DUBLIN CITY CENTRE
TRANSPORT PLAN 2023

Technical Notes | Part 5: Cycling

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CYCLING

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1. INTRODUCTION

1.1. Context

The Dublin City Centre Transport Plan 2023 (the Plan) is an update of the 2016 City Centre Transport Study, as provided for in the Dublin City Development Plan (DCDP) 2022-2028[1]. It is intended to frame the implementation of the DCDP and the 2022-2042 National Transport Authority (NTA) Transport Strategy for the Greater Dublin Area (the Transport Strategy) in Dublin City Centre.

The Plan considers ways to optimise and enhance the transport network to meet the transport needs, challenges, and opportunities for the city centre. This is based on prevailing national, regional and local transport policy, most notably the Hierarchy of Road Users model set out in the National Sustainable Mobility Policy (NSMP), which places sustainable modes at the top. The emerging proposals have been developed with the sustainable growth of the city and its economy as a key aim, as well as its social, cultural and environmental wellbeing.

A suite of technical notes has been produced which informed the development of the Plan. This note should be read in conjunction with the other technical notes.

1.2. Purpose of This Technical Note

This technical note looks at the identification of a preferred primary cycling network, which will consist of linkages to key public buildings, shopping streets, public transport points, employment, education, and tourist and recreational attractions. This will form a coherent network based on the National Cycle Manual's Five Needs of Cyclists which will result in a safe, coherent network which will be accessible for all.

1.3. Technical Note Structure

Following this introductory section, the next sections of this technical note are organised as follows:

Section 2 outlines the Planning Context, where cycling-relevant extracts from Technical Note 1: Policy and Background Review are presented, alongside relevant information on the receiving environment for cycling in Dublin in 2030.

Section 3 outlines the receiving environment in 2030, including changes in land use and population, and transport infrastructure that are expected to be in place by 2030 or shortly after. These developments in the city will create challenges and opportunities for cyclists which are outlined as well. Together, Section 2 and Section 3 present the basis upon which the technical work is predicated.

Section 4 presents the principles of the Cycle Network Development. These form the basis on which the Methodology, Optioneering, and Preferred Network sections are developed in the following chapters.

Section 5 contains the Methodology used for the development of a Primary Cycle Network.

Section 6 outlines the Optioneering and Network Development process.

The conclusion of the exercise outlined in Section 6 is presented in the form of a Preferred Network in **Section 7**.

1.4. Plans for Cycle Networks in Dublin

In 2019, Dublin City's cycling mode share was placed at just 6% based on trips to the city centre in the morning, with this figure expected to more than double by 2028 to 13%. To plan ahead for the predicted increase in cyclist volumes in Dublin City, several policies, strategies, and initiatives have been put forward by various bodies to ensure a suitable primary network is in place to meet future demand targets and improve upon the current cycling facilities in Dublin City Centre, see Figure 1-1.

[1] Published by Dublin City Council (DCC) in 2022

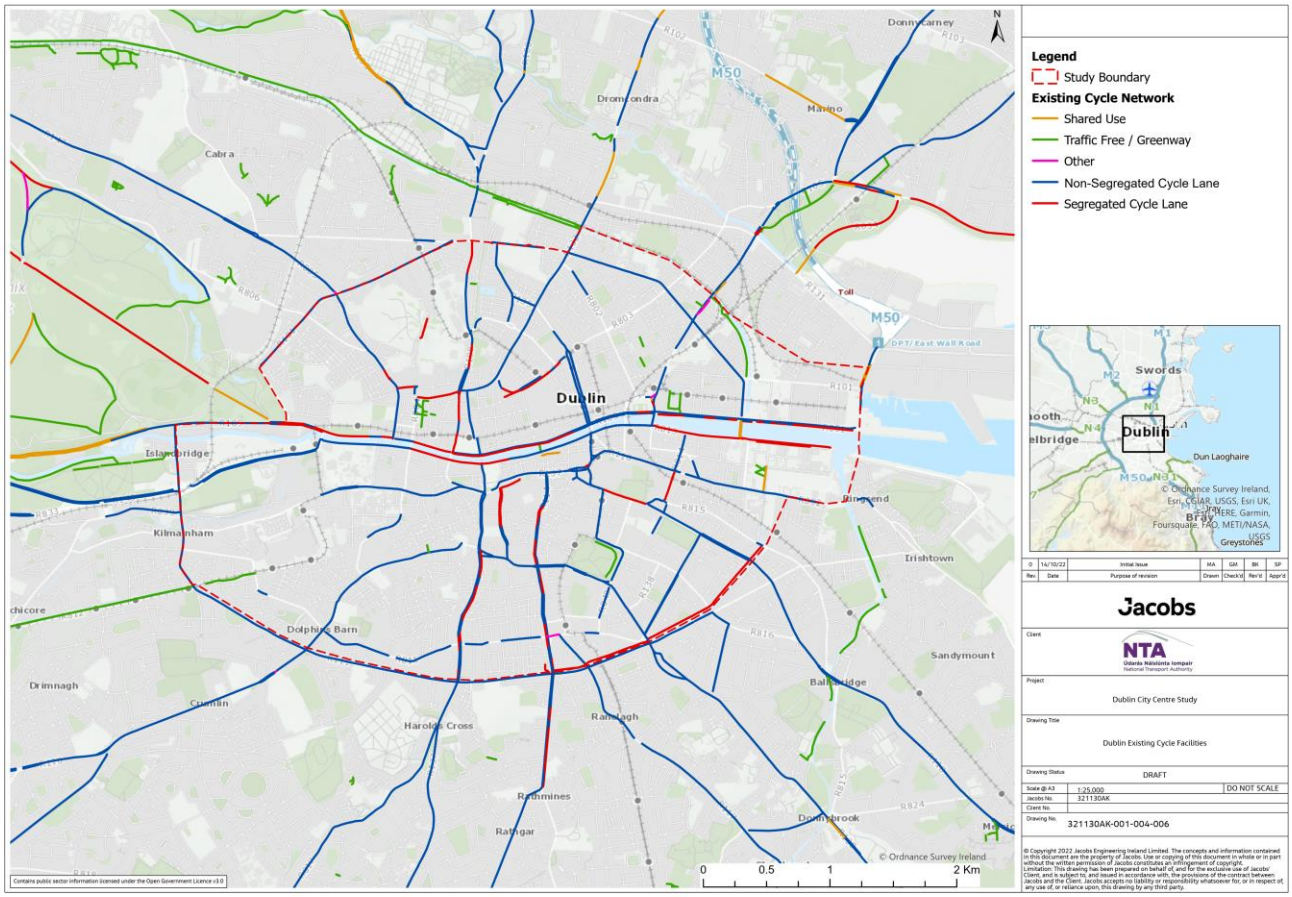

Figure 1-1: Dublin Existing Cycle Facilities[2]

Three proposed networks are of relevance to this Plan; these networks have been the result of significant previous background research and analysis and this Plan leverages this previous work to develop a preferred primary cycle network presented within this Plan. These proposed networks are:

- NTA City Centre Team Draft Network (see Figure 1-2);
- NTA 2022 Greater Dublin Area Cycle Network Plan[3] (see Figure 1-3);
- 2022 DCC Active Travel Network Delivery Program (mixed cycle and walking)[4] (see Figure 1-4).

