DUBLIN REPLACEMENT UNDERGROUND CABLE PROGRAMME

Route Options Assessment – CP1146 Inchicore to Poolbeg

IE000451
S4 P01
28 March 2023

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
S4 P01	Publication	JA/ET	DC	DC	28.03.23

Approval for issue

DC	28 March 2023

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1 INTRODUCTION

1.1 The Project

Dublin's electricity infrastructure is ageing and reaching its end of life. Work must be done to transform and modernise the city's electricity infrastructure, so Dublin can continue to develop and thrive, while increasingly using power from renewable sources.

The Dublin Replacement Underground Cable Programme is a critical programme that will strengthen key electricity infrastructure in Dublin and the surrounding areas, making the city 'renewable ready.' This programme is set to replace and upgrade five 220kV circuits across Dublin city and the surrounding areas.

Figure 1-1: Existing 220kV circuits in Dublin, with the study area shown in pink

The 220kV circuits which are to be replaced are identified in Figure 1-1 and detailed in Table 1-1.

Table 1-1: Dublin Replacement Cable Projects in the Dublin Area

Project Name	Existing Circuit Route Length
CP1146 Carrickmines - Poolbeg	11.9 km
CP1150 Inchicore – Poolbeg	**14.5 km**
CP1157 Inchicore – Poolbeg	**14.5 km**
CP1216 North Wall – Poolbeg	4.6 km
CP1100 Finglas – North Wall	11.3 km

EirGrid proposes to replace all the existing circuits with cross-linked polyethylene (XLPE) cable primarily on an offline route, to minimize power outages on the existing circuits. These XLPE cables are more efficient and robust, which will enable the grid to carry more power.

Replacing the existing circuits in an offline route means the new circuit follows a separate route to the existing circuit. The advantage of this is that there are minimal disruptions to the existing circuit and no, or very few, planned outages would be needed during construction.

The alternative to this is online replacement where the new circuit follows the existing circuit route. The old circuit is decommissioned as the new circuit is laid. For this method, a circuit outage of the existing circuit would be required for the entire construction period.

Due to the electricity needs of Dublin, an online replacement is not feasible. For this reason, offline installation will be considered for the replacement of this circuit.

1.2 Purpose of this Report

The Dublin Replacement Underground Cable Programme is following EirGrid's Framework for Grid Development, which is an end-to-end process for all EirGrid's grid development projects. The framework takes projects from their conception - the identification of a need to develop the electricity transmission grid - to their eventual construction and subsequent energisation. The framework is explained in EirGrid's "Have your Say" document and is illustrated in Figure 1-2.

This approach facilitates engagement and consultation with stakeholders and the public which helps to explore options fully and make more informed decisions. Previous studies by EirGrid have brought the Dublin Replacement Underground Cable Programme through Steps 1, 2 and 3 of their Framework for Grid Development and the project is currently at Step 4. It is noted that as the project progresses through to Step 5, there is a possibility that the replacement of underground electricity transmission cables may be classified as exempted development, meaning planning permission is not required. This is subject to the detailed assessment of the project and meeting specific criteria including environmental and ecological criteria.

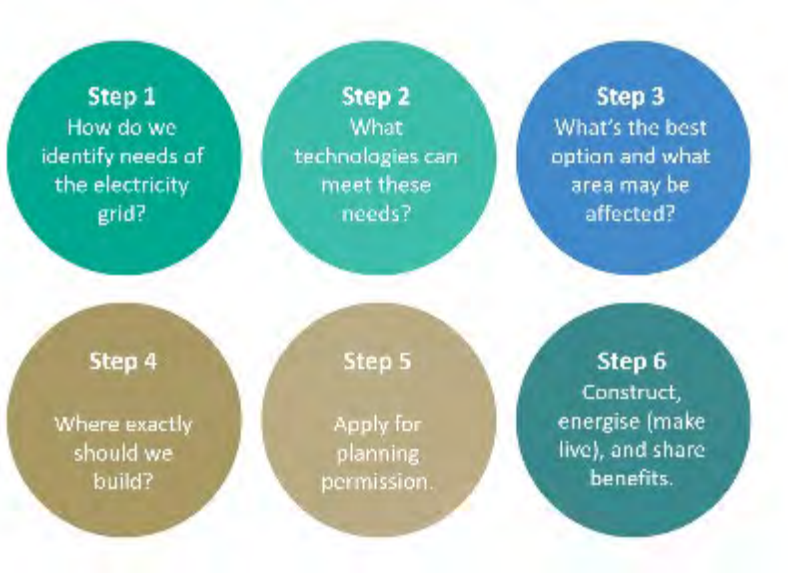

Figure 1-2: EirGrid's Six-Step Framework for Grid Development

As part of Step 4, six route options to replace the existing Inchicore - Poolbeg 220kV circuits, were developed. To assist in the assessment the route options were broken down into smaller sections. The sections were then assessed using EirGrid's five multi-criteria assessment categories, as shown in Figure **1.3**.

Figure 1-3: EirGrid's Five Multi-Criteria Assessment Categories

This Route Options Assessment report describes all the potential route options, the methodology used to identify these route options, and how the route options were broken down into sections. This report presents the assessment according to the five categories listed above and how the best performing sections are used to build optimised routes. From these routes, the Emerging Best Performing Routes are selected to progress and develop further.

To aid in the final selection of a Best Performing Route, site investigation will be undertaken, to supplement the desk based investigations carried out to date. There are two types of site investigations proposed: non-invasive and invasive investigations.

Non-invasive investigations are performed to gain an accurate representation of the above and below ground environments and include:

- Surveys of the landscape
- Inspecting manholes and chambers
- Using sonic and radar devices with CAT (Cable Avoidance Tool) and genny and Ground Penetrating Radar (GPR) and other geophysical methods.

Invasive investigations will be conducted to confirm the location of below ground services where non-invasive methods are unsuccessful and where ground conditions are important. This involves slit trenching and H trenching, trial pitting and ground sampling using boreholes.

- Slit trenches are long narrow trenches used to identify and confirm the position of existing underground utilities. H trenches are H-shaped trenches performed where Joint Bays are proposed.
- At sites where trenchless methods such as Horizontal Directional Drilling (HDD) is proposed to cross existing services, infrastructure or natural features, borehole may be needed to analyse soil and ground conditions to inform the feasibility and detailed design of the crossing.

2 METHODOLOGY AND APPROACH

2.1 Introduction

The purpose of this report is to assess the various route options and determine the Emerging Best Performing Route Option to develop further in the Best Performing Option Report and through Step 5 to completion. This section outlines the methodology applied to achieve this.

Initial route options were identified using high-level considerations as listed below, in Chapter 2.2, following the identification of constraints within the study area. The constraints identified in the study area were primarily based on a review of publicly available datasets, as well as route walkover surveys.

The data sources include but are not limited to the following:

- Development Plans – Fingal County Council and Dublin City Council
- Myplan.ie Mapping
- Central Statistics Office, CSO
- National Parks and Wildlife Services, NPWS
- Irish Ramsar Wetland Committee
- Environmental Protection Area (EPA) mapping
- Geological Survey Ireland, GSI
- National Monuments Service
- Heritage Mapping
- Corine 2018 and 2012 data (sourced from the EPA). This dataset was used with aerial imagery and supplemented with datasets obtained directly from other sources covering the Dublin area, to determine land use.
- Digital terrain mapping was sourced by EirGrid from the Ordnance Survey Ireland (OSI) for the study area. An orthographical map of the study area, sourced from OSI, was also reviewed.
- Information from local authorities, asset owners and utility providers.

To help minimise disruption and work as efficiently as possible, this project will coordinate with other state-owned utilities, transport providers and local authorities through the Dublin Infrastructure Forum (DIF). The forum meets quarterly.

The DIF has also setup three working groups at operational level:

- Stakeholder engagement and communications;
- Technical expertise; and
- Planning and environment.

While the initial focus of the work of the DIF has been on the ***Powering Up Dublin*** programme, it is intended to work more broadly across other major infrastructure projects being delivered in the area such as water, gas and transport.

2.2 Identification of Route Options

Potential route options for the Inchicore to Poolbeg circuit were identified following the high-level considerations:

- Environmental

  - Ecology
  - Water bodies
- Social
  - Residential, amenity, commercial
  - Archaeology/Cultural heritage
- Economic
  - Land ownership
  - Length of route
- Technical
  - Major obstacles (crossings that may require trenchless techniques)
  - Route geometry (width, straight sections, sharp bends)
- Deliverability
  - Land availability
  - Road access

This led to the identification of six potential route options, however the route options are not completely unique and there is some overlap between sections on some route options.

2.3 Definition of Sections

To assist with the multi-criteria assessment of each route, and to ensure each section assessed was distinct and no section was duplicated in the assessment, the route options were broken down into sections. These sections ran between two nodes along the route. A node was created wherever two routes crossed or diverted from each other. The sections are labelled according to the nodes they run between, for example the section running between Node A and Node B was labelled Section A-B.

2.4 Route Building

The advantage of breaking up the route options into smaller sections as described in Chapter 2.3 above is that these sections can then be combined in new ways to build an optimised route. This methodology grants a lot more freedom to build the best possible route, using sections that rank the best during the multi-criteria assessment.

This also allows certain constraints to be avoided more easily, by selecting alternative sections that bypass the constraint.

Each section was assessed using the multi-criteria assessment outlined in Chapter 2.5.

2.5 Criteria Used for Comparison of Options

The route sections were assessed using EirGrid's five multi-criteria assessment categories. These are as follows:

- Technical
- Deliverability
- Economic
- Socio-Economic
- Environmental

The categories were further divided into subcategories which are described below. For each subcategory, the section was rating according to the colour scale shown in Table 2-1.

Table 2-1: Colour coding of Risk / Significance / Sensitivity levels

Colour Key	Level of Risk / Significance / Sensitivity
Yellow	Low
Green	Low-Moderate
Dark Green	Mid-Level / Moderate
Blue	Moderate-High
Dark Blue	High

2.5.1 Technical

Table 2-2: Technical Subcategories for the Multi-Criteria Assessment

Subcategory	Description
Technical Operating Risk	Will the route lead to areas which are difficult to access to complete maintenance activities, examples include access to railways, motorways, fast lanes of major roads, etc.
Compliance with EirGrid Functional Specification for 220kV	Considers the limitations imposed by the specification in terms of routing with existing roadways, cable rating
Expansion/Extendibility	Considers the possibility of future extension of the network (would also consider the impact of the use of a particular route on future advised EirGrid routes).
Geotechnical conditions	Considers the impact of known ground conditions (from GSI data or other available datasets), this would include depth to bedrock, likely water table depth, known areas of poor ground / marsh.

2.5.2 Deliverability

Table 2-3: Deliverability Subcategories for the Multi-Criteria Assessment

Subcategory	Description
Road Access	Road access to the sites to be considered, specifically the ability to deliver plant and cable to a site (low bridges, narrow roads, load limits on roads/bridges)
Outage Impact	This item considers the requirement to deenergise existing cables to construct the new circuits.
Route Geometry	The number of acute bends or overall “bendiness” of a particular route should be considered against other routes Topography, topology etc.
Land Availability	Land availability for the construction of the circuit and specifically the joint bays and working space during cable pulling
Planning and other statutory requirements	Considers the requirement for planning, foreshore licenses or other statutory requirements
Material Assets	Considers the impact of the route on existing EirGrid assets. Number of crossings of canals, motorway, Luas, DART and feasibility of these, major utility infrastructure.
Utility Congestion	Considers the extent of existing utilities based on available datasets (risk of inaccuracy of existing datasets to be noted)
Working Time Constraints	Considers the working time restrictions which will apply to the route, this data will most likely come from the Traffic Impact Number, however other

Subcategory	Description
	sources may be considered (work in residential areas, at sports grounds etc.)
Reinstatement Requirements	Considers the technical / time impact of reinstatement on the proposed route, has the road been recently resurfaced, is the road of concrete construction are there special paving or surface treatments in place which will need to be reinstated
Dependence on other projects	Considers the likely interface, both positive and negative on the cable routes (Metro North and others)

2.5.3 Economic

Table 2-4: Economic Subcategories for the Multi-Criteria Assessment

Subcategory	Description
Length of Route	Comparison of route length against a baseline of the existing route length.
Number of Crossings	Quantity of non-standard crossings, HDD, Microtunnel, River Crossing etc.
Reinstatement Costs	Considers the cost impact of reinstatement on the proposed route, has the road been recently resurfaced, is the road of concrete construction are there special paving or surface treatments in place which will need to be reinstated
Utility Diversion Requirements	Considers the requirement to arrange for the diversion of known utilities to prevent a clash or to open a circuit corridor. This would be for significant utilities such as high-pressure gas mains etc.
Bespoke Circuit Trench Requirements	Sections where non-standard trenches cannot be achieved – e.g., Bridge deck crossings or similar.

2.5.4 Socio-Economic

Table 2-5: Socio-Economic Subcategories for the Multi-Criteria Assessment

Subcategory	Description
Cultural heritage	Considers the potential impact / proximity to areas (and specific points) of Cultural Heritage.
Proximity to critical services	Services that will have a critical socio-economic impact if affected (i.e., business parks, schools, smaller healthcare centres, etc)
Duration of the works	The overall duration of the works in a particular area should be considered, however it should be noted that some low impact routes may have long durations whilst some high impact routes may be completed quickly
Settlements and Communities	Proximity to buildings, specifically the number of buildings and residences within a 50m buffer of the route
Amenity	Impact on recreational activities (e.g., fishing, sports) and tourism during and after construction, that are not included in the other sub-criteria.
Traffic and Transport	Considers the impact of the route on traffic, specifically on bus routes, on-street parking and cycle lanes. When the route has been selected, it is important to note that a full Traffic Management Plan (TMP) will be created and implemented throughout the construction phase of this project. Any openings in the road will comply fully

Subcategory	Description
	with the Guidelines for Managing Openings in Public Roads and will be licenced accordingly.
Emergency services	Considers the impact to Ambulance, Fire Engine and Garda dispatch points / depots as well as to Emergency Hospitals / ERs

2.5.5 Environmental

Table 2-6: Environmental Subcategories for the Multi-Criteria Assessment

Subcategory	Description
Planning policy and land use	Considers if the project is allowable under the development plan.
Biodiversity, Flora and Fauna	Considers the possible impact of the selected route on biodiversity – based on the significance from constraints mapping
Landscape and Visual	Considers the impact of the route on landscape – based on the significance from constraints mapping.
Contaminated land	Considers the risk of encountering and dealing with the impacts of contaminated ground. Based on constraints mapping and known areas of contamination such as landfills, historic landfills etc.
Flood risk	Considers the risk of flooding, this will be most applicable to the construction stage – based on the significance from constraints mapping.
Water Impact	Considers the risk arising from proximity to water bodies – based on the significance from constraints mapping. Number of crossings, proximity of circuits etc.
Probability of triggering NIS requirements	Considers the risk of a particular route or section of a route triggering an NIS, in particular proximity to a Natura 2000 site (or pathway link) or similar.

3 INCHICORE - POOLBEG

This chapter looks at the location of the existing Inchicore - Poolbeg 220kV circuit, the six route options which have been identified are described below. The route options have subsequently been divided into nodes and sections and these are also described below.

3.1 Summary of the Existing Route

Inchicore – Poolbeg 220kV circuit #1 is an approximately 12.5km long low pressure Self Contained Fluid Filled (SCFF) cable circuit. The circuit was first energised in 1971 and consists of 3 x 485mm^2 Copper cable with a rating of 266MVA.

Inchicore – Poolbeg 220kV circuit #2 is an approximately 11.3km long low pressure SCFF cable circuit. This circuit was first energised in 1984 and consists of 3 x 1300mm^2 Aluminium cable with a rating of 349MVA.

Both circuits are reaching their end of life, but are vital for the transmission grid in Dublin. To minimise the disruption to the grid, the circuits need to be replaced in an offline route as discussed in Chapter 1.1. Both circuits are shown in Figure 3-1.

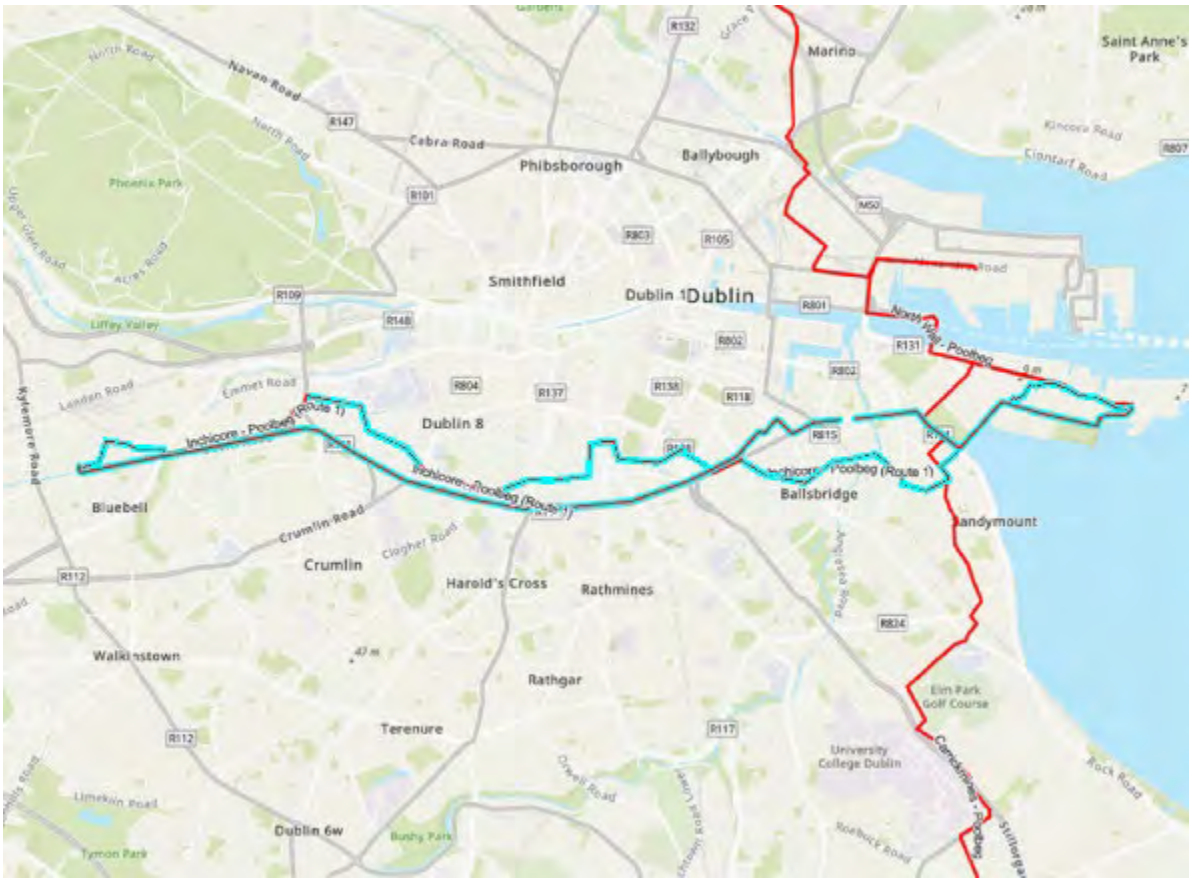

Figure 3-1: Map of two existing Inchicore – Poolbeg 220kV SCFF cable circuits

3.2 Option Selection Overview

Potential route options were developed according to the high-level criteria outlined in Chapter 2.2. Six route options were developed. These route options are all shown in Figure 3-2.

