheme. The site was identified to have archaeological potential due to its location within the medieval Pale. The review of cartographic sources and the results of archaeological investigations in the area further suggested the site has some potential to contain undisturbed archaeological features, that would be impacted by the proposed improvement scheme if present. Due to the nature of the site and the development, test trenching was not feasible, and monitoring was therefore recommended.

However, due to the presence of a stream, representing a townland boundary a Wade survey was carried out and concluded that no structures, artefacts or features of archaeological or architectural significance were identified or discovered as a result of the wade and detection survey therefore concluding the proposed development will have no impact on archaeological features. The Archaeological Impact Assessment Report and Wade Survey Report can be found in ***Appendix F***.

7 CONCLUSION

The Hillcrest Road Improvement Scheme prioritises safety for pedestrians and cyclists while benefiting drivers by allowing more efficient road use without the risk of collisions. The inclusion of segregated facilities is key to achieving several local and national objectives, such as promoting sustainable transportation and enhancing public health and well-being. The provision of cycle and pedestrian facilities along the scheme will be crucial for reducing traffic congestion in the future and improving air quality. By encouraging non-motorised transportation, the project supports active lifestyles and contributes to a healthier environment. These benefits align with broader goals to create more liveable and equitable communities.

The redesign of the Hillcrest Road ensures compliance with the latest best practice guidelines, guaranteeing the safety of all road users and in conclusion, the proposed measures prioritise non-motorised transportation and aim to foster a more sustainable and inclusive environment in Sandyford. By supporting active lifestyles and reducing greenhouse gas emissions, the scheme will significantly enhance the quality of life for residents and contribute to broader environmental goals.

8 VERIFICATION

This report was compiled and verified by:

Zainab Bhamjee [NDip (Civil Eng); BTech (Civil: Urban Eng)]

Civil Engineer

O'Connor Sutton Cronin & Associates

Appendix A SITE LOCATION

Appendix B PART 8 DRAWINGS

Appendix C STAGE 1 ROAD SAFETY AUDIT

Appendix D SITE ACCESS MAP

Appendix E ENVIRONMENTAL REPORTS

Appendix F ADDITIONAL REPORTS

OCSC

O'CONNOR · SUTTON · CRONIN

MULTIDISCIPLINARY CONSULTING ENGINEERS

Head Office

9 Prussia Street
Dublin 7
Ireland
D07KT57
T: +353 (0)1 8682000
E: ocsc@ocsc.ie | W: www.ocsc.ie

Civil | Structural | Mechanical | Electrical | Sustainability | Environmental