The NTA 2022 Greater Dublin Area (GDA) Cycle Network Plan (Cycle Network Plan) is an update of the preceding 2013 Greater Dublin Area Cycle Network Plan. The Cycle Network Plan consists of an Urban Network, Inter-Urban Network and Green Route Network. Of relevance to this Plan is the Urban Network for Dublin City; in particular, it's primary cycle corridors.

The NTA City Centre Team Draft Network (NTA Cycle Network) forms an ideal primary network for Dublin City which sees a continuous and predominantly arterial network formed along most of Dublin's primary streets and roads. This idealised network was devised by the NTA as part of an exercise to inform the development of the preferred cycle network as part of this Plan.

[2] Note that 'Segregated Cycle Lanes' includes lanes with light segregation.

[3] Greater Dublin Area, Cycle Network Plan (GDA, 2022). URL: https://www.nationaltransport.ie/wp-content/uploads/2023/01/2022-GDA-Cycle-Network.pdf

[4] DCC Active Travel Network Delivery Program (DCC, 2022). URL: https://www.dublincity.ie/residential/transportation/active-travel/active-travel-network/active-travel-network-delivery-programme

The 2022 DCC Active Travel Network Delivery Program (DCC Active Travel Program) is an investment programme of cycle and walking schemes with an expected delivery timeframe, grouped into 2022 – 2024, 2025 – 2027, and Post-2027. This plan outlines the delivery plan for future active travel schemes within Dublin City.