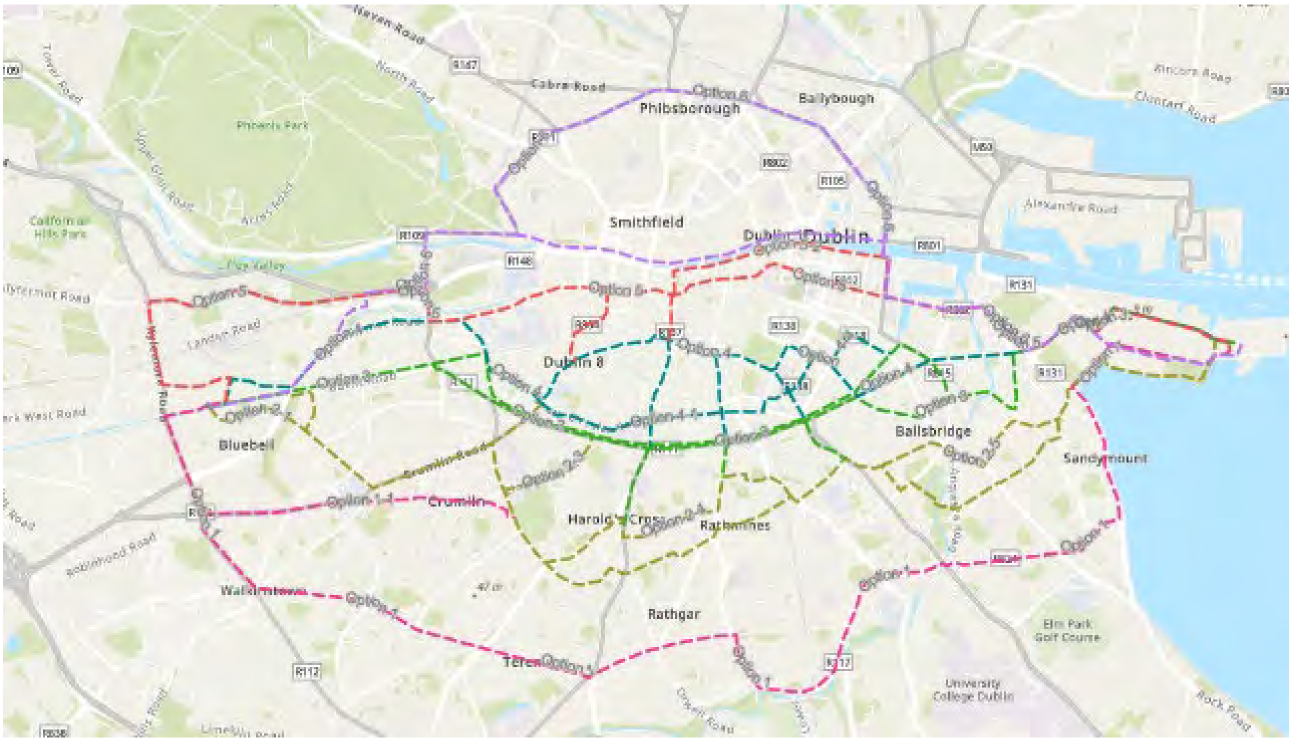

Figure 3-2: All route options developed in the Inchicore to Poolbeg study area

Individual route options are described and shown in Chapters 3.2.1 to 3.2.9.

3.2.1 Route Option 1

Route Option 1 leaves the Inchicore Substation and travels in a westerly direction along the Grand Canal towards Kylemore Road. It continues along the Kylemore Road, and crosses under the Luas Red Line at Naas Road, through the junction at the Long Mile Road, along Walkinstown Avenue and through Walkinstown Roundabout. Here it heads east towards Terenure Village along Kimmage Road West and Terenure Road West (R818). From Terenure it heads through Rathgar Village along Highfield Road and turns south into Dartry Road. It turns east again runs under the Luas Green Line at the Nine Arches bridge, through Milltown Village and onto Eglinton Road. At Donnybrook, it crosses the River Dodder at Anglesea Bridge, travels along Ailesbury Road, crosses the Merrion road and crosses under the DART lines at Sydney Parade to join Strand Road via Sydney Parade Avenue. The route then follows Strand Road (R131) to Sean Moore Park where it turns to the east, skirts the park's boundary, and follows the route of the shoreline toward the Poolbeg Substation.

There is 1 alternative section on this route described below:

- Route 1-1

  This route does not pass through Walkinstown Avenue but instead it turns right at Long Mile Road junction. Here it heads east towards Kildare Road then re-joining option 2 at Sundrive Road.

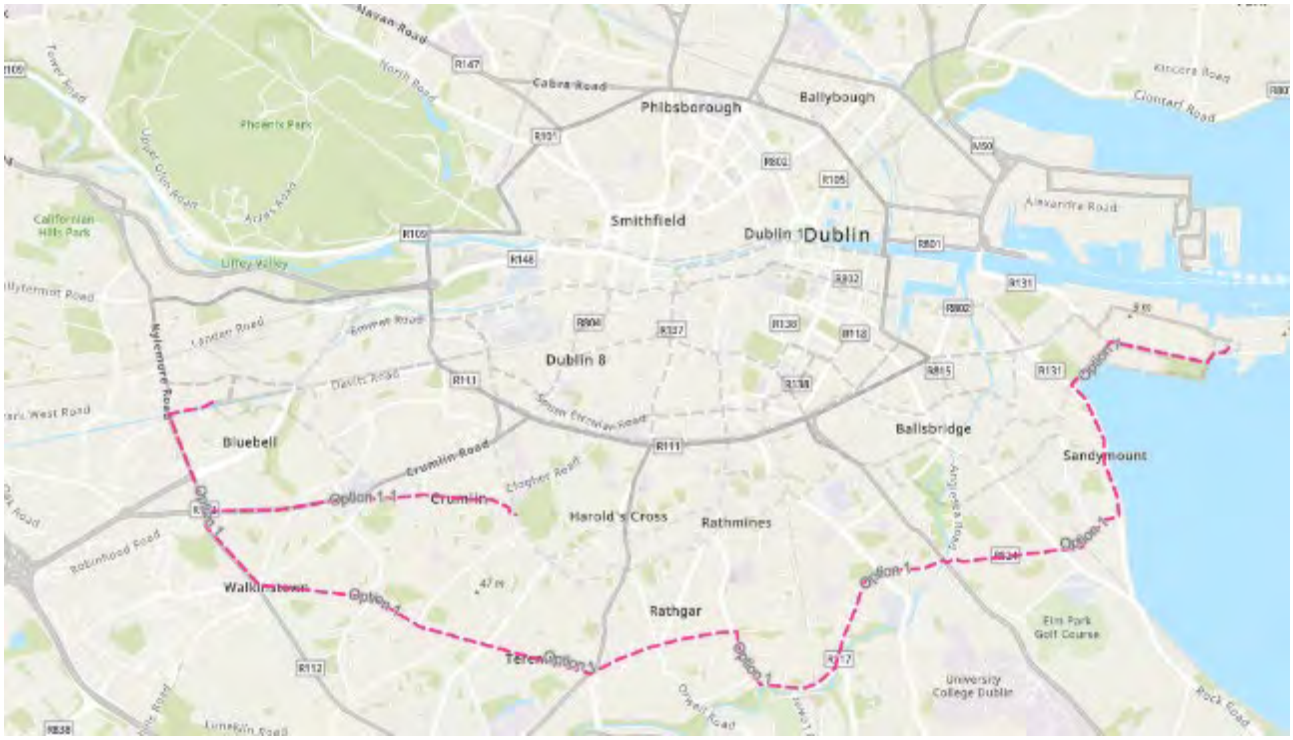

Figure 3-3: Inchicore to Poolbeg - Route Option 1

3.2.2 Route Option 2

Route Option 2 leaves the Inchicore Substation and heads west along the tow path on the north side of the Grand Canal. Here it crosses the canal and turns right along Kilworth Road and Cooley Road. It turns northeast along the Crumlin Road and then south to follow the Sundrive Road. It continues through Larkfield Park, Clareville Road and Kenilworth Park before crossing the junction with Harolds Cross Road and entering Kenilworth Square North. It enters Rathmines Village through Grosvenor Road, takes a quick right east along Castlewood Avenue, Belgrave Square and Charleston Road before entering Ranelagh Village. The route follows Ranelagh Road for a short distance and turns left onto Chelmsford Road and Appian Way. It then turns south to follow Wellington Place, Pembroke Park and Herbert Park before entering the open space of Herbert Park. The route crosses Herbert Park adjacent to the southwest boundary and then crosses the River Dodder before entering the grounds at Merrion Cricket Club. On exiting the cricket grounds it follows Simmonscourt Road and Sandymount Avenue where it crosses the DART line adjacent to Sandymount Station. From here it follows Sandymount avenue past Sandymount Green onto Dromord Avenue and Marine. The route enters Sean Moore Park where it turns to the East, skirts the park and follows the route of the shoreline toward the Poolbeg Substation.

Sub-options of the Route Option include:

- Route 2-1

  Exits the Inchicore Substation and crosses the canal into open space to the rear of Bluebell Estate. It follows Bluebell Road crosses the Naas Road and enters Lansdowne Valley Park. Here it crosses the River Camac before entering Cooley road to join back with Option 2.

- Route 2-2

  Continues along the Crumlin Road and crosses the canal at Dolphins Barn before connecting to Option 4-1 at the South Circular Road.

- Route 2-3

Turns east off Sundrive road and follows Clogher road towards the Canal.

- Route 2-4

  From Sundrive Road follows Kimmage Road Lower to Harolds Cross Park. It follows Harolds Cross Road to Leinster Road and onto Rathmines Road. On Rathmines Road it turns east onto Richmond Hill before turning south along Mount Pleasant Avenue Lower and into Mount Pleasant Square. It then joins Ranelagh Road going south to join up with Option 2.

- Route 2-5

  This route does not turn south into Pembroke Park but instead continues to Clyde Road and into Ballsbridge via Eglin Road. Here it travels southeast through Ballsbridge and across the River Dodder. After leaving Ballsbridge it turns onto Serpentine Avenue where it crosses the DART lines. It follows Claremont Road to Sandymount Green and joins Option 2.

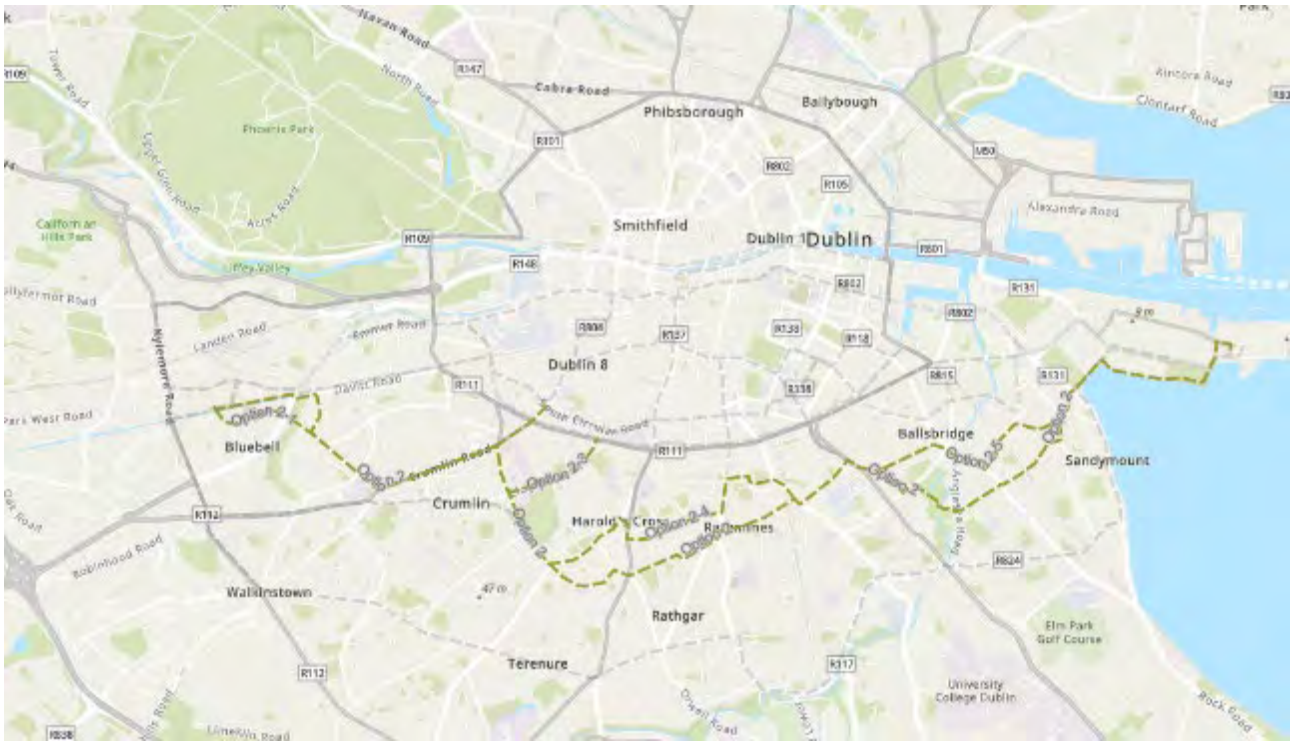

Figure 3-4 Inchicore to Poolbeg - Route Option 2

3.2.3 Route Option 3

Route option 3 leaves the Inchicore Sub-station and goes east along the tow path on the north bank of the Grand Canal. It crosses the R810 and enters Goldenbridge Walk. It continues along Goldenbridge Walk east towards Millview cottages. At Suir it crosses the canal and the Luas Red line before and continues east along Parnell Road, Grove Road and under the Luas Green Line at Grand Parade. Continuing on Mespil Road it then turns onto Pembroke Road and follows Lansdown Road where it crosses the River Dodder. From Herbert Road it turns north onto Tritonville Road and Church Road. It crosses Bath Strreet and Pembroke Street and follows Sean More Road before turning onto South Bank Road. The route the turns onto Whitebank Road before following Pigeon House Road to the Poolbeg Sub-station.

Sub-options of the Route Option include:

- Route 3-1

  Follows Option 3 along the Grand Canal until it reaches Suir Road. It crosses Suir Road and follows the pathway on the north side of the Luas Red Line. At the South Circular Road it heads South through Rialto Village, onto Herberton Road before re-joining the north bank of the canal south of Dolphin

House. It follows the north bank of the canal and crosses Dolphins Barn Bridge, Parnell Bridge and Emmet Bridge where it then enters Windsor Terrace and Portobello Road. The route then continues east along Portobellow Quay Walk, crosses Richmond Street South at the La Touche Bridge and follows Charlemont Mall. It then enters Charlemont Place, travels under the Luas Green Line. It crosses Leeson Street at Leeson Street Bridgeand follows Herbert Place, Warrington Place and Clanwilliam Place before heading south along Pembroke Road to join Option 3.

- Route 3-2

  At Harolds Cross this route heads south along Harolds Cross Road to provide a link to other Options.

- Route 3-3

  At Rathmines this route heads south along Rathmines Road Lower to provide a link to other Options.

- Route 3-4

  At Leeson Street this route heads south along Leeson Street Upper to provide a link to other Options.

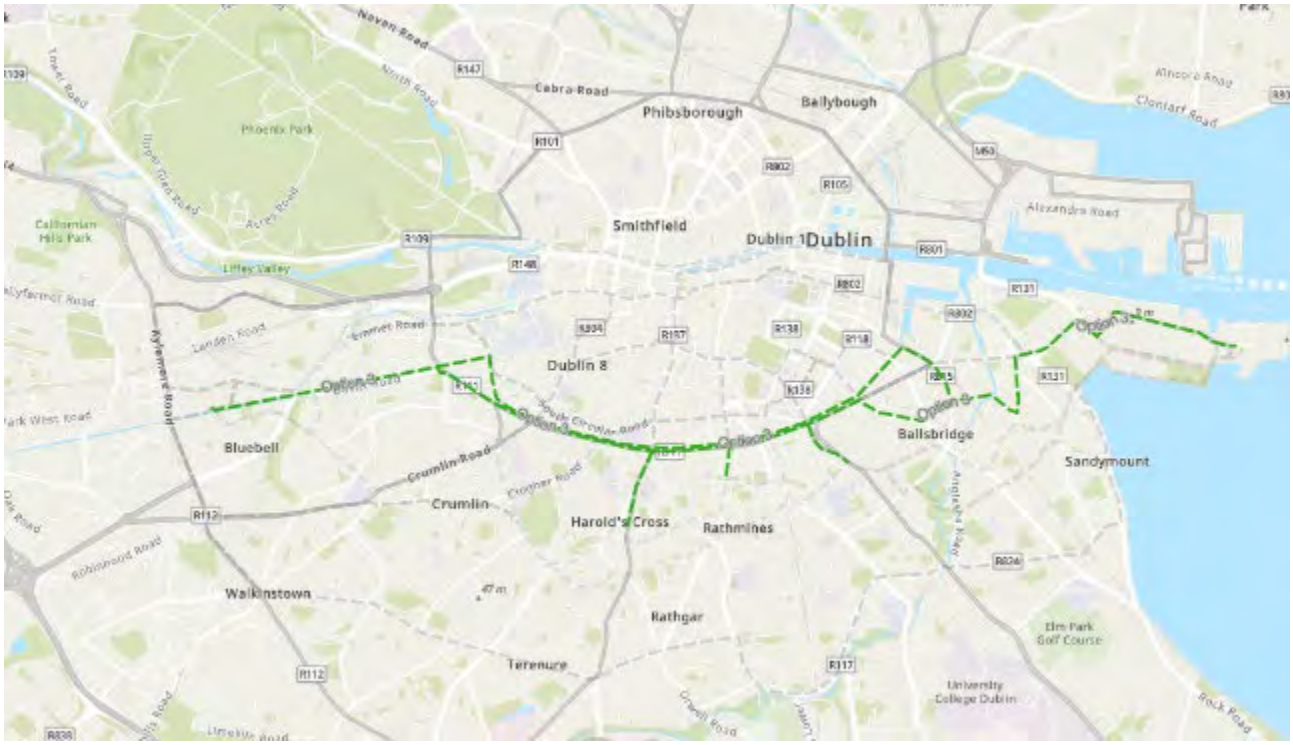

Figure 3-5 Inchicore to Poolbeg - Route Option 3

3.2.4 Route Option 4

Route option 4 leaves the sub-station at Inchicore and heads east along Jamestown Road. At the junction with Tyrconnell Road it heads north into the centre of Inchicore. Here it heads east again along Emmet Road and into Old Kilmainham before turning into Brookfield Road and past St. James Hospital. It then joins the South Circular Road and follows it through Rialto Village to Dolphin's Barn Street where it turns north towards Cork Street and St. Luke's Avenue. At The Coombe it heads east along Kevin Street, Cuffe Street and onto St. Stephens's Green South. Route 4 exits St. Stephen's Green, follows Leeson Street Lower, turns onto Pembroke Street Upper and passes Fitzwilliam Square before joining Baggot Street Lower. It follows Baggot Street Lower where it crosses the Grand Canal to join Haddington Road. It continues along Bath Avenue, crosses the River Dodder and follows Londonbridge Road to Irishtown, where it joins Church Avenue and Sean Moore Road. At the roundabout on Sean Moore Road it turns onto South Bank Road before taking Whitebank Road to Pigeon House Road. Route option 4 then follows Pigeon House Road to the sub-station at Poolbeg.