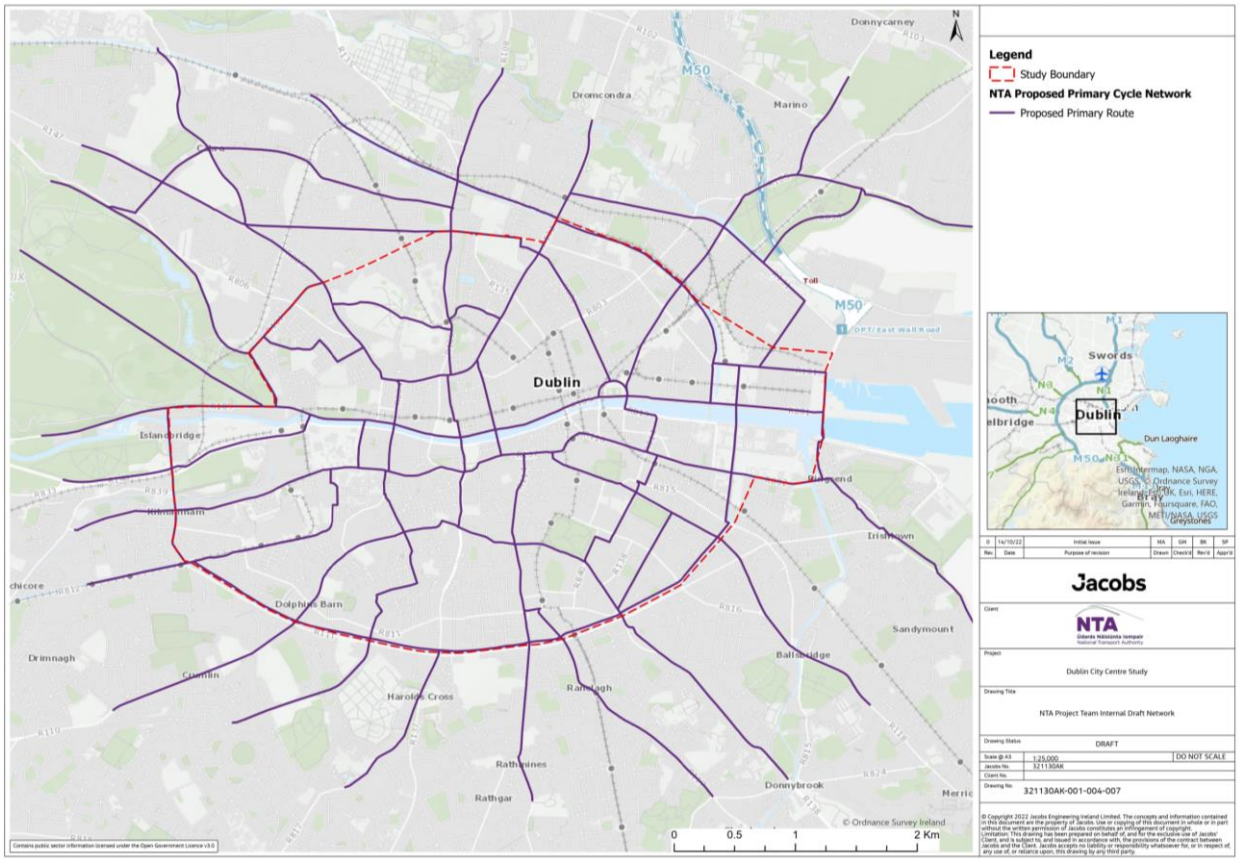

Figure 1-2: NTA City Centre Team Internal Draft Network

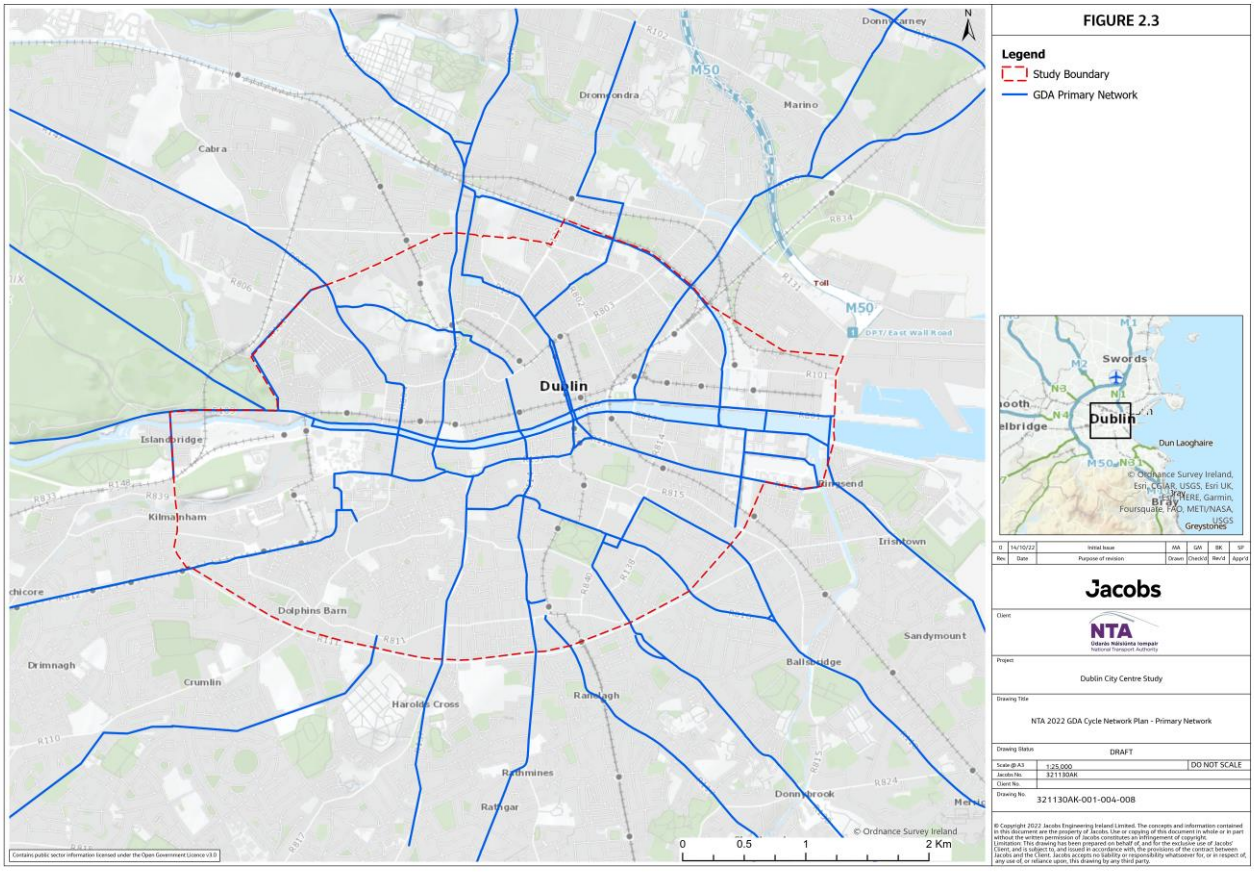

Figure 1-3: NTA 2022 GDA Cycle Network Plan – Primary Network

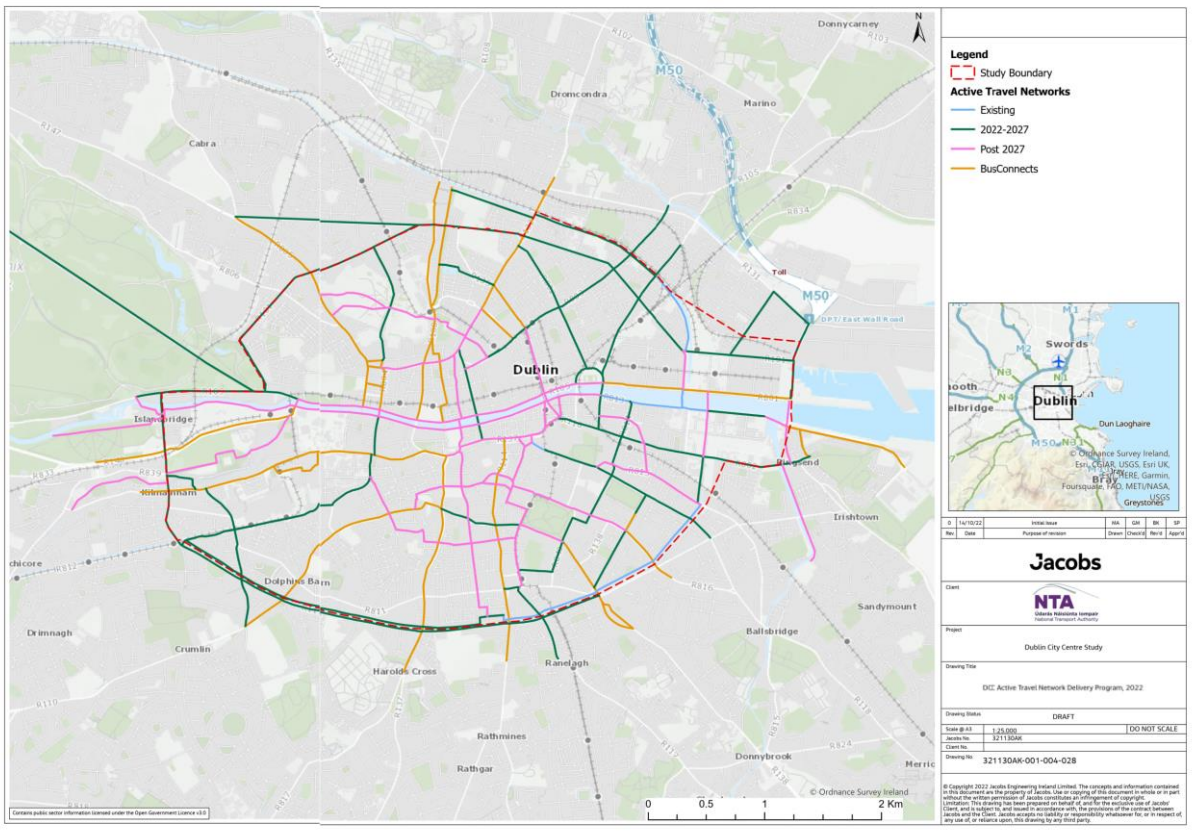

Figure 1-4: 2022 DCC Active Travel Network Delivery Program

2. POLICY AND PLANNING INFORMATION

A review of relevant policy and strategy documentation, and a review of upcoming, planned, and proposed projects within Dublin City which are likely to affect proposals laid out within the Plan, are outlined respectively in Technical Note 1: Policy and Background Review and in Technical Note 2: Development Trends Review.

Within this section are high level extracts from the DCDP and from the Transport Strategy relevant to this technical note.

2.1. Dublin City Development Plan 2022-2028

The DCDP governs spatial policy in the city; its main strategic approach is to develop a city that is low carbon, sustainable and climate resilient. The DCDP's vision is for a city where people will choose to live; work; experience city living; invest; and socialise.

Measures identified within the DCDP relevant to cycling in Dublin City Centre are taken from Chapter 7: The City Centre, Urban Villages and Retail, Chapter 8: Sustainable Movement and Transport, and Chapter 10: Green Infrastructure and Recreation.

2.1.1. Chapter 7 – The City Centre, Urban Villages and Retail

Chapter 7 of the DCDP details how the city centre and key urban villages, which are defined within the Chapter, offer the opportunity to provide people with vibrant areas to live, shop, eat, relax and work. It explores how active modes and public transport can be used to develop healthy and sustainable urban centres that offer more space and comfort for cyclists.

The objective within Chapter 7 of the DCDP relevant to this technical note is reproduced in Table 2-1.

Table 2-1 The City Centre, Urban Villages and Retail Objectives from the DCDP

It is the Objective of Dublin City Council	
CCUVO6	**Car Parks and Last Mile Delivery** To investigate the potential of the use of car parks in the city centre for micro hubs and distribution centres for 'last-mile' delivery as part of the preparation of a Servicing / Logistics Strategy for the city

2.1.2. Chapter 8 – Sustainable Movement and Transport

Chapter 8 of the DCDP emphasises the importance of transitioning to sustainable modes of transport to mitigate against the negative impacts of climate change by setting mode share targets that can be seen in SMTO1 in Table 2-2. This chapter of the DCDP proposes numerous approaches of achieving these targets, including reallocating some of the road available away from private vehicles and effective integration of land use and transportation.

The policies and objectives within Chapter 8 of the DCDP relevant to this technical note are reproduced in Table 2-2 and Table 2-3, respectively.