- Route 4-1

  At Dolphin's Barn this route continues east along the South Circular Road, follows Harrington Street, Harcourt Street and Adelaide Road. It turn north into Earlsfort Terrace and east into Hatch Street Lower where it re-joins Route Option 4.

- Route 4-2

  After the exiting The Coombe this route turns south to follow New Street South, Clanbrassil Street Lower and Clanbrassil Street Upper before terminating at the Grand Canal.

- Route 4-3

  This route turns south at Kevin Street Lower to follow Wexford Street, Camden Street Lower, Camden Street Upper and Richmond Street South before terminating at the Grand Canal.

- Route 4-4

  At St. Stephen's Green this route turns north to follow St. Stephens's Green East to join Merrion Row. It follows Baggot Street Lower turns on Fitzwilliam Street Lower, passes Merrion Square East and turns to follow Mount Street Lower where it terminates at the Grand Canal.

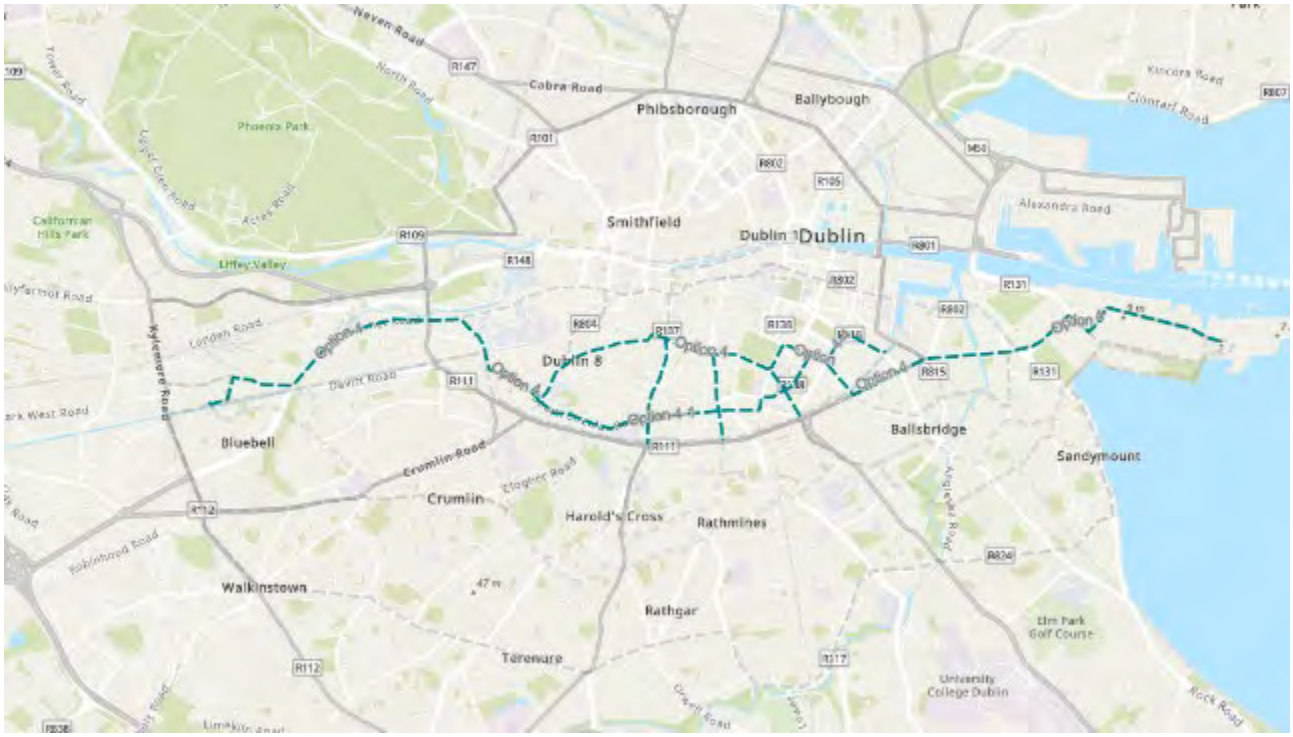

Figure 3-6 Inchicore to Poolbeg - Route Option 4

3.2.5 Route Option 5

Route option 5 leaves at the Inchicore substation and travels in a westerly direction along Kylemore Way towards Kylemore Road (R112). The route travels along Kylemore Road, where it crosses over the railway, to Ballyfermot Road, which it follows as it becomes Sarafield Road and then Con Colbert Road (R148). At the junction with South Circular Road (R111), travels in a southerly direction, crossing the railway and the River Camac, to the intersection with Old Kilmainham Road.

The route follows Old Kilmainham Road as it becomes Mount Brown, James's Street, Thomas Street and Cornmarket. At the junction with High Street, the route turns onto High Street, then crosses onto Christchurch Place and Lord Edward Street. The route follows Lord Edward Street as it becomes Cork Hill, Dame Street, College Green, College Street (crosses and parallel to the LUAS) and Pearse Street.

On Pearse Street, the route travels on the Mac Mahon Bridge over the Grand Canal and then on Ringsend Bridge over the River Dodder. The route travels along Irishtown Road. At the junction with Sean Moore Road, the route turns in an easterly direction. The route follows South Bank Road onto the Poolbeg Peninsula.

The route travels along Pigeon House Road as far as the Poolbeg substation.

The following sub-option is included in route option 5 assessment:

- Route 5-1

  This option turns south off Thomas Street onto the R804 (Thomas Court and Marrowbone Lane). At the junction with the R110, the route joins route option 4.

- Route 5-2

  This option turns north off High Street onto Winetavern Street. At the junction with the R148 (Wood Quay), the route turns in an easterly direction. The route follows Wood Quay, Essex Quay, Wellington Quay, Aston Quay, Burg Quay, George's Quay, City Quay and Sir John Rogerson's Quay. It then travels south down Cardiff Lane and Macken Street, before turning in an easterly direction on Pearse Street and re-joining option 5.

- Route 5-3

  This option turns south off High Street onto the R137 (Nicholas Street and Patrick Street). At the junction with the R110, the route joins route option 4.

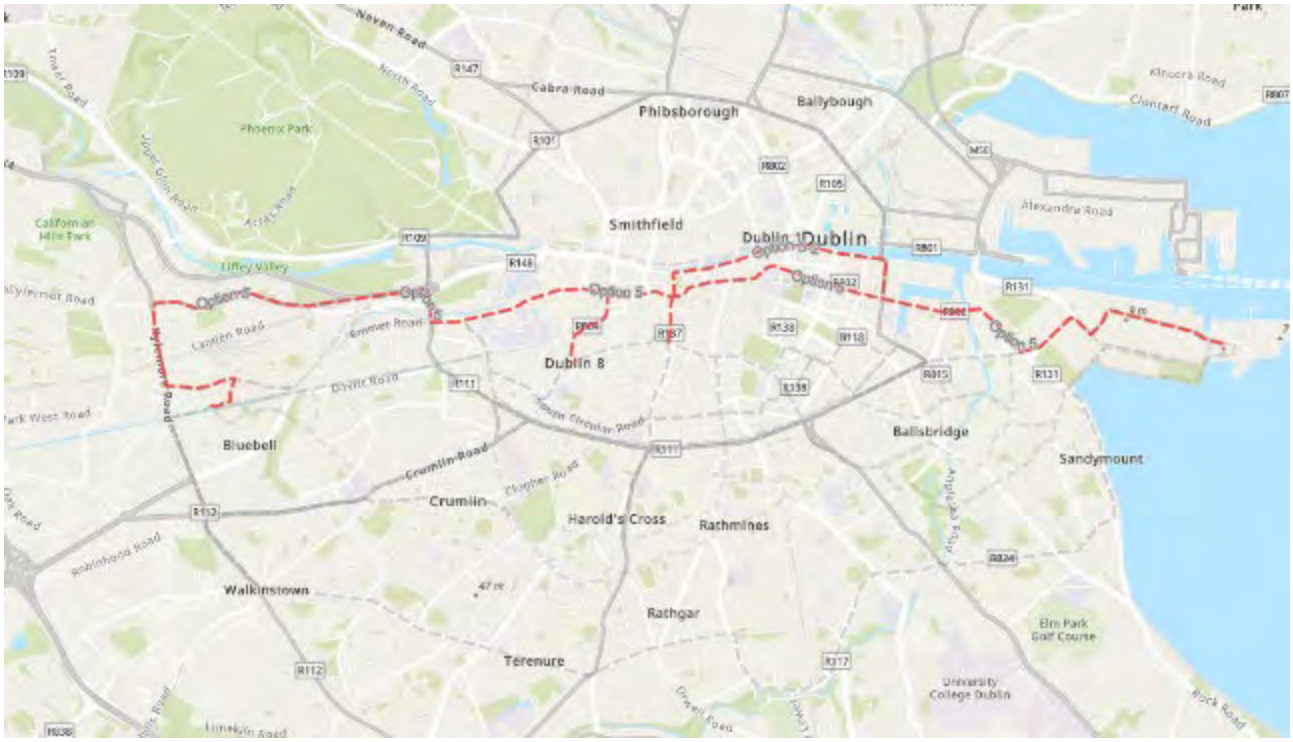

Figure 3-7 Inchicore to Poolbeg - Route Option 5

3.2.6 Route Option 6

Route option 6 leaves the Inchicore substation and travels in an easterly direction along the Grand Canal towards Tyrconnell Road. It continues along Tyrconnell Road, Grattan Road and Inchicore Road. The route turns onto Memorial Road towards the R148. At the junction with the R111, the route follows this road in a northerly direction where it crosses the River Liffey on Island Bridge. The route follows Conyngham Road, where it crosses over the railway, and at the junction with the R101, the route follows this road as it becomes

North Circular Road. The route follows North Circular, where it passes over the LUAS line, Poplar Row, Sevillle Place and Guild Street. On Seville Place, the route passes under the railway.

The route crosses the River Liffey on Samuel Beckett Bridge. It then travels south down Cardiff Lane and Macken Street, before turning in an easterly direction on Pearse Street. Here, the route travels on the Mac Mahon Bridge over the Grand Canal and then on Ringsend Bridge over the River Dodder. The route travels along Irishtown Road. At the junction with Sean Moore Road, the route turns in an easterly direction. The route follows South Bank Road onto the Poolbeg Peninsula.

The route travels off road through Irishtown Nature Reserve, and into the Poolbeg substation.

The following sub-option is included in route option 6 assessment:

- Route 6-1

  This option heads east at the Junction of Conyngham Road and Infirmary Road. It then heads east along Parkgate Street, Wolfe Tone Quay, Sarsfield Quay, Ellis Quay, Arran Quay, Inns Quay, Ormond Quay Upper, Ormond Quay Lower, Bachelors Walk, Eden Quay, Custom House Key and North Wall Key. The route crosses the LUAS on Parkgate Street and Eden Quay where it re-joins Route Option 6.

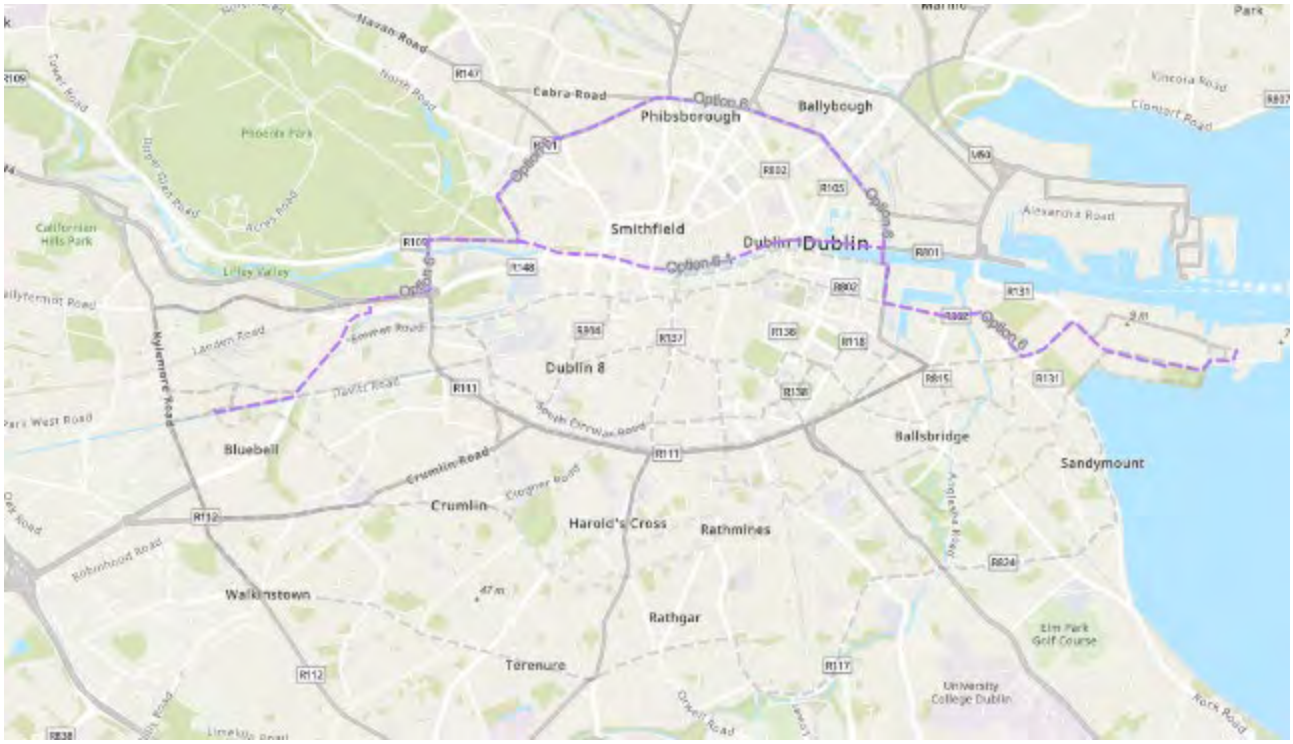

Figure 3-8 Inchicore to Poolbeg - Route Option 6

3.3 Identification of Sections and Nodes

Nodes were placed wherever two or more route options crossed or diverged. The sections were labelled according to the nodes they run between, for example the section between Node A and Node B was called Section A-B.

A map of the identified nodes for all route options is shown in Figure 3-9.

Figure 3-9: Node Map for Inchicore to Poolbeg route options

The table below lists all sections, which route options they form part of and which roads or areas the sections run through.

Table 3-1: All Sections assessed in the Inchicore - Poolbeg study area

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
AA-AB									x																				0.39	Lansdown Road
A-AN															x						x								0.40	Inchicore depot
A-AO																									x				0.86	Grand Canal, Tyrconnell Road
A-AS		x																											1.06	Grand Canal, Davitt Road
A-AT			x																										1.13	Bluebell Road, Cooley Road
A-AU									x																				2.25	Goldenbridge Walk, Millview Cottages
A-B	x																												1.46	Bluebell Road
AB-AC									x																				0.08	Lansdown Bridge (New Bridge)
AC-AD									x																				0.61	Herbert Road, Tritonville Road
AC-AD2																												x	0.30	Newbridge Road
AD-AG									x																				0.20	Tritonville Road
AD-S																												x	0.49	Sandymount Road
AE-AA										x																			0.43	Shelbourne Road
AE-AF															x														0.34	Bath Avenue
AF-AB																												x	0.61	Havelock Square
AF-AG															x														0.48	Bath Avenue
AG-AH									x						x														0.11	Church Avenue
AH-BV									x							x						x			x				0.88	Sean Moore Road, South Bank Road
AI-AK				x																									0.42	Crumlin Road
AI-E		x																											0.48	Sundrive Road
AJ-AI														x															0.42	Dolphin Road
AJ-AK									x																				0.39	Dolphin Road
AK-AL									x																				0.66	Parnell Road
AK-AX				x																									0.03	Camac Bridge, Dolphin's Barn
AL-AM									x																				0.57	Parnell Road
AM-X									x																				0.76	Grove Road
AN-AO															x														0.62	Jamestown Road

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
AN-BR																					x								3.68	Jamestown Road, Tyrconnell Road.
AO-AP															x										x				0.67	Tyrconnell Road
AP-AQ															x														0.93	Emmet Road
AP-BR																									x				0.55	Grattan Crescent
AQ-AR															x						x								0.32	Old Kilmainham
AR-AV															x														0.53	Brookfiel Road
AR-BA																					x								1.49	Mount Brown, James' St.
AS-AJ																												x	1.87	Davitt Road, Dolphin road
AS-AT		x																											0.40	Kilworth Road
AT-AI		x																											2.10	Cooley Road, Crumlin road
AU-AJ									x																				0.69	Dolphin Road
AU-AV										x																			0.66	Luas Red Line, Mount Shannon Rd (Rear Laneway)
AV-AW															x														0.65	South Circular Road
AV-AX										x																			0.71	Herberton Road,Grand Canal
AW-AY															x														0.54	Dolphin's Barn Street
AW-AZ																x													1.17	South Circular Road
AX-AW				x																									0.18	Dolphin's Barn
AX-BT										x																			1.21	Grand Canal
AY-BA																						x							0.89	Marrowbone Lane, Thomas Court
AY-BC															x														0.98	Cork Street
AZ-BC																	x												0.80	Clanbrassil St.
AZ-BE																x													0.69	South Circular Road
B1-B2	x																												2.33	Cromwellsfort Rd., Kimmage Road W.,
B2-B3	x																												2.51	Ternure Road E., Highfield Road

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
B3-B4	x																												1.49	Dartry Road, Milltown Road
B4-B5	x																												1.71	Milltown Road, Eglinton Road
B5-B6	x																												1.14	Ailesbury Road
B6-B7	x																												1.24	Ailesbury Road, Sydney Parade Ave., Strand Road
B7-U	x																												0.85	Strand Road
BA-BB																					x								0.64	Thomas St., High St.
B-B1	x																												0.92	Walkinstown Avenue,
BB-BC																								x					0.45	Patrick Street
BB-BN																					x								2.22	Christchurch Place, Lord Edward St., Dame Street, Cillege Green, Pearse St.
BB-BO																							x						2.33	Winetavern St., Wood Quay to Sir John Rogerson's Quay, Macken St.
B-C	x																												3.14	Long Mile Road, Kildare Road
BC-BD															x														0.50	Kevin Street
BD-BE																		x											0.57	Camden St., Wexford St.
BD-BI															x														0.57	Cuffe Street, St. Stephen's Green
BE-BF																		x											0.27	Richmond St.
BE-BH																x													0.76	Adelaide Road, Hatch Street Lwr.
BF-BG										x																			0.80	Charlemont Mall, Claremont Place
BG-BH																				x									0.29	Leeson Street
BG-BL										x																			0.55	Wilton Tce.
BH-BJ															x														0.45	Pembroke Street
BI-BH															x														0.27	Leeson Street

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
BI-BJ																			x										0.59	St. Stephen's Green Merrion row, Baggot St.
BJ-BK															x					x									0.17	Baggot Street Lower
BK-BL															x														0.38	Baggot Street Lower
BK-BM																			x										0.80	Fitzwilliam St., Merrion Sq. Mount St.
BL-BM										x																			0.50	Herbert Place, Warrington Place
BL-Z															x														0.05	McCartney Bridge
BM-AE										x																			0.48	Clanwilliam Place, Grand Canal St.
BN-AH																					x				x				1.55	Ringsend Road, Irishtown Road
BO-BN																							x		x				0.44	Sir John rogerson's Quay, Macken Street.
BP-BO																									x				0.15	Samuel Beckett Bridge
BQ-BP 1																									x	x			5.37	Infimary Way, R101, Guild Street.
BQ-BP 2																										x			3.70	Parkgate Street, Wolfe Tone Quay to North Wall Quay
BR-AQ																					x								0.91	Chapelizod Bypass, South Circular Road.
BR-BQ																									x				2.00	Chapelizod Bypass, Islandbridge, Conyngham Road
BT-AZ																	x												0.27	Clanbrassil St.
BT-BF										x																			0.75	Windsor Tce. Portobello Road.

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
BU-BS	x																								x		x		1.45	South Bank Road
BV-BS									x							x						x						x	1.55	Pigeon House Road
BV-BU																									x			x	0.20	South Bank Road
C-D		x																											0.55	Sundrive Road
D-F		x																											0.92	Clareville Park
D-G						x																							0.95	Kimmage Road Lwr.
E-AL					x																								1.08	Clogher Road
E-C		x																											0.26	Sundrive Road
F-H		x																											0.88	Kenilwort Square
F-M								x																					3.48	Kenilworth Sq. Maxwell Road, Church Ave., Anna Villa, Marlborough Road.
G-AM											x																		0.76	Harold's Cross Road
G-W						x																							1.48	Leinster Road, Rathmines Road Lwr.
H-I		x																											0.15	Grosvenor Road
I-J		x																											0.84	Castlewood Avenue
J-K		x																											0.71	Chelmsford Road, Appian Way
K-L		x																											0.38	Morehampton Road, Wellington Place
L-M		x																											0.31	Pembroke Park
L-P							x																						1.09	Clyde Road, Elgin Road, Ballbridge
M-N		x																											0.41	Herbert Park
N-O		x																											0.26	Merrion Cricket Club
O-Q		x																											0.54	Simmonscourt Road
P-R							x																						1.02	Serpentine Ave., Claremont Road
Q-P																											x		0.24	Merrion Road

Section	Option 1	Option 2	Option 2-1	Option 2-2	Option 2-3	Option 2-4	Option 2-5	Option 2-6	Option 3	Option 3-1	Option 3-2	Option 3-3	Option 3-4	Option 3-5	Option 4	Option 4-1	Option 4-2	Option 4-3	Option 4-4	Option 4-5	Option 5	Option 5-1	Option 5-2	Option 5-3	Option 6	Option 6-1	IP1	IP2	Section Length (Km)	Road Names
Q-R		x																											0.93	Sandtmount Avenue
R-T		x																											0.29	Seafort Avenue, Dromard Tce.
S-R																											x		0.17	Sandymount Road
S-T																											x		0.21	Marine Drive
T-U		x																											0.06	Marine Drive
U-V	x	x																											0.39	Sean Moore Park
V-BS		x																											1.68	Irishtown Nature Reserve, Pigeon House Road
V-BU	x																										x	x	0.19	South Bank Road
W-J							x																						0.83	Richmond Hill, Mount Pleasent Sq., Ranelagh Road
W-X												x																	0.32	Rathmines Road Lower
X-Y									x																				0.80	Canal Road, Grand Parade
Y-K													x																0.56	Leeson Street Upper
Y-Z									x																				0.56	Mespil Road
Z-AA									x																				1.01	Baggot Street, Pembroke Road
Z-AE															x														0.79	Haddington Road

4 SECTION LEVEL ASSESSMENT

4.1 Section Level Multi-Criteria Assessment

Each route section was assessed according to the methodology described in Chapter 2. A summary of this assessment can be found in Table 4-1, the main risk factors have been highlighted in this table.

Table 4-1: Summary of section assessments

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
AA-AB	0.39	Lansdown Road	This section crosses under DART tracks. Future access may be restricted.	100% of this section is wide single carriageway. The existing circuit is parallel to 100% of this section.	There is high utility congestion along this section. There is one crossing Dart line on this section. Bespoke trench design may be required for crossing Grand Canal & crossing Luas lines.	This section passes high density of shops at Kylemore Rd. Section passes no emergency services.	10% of section has medium risk of river flooding. This section is 25% parallel to the River Dodder. There are mature trees adjacent to the road along 20% of this section.
A-AN	0.40	Inchicore depot	Narrow section beside pylon could restrict future options.	Offroad sections along this section may be inaccessible for normal construction vehicles. Majority of route is parallel to the existing circuit.	There is high utility congestion along this section. 100% private land at Inchicore substation & Jamestown Industrial Estate - Road condition unknown.	Section passes no emergency services.	This section is 40% adjacent to the Grand Canal.
A-AO	0.86	Grand Canal, Tyrconnell Road	Narrow section beside pylon could restrict future options.	Offroad sections along the canal towpath are narrow and difficult to access. The existing circuit is parallel to 25% of this section.	There is high utility congestion along this section. There are no major junctions at this section.	This section is 90% off road. Working area constrained next to Grand Canal; Section passes no emergency services.	This section is 90% adjacent to the Grand Canal and it passes the Grand Canal pNHA
A-AS	1.06	Grand Canal, Davitt Road	This section is 80% on public road. It crosses the Grand	Offroad sections along the canal may be difficult to access.	There is high utility congestion along this section.	This section is 80% off road -Working area constrained next to Grand Canal.	Adjacent to & crosses Grand Canal. Crossing River Camac.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
			Canal. It may prove difficult to access. HDD under Canal/Luas.	The existing circuit is parallel to 25% of this section.	There are no major junctions at this section.	Section passes no emergency services.	
A-AT	1.13	Bluebell Road, Cooley Road	This section is 80% on public road. It crosses the Grand Canal & Lansdowne Valley Park - It may prove difficult to access. HDD under Canal/Luas.	Offroad sections along the canal may be difficult to access. The existing circuit is parallel to 75% of this section.	There is high utility congestion along this section. This section crosses the Grand Canal, Luas Line & River Camac - Bespoke trench design may be required for crossing Grand Canal and Luas lines.	This section passes Bluebell park and playground, Bernard Curtis Park, Bluebell Community Cente & Lansdowne Valley Park. Section passes no emergency services.	This section runs in Grand Canal pNHA. This section crosses the Grand Canal and River Camac.
A-AU	2.25	Goldenbridge Walk, Millview Cottages	This section is 80% adjacent to canal on roads, 20% adjacent canal on towpath.	80% of this section is adjacent to Canal on road/path. The existing circuit is parallel to 75% of this section.	There is moderate utility congestion along this section. There are two major junctions at this section.	This section is 100% off road - Working area constrained next to Grand Canal. This section passes by Goldenbridge Cemetery. Section passes no emergency services.	This section is adjacent to Grand Canal pNHA and Inland bird feeding site at Good Counsel GAA club.
A-B	1.46	Bluebell Road	This section is 100% on public road/ canal. Grand Canal may prove difficult to access. HDD under Canal.	Offroad sections along the canal may be difficult to access. This section is completely offline.	There is a mix of high and low utility congestion along this section. There is one major junction crossing, one crossing of the Luas line and one crossing bridge on this section - Bespoke trench design may be required for one bridge crossing and crossing Luas lines.	This section passes high density of shops at Kylemore Rd. This section passes no emergency services.	This section is adjacent to Grand Canal pNHA and Inland bird feeding site at Good Counsel GAA club. This section crosses the Grand Canal and River Camac.
AB-AC	0.08	Lansdown Bridge (New Bridge)	This section crosses under DART tracks and crosses a bridge. Future access would be difficult.	This section is a mix of wide single carriageway and HDD crossing of the New bridge.	There is high utility congestion along this section. There is one bridge	This section passes one SMR buffer. This sections passes Aviva Stadium;	There are mature trees adjacent to the road along 10% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				The existing circuit is parallel to 75% of this section.	crossing River Dodder on this section - Bespoke trench design may be required for one bridge crossing River Dodder.	Lansdowne Football Club. This section passes no emergency services.	This section crosses the River Dodder.
AC-AD	0.61	Herbert Road, Tritonville Road	There is a medium flood risk along 70% of this section.	100% of this section is wide single carriageway. The existing circuit is parallel to 50% of this section.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes Lansdowne College. This section passes no emergency services.	15% of section has medium risk of river flooding. There are mature trees adjacent to the road along 50% of this section.
AC-AD2	0.30	Newbridge Road	There is a low risk of coastal flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There is one major junctions at this section.	This section passes one SMR buffer. This sections passes Sandymount Community Centre. This section passes no emergency services.	There are mature trees adjacent to 50% of this section. There is a low risk of river flooding and coastal flooding along 100% of this section. This section is adjacent to River Dodder.
AD-AG	0.20	Tritonville Road	No technical issues on this section.	100% of this section is wide single carriageway. The existing circuit is parallel to 10% of section and it crosses in one location.	There is a moderate utility congestion along this section. There is no major junctions at this section.	This section passes two SMR buffer. This sections passes Sandymount Community Centre. This section passes Garda Station.	There are mature trees adjacent to 50% of this section.
AD-S	0.49	Sandymount Road	There is low risk of coastal flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There is one major junctions at this section.	This section passes Sandymount Road Medical Centre. This section passes no emergency services.	This section passes approximately 250m away from Inland bird feeding site at Irishtown/Sean Moore Park. This section runs on public roads. There are some mature trees along roads.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
							There is a low risk of river flooding and coastal flooding along 100% of this section.
AE-AA	0.43	Shelbourne Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a high utility congestion along this section. There is one major junctions at this section.	This section passes Lansdowne Lodge Pre-School Montessori. This section passes no emergency services.	There is a medium risk of river flooding along 80% of this section.
AE-AF	0.34	Bath Avenue	This section passes under DART overbridge. It may restrict future crossing. There is a medium risk of river flooding along 100% of this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	There are mature trees adjacent to 25% of this section. There is a medium risk of river flooding along 100% of this section.
AF-AB	0.61	Havelock Square	This section is 65% on public road and 35% on private land (Aviva Statium) There is a low risk of coastal flooding along 100% of this section.	100% of this section is wide single carriageway. The existing circuit is parallel to 10% of section and it crosses in one location.	There is a low utility congestion along this section. There is no major junctions at this section.	This section passes one SMR buffer. This sections passes Aviva Stadium; Lansdowne Football Club. This section passes no emergency services.	There is a low risk of river flooding along 100% of this section.
AF-AG	0.48	Bath Avenue	This section crosses bridge or HDD. It may restrict future crossing. There is a medium risk of river flooding along 50% of this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is no major junctions at this section.	This section passes two SMR buffer. This sections passes Lansdowne LTC Bridge Club; St marys knanaya church Dublin. This section passes Garda Station.	There is a medium risk of river flooding along 40% of this section. This section crosses the River Dodder.
AG-AH	0.11	Church Avenue	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section.	This section passes two SMR buffer. This sections passes St. Matthew's Church of	There is a medium risk of river flooding along 20% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There is one major junctions at this section.	Ireland, Irishtown - Church; St marys knanaya church dublin. This section passes Garda Station.	
AH-BV	0.88	Sean Moore Road, South Bank Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a mix of low and high utility congestion along this section. There are two major junctions at this section.	This sections passes Sean Moore Park; Clanna Gael Fontenoy GAA Club. This section passes no emergency services.	This section passes approximately 90m away from Inland bird feeding site at Sean Moore Park and 130m away from Irishtown Stadium. 95% of this section runs adjacent to public parks.
AI-AK	0.42	Crumlin Road	No technical issues on this section.	This section is a 3-lane single carriage way. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This sections passes Loreto Senior Primary, Dolphin Park, Templeogue Synge Street GAA grounds. This section passes no emergency services.	This section passes approximately 50m away from Inland bird feeding site at Dolphin Park, Templeogue Synge Street GAA grounds. This section is adjacent to Grand Canal pNHA. There is a medium risk of river flooding along 90% of this section.
AI-E	0.48	Sundrive Road	There is a low risk of river flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This sections passes Loreto College, Clogher Road Sports Centre. This section passes no emergency services.	There is a medium risk of river flooding along 100% of this section.
AJ-AI	0.42	Dolphin Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes Garda Station.	This section passes approximately 200m away from Inland bird feeding site at Good Counsel GAA club and 130m away from Dolphin Rd Park. This section is adjacent to

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
							Grand Canal pNHA. There are mature trees adjacent to 10% of this section. There is a medium risk of river flooding along 100% of this section.
AJ-AK	0.39	Dolphin Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is one major junctions at this section.	No socio-economic issues on this section.	This section passes approximately 120m away from Inland bird feeding site at Dolphin Park Templeogue Synge Street GAA grounds and 150m away from Dolphin Rd Park. This section is adjacent to Grand Canal pNHA. 100% of this section runs adjacent to Grand Canal.
AK-AL	0.66	Parnell Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is one major junctions at this section.	This sections passes HSE immunisation center Medical Center, Dolphin's Barn Library Public library. This section passes Fire Station.	This section passes approximately 120m away from Inland bird feeding site at Dolphin Park Templeogue Synge Street GAA grounds. This section is adjacent to Grand Canal pNHA. 100% of this section runs adjacent to Grand Canal.
AK-AX	0.03	Camac Bridge, Dolphin's Barn	This section is 100% on bridge crossing or HDD. Future access would be difficult.	This section is a 3-lane single carriage way. The existing circuit crosses this section.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This section passes Fire Station and blue light corridor for Coombe Women's Hospital.	This section is adjacent to Grand Canal pNHA. 100% of this section runs adjacent to Grand Canal.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
AL-AM	0.57	Parnell Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is one major junctions at this section.	This section passes Irish Kennel Club. This section passes no emergency services.	This section is adjacent to Grand Canal pNHA. 100% of this section runs adjacent to Grand Canal.
AM-X	0.76	Grove Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	No socio-economic issues on this section.	This section is adjacent to Grand Canal pNHA. 100% of this section runs adjacent to Grand Canal.
AN-AO	0.62	Jamestown Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	No significant environmental issues identified on this section.
AN-BR	3.68	Jamestown Road, Tyrconnell Road.	This section is 100% on public road. (10% on 3 lane road). Bridge crossing over railway will restrict access on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes Inchicore Medical Centre; CCH - West Block Government college; St. Gabriel's Primary School, Markievicz Park; Good Counsel Liffey Gaels GAA & Camogie Club; Irish National War Memorial Park. This section passes no emergency services.	There are mature trees adjacent to the road along 20% of this section. 35% of this section runs adjacent to public parks.
AO-AP	0.67	Tyrconnell Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This section passes Inchicore Community Creche and Afterschool; Scoil Mhuire gan Smál, Oblate Church of Mary Immaculate. This section passes no emergency services.	There are mature trees adjacent to the road along 70% of this section.
AP-AQ	0.93	Emmet Road	No technical issues on this section.	This section is a 3-lane single carriage way.	There is a low utility congestion along this	This section passes one SMR buffer.	There is a mix of medium