Table 2-2: Sustainable Movement and Transport Policies from the DCDP

It is the Policy of Dublin City Council:	
SMT1	**Modal Shift and Compact Growth** To continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as active mobility and public transport, and to work with the National Transport Authority (NTA), Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives to achieve compact growth.
SMT3	**Integrated Transport Network** To support and promote the sustainability principles set out in National and Regional documents to ensure the creation of an integrated transport network that services the needs of communities and businesses of Dublin City and the region.
SMT5	**Mobility Hubs** To support the development of mobility hubs at key public transport locations and local mobility hubs in tandem with new developments to include shared car and micro mobility initiatives, creating a vibrant, accessible and liveable place to support the transportation experience.
SMT13	**City Centre Road Space** To manage city centre road-space to best address the needs of pedestrians and cyclists, public transport, shared modes and the private car, in particular, where there are intersections between DART, LUAS and Metrolink and with the existing and proposed bus network.
SMT15	**Walking, Cycling and Active Travel** To prioritise the development of walking and cycling facilities and encourage a shift to active travel for people of all ages and abilities, in line with the city's mode share targets.
SMT26	**Repurposing of Multi-Storey Car Parks** To support the repurposing of multi-storey car parks for alternative uses such as central mobility hubs providing high density bike parking, shared mobility services, 'last mile' delivery hubs and recreational or cultural uses.
SMT32	**Traffic Calming and Self-Regulation Street Environments** To ensure that all streets and street networks are designed to passively calm traffic through the creation of a self-regulating street environment that are suited to all users, including pedestrians and cyclists.

Examples of other policies used to inform this technical note were SMT19: Walking and Cycling for School Trips and SM22: Shared Mobility and Adaptive Infrastructure.

Table 2-3: Sustainable Movement and Transport Objectives from the DCDP

It is the Objective of Dublin City Council:	
SMTO1	**Transition to More Sustainable Travel Modes** To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the Development Plan, in line with the city mode share targets of 26% walking/cycling/micro mobility; 57% public transport (bus/rail/LUAS); and 17% private (car/ van/HGV/motorcycle).
SMTO8	**Cycling Infrastructure and Routes** To improve existing cycleways and bicycle priority measures and cycle parking infrastructure throughout the city and villages, and to create protected cycle lanes, where feasible. Routes within the network will be planned in conjunction with green infrastructure objectives and the NTA's Cycle Network Plan for the Greater Dublin Area, and the National Cycle Manual, having regard to policies GI2, GI6 and GI8 and objectives GI02 and GIO16.

Examples of other objectives used to inform this technical note were SMTO10: Cycle Parking Spaces, SMTO13: River Liffey Boardwalk, SMTO17: Cross Guns Bridge, SMT027: Summerhill Pedestrian/Cycle Connection, SMTO28: Dominick Street Lower Pedestrian/Cycle Connection.

2.1.3. Chapter 10: Green Infrastructure and Recreation

Chapter 10 details the DCDP's approach to Green Infrastructure and Recreation; here the policies and objectives relating to active travel infrastructure are of importance to the Plan.

The DCDP envisages a proactive green infrastructure strategy and states that '*Landscape and park features contribute to the city's high quality environment and they are essential resources for conversing biodiversity and creating a healthy, low-carbon resilient and connected city*'.

The key relevant objective is given below in Table 2-4.

Table 2-4: Green Infrastructure and Recreation Objectives from the DCDP

It is the Objective of Dublin City Council:	
GIO6	**Metropolitan and Local Greenways** To support the development of the following metropolitan greenways and local cycleways / walkways: Royal Canal and the Grand Canal (including the inner Grand/Royal canal loop linking the two canals via the Phoenix Park). Rivers Liffey (Dublin Galway Euro route) and Dodder (to Dublin Mountains). Coastal corridor. Local routes and extension of existing routes including along the Rivers Tolka, Santry, Poddle, Camac and Mayne

2.2. Greater Dublin Area Transport Strategy 2022 - 2042

The Transport Strategy sets out a 20-year framework for investment in transport infrastructure and services. The strategy emphasises the need to align with wider national and regional policies, as well as spatial planning policy and strategy as Ireland undertakes a climate transition towards a low carbon and climate resilient society.

The Transport Strategy constitutes a variety of chapters relevant to this Plan: Chapter 11. Cycling and Personal Mobility Vehicles; Chapter 13. Roads; Chapter 15. Freight Delivery and Servicing – all of which will be summarised in this section.

2.2.1. Chapter 11 – Cycling and Personal Mobility Vehicles

Cycling levels in the GDA are currently at their highest levels in 30 years, and to enable continued growth, the Transport Strategy identifies the continued need for investment in high quality cycling infrastructure which will enable the goal of tripling cycle mode share in the GDA from 4% to 12%. As part of the Transport Strategy, the 2013 Greater Dublin Area Cycle Network Plan has been reviewed with the Cycle Network Plan designed for delivery throughout the lifetime of the Transport Strategy.

Along with the provision of high-quality cycling infrastructure, the provision of cycle parking is also outlined as a key necessity for an increasingly cycle centric city. It is envisaged that parking will be enabled through a mix of private and public parking at trip origins and destinations. Increased cycling mode share will also be enabled through the expansion of bike sharing schemes which are envisaged to cater for short distance urban trips. The Transport Strategy addresses the difficulties currently faced by long distance commuters who are restricted at peak hours from bringing bicycles onto trains in the GDA, with provision in all new carriages for bicycle storage.

Of relevance is the use of E-Bikes, Electric Scooters and other emerging personal mobility modes. While E-Bikes have established themselves in legislation and plans for future cycling measures, other modes are not currently legislated for and provide a wide variety of opportunities and challenges – leading to their continued monitoring by the NTA. Relevant measures outlined within the Transport Strategy are outlined below in Table 2-5.

Table 2-5: Transport Strategy Chapter 11 Relevant Measures

Transport Strategy Measures:	
CYC1	**GDA Cycle Network** It is the intention of the NTA and the local authorities to deliver a safe, comprehensive, attractive and legible cycle network in accordance with the updated Greater Dublin Area Cycle Network.
CYC2	**Cycle Infrastructure Design** It is the intention of the NTA to ensure that cycle infrastructure in the GDA provides an appropriate quality of service to all users, through the implementation of the design guidance contained in the latest version of the National Cycle Manual.

Examples of other measures used to inform this technical note were CYC5: Cycle Parking, CYC7: Bike Share Scheme Expansion, CYC8: Bike Share Scheme Electrification, and CYC10: Bikes on Public Transport.

2.2.2. Chapter 13 – Roads

The overarching aim of this chapter is the prioritisation of sustainable travel, with road schemes providing additional road capacity given lower priority compared to active and public transport modes. This sees measures recommended for the continued protection of strategic function of existing roads but limits the ability for further roads to be built – unless for safety, economy, sustainable travel or development needs. The relevant measure from this chapter is outlined in Table 2-6.

Table 2-6: Transport Strategy Chapter 13 Relevant Measures

Transport Strategy Measures:	
ROAD13	**Road space Reallocation** The local authorities and the NTA will implement a programme of road space reallocation from use by general traffic or as parking to exclusive use by sustainable modes as appropriate, as a means of achieving the following: • Providing sufficient capacity for sustainable modes; • Improving safety for pedestrians and cyclists; and • Encouraging mode shift from the private car and reducing emissions.

Chapter 15 – Freight, Delivery and Servicing

Due to the intensive transport requirements of the freight industry, challenges exist in relation to safety, congestion, and air and noise pollution. With national and Dublin growth levels predicted in the National Planning Framework (NPF)[5], there is likely to be an increased demand for delivery and freight activity in Dublin City Centre and the wider GDA. To combat the challenges associated with this, a low carbon transition must take place in the freight industry with low/no emission modes utilised such as EV's, trains, or bicycles etc. As with land use planning and the transport of people outlined in previous sections, it is also necessary to plan appropriate locations for freight intensive development in line with transport needs and provision. Relevant measures are outlined in Table 2-7.

Table 2-7: Transport Strategy Chapter 15 Relevant Measures

Transport Strategy Measures:	
FREIGHT1	**Environmental Measures for Freight** It is the intention of the NTA, in collaboration with other authorities, to: • Seek the reduction of the amount of 'last mile trips' being made by non-zero emission vehicles; • Facilitate the transition to zero-emission delivery vehicles including emerging technologies for HGV, Electric Light Goods Vehicles and cargo bikes; and • Support local 'Click and Collect' facilities where appropriate to minimise trips to individual homes and workplaces.

[5] National Planning Framework: https://www.npf.ie/

3. RECEIVING ENVIRONMENT

3.1. Cycle Network in Place in 2030

The plans that govern the development of the primary cycle network by 2030 are the Cycle Network Plan which develops the intended network, and the DCC Active Travel Program which outlines plans for the implementation of specific routes.

The Cycle Network Plan splits cycle networks into several corridor types shown in Figure 3-1 including Primary Orbital, Primary Radial, Secondary, Greenway and Feeder. Primary routes will have the highest target quality of service and should fit two cyclists abreast with additional width for overtaking. Primary routes are earmarked to carry the most cycle traffic in the city. Secondary and Feeder routes complement the Primary routes by serving as local links for cyclists to reach the Primary routes.

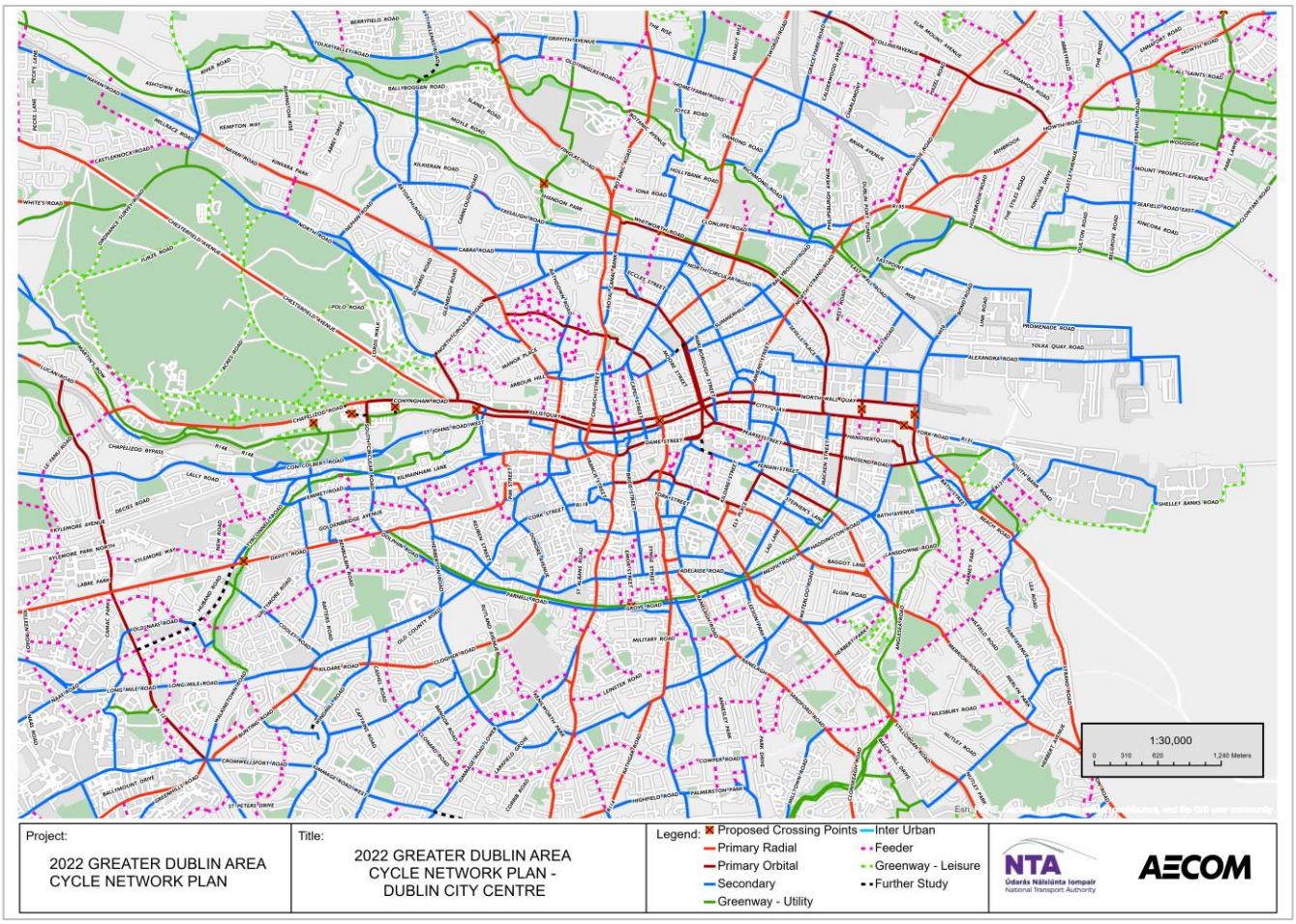

Figure 3-1: 2022 GDA Cycle Network Plan (NTA)

Figure 3-2 shows the network envisaged in the DCC Active Travel Program. As can be seen, it does not cater for the full implementation of the Cycle Network Plan, though it does carry over the main elements of it. To get a sense of the expected primary cycle network in Dublin in 2030, the DCC Active Travel Program and Cycle Network Plan can be compared to see overlapping routes and likely corridors for cycle infrastructure implementation before 2030, see Figure 3-3.

Also included are the BusConnects Core Bus Corridors (CBCs) which are expected to be completed by 2030 and will provide high quality cycle infrastructure on many of the arterial roads leading to/from Dublin City Centre.