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				This section is completely offline.	section. There are no major junctions at this section.	This section passes Inchicore College of Further Education, Richmond Park; St. Michael's Church, Inchicore; Turvey Park. This section passes no emergency services.	and high risk of river flooding along 10%, 5% respectively on this section.
AP-BR	0.55	Grattan Crescent	This section is 100% on public road. Bridge crossing over railway will restrict access on this section.	This section is a mix of wide single carriageway and 3-lane single carriage way. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes Inchicore National School; CCH - West Block Government college, Grattan Crescent Park; Richmond Park Stadium. This section passes no emergency services.	There are mature trees adjacent to the road along 35% of this section.
AQ-AR	0.32	Old Kilmainham	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes two SMR buffer. This section passes no emergency services.	There is a medium risk of river flooding along 5% of this section.
AR-AV	0.53	Brookfiel Road	Narrow, steep road & bridge crossing could restrict future expansion on this section.	100% of this section is wide single carriageway. The existing circuit is parallel to 50% of section and it crosses in one location.	There is a mix of low and high utility congestion along this section. There are no major junctions at this section.	This section passes one Hospital.	5% of this section runs adjacent to Grand Canal.
AR-BA	1.49	Mount Brown, James' St.	This section is 15% parallel and crosses under Luas tracks. Access could be difficult.	This section is a mix of wide single carriageway and 3-lane single carriage way. This section is completely offline.	There is a high utility congestion along this section. There is one major junctions at this section.	This section passes major concentration of buffers, one DCC ACA and Pearse Lyons Whiskey Distillery. This section passes two Hospitals.	There are mature trees adjacent to the road along 25% of this section.
AS-AJ	1.87	Davitt Road, Dolphin road	No technical issues on this section.	100% of this section is wide single carriageway.	There is a high utility congestion along this	This section passes Good Counsel Liffey Gaels GAA	This section runs adjacent

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				Majority of route is parallel to the existing circuit.	section. There are two major junctions at this section.	& Camogie Club - Sports club; Dolphin Rd Outdoor Public Gym - Athletic park. This section passes National Ambulance Service.	to the Inland bird feeding site at Good Counsel GAA club and Dolphin Rd Park. This section runs adjacent to the Grand Canal.
AS-AT	0.40	Kilworth Road	No technical issues on this section.	100% of this section is wide single carriageway. The existing circuit is parallel to 10% of section and it crosses in one location.	There is a low utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	No significant environmental issues identified on this section.
AT-AI	2.10	Cooley Road, Crumlin road	This section is 100% on public roads.	100% of this section is wide single carriageway. The existing circuit is parallel to 10% of section and it crosses in one location.	There is a mix of low and high utility congestion along this section. There is no major junctions at this section.	This section passes Crumlin Hospital, Crumlin College of Further Education. This section passes one Hospital and one Garda Station.	There is a medium risk of river flooding along 3% of this section.
AU-AJ	0.69	Dolphin Road	20% of this section crosses bridge or HDD - Future access would be difficult.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is no major junctions at this section.	This section passes Dolphin Rd Outdoor Public Gym - Athletic park; Good Counsel Liffey Gaels GAA & Camogie Club - Sports club. This section passes no emergency services.	This section runs adjacent to Grand Canal pNHA, Inland bird feeding site at Good Counsel GAA club and Dolphin Rd Park. This section crosses/ runs adjacent to the Grand Canal.
AU-AV	0.66	Luas Red Line, Mount Shannon Rd (Rear Laneway)	50% of this section is adjacent to canal and Luas tracks. Narrow track / path access would be difficult.	Offroad sections along this section may have limited work space. Majority of route is parallel to the existing circuit.	There is a moderate utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	80% of this section runs along the Grand Canal. This section crosses the Rialto Luas Line.
AV-AW	0.65	South Circular Road	No technical issues on this section.	100% of this section is wide single carriageway.	There is a high utility congestion along this section.	This section passes Rialto Primary Care Centre; St. Andrew's Community Centre, Rialto Parish	No significant environmental issues identified on this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				Majority of route is parallel to the existing circuit.	There are no major junctions at this section.	Roman Catholic Church. This section passes no emergency services.	
AV-AX	0.71	Herberton Road,Grand Canal	50% of this section is next to Grand Canal on pathway. It may constrain future expansion along the canal.	This section is narrow, however space in green area can be found. The existing circuit is 25% parallel to this section.	There is a mix of low and moderate utility congestion along this section. There is one major junctions at this section.	This section passes Grand Canal Walkway and Fire Station.	This section passes approximately 160m away from Inland bird feeding site at Dolphin Park Templeogue Synge Street GAA grounds. This section runs in Grand Canal pNHA. 60% of this section is adjacent to the Grand Canal.
AW-AY	0.54	Dolphin's Barn Street	No technical issues on this section.	This section is a 3-lane single carriage way. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes one SMR buffer and one Hospital.	No significant environmental issues identified on this section.
AW-AZ	1.17	South Circular Road	No technical issues on this section.	This section is a 3-lane single carriage way. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There is one major junctions at this section.	This section passes Dublin International Foundation College; Griffith College, Our Lady Of Dolours Church; Griffith College Library; The National Stadium; Dublin Mosque; St.Catherine & St.James' Church of Ireland. Section passes no emergency services	There are mature trees adjacent to the road along 20% of this section.
AX-AW	0.18	Dolphin's Barn	No technical issues on this section.	This section is a 3-lane single carriage way. This section is completely offline.	There is a low utility congestion along this section.	This section passes Blue light corridor for Coombe Women's Hospital.	This section is adjacent to the Grand Canal pNHA.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There is one major junctions at this section.		
AX-BT	1.21	Grand Canal	100% of this section is next to Royal Canal. Narrow banks in places. It may constrain future expansion along the canal.	100% of section offroad and may be difficult to access. 90% of section off road Working area constrained along Grand Canal and by HDD under bridge crossings. The existing circuit crosses this section.	There is a moderate utility congestion along this section. There are no major junctions at this section.	This section passes The National Stadium. Section passes no emergency services.	This section passes approximately 150m away from Inland bird feeding site at Dolphin Park Templeogue Synge Street GAA grounds. This section runs in Grand Canal pNHA. 100% of this section is adjacent to the Grand Canal.
AY-BA	0.89	Marrowbone Lane, Thomas Court	There are sections of this route where the space is significantly limited. This may restrict future access	90% of this section is wide single carriageway. 10% of the section consists of narrow road space. This section is completely offline.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes major concentration of buffers, one DCC ACA, Liffey College Language school; Dublin City Council - Water & Sanitary Division, St. Catherine's Park; St Catherine's Community Sports Centre. This section passes no emergency services.	No significant environmental issues identified on this section.
AY-BC	0.98	Cork Street	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes ten SMR buffers, St Brigid's Catholic Primary School, Weaver Park. Section passes no emergency services.	There is a medium risk of river flooding along 50% of this section.
AZ-BC	0.80	Clanbrassil St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are two major junctions at this section.	This section passes eight SMR buffers, St Brigid's Catholic Primary School, Weaver Park. Section passes no emergency services.	There are mature trees adjacent to the road along 15% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
AZ-BE	0.69	South Circular Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a mix of low and high utility congestion along this section. There is one major junctions at this section.	This section passes South Circular Road GP Clinic, Bulgarian School Dublin, St. Kevin's Church. Section passes no emergency services.	There are mature trees adjacent to the road along 30% of this section.
B1-B2	2.33	Cromwellsfort Rd., Kimmage Road W.,	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are two major junctions at this section.	This section passes Ashleaf Shopping Centre Kimmage Medical Centre, Ben Dunne Gym Carlisle. Section passes no emergency services.	There is a medium risk of river flooding along 50% of this section.
B2-B3	2.51	Ternure Road E., Highfield Road	There is low risk of river flooding along 10% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are three major junctions at this section.	This section passes eight SMR buffers, Harvey Nursing Home Terenure, Presentation Primary School, Saint Josephs Church. This section passes one emergency service - Terenure Garda Station.	No significant environmental issues identified on this section.
B3-B4	1.49	Dartry Road, Milltown Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes two SMR buffers, Alexandra College Junior School, Darty Park Waterfall, Shanagarry Park. Section passes no emergency services.	There is a medium risk of river flooding along 50% of this section. This section crosses Major waterbodies; adjacent to waterbodies.
B4-B5	1.71	Milltown Road, Eglinton Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a high utility congestion along this section. There are two major junctions at this section.	This section passes two SMR buffers, Alexandra College Dublin, Shanagarry Park, Old Alex Hockey Club, Milltown Park. Section passes no emergency services.	There is a medium risk of river flooding along 50% of this section. This section crosses Major waterbodies; adjacent to waterbodies.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
B5-B6	1.14	Ailesbury Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There are two major junctions at this section.	This section passes one SMR buffers, Polish Embassy - Residence, Lithuanian Embassy, Embassy of the People's Republic of China, Church of the Sacred Heart Section passes no emergency services.	No significant environmental issues identified on this section.
B6-B7	1.24	Ailesbury Road, Sydney Parade Ave., Strand Road	This section crosses DART line. It may restrict future access	100% of this section is wide single carriageway. This existing circuit is parallel to 25% this section.	There is a high utility congestion along this section. There is one major junctions at this section.	This section passes one SMR buffers, 'Embassy of Spain Embassy of Pakistan, Sandymount Strand Beach. Section passes no emergency services.	There is a high risk of river flooding along 100% of this section. This section runs adjacent to the Dublin Bay.
B7-U	0.85	Strand Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes through / adjacent Sandymount Village (AA15). Section passes no emergency services.	There is a low risk of river flooding along 90% of this section. This section is parallel to the Dublin Bay.
BA-BB	0.64	Thomas St., High St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There are three major junctions at this section.	This section passes major concentration of buffers, one no. DCC ACA, National College of Art and Design College, Trinity Business School, John's Lane Church; Vicar Street, St. Audoen's Church. Section passes no emergency services.	There are mature trees adjacent to the road along 5% of this section.
B-B1	0.92	Walkinstown Avenue,	No technical issues on this section.	100% of this section is wide single carriageway.	There is a mix of low and high utility congestion along this section.	This section passes Walkinstown Avenue Park.	No significant environmental issues identified on this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				This section is completely offline.	There are two major junctions at this section.	Section passes no emergency services.	
BB-BC	0.45	Patrick Street	No technical issues on this section.	100% of this section is dual carriageway. This section is completely offline.	There is a low utility congestion along this section. There are two major junctions at this section.	This section passes major concentration of buffers, one no. DCC ACA, St Patrick's Cathedral; St. Patrick's Park. Section passes no emergency services.	15% of this section is next to public parks.
BB-BN	2.22	Christchurch Place, Lord Edward St., Dame Street, Cillege Green, Pearse St.	15% of this section is parallel and crosses under Luas tracks & Railway overbridge. Access could be difficult. There is a medium risk of coastal flooding along 10% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low, moderate and high utility congestion along this section. There are nine major junctions at this section.	This section passes major concentration of buffers, three no. DCC ACA, one UNESCO hertiage site, Temple Bar, The Lir Academy Drama school; Trinity College; City Hall; Irish Houses of Parliament, Christ Church Cathedral; St. Mark's Church; Pearse Square Park. This section passes Garda Station and one no. Fire Brigade HQ.	There is a medium risk of river flooding along 15% of this section.
BB-BO	2.33	Winetavern St., Wood Quay to Sir John Rogerson's Quay, Macken St.	This section crosses under Luas tracks & Railway overbridge.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes major concentration of buffers, one no. DCC ACA, one UNESCO hertiage site, Dublin City Council - Chief Valuers Department; high concentration of shops, resturants and medical centres, Church of the Immaculate Conception; Christ Church Cathedral; Elizabeth O'Farrell Park; River Liffey.	This section runs adjacent to NPWS Coastal Habitats. 70% of this section has medium risk of river flooding and 80% of section has medium risk of coastal flooding. 80% of this section runs adjacent to the River Liffey.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
						Section passes no emergency services.	
B-C	3.14	Long Mile Road, Kildare Road	This section is 100% on public road. This section crosses under Luas tracks. It may restrict future access.	100% of this section is wide single carriageway. The existing circuit is 40% parallel to this section.	There is a mix of low and high utility congestion along this section. There is one major junctions at this section.	This section passes Assumption Junior National School Walkinstown; Drimnagh Castle Secondary School, Centrul Misionar Crestin Ortodox Roman Church; Willian Pearse Park. This section passes one Hospital.	There is a medium risk of river flooding along 3% of this section. There are mature trees adjacent to the road along 15% of this section.
BC-BD	0.50	Kevin Street	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This passes ten no. SMR buffers, Marsh's Library; Kevin Street Library. This section passes Garda Station.	No significant environmental issues identified on this section.
BD-BE	0.57	Camden St., Wexford St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This passes four no. SMR buffers, high concentration of shops and resturants. Section passes no emergency services.	No significant environmental issues identified on this section.
BD-BI	0.57	Cuffe Street, St. Stephen's Green	This section crosses under Luas tracks. It may restrict future access.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This passes eight no. SMR buffers, MoLI – Museum of Literature Ireland, St. Stephen's Green. Section passes no emergency services.	There are mature trees adjacent to the road along 30% of this section. 70% of this section is next to public park.
BE-BF	0.27	Richmond St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This section passes Atlas Language School. Section passes no emergency services.	No significant environmental issues identified on this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
BE-BH	0.76	Adelaide Road, Hatch Street Lwr.	15% of this section is parallel and crosses under Luas track. Access could be difficult.	100% of this section is wide single carriageway. The existing circuit is 90% parallel to this section.	There is a mix of low and moderate utility congestion along this section. There are two major junctions at this section.	This sections passes Adelaide Road Presbyterian Church. Section passes no emergency services.	There are mature trees adjacent to the road along 25% of this section.
BF-BG	0.80	Charlemont Mall, Claremont Place	No technical issues on this section.	Offroad sections along this section may be inaccessible for normal construction vehicles. The existing circuit is 100% parallel to this section.	There is a mix of moderate and high utility congestion along this section. There are no major junctions at this section.	This sections passes Ouroboros Theatre Ireland. Section passes no emergency services.	This section runs in Grand Canal pNHA. 100% of this section runs adjacent to the Grand Canal.
BG-BH	0.29	Leeson Street	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a high utility congestion along this section. There are two major junctions at this section.	This sections passes three Hospitals.	No significant environmental issues identified on this section.
BG-BL	0.55	Wilton Tce.	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes Embassy of Canada to Ireland, Wilton Park. Section passes no emergency services.	This section runs in Grand Canal pNHA. 100% of this section runs adjacent to the Grand Canal.
BH-BJ	0.45	Pembroke Street	No technical issues on this section.	100% of this section is wide single carriageway. The existing circuit is 25% parallel to this section.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes Fitzwilliam Square DCC ACA, Embassy of Greece in Dublin; Embassy of Peru in Ireland, Fitzwilliam Square. Section passes no emergency services.	There are mature trees adjacent to the road along 20% of this section.
BI-BH	0.27	Leeson Street	No technical issues on this section.	100% of this section is wide single carriageway.	There is a low utility congestion along this	This section passes one no. SMR buffers, The Institute of Education,	No significant environmental issues

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				This section is completely offline.	section. There is one major junctions at this section.	Catholic University School, Department of Transport. Section passes no emergency services.	identified on this section.
BI-BJ	0.59	St. Stephen's Green Merrion row, Baggot St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are two major junctions at this section.	This section passes one no. SMR buffers, Loreto College; Department Of Justice; Australian Embassy Ireland, St. Stephen's Green; Huguenot Cemetery. Section passes no emergency services.	40% of this section is next to public park.
BJ-BK	0.17	Baggot Street Lower	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	90% of this section is next to public park.
BK-BL	0.38	Baggot Street Lower	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes Catherine McAuley National School. Section passes no emergency services.	No significant environmental issues identified on this section.
BK-BM	0.80	Fitzwilliam St., Merrion Sq. Mount St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes The National University of Ireland, Irish Architectural Archive, Merrion Square Park. Section passes one no. Hospital.	15% of this section is next to public park.
BL-BM	0.50	Herbert Place, Warrington Place	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a mix of moderate and high utility congestion along this section.	No socio-economic issues on this section.	This section runs in Grand Canal pNHA. There is a medium risk of river flooding along 15% of

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There are no major junctions at this section.		this section. 100% of this section runs adjacent to the Grand Canal.
BL-Z	0.05	McCartney Bridge	100% of this section crosses bridge or HDD. It may restrict future access.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	This section runs in Grand Canal pNHA. 100% of this section runs adjacent to the Grand Canal.
BM-AE	0.48	Clanwilliam Place, Grand Canal St.	10% of this section crosses bridge or HDD. It may restrict future access.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This section passes Grand Canal Plaza. Section passes no emergency services.	This section runs in Grand Canal pNHA. There are mature trees adjacent to the road along 20% of this section.
BN-AH	1.55	Ringsend Road, Irishtown Road	10% of this section crosses 2 bridges or HDD. It may restrict future access.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes two no. SMR buffers, Irishtown & Ringsend Primary Care Centre; Irishtown Gospel Hall & Chapel of Ease, Grand Canal Dock; Shelbourne Park Greyhound Stadium. Section passes no emergency services.	This section passes approximately 90m away from Inland bird feeding site at Shelbourne Park Greyhound Stadium and 100m away from Ringsend Park. This section runs in Grand Canal pNHA. There is a medium risk of river flooding along 10% of this section. This section crosses the Grand Canal and the River Dodder.
BO-BN	0.44	Sir John rogerson's Quay, Macken Street.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of moderate and high utility congestion along this section.	This section passes one no. SMR buffers, Safari Childcare Hanover Street - Preschool, Bord Gas Energy Theatre.	This section runs adjacent to NPWS Coastal Habitats. There is a high risk of

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There are two major junctions at this section.	Section passes no emergency services.	coastal flooding along 10% of this section. 15% of this section runs adjacent to the River Liffey.
BP-BO	0.15	Samuel Beckett Bridge	This section crosses bridge or HDD. It may restrict future access.	100% of section on swinging bridge, trenchless crossing needed. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes River Liffey. Section passes no emergency services.	This section runs adjacent to NPWS Coastal Habitats. 100% of this section runs adjacent to the River Liffey.
BQ-BP 1	5.37	Infimary Way, R101, Guild Street.	This section crosses Luas tracks at three different locations, Railway overbridge, Rolling lift bridge. There is a medium risk of coastal flooding along 10% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are ten major junctions at this section.	This section passes Phibsborough DC ACA and one no. SMR buffers, Technological University of Dublin, O'Connell Secondary School, Preschool & Afterschool Education and Support Programme, St Laurence O'Tooles National School, Phoenix Park, Saint Patricks Chess Club; St. Peter's Roman Catholic Church, Play Ground. Section passes two no. Garda Stations and one Hospital.	There are mature trees adjacent to the road along 50% of this section. 5% of this section runs adjacent to the Royal Canal.
BQ-BP 2	3.70	Parkgate Street, Wolfe Tone Quay to North Wall Quay	This section is 100% on public road. This section crosses Luas line, under railway and rolling lift bridge.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are seven major junctions at this section.	This section passes major concentration of buffers and two no. DCC ACA, Embassy of Poland; Dublin Civil Defence HQ; Four Courts; high concentration of resturants and shops, Croppies Memorial Park; Croppies Acre Memorial Park; EPIC The Irish Emigration Museum; Liberty Hall	This section runs adjacent to NPWS Coastal Habitats. 95% of this section runs adjacent to the River Liffey. 15% of section has medium risk of river flooding, 10% of section has high risk of river

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
						Theatre; River Liffey Section passes one no Dublin Civil Defence HQ.	flooding, 15% of section has high risk of coastal flooding.
BR-AQ	0.91	Chapelizod Bypass, South Circular Road.	This section is 100% on public road. Bridge crossing over railway could restrict future expansion on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There are two major junctions at this section.	This section passes one no. SMR buffers, Gaelscoil Inse Chór Elementary school, St. John of God Special School, Bully's Acre Cemetery. Section passes no emergency services.	60% of this section runs adjacent to public parks. This section crosses the River Camac.
BR-BQ	2.00	Chapelizod Bypass, Islandbridge, Conyngham Road	This section is 100% on public road. Bridge crossing or HDD could restrict future expansion on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and high utility congestion along this section. There are two major junctions at this section.	This section passes five no. SMR buffers, St. John of God Special School; Gaelscoil Inse Chór, Irish National War Memorial Park; Hurling Grounds; Phoenix Park. Section passes no emergency services.	95% of this section runs adjacent to public parks. There is a high risk of river flooding along 5% of this section.
BT-AZ	0.27	Clanbrassil St.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	No socio-economic issues on this section.	No significant environmental issues identified on this section.
BT-BF	0.75	Windsor Tce. Portobello Road.	15% of this section is parallel to Grand Canal. Narrow path adjacent to apartments could restrict future expansion on this section.	100% of section offroad and may be unaccessable for normal construction vehicles. The existing circuit is 100% parallel to this section.	There is a high utility congestion along this section. There is one major junctions at this section.	No socio-economic issues on this section.	This section runs in Grand Canal pNHA. This section runs adjacent to the Grand Canal.
BU-BS	1.45	South Bank Road	This section is 15% on private road and 85% on private land (DPC). Section could constrain	This section is narrow/ off road, crossing DPC land.	There is a high utility congestion along this section.	This section passes Irishtown Nature Park, Dublin.	This section runs adjacent to South Dublin Bay pNHA, South Dublin Bay SAC,

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
			future circuits in/out of Poolbeg substation.	Majority of route is parallel to the existing circuit.	There are no major junctions at this section.	Section passes no emergency services.	South Dublin Bay SPA, NPWS Coastal Habitats. Inland bird feeding site at Irishtown Nature Reserve. 60% of this section runs adjacent to Nature Reserve. 60% of this section runs adjacent to Dublin Bay.
BV-BS	1.55	Pigeon House Road	There is a high risk of coastal flooding along 25% of this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a mix of low and high utility congestion along this section. There are no major junctions at this section.	This section passes one no. SMR buffers, parking for Shelley Banks Beach and Great South Wall. Section passes no emergency services.	This section runs adjacent to NPWS Coastal Habitats. There is a high risk of coastal flooding along 25% of this section. This section is 25% adjacent to WTP water body.
BV-BU	0.20	South Bank Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	No socio-economic issues on this section.	No significant environmental issues identified on this section.
C-D	0.55	Sundrive Road	There is a medium risk of river flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of moderate and high utility congestion along this section. There are no major junctions at this section.	This section passes Sundrive Medical Centre, Eamonn Ceannt Park. Section passes no emergency services.	35% of section has medium risk of river flooding and 45% of section has high risk of river flooding.
D-F	0.92	Clareville Park	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section.	This section passes Harold's Cross National School, Harolds Cross Medical Practice.	No significant environmental issues identified on this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There are no major junctions at this section.	Section passes no emergency services.	
D-G	0.95	Kimmage Road Lwr.	There is a high risk of river flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There is one major junctions at this section.	This section passes Mount Argus Park; Harold's Cross Park. Section passes no emergency services.	There is a high risk of river flooding along 90% of this section.
E-AL	1.08	Clogher Road	There is a medium risk of river flooding along 40% of this section.	100% of this section is wide single carriageway. The existing circuit is 65% parallel to this section.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes one no. SMR buffers, Pearse college, Clogher Road Sports Centre; St. Bernadette's Church; Dolphin's Barn Jewish Cemetery; Transport Club Social club. Section passes no emergency services.	This section passes approximately 130m away from Inland bird feeding site at Dolphin Park, Templeogue Synge Street GAA grounds. This section runs in Grand Canal pNHA. There is a medium risk of river flooding along 45% of this section.
E-C	0.26	Sundrive Road	There is a medium risk of river flooding along 80% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There are no major junctions at this section.	This section passes Eamonn Ceannt Park. Section passes no emergency services.	There is a medium risk of river flooding along 100% of this section.
F-H	0.88	Kenilwort Square	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes Rathgar Junior School, Kenilworth Square, Grosvenor Road Baptist Church. Section passes no emergency services.	There are mature trees adjacent to the road along 70% of this section.
F-M	3.48	Kenilworth Sq. Maxwell Road, Church Ave., Anna Villa, Marlborough Road.	This section crosses under Luas tracks. Access could be difficult.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low, moderate and high utility congestion along this section.	This section passes adjacent to 1 DCC ACA, KPS national school, Sandford Park School, Ukraine Community	There are mature trees adjacent to the road along 15% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There are no major junctions at this section.	Centre Rathmines, Rathgar Medical Practice, Kenilworth Square, Church of the Three Patrons, Holy Trinity Rathmines Section passes no emergency services.	
G-AM	0.76	Harold's Cross Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There are no major junctions at this section.	This section passes one no. SMR buffers, Harold's Cross Park. Section passes no emergency services.	50% of thiss ection runs adjacent to public park.
G-W	1.48	Leinster Road, Rathmines Road Lwr.	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes Rathmines College of Further Education, Rathmines Village Centre, Rathmines Library, Swan Leisure. Section passes no emergency services.	No significant environmental issues identified on this section.
H-I	0.15	Grosvenor Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes Rathmines Village Centre, The Stella Cinema. Section passes one no. Garda Station.	No significant environmental issues identified on this section.
I-J	0.84	Castlewood Avenue	This section crosses Luas overbridge. Access could be difficult.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes Belgrave Clinic; The Swan Shopping Centre, Motor School, Belgrave Square. Section passes no emergency services.	No significant environmental issues identified on this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
J-K	0.71	Chelmsford Road, Appian Way	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes adjacent to 2 DCC ACA, Ranelagh Village Centre, Fitzwilliam Lawn Tennis Club. Section passes no emergency services.	There are mature trees adjacent to the road along 35% of this section.
K-L	0.38	Morehampton Road, Wellington Place	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes Embassy of Portugal, Morehampton Road Wildlife Sanctuary. Section passes no emergency services.	There are mature trees adjacent to the road along 50% of this section.
L-M	0.31	Pembroke Park	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes St. Conleth's College. Section passes no emergency services.	There are mature trees adjacent to the road along 15% of this section.
L-P	1.09	Clyde Road, Elgin Road, Ballbridge	This section crosses bridge or HDD. It may restrict future access. There is a medium risk of river flooding along 60% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes one no. SMR buffers, St. Conleth's College; Embassy of Algeria in Dublin; Embassy of the Arab Republic of Egypt; Embassy of Slovenia; Embassy of the United States of America; The Embassy Primary School, Herbert Park, RDS Section passes no emergency services.	There are mature trees adjacent to the road along 50% of this section.
M-N	0.41	Herbert Park	This section is 30% on public roads and 70% on public park. Access may be difficult.	Offroad sections however readily accessable. This section is completely offline.	There is a low utility congestion along this section.	This section passes Hebert Park; Belmont FC; Ballsbridge FC. Section passes no emergency services.	There are mature trees adjacent to the road along 20% of this section. 80% of this section passes through public parks.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There is one major junctions at this section.		
N-O	0.26	Merrion Cricket Club	80% of this section is on private lands. HDD crossing River Dodder on this section. It may restrict future access.	100% of section off road in Herbert Park. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes one no. SMR buffers, Hebert Park, Merrion Cricket Club. Section passes no emergency services.	There is a medium risk of river flooding along 100% of this section. 30% of this section passes through public parks/ 70% passes through private Cricket grounds. This section crosses the River Dodder.
O-Q	0.54	Simmonscourt Road	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low and moderate utility congestion along this section. There are no major junctions at this section.	This section passes Blackrock Educate Together Secondary School, Merrion Cricket Club; RDS Main Arena; St. Mary's Church of Ireland; Poor Clare Monastery. Section passes no emergency services.	There are mature trees adjacent to the road along 60% of this section. There is a medium risk of river flooding along 5% of this section.
P-R	1.02	Serpentine Ave., Claremont Road	This section crosses under DART tracks. It may restrict future access. There is a medium risk of river flooding along 60% of this section.	100% of this section is wide single carriageway. The existing circuit is 50% parallel to this section.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes through Sandymount Village (DCC ACA), Sandymount Village Centre, YMCA Sports Ground; Pembroke Wanderers Hockey Club. Section passes no emergency services.	This section passes approximately 130m away from Inland bird feeding site at YMCA Sports Ground. There are mature trees adjacent to the road along 25% of this section. There is a medium risk of river flooding along 50% of this section.
Q-P	0.24	Merrion Road	There is a medium risk of river flooding along 100% of this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a high utility congestion along this section.	This section passes RDS. Section passes no emergency services.	There is a medium risk of river flooding along 50% of this section and a low risk of river flooding along 100% of it.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
					There are no major junctions at this section.		
Q-R	0.93	Sandtmount Avenue	This section crosses under DART tracks. It may restrict future access.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of moderate and high utility congestion along this section. There are no major junctions at this section.	This section passes one no. ACA; Sandymount Village, Sandymount School, YMCA Sports Ground; Sandymount Green. Section passes no emergency services.	This section passes approximately 50m away from Inland bird feeding site at YMCA Sports Ground.
R-T	0.29	Seafort Avenue, Dromard Tce.	There is a medium risk of coastal flooding along 15% of this section.	100% of this section is wide single carriageway. The existing circuit is 25% parallel to this section.	There is a moderate utility congestion along this section. There are no major junctions at this section.	This section passes through Sandymount Village (DCC ACA), Sandymount Village Centre; Shelleybanks Educate together School. Section passes no emergency services.	There is a medium risk of coastal flooding along 10% of this section.
S-R	0.17	Sandymount Road	There is a medium risk of coastal flooding along 25% of this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes one no. DCC ACA, Sandymount Green. Section passes no emergency services.	There is a medium risk of coastal flooding along 25% of this section.
S-T	0.21	Marine Drive	There is a low risk of coastal flooding along 100% of this section.	Sections less than 6m wide. The existing circuit is 100% parallel to this section.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes one no. DCC ACA, Sandymount Green. Section passes no emergency services.	There is a medium risk of coastal flooding and river flooding along 100% of this section.
T-U	0.06	Marine Drive	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes through Sandymount Village (DCC ACA). Section passes no emergency services.	There is a medium risk of coastal flooding along 100% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
U-V	0.39	Sean Moore Park	There is a high risk of coastal flooding along 45% of this section.	95% of this section is off road with restricted access. 5% of section narrow road. Majority of route is parallel to the existing circuit.	There is a mix of low and high utility congestion along this section. There are no major junctions at this section.	This section passes one no. SMR buffers, Irishtown Nature Reserve, Sean Moore Park, Sandymount Beach. Section passes no emergency services.	This section passes through inland bird feeding sites DCC Brent Field Ringsend and Irishtown/Sean Moore Park; and adjacent to South Dublin Bay pHNA, SPA and SAC. Area is reclaimed land which was used for C&D waste disposal in the past. There is a medium risk of coastal flooding along 45% of this section. This section is 55% parallel to Dublin Bay.
V-BS	1.68	Irishtown Nature Reserve, Pigeon House Road	This section is 80% on nature walkways and 20% on private lands (DPC). Access may be difficult. There is a medium risk of coastal flooding along 25% of this section.	100% of section offroad and may be unaccessable for normal construction vehicles. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes Irishtown Nature Park, Dublin. Section passes no emergency services.	This section is adjacent to South Dublin Bay pNHA, South Dublin Bay SAC, South Dublin Bay SPA, NPWS Coastal Habitats. Inland bird feeding site at Irishtown Nature Reserve. There is a medium risk of coastal flooding along 25% of this section. This section is parallel to Dublin Bay.
V-BU	0.19	South Bank Road	This section is 75% on private road and 25% on pedestrian path. Access may be difficult. There is a high risk of coastal flooding along 100% of this section.	100% of this section is narrow and off road. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are no major junctions at this section.	This section passes Pembroke cove. Section passes no emergency services.	80% of this section is adjacent to public parks. There is a medium risk of coastal flooding along 100% of this section.

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
W-J	0.83	Richmond Hill, Mount Pleasent Sq., Ranelagh Road	This section crosses under Luas overbridge. Access may be difficult.	100% of this section is wide single carriageway. This section is completely offline.	There is a mix of low, moderate and high utility congestion along this section. There are no major junctions at this section.	This section passes adjacent to 1 DCC ACA, Ranelagh Village Centre, St. Mary's Community Centre; Mount Pleasant L.T.C. Section passes no emergency services.	No significant environmental issues identified on this section.
W-X	0.32	Rathmines Road Lower	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There are no major junctions at this section.	This section passes St. Mary's College - School; St. Mary's College Rathmines Junior School - School, Church Of Mary Immaculate Refuge of Sinners. Section passes no emergency services.	No significant environmental issues identified on this section.
X-Y	0.80	Canal Road, Grand Parade	This section crosses under Luas overbridge. Access may be difficult.	100% of this section is wide single carriageway. This section is completely offline.	There is a moderate utility congestion along this section. There are three major junctions at this section.	This section passes adjacent to 1 DCC ACA. Section passes no emergency services.	This section runs in Grand Canal pNHA. 100% of this section is adjacent to the Grand Canal.
Y-K	0.56	Leeson Street Upper	No technical issues on this section.	100% of this section is wide single carriageway. This section is completely offline.	There is a low utility congestion along this section. There is one major junctions at this section.	This section passes Romanian Orthodox Church; Section passes one no. Ambulance Station.	There are mature trees adjacent to the road along 60% of this section.
Y-Z	0.56	Mespil Road	No technical issues on this section.	100% of this section is wide single carriageway. Majority of route is parallel to the existing circuit.	There is a high utility congestion along this section. There are two major junctions at this section.	No socio-economic issues on this section.	This section runs in Grand Canal pNHA. 100% of this section is adjacent to the Grand Canal.
Z-AA	1.01	Baggot Street, Pembroke Road	No technical issues on this section.	100% of this section is wide single carriageway.	There is a mix of low and	This section passes one no. SMR buffers, Embassy	There are mature trees adjacent to the road along

Section	Section Length (Km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental
				The existing circuit is 100% parallel to this section.	high utility congestion along this section. There is one major junctions at this section.	of the United Arab Emirates; Workplace Relations Commission Section passes no emergency services.	65% of this section. There is a medium risk of river flooding along 10% of this section.
Z-AE	0.79	Haddington Road	No technical issues on this section.	100% of this section is wide single carriageway. The existing circuit is 50% parallel to this section.	There is a moderate utility congestion along this section. There are two major junctions at this section.	This section passes one no. St. Christopher's Primary School; Embassy of Sudan; St Mary's Catholic Church, Haddington Road; The Square, Beggars Bush. Section passes no emergency services.	This section runs in Grand Canal pNHA. There are mature trees adjacent to the road along 80% of this section.

4.2 Section MCA Output Summary

Using the methodology outlined in Chapter 2, the results for each section are outlined in Table 4-2.

Table 4-2: Summary results of multi-criteria assessment

Section	Technical	Deliverability	Economic	Socio-Economic	Environmental	Overall Rating
A-AN						
A-AO						
A-AS						
A-AT						
A-AU						
A-B						
AB-AC						
AC-AD						
AC-AD2						
AD-AG						
AD-S						
AE-AA						
AE-AF						
AF-AB						
AF-AG						
AG-AH						
AH-BV						
AI-AK						
AI-E						
AJ-AI						
AJ-AK						
AK-AL						
AK-AX						
AL-AM						
AM-X						
AN-AO						
AN-BR						
AO-AP						
AP-AQ						
AP-BR						
AQ-AR						
AR-AV						
AR-BA						
AS-AJ						
AS-AT						
AT-AI						
AU-AJ						
AU-AV						
AV-AW						
AV-AX						
AW-AY						

Section	Technical	Deliverability	Economic	Socio-Economic	Environmental	Overall Rating
AW-AZ						
AX-AW						
AX-BT						
AY-BA						
AY-BC						
AZ-BC						
AZ-BE						
B1-B2						
B2-B3						
B3-B4						
B4-B5						
B5-B6						
B6-B7						
B7-U						
BA-BB						
B-B1						
BB-BC						
BB-BN						
BB-BO						
B-C						
BC-BD						
BD-BE						
BD-BI						
BE-BF						
BE-BH						
BF-BG						
BG-BH						
BG-BL						
BH-BJ						
BI-BH						
BI-BJ						
BJ-BK						
BK-BL						
BK-BM						
BL-BM						
BL-Z						
BM-AE						
BN-AH						
BO-BN						
BP-BO						
BQ-BP 1						
BQ-BP 2						
BR-AQ						
BR-BQ						
BT-AZ						
BT-BF						

Section	Technical	Deliverability	Economic	Socio-Economic	Environmental	Overall Rating
BU-BS						
BV-BS						
BV-BU						
C-D						
D-F						
D-G						
E-AL						
E-C						
F-H						
F-M						
G-AM						
G-W						
H-I						
I-J						
J-K						
K-L						
L-M						
L-P						
M-N						
N-O						
O-Q						
P-R						
Q-P						
Q-R						
R-T						
S-R						
S-T						
T-U						
U-V						
V-BS						
V-BU						
W-J						
W-X						
X-Y						
Y-K						
Y-Z						
Z-AA						
Z-AE						

The results from the multi-criteria assessment were mapped showing the overall rating of each section. This map is shown in Figure 4-1.