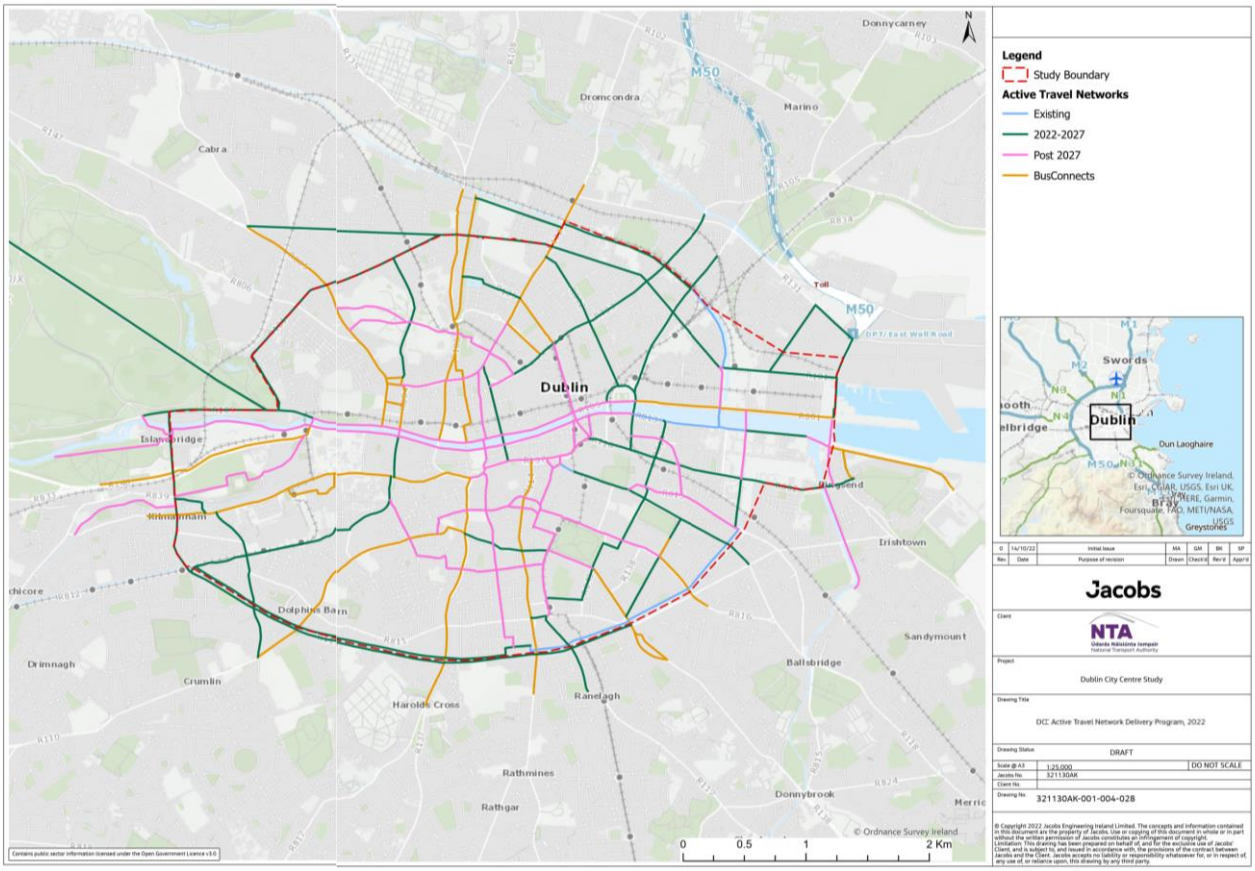

Figure 3-2 DCC Active Travel Network Delivery Program, 2022

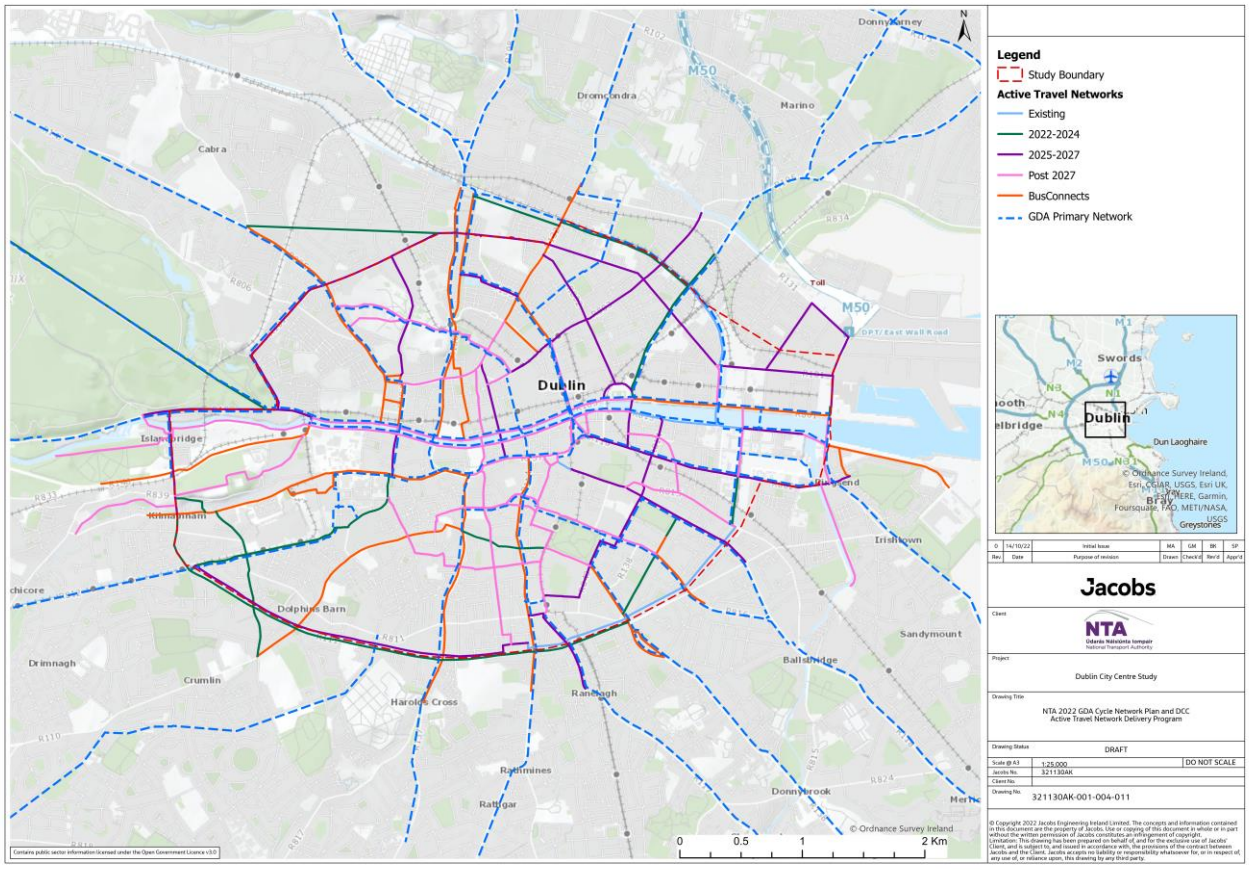

Figure 3-3: Overlay of 2022 GDA Cycle Network Plan, NTA and DCC Active Travel Network Delivery Program, 2022

3.2. Challenges and Opportunities

To meet Dublin's transport needs, it is important to understand the changing landscape of Dublin's transport modal share. Under sustainable transport targets from the DCDP, daily cycling trips into the study area are expected to more than double from ~13,000 trips in 2019 to ~31,000 trips by 2028, see Figure 3-4. With this increasing demand, Dublin will have to adapt to enable this sustainable transition through reallocation of road space, cycling infrastructure, and increasing awareness over the benefits of cycling.