Legend

- Nodes

Weighted Total as % of possible score

- 0 - 33%
- 33 - 41%
- 41 - 49%
- 49 - 57%
- 57 - 100%
- No Rating

0 0.125 0.25 0.5 Kilometers

Client

EirGrid
Powering Up Dublin

Dublin Cables Project

Title

CP1150 Inchicore to Poolbeg

Multi-Criteria Analysis Weighting

RPS
West Pier
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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3019

Status:	Rev:	Model File Identifier:
S0	P04	N/A
Drawn: NC		Date: 16/03/2023
Checked: IP		Scale: 1:15,000 @A1
Approved: DC		Projection: ITM

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5 ROUTE BUILDING

5.1 Multi Criteria Assessment Exceptions

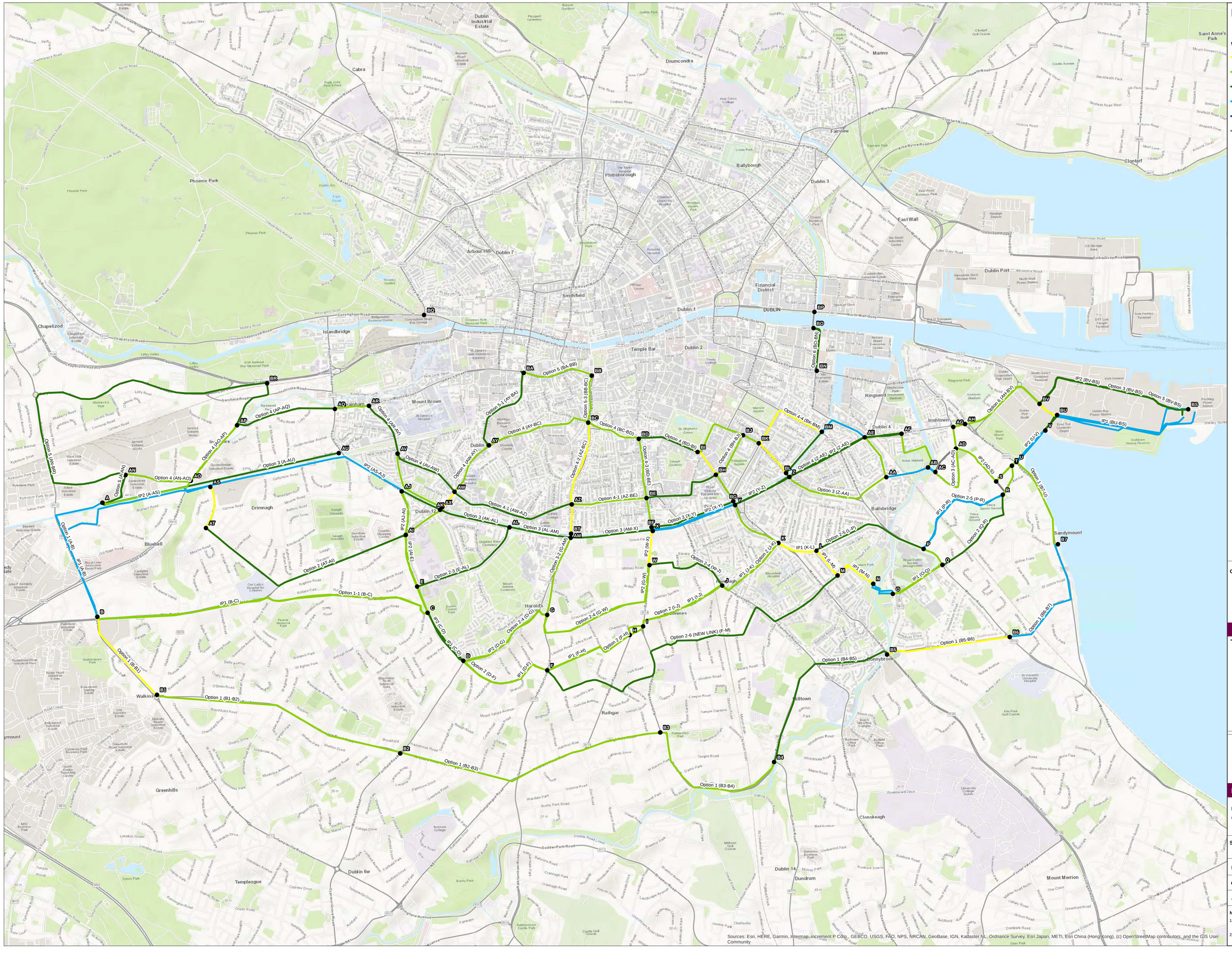
To create optimised route options that have the lowest overall risk factors, some sections were excluded from the route building exercise. In general, any section that was ranked light blue or dark blue overall, was excluded from further studies.

The overall summary output of the Multicriteria Assessment averages the ranking for each criterion, which are themselves averages of the sub criteria. Because of how many sub criteria and criteria there are, there might be an instance where a section may not be deemed feasible due to one factor, but if the other criteria rank well, the overall rank might be low risk. For example, the section might not be feasible from a deliverability perspective, but due to low environmental and technical risks, the overall ranking is low. In these cases, judgement is exercised, and the section will be removed from further consideration despite the low overall risk ranking, and vice versa in the case of high-ranking sections that are feasible options. The explanation for these exceptions are given below. The table below summarises whether sections will be included or excluded from future route building.

Table 5-1: Route sections included or excluded from route builder

Section	Overall Rating	Including/Excluding
A-AS		Including. Risk crossing Grand Canal and LUAS can be mitigated during detailed design.
A-AT		Excluding.
A-B		Including. Risk crossing Grand Canal and LUAS can be mitigated during detailed design.
AA-AB		Including. Risk crossing DART can be mitigated during detailed design. Works will be timed when there are no events on at Aviva Stadium.
AB-AC		Including. Risk crossing River Dodder can be mitigated during detailed design. Works will be timed when there are no events on at Aviva Stadium.
AF-AG		Excluding.
AK-AX		Excluding.
AR-BA		Excluding.
AS-AJ		Including. Risk running adjacent to Grand Canal can be mitigated during detailed design.
AU-AJ		Excluding.
AU-AV		Excluding.
AX-BT		Excluding.
B6-B7		Including. Highly rated due to DART crossing. Risk can be mitigated during detailed design.
BB-BN		Excluding.
BB-BO		Excluding.
BG-BL		Excluding.
BM-AE		Including. Risk crossing Grand Canal can be mitigated during detailed design.
BN-AH		Excluding.
BP-BO		Excluding.
BQ-BP 1		Excluding.
BQ-BP 2		Excluding.
BR-AQ		Excluding.
BR-BQ		Excluding.
BT-BF		Excluding.
BU-BS		Including. Viable option into Poolbeg Peninsula.
N-O		Including. Risk crossing River Dodder can be mitigated during detailed design.
P-R		Including. Highly rated due to DART crossing. Risk can be mitigated during detailed design.
U-V		Including. High rated due to environmental and deliverability running through the park. Risk can be mitigated during detailed design.
V-BS		Excluding.
X-Y		Including. Traffic management risk can be mitigated during detailed design.

A map of the study area excluding the sections listed above is shown in Figure 5-1.



Legend

- Nodes

Weighted Total as % of possible score

- 0 - 33%
- 33 - 41%
- 41 - 49%
- 49 - 57%
- 57 - 100%
- No Rating

0 0.125 0.25 0.5 Kilometers

Client

EirGrid
Powering Up Dublin

Dublin Cables Project

Title

CP1150 Inchicore to Poolbeg

Multi-Criteria Analysis Weighting

Progressed Sections

West Pier
Business Campus,
Dun Laoghaire,
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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3020

Status:	Rev:	Model File Identifier:
S0	P01	N/A
Drawn: NC		**Date:** 21/03/2023
Checked: IP		**Scale:** 1:15,000 @A1
Approved: DC		**Projection:** ITM

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5.2 Possible Route Options

From the route sections that have been progressed to this stage, four possible route options can be built.

These route options are discussed in Chapter 5.3 to 5.6.

5.3 Optimised Route Option 1 (Option J)

Optimised Route Option 1 is shown in Figure 5-2. The total length of this route is 15.7 km.

Optimised Route Option 1 leaves the Inchicore Substation and travels in a westerly direction along the Grand Canal towards Kylemore Road. It continues along the Kylemore Road, and crosses under the Luas Red Line at Naas Road, through the junction at the Long Mile Road, along Walkinstown avenue and through Walkinstown Roundabout. Here it heads east towards Terenure Village along Kimmage Road West and Ternure Road West (R818).

From Terenure it heads through Rathgar Village along Highfield Road and turns south into Dartry Road. It turns east again runs under the Luas Green Line at the Nine Arches bridge, through Milltown Village and onto Eglinton Road. At Donnybrook, it crosses the River Dodder at Anglesea Bridge, travels along Ailesbury Road, crosses the Merrion road and crosses under the DART lines at Sydney Parade to join Strand Road via Sydney Parade Avenue. The route then follows Strand Road (R131) to Sean Moore Park where it turns to the east, skirts the park's boundary, and follows the route of the shoreline toward the Poolbeg Substation.

Legend

- Inchicore to Poolbeg *Option J*

0 0.125 0.25 0.5 Kilometers

Client

EIRGRID

Dublin Cables Project

Title

Emerging Best Options

Inchicore to Poolbeg

Option J

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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3022

Status:	Rev:	Model File Identifier:
S0	P01	N/A

Drawn:	NC	**Date:**	28/03/2023
Checked:	IP	**Scale:**	1:15,281 @A1
Approved:	DC	**Projection:**	ITM

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5.3.1 Summary of Optimised Route Option 1 MCA Results

The overall risk rating of this optimised route was mid-level / moderate risk (dark green). The breakdown showing the section level rating is shown in Table 5-2.

Table 5-2: Multi-criteria assessment results of Optimised Route Option 1

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-B	1.46	Bluebell Road						
B-B1	0.92	Walkinstown Avenue,						
B1-B2	2.33	Cromwellsfort Rd., Kimmage Road W.,						
B2-B3	2.51	Ternure Road E., Highfield Road						
B3-B4	1.49	Dartry Road, Milltown Road						
B4-B5	1.71	Milltown Road, Eglinton Road						
B5-B6	1.14	Ailesbury Road						
B6-B7	1.24	Ailesbury Road, Sydney Parade Ave., Strand Road						
B7-U	0.85	Strand Road						
U-V	0.39	Sean Moore Park						
V-BU	0.19	South Bank Road						
BU-BS	1.45	South Bank Road						
Overall	15.7							

5.3.2 Outstanding Challenges of Optimised Route Option 1

There are several outstanding challenges on this route option that would need to be addressed with further investigation and design. They are as follows:

- Grand Canal crossing at Kylemore Road. It needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required.
- Luas Red Line crossing under the Naas Road. HD required.
- DART crossing at Sydney Parade. Space for HDD required.

5.4 Optimised Route Option 2 (Option L)

Optimised Route Option 2 is shown in Figure 5-3. The total length of this route is 13.5 km.

Optimised Route Option 2 exits the Inchicore Substation and heads east along the tow path on the north bank of the Grand Canal. Here it crosses the canal and Luas Red Line at Tyrconnell Road and turns right along Kilworth Road and Cooley Road. It turns northeast along the Crumlin Road and then south to follow the Sundrive Road. It continues through Larkfield Park, Clareville Road and Kenilworth Park before crossing the junction with Harolds Cross Road and entering Kenilworth Square North. It enters Rathmines Village via Grosvenor Road, takes a quick right east along Castlewood Avenue turns right and travels along Chelmsford Road and Appian Way. After a short section on Leeson Street Upper it travels along Wellington Place, turns into Pembroke Park and continues to Herbert Park.

The route enters Herbert Park at the southwest boundary and then crosses under the River Dodder before entering the grounds at Merrion Cricket Club. On exiting the cricket grounds, it follows Simmonscourt Road and Sandymount Avenue where it crosses under the DART line adjacent to Sandymount Station. From here it follows Sandymount Avenue, Gilford Road, Sandymount Green, Seafort Avenue, Dromard Terrace and Marine Drive. The route enters Sean Moore Park,skirts the park's boundary and travels in a northeast direction.It turns right onto Kilsaran South Bank Road before entering Murphy Ringsend P-FIX land. On exiting Murphy's land, it travels along Irishtown Nature Park and through Pigeon House road toward the Poolbeg Substation.

Optimised Route 2 – Variation 1 (route length: 13.8 km)

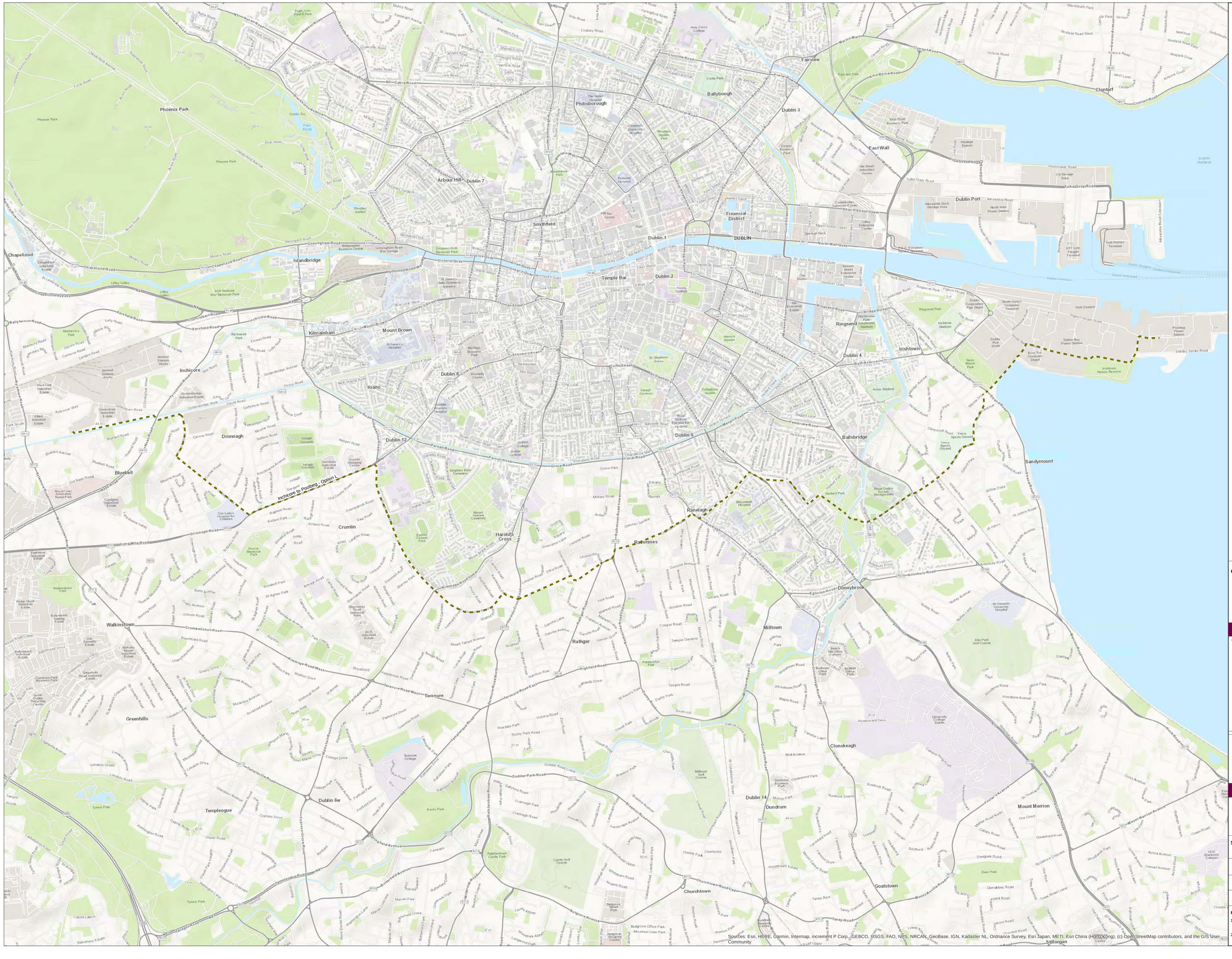
Optimised Route 2 Variation 1 exits the Inchicore Substation and heads east along the north bank of the Grand Canal. Here it crosses the canal and Luas Red Line at Tyrconnell road and turns right along Kilworth Road and Cooley Road. It turns northeast along the Crumlin Road and then south to follow the Sundrive Road. It continues through Larkfield Park, Clareville Road and Kenilworth Park before crossing the junction with Harolds Cross Road and entering Kenilworth Square South; Leicester Avenue; Frankfort Avenue and turns right along Maxwell Road. Here it turns left and travels along Rathmines Road Upper, takes a quick right east along Church Avenue and follows Belgrave Road and Dunville Avenue. It crosses under the Luas Green line before continuing east along Dunville Avenue and Beechwood Road. The route enters Anna Villa where it turns right along Sandford Road and takes a quick left at Marlborough Road and continues into Herbert Park.

The route crosses Herbert Park adjacent to the southwest boundary and then crosses under the River Dodder before entering the grounds at Merrion Cricket Club. On exiting the cricket grounds, it follows Simmonscourt Road and Sandymount Avenue where it crosses under the DART line adjacent to Sandymount Station. From here it follows Sandymount Avenue, Gilford Road, Sandymount Green, Seafort Avenue, Dromard Terrace and Marine Drive. The route enters Sean Moore Park, skirts the park's boundary and travels in a northeast direction. It turns right onto Kilsaran South Bank Road before entering Murphy Ringsend P-FIX land. On exiting the Murphy's land, it travels along Irishtown Nature Parkand through Pigeon House road toward the Poolbeg Substation.

Optimised Route 2 – Variation 2 (route length: 13.2 km)

Optimised Route 2 Variation 2 exits the Inchicore Substation and heads east along the north bank of the Grand Canal. Here it crosses the canal and Luas Red Line at Tyrconnell Road and turns right along Kilworth Road and Cooley Road. It turns northeast along the Crumlin Road and then south to follow the Sundrive Road. It continues through Larkfield Park, Clareville Road and Kenilworth Park before crossing the junction with Harolds Cross Road and entering Kenilworth Square North. It enters Rathmines Village through Grosvenor Road, takes a quick right east along Castlewood Avenue and Charleston Road. It crosses under the Luas Green Line before entering Ranelagh Village.

The route follows Chelmsford Road to Appian Way and turns right onto Leeson Street Upper. Here it continues east along Wellington Place, Clyde Road, Elgin Road and Merrion Road. It crosses the River Dodder at Ballsbridge, follows the Merrion Road and turns right into Serpentine Avenue. Here it crosses under the DART line and continues through Serpentine Avenue, Claremont Road, Dromard Terrace and Marine Drive. The route enters Sean Moore Park, skirts the park's boundary and travels in a northeast direction. It turns right onto Kilsaran South Bank Road before entering Murphy Ringsend P-FIX land. On exiting the Murphy's land, it travels along Irishtown Nature Parkand through Pigeon House road toward the Poolbeg Substation.



Legend

- Inchicore to Poolbeg *Option L*

0 0.125 0.25 0.5 Kilometers

Client

EIRGRID

Dublin Cables Project

Title

Emerging Best Options

Inchicore to Poolbeg

Option L

RPS

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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3024

Status:	Rev:	Model File Identifier:
S0	P01	N/A
Drawn: NC	**Date:**	28/03/2023
Checked: IP	**Scale:**	1:15,000 @A1
Approved: DC	**Projection:**	ITM

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5.4.1 Summary of Optimised Route Option 2 MCA Results

The overall risk ranking of this optimised route was low-moderate risk (light green). The breakdown showing the section level ranking is shown in Table 5-3.

Table 5-3: Multi-criteria assessment results of Optimised Route Option 2

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AS	1.06	Grand Canal, Davitt Road						
AS-AT	0.40	Kilworth Road						
AT-AI	2.10	Cooley Road, Crumlin road						
AI-E	0.48	Sundrive Road						
E-C	0.26	Sundrive Road						
C-D	0.55	Sundrive Road						
D-F	0.92	Clareville Park						
F-H	0.88	Kenilwort Square						
H-I	0.15	Grosvenor Road						
I-J	0.84	Castlewood Avenue						
J-K	0.71	Chelmsford Road, Appian Way						
K-L	0.38	Morehampton Road, Wellington Place						
L-M	0.31	Pembroke Park						
M-N	0.41	Herbert Park						
N-O	0.26	Merrion Cricket Club						
O-Q	0.54	Simmonscourt Road						
Q-R	0.93	Sandymount Avenue						
R-T	0.29	Seafort Avenue, Dromard Tce.						
T-U	0.06	Marine Drive						
U-V	0.39	Sean Moore Park						
V-BU	0.19	South Bank Road						
BU-BS	1.45	South Bank Road						
Overall	13.5							

The section level rating of Optimised Route 2 Variation 1 is shown in Table 5-4. The overall rating was mid-level / moderate risk (dark green).

Table 5-4: Multi-criteria assessment results of Optimised Route Option 2 Variation 1

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AS	1.06	Grand Canal, Davitt Road						
AS-AT	0.40	Kilworth Road						

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
AT-AI	2.10	Cooley Road, Crumlin road						
AI-E	0.48	Sundrive Road						
E-C	0.26	Sundrive Road						
C-D	0.55	Sundrive Road						
D-F	0.92	Clareville Park						
F-M	3.48	Kenilworth Sq. Maxwell Road, Church Ave., Anna Villa, Marlborough Road.						
M-N	0.41	Herbert Park						
N-O	0.26	Merrion Cricket Club						
O-Q	0.54	Simmonscourt Road						
Q-R	0.93	Sandymount Avenue						
R-T	0.29	Seafort Avenue, Dromard Tce.						
T-U	0.06	Marine Drive						
U-V	0.39	Sean Moore Park						
V-BU	0.19	South Bank Road						
BU-BS	1.45	South Bank Road						
Overall	13.8							

The section level rating of Optimised Route 2 Variation 2 is shown in Table 5-5. The overall rating was low-moderate risk (light green).

Table 5-5: Multi-criteria assessment results of Optimised Route Option 2 Variation 2

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AS	1.06	Grand Canal, Davitt Road						
AS-AT	0.40	Kilworth Road						
AT-AI	2.10	Cooley Road, Crumlin road						
AI-E	0.48	Sundrive Road						
E-C	0.26	Sundrive Road						
C-D	0.55	Sundrive Road						
D-F	0.92	Clareville Park						
F-H	0.88	Kenilwort Square						
H-I	0.15	Grosvenor Road						
I-J	0.84	Castlewood Avenue						
J-K	0.71	Chelmsford Road, Appian Way						
K-L	0.38	Morehampton Road, Wellington Place						
L-P	1.09	Clyde Road, Elgin Road, Ballbridge						

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
P-R	1.02	Serpentine Ave., Claremont Road						
R-T	0.29	Seafort Avenue, Dromard Tce.						
T-U	0.06	Marine Drive						
U-V	0.39	Sean Moore Park						
V-BU	0.19	South Bank Road						
BU-BS	1.45	South Bank Road						
Overall	13.2							

5.4.2 Outstanding Challenges of Optimised Route Option 2

There are several outstanding challenges on this route option that would need to be addressed with further investigation and design. They are as follows:

- Grand Canal crossing at Tyrconnell Road. Space required for HDD.
- Luas Red Line crossing at Tyrconnell Road. Space required for HDD. This could be done with the HDD for crossing the Grand Canal above.
- River Dodder crossing at Ballsbridge. HDD crossing likely.
- DART Crossing on Serpentine Avenue. Space required for HDD.

5.5 Optimised Route Option 3

Optimised Route Option 3 is shown in Figure 5-4. This route option is 11.5 km.

Optimised Route Option 3 exits the Inchicore Substation and heads east along the tow path on the north bank of the Grand Canal. Here it crosses the canal and Luas Red Line at Tyrconnell Road. It then follows Dolphin Road, Parnell Road, Grove Road, Grand Parade adjacent to the Grand Canal. At the junction with Baggot Street Upper, the route turns southeast onto Pembroke Road and Lansdowne Road.

On Lansdowne Road, the route crosses under the Dart line and passes the Aviva Stadium. The route crosses the River Dodder on New Bridge and continues along Herbert Road. From Herbert Road it turns north onto Tritonville Road and Church Avenue. The route crosses Bath Street and then follows Sean More Road before turning onto South Bank Road. The route turns onto Whitebank Road before following Pigeon House Road to the Poolbeg Sub-station.

Figure 5-4: Map of Optimised Route Option 3

5.5.1 Summary of Optimised Route Option 3 MCA Results

The overall risk raking of this optimised route was mid-level / moderate risk (dark green). The breakdown showing the section level rating is shown in Table 5-6.

Table 5-6: Multi-criteria assessment results of Optimised Route Option 3

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AS	1.06	Grand Canal, Davitt Road						
AS-AJ	1.87	Davitt Road, Dolphin Road						
AJ-AK	0.39	Dolphin Road						
AK-AL	0.66	Parnell Road						
AL-AM	0.57	Parnell Road						
AM-X	0.76	Grove Road						
X-Y	0.80	Canal Road, Grand Parade						
Y-Z	0.56	Mespil Road						
Z-AA	1.01	Baggot Street, Pembroke Road						
AA-AB	0.39	Lansdown Road						
AB-AC	0.08	Lansdown Bridge (New Bridge)						
AC-AD	0.61	Herbert Road, Tritonville Road						
AD-AG	0.20	Tritonville Road						
AG-AH	0.11	Church Avenue						
AH-BV	0.88	Sean Moore Road, South Bank Road						
BV-BS	1.55	Pigeon House Road						

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
Overall	11.8							

5.5.2 Outstanding Challenges of Optimised Route Option 3

There are several outstanding challenges on this route option that would need to be addressed with further investigation and design. They are as follows:

- LUAS Red line. Space required for HDD crossing.
- DART Crossing on Lansdowne Road. This is a level crossing, so space will be required for HDD or Microtunnel crossing.
- Aviva Stadium. This will have a large traffic impact if not carefully managed.
- River Dodder. It needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required.

5.6 Optimised Route Option 4 (Option K)

Optimised Route Option 4 is shown in Figure 5-5. This route option is 12.9 km.

Optimised Route Option 4 leaves the Inchicore Substation and heads east along Jamestown Road. At the junction with Tyrconnell Road, it heads north into the centre of Inchicore. Here it heads east again along Emmet Road and onto Old Kilmainham before turning into Brookfield Road and past St. James Hospital. The route then crosses under the Luas Red line at Rialto and travels along South Circular Road, Harrington Street and Harcourt Road where it crosses under the Luas Green line and continues along Adelaide Road.

The route turns north onto Earlsfort Terrace and then west onto Hatch Steet Lower, which becomes Pembroke Street Upper, where the route passes Fitzwilliam Square before joining Baggot Street Lower. It follows Baggot Street Lower and at the junction with Fitzwilliam Street Upper it turns right, joining Merrion Square East, passing Merrion Square Park and onto Mount Street Lower. The route turns east onto Clanwilliam Place, running alongside the Grand Canal. The route crosses the Grand Canal on Grand Canal Street Upper. The route follows this road south to the junction with Lansdowne Road, which it follows east. On this road it crosses under the Dart line and passes the Aviva Stadium. The route crosses the River Dodder on New Bridge and continues along Herbert Road. From Herbert Road it turns north onto Tritonville Road and Church Avenue. The route crosses Bath Street and then follows Sean More Road before turning onto South Bank Road. The route turns onto Whitebank Road before following Pigeon House Road to the Poolbeg Sub-station.

Optimised Route Option 4 – Variation 1 (route length: 13.1 km)

Optimised Route Option 4 Variation 1 leaves the Inchicore Substation and heads east along Jamestown Road. At the junction with Tyrconnell Road, it heads north into the centre of Inchicore. Here it heads east again along Emmet Road and onto Old Kilmainham before turning into Brookfield Road and past St. James Hospital. The route then crosses under the Luas Red line at Rialto and travels along South Circular Road through Rialto Village to Dolphin's Barn Street.

On Dolphin's Barn Street, the route turns north towards Cork Street and St. Luke's Avenue. At The Coombe it heads east along Kevin Street, Cuffe Street and onto St. Stephens's Green South where it then joins Pembroke Street Upper, where the route passes Fitzwilliam Square before joining Baggot Street Lower. It follows Baggot Street Lower and at the junction with Fitzwilliam Street Upper it turns right, joining Merrion Square East, passing Merrion Square Park and onto Mount Street Lower. The route turns east onto Clanwilliam Place, running alongside the Grand Canal. The route crosses the Grand Canal on Grand Canal Street Upper. The route follows this road south to the junction with Lansdowne Road, which it follows east. On this road it crosses under the Dart line and passes the Aviva Stadium. The route crosses the River Dodder on New Bridge and

continues along Herbert Road. From Herbert Road it turns north onto Tritonville Road and Church Avenue. The route crosses Bath Street and then follows Sean More Road before turning onto South Bank Road. The route turns onto Whitebank Road before following Pigeon House Road to the Poolbeg Sub-station.

Legend

- Inchicore to Poolbeg *Option K*

0 0.125 0.25 0.5 Kilometers

Client

EIRGRID

Dublin Cables Project

Title

Emerging Best Options

Inchicore to Poolbeg

Option K

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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3023

Status:	Rev:	Model File Identifier:
S0	P01	N/A
Drawn: NC		**Date:** 28/03/2023
Checked: IP		**Scale:** 1:15,000 @A1
Approved: DC		**Projection:** ITM

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5.6.1 Summary of Optimised Route Option 4 MCA Results

The overall risk rating of this optimised route was low moderate risk (light green). The breakdown showing the section level rating is shown in Table 5-7.

Table 5-7: Multi-criteria assessment results of Optimised Route Option 4

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AN	0.40	Inchicore depot						
AN-AO	0.62	Jamestown Road						
AO-AP	0.67	Tyrconnell Road						
AP-AQ	0.93	Emmet Road						
AQ-AR	0.32	Old Kilmainham						
AR-AV	0.53	Brookfiel Road						
AV-AW	0.65	South Circular Road						
AW-AZ	1.17	South Circular Road						
AZ-BE	0.69	South Circular Road						
BE-BH	0.76	Adelaide Road, Hatch Street Lwr.						
BH-BJ	0.45	Pembroke Street						
BJ-BK	0.17	Baggot Street Lower						
BK-BM	0.80	Fitzwilliam St., Merrion Sq. Mount St.						
BM-AE	0.48	Clanwilliam Place, Grand Canal St.						
AE-AA	0.43	Shelbourne Road						
AA-AB	0.39	Lansdown Road						
AB-AC	0.08	Lansdown Bridge (New Bridge)						
AC-AD	0.61	Herbert Road, Tritonville Road						
AD-AG	0.20	Tritonville Road						
AG-AH	0.11	Church Avenue						
AH-BV	0.88	Sean Moore Road, South Bank Road						
BV-BS	1.55	Pigeon House Road						
Overall	12.9							

The section level rating of Optimised Route 4 Variation 1 is shown in Table 5-8. The overall rating was low-moderate risk (light green).

Table 5-8: Multi-criteria assessment results of Optimised Route Option 4 Variation 1

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
A-AN	0.40	Inchicore depot						
AN-AO	0.62	Jamestown Road						

Section	Section Length (km)	Road Names	Technical	Deliverability	Economic	Socio-Economic	Environmental	Average
AO-AP	0.67	Tyrconnell Road						
AP-AQ	0.93	Emmet Road						
AQ-AR	0.32	Old Kilmainham						
AR-AV	0.53	Brookfiel Road						
AV-AW	0.65	South Circular Road						
AW-AY	0.54	Dolphin's Barn Street						
AY-BC	0.98	Cork Street						
BC-BD	0.50	Kevin Street						
BD-BI	0.57	Cuffe Street, St. Stephen's Green						
BI-BH	0.27	Leeson Street						
BH-BJ	0.45	Pembroke Street						
BJ-BK	0.17	Baggot Street Lower						
BK-BM	0.80	Fitzwilliam St., Merrion Sq. Mount St.						
BM-AE	0.48	Clanwilliam Place, Grand Canal St.						
AE-AA	0.43	Shelbourne Road						
AA-AB	0.39	Lansdown Road						
AB-AC	0.08	Lansdown Bridge (New Bridge)						
AC-AD	0.61	Herbert Road, Tritonville Road						
AD-AG	0.20	Tritonville Road						
AG-AH	0.11	Church Avenue						
AH-BV	0.88	Sean Moore Road, South Bank Road						
BV-BS	1.55	Pigeon House Road						
Overall	13.1							

5.6.2 Outstanding Challenges of Optimised Route Option 4

There are several outstanding challenges on this route option that would need to be addressed with further investigation and design. They are as follows:

- LUAS Red line. Space required for HDD crossing.
- LUAS Green Line. Space required for HDD crossing
- Grand Canal. It needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required.
- DART Crossing on Lansdowne Road. This is a level crossing, so space will be required for HDD or Microtunnel crossing.
- Aviva Stadium. This will have a large traffic impact if not carefully managed.
- River Dodder. It needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required.

6 EMERGING BEST PERFORMING ROUTES

The four optimised routes created after the multi-criteria assessment, and outlined in Chapter 5, were assessed to determine the Emerging Best Performing routes to progress to the Best Performing Option Report.

Optimised Route 1 will be progressed for further consideration, and from here will be referred to as ***Option J***. Option J has been selected due to the overall ranking of low-moderate risk. The higher risk ranking of mid-level/moderate in the Deliverability, Economic, Socio-Economic and Environmental criteria are being driven by the working time constraints, high utility congestion, number of crossings and it runs through in land bird feeding sites DCC Brent Field Ringsend and Irishtown/Sean Moore Park; and adjacent to South Dublin Bay pHNA, SPA and SAC. Nonetheless, this risk can be managed with careful planning and site investigation. The high working time constraint is due to large sections of the route having a high TIN number and may increase the working time for construction in these areas. Part of this risk can be mitigated by well-planned traffic management during Option J construction. Another factor driving the risk is the Grand Canal crossing at Kylemore Road, the Luas Red Line crossing under the Naas Road and the DART crossing at Sydney Parade. It needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required. This route could be constructed in compliance with EirGrid specifications and would have minimal expansion/extendibility issues.

Optimised Route 2 will be referred to as ***Option L***, also has an overall ranking of low-moderate risk. The higher risk ranking of mid-level/moderate in the Deliverability and Economic criteria are high utility congestion and number of crossings. The main pinch point of this route option is between the Inchicore substation and the Lansdowne Valley Park, with some areas of high utility congestion. With site investigations, this risk can be managed. The Grand Canal crossing at Tyrconnell Road, the Luas Red Line crossing at Tyrconnell Road, the River Dodder crossing at Ballsbridge, the DART crossing at Serpentina Avenue, it must be determined whether HDD or another trenchless crossing is required.

Optimised Route 4, will be referred to as ***Option K***, will also be progressed for further consideration. The Deliverability and Economic higher risk ranking of mid-level/moderate is being driven by utility congestion, material assets and outage impact. Space will be required for HDD or microtunnel crossing for The DART crossing at Lansdowne Road. The Grand Canal crossing needs to be determined if there is space in the bridge deck, or if HDD or another trenchless crossing would be required. The LUAS Red/ Green Line requires space for HDD crossing. This route could be constructed in compliance with EirGrid specifications and would have minimal expansion/extendibility issues.

Optimised Route Option 3 will not be progressed for further consideration at this time, due to the lower performance of this route on deliverability and economic criteria. Following the consultation phase this option may be revisited as if then becomes a more viable alternative.

The map on Page 54 shows Option J, Option K and Option L which are progressing for further assessment.

Legend

- Inchicore to Poolbeg *Option J*
- Inchicore to Poolbeg *Option K*
- Inchicore to Poolbeg *Option L*

0 0.125 0.25 0.5 Kilometers

Sources: Esri HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Client

EIRGRID

Dublin Cables Project

Title

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Issue Details

File Identifier:
CP1150-RPS-00-XX-DR-C-DG3021

Status:	Rev:	Model File Identifier:
S0	P02	N/A
Drawn: NC		**Date:** 27/03/2023
Checked: IP		**Scale:** 1:15,000 @A1
Approved: DC		**Projection:** ITM

NOTE:

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7 NEXT STEPS

This Route Options Assessment report will be published for public consultation. Any feedback received during the eight-week consultation will be considered in the project design moving forward. EirGrid are also engaging through a Business Forum and Community Forum. Both forums will meet twice during the public consultation and the feedback received at each forum will also influence design where possible.

In addition to the feedback received from the consultation activity, a campaign of non-invasive investigations (such as Ground Penetrating Radar) will be performed to identify areas of high utility congestion, as well as limited invasive site investigations (such as slit trenches and H trenches) to validate the desktop designs. This approach informs and underpins the ongoing design, and in doing so reduces the risk of unexpected issues encountered during the construction phase.

Feedback and investigations are expected to iterate the design which may include sections that have previously assessed but ranked sub optimally during the multi-criteria assessment. These alternative sections have been subjected to the same scrutiny as all other route sections in order to provide this flexibility and are expected to enable minimal deviation from the proposed route options.

The next publication for this project is the Best Performing Option. This report will contain the additional design and investigative work detailed above.