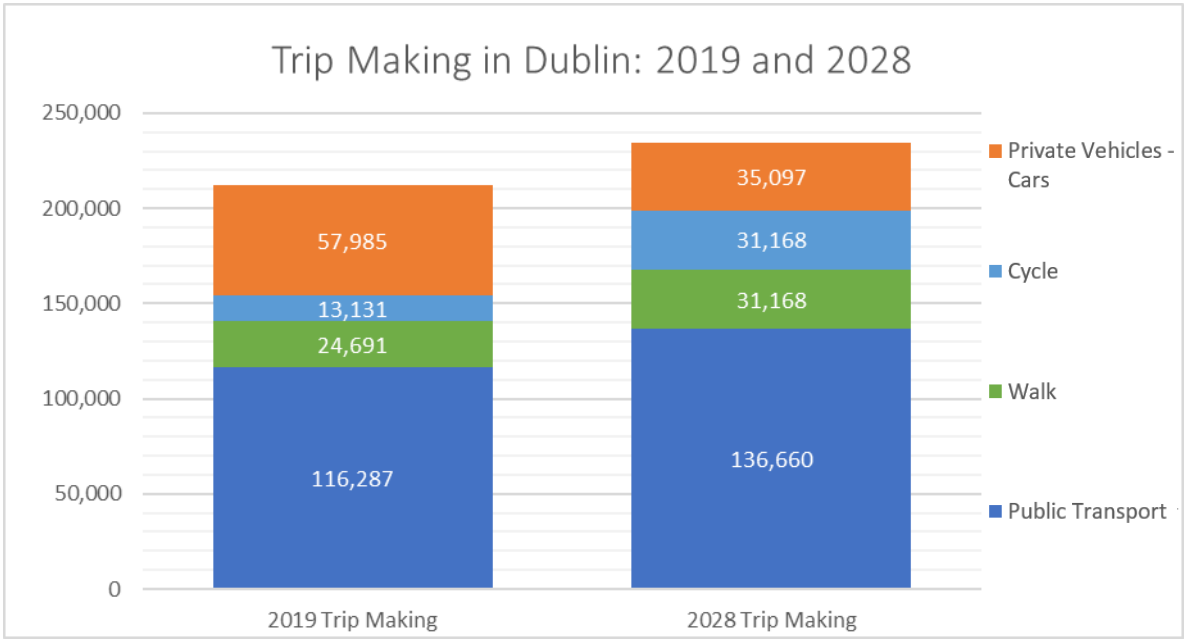

Figure 3-4: Dublin Mode Share Analysis – 2019 and 2028

Available space and permeability of an area are constraints to any cycle network. Often in historical cities like Dublin, street space is not sufficient to meet the demands from all travel modes. As such, opportunity for primary cycle corridors is generally limited to key streets, resulting in increased modal conflict. This challenge presents the opportunity for reallocation of street space away from general traffic and providing more space for safe and comfortable active travel infrastructure. This opportunity is realised in projects such as BusConnects CBCs and the Clontarf to City Centre Scheme (C2CC) whereby road space is reallocated from private modes to public and active transport modes.

A key concern of many cyclists is personal safety during trips[6]. This can be due to conflict with other modes, other cyclists, or poorly lit/quiet areas. By employing off road and segregated cycle tracks for as much of a network as possible, conflict with other modes will be minimised and cyclist safety can be ensured.

Shared cycle schemes pose an excellent opportunity for fast, cheap, and sustainable last mile trips. The use of shared cycle schemes helps to overcome the existing difficulty in multi-modal trips caused by restrictions surrounding personal bicycles being brought onto trains, trams, and buses. It is the intention of the NTA to improve the provision of cycle storage on all new trains throughout the lifetime of the Transport Strategy to encourage multi-modal trips – however until implementation, shared cycle schemes provide a suitable service for these types of trips. It is imperative therefore to provide adequate cycle capacity in Dublin City, and its mobility hubs, to enable the high volume of last mile cycling trips which shared cycle schemes will encourage and enable.

The growing use of E-Bikes is an opportunity to make cycling a more inclusive and long-distance form of transport. E-Bikes present the opportunity to encourage people who otherwise may not have the fitness or confidence to cycle and will aid in growing cyclist numbers throughout more demographics. E-Bikes present a considerable challenge, however, in their safety and use alongside standard bicycles, higher speeds of E-Bikes and their increased size and weight will increase risk to users and other cyclists. To allow for mixed use of both standard bicycles and E-Bikes, it is important that cycle lanes are sufficiently wide to allow for overtaking and avoid needlessly sharp turns which will be difficult for E-Bikes to navigate.

[6] National Travel Survey 2019, Table 12.3: https://www.cso.ie/en/releasesandpublications/ep/p-nts/nationaltravelsurvey2019/cycling/

The development of mobility hubs, a strategic objective of the Development Plan, around existing public transport nodes is an opportunity to increase the ease of multi-modal trips, shared mobility, and efficient transfer. With allocation of space to cycle stands, shared cycle hubs, and wash facilities – many of the barriers surrounding accessibility, safety, and stigma around cycling can be broken down and a healthy cycle culture encouraged. This objective can be supported by the provision of primary cycling corridors to major existing and future mobility hubs.

4. PRINCIPLES FOR CYCLE NETWORK DEVELOPMENT

The goal of this technical note is to identify a preferred primary cycle network for Dublin City Centre which will fit within a wider urban and national cycle network that will enable and support the increasing demand for active modes of travel. The aim of a primary network is to provide connected, continuous, high-quality links between high demand nodes. This network will cater for an expected large increase in cyclists within the study area – and is expected to link with existing, and planned mobility projects to encourage an accessible, safe, and efficient transport system. Key objectives within the Plan are as follows:

- Identify a preferred primary cycle network for Dublin City Centre.
- Cater for 2030 travel demand.
- Link to transport hubs and key trip generators.
- Consider the Five Needs of Cyclists to maximise the comfort, safety and efficiency of any network proposal.

As set out by the National Cycle Manual[7], there are Five Needs of Cyclists to be considered as part of cycle network design. These five needs intersect with each other and lay out basic considerations to help encourage the use of cycling as a key trip making mode. These five needs will form the core principles which will govern the cycle network development in this Plan.

Road Safety

Designers of transport infrastructure must seek to maximise road safety for all road users, including cyclists. All networks should include measures that are proven to be safe, and that the cyclist believes to be safe. Any perception of a lack of safety could be a deterrent to cycling.

Consider in particular:

- **Quality of Cycling Surface:** Cyclists are safer when focusing solely on road traffic and not distracted by sub-standard cycling surfaces.
- **Junction Design**: Most collisions involving cyclists occur at junctions.
- **Evening and Night-time cycling:** Poor lighting and personal security concerns will deter certain cyclists.
- **Drainage:** Blocked drains, poorly located gullies and manholes.
- **Debris:** Broken glass, grit build up, wet leaves.

Coherence

The cycling network should link all main origin and destination zones / centres for cyclists. A well-targeted cycle network should carry the majority of cycle traffic (in cycle-km terms).

Cycling routes within the network should be logical and continuous. Delays, detours, gaps or interruptions should be avoided. Markings and signage should be clear and consistent.

Consider in particular:

- **Continuity of Route:** It is illogical to discontinue cycling provision near busy destinations to accommodate or maintain other traffic flow.
- **Junctions:** Cycling routes approaching, going through and exiting junctions should be obvious.
- **Time Plating:** Discontinuity can occur by virtue of loading, parking or when general traffic is allowed in a bus lane.

[7] National Cycle Manual: https://www.nationaltransport.ie/wp-content/uploads/2013/10/national_cycle_manual_1107281.pdf

Directness

Cycling infrastructure should be as direct as possible, minimising any delays or detours. A well-designed urban cycle network should confer an advantage in terms of average distance or journey time when compared with other transport networks.

Consider in particular:

- **Filtered Permeability:** Positive advantage to cycling by providing short-cuts, etc.
- **Traffic Signals:** Sequencing of signals to minimise waiting time at junctions and crossings for cyclists.
- **Detours:** Short detours to maintain momentum and avoid local conflicts. Long detours are unlikely to be used.

Comfort

Cycling infrastructure should be designed, built and maintained for ease of use and for comfort. This is particularly important for beginners, tourists and recreational cyclists.

Anything that causes discomfort or delay, or requires a disproportionate amount of effort, is likely to result in the cycling facility not being used.

Improved cycling comfort can be achieved through providing effective width for cycling links; well-drained high-quality surfacing; improving shelter; minimising stopping, delays, detours etc.

Consider in particular:

- **Width:** Provide adequate width to avoid conflict
- **Gradients:** Ensure gradients are not excessive.
- **Stopping and Delays:** Minimise the number of obstructions or detours that impact on the cycling momentum.
- **Surface Quality:** Ensure cycling surface in smooth and continuous.
- **Shelter:** Minimise exposure to inclement weather.

Attractiveness

The cycling environment along a route should be pleasant and interesting. This is particularly important for beginners, tourists and recreational cyclists.

Monotony and exposure to the elements are unattractive to cyclists, as are litter, uncontrolled animals and poorly maintained environments.

Consider in particular:

- **Shelter:** Planting wind breaks. This can also provide visual interest.
- **Maintenance:** Keep cycling surface in good condition and clear of debris.
- **Lighting:** Ensure that cycle routes are adequately lit so as not to deter evening and night-time use.

5. METHODOLOGY

The following approach has been adopted to identify the preferred primary cycle network for this Plan. This will build upon the existing cycle network and proposals/strategies identified in Section 1.4:

  - Cycle Network Plan.
  - NTA Cycle Network.
  - DCC Active Travel Program (mixed cycle and walking).

- Perform a gap analysis on the existing plans considering only the coherency and continuity of the routes proposed.
  - Goal of finding gaps is to create coherency and directness within the primary network.
  - From the combined identified gaps for each network – identify clusters for appraisal.
- Appraise clusters of new potential corridors for their trip utility and identify potential streets within each corridor suitable for inclusion on the network.
- Streets in each cluster will be subject to a Multi Criteria Analysis (MCA) pertaining to the Five Needs of Cyclists to find the most suitable corridor.
- Using existing proposals and identified gaps – plot initial preferred network.
  - Initial preferred network will be formed from the NTA Cycle Network, and the identified corridors from the MCA.
- Optioneering
  - Consider likely trip making and proposed network density on the initial preferred network to identify necessary and unnecessary corridors.
- Summarise all of the preceding MCA and Optioneering outcomes to find corridors deemed suitable for a primary cycle network.
  - Arrive at emerging preferred network based on identified issues and mitigations.
- Identify strategic locations for additional cyclist infrastructure/measures to improve the experience of cyclists in Dublin City Centre.

6. OPTIONEERING / NETWORK DEVELOPMENT

6.1. Gap Analysis

The gap analysis utilises the work and knowledge from the existing cycle network proposals through analysing the potential to improve upon these proposals. The objective of this analysis is to identify discontinuities in the proposed cycle networks to improve and build upon existing proposals. Networks analysed are:

- Cycle Network Plan.
- NTA Cycle Network.
- DCC Active Travel Program (mixed cycle and walking).

In the analysis of the three proposed networks, street characteristics and likely trip corridors are ignored – with the sole purpose being to make a safe, direct, and continuous network for all parts of the city. This analysis is completed for each of the three networks, with the resultant combined heatmap[8] used to display potential desire lines of travel not accounted for in either of the three networks. The outcome of the network analysis is shown, see Figure 6-1, with supporting maps for each of the three networks shown in Appendix A.

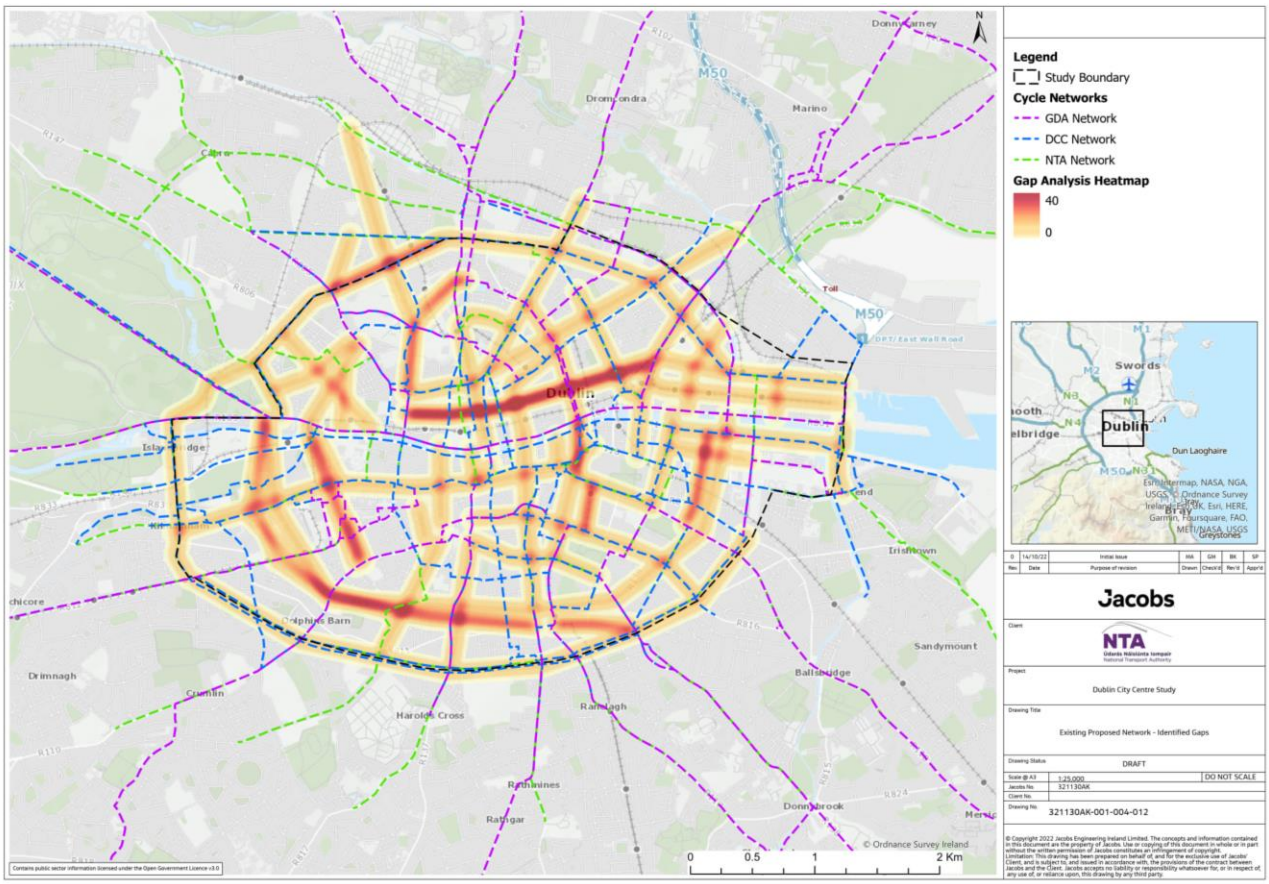

Figure 6-1:Gap Analysis Combined Map

[8] Heatmap scale is indicative only.

6.2. Trip Making Utility

To appraise trip making utility, 2030 population and daytime population density[9] is mapped, see Appendix B.

Daytime population for small areas is mapped to find likely trip-end locations and clusters. Places of employment and education are key to cycling infrastructure as these areas are more likely to incur peak hour trips and need a higher quality infrastructure to avoid congestion.

From the population data shown, there is a clear migration of commuters and students from areas in the west and north inner city to the primary daytime population centre in the centre and east of the city.

Each of the previously identified clusters can be singled out with their individual utility considered using the mapped population data (Figure 6-2). This will give an initial indication as to whether high levels of trip making are likely on identified new corridors and will feed into the preparation of the initial preferred network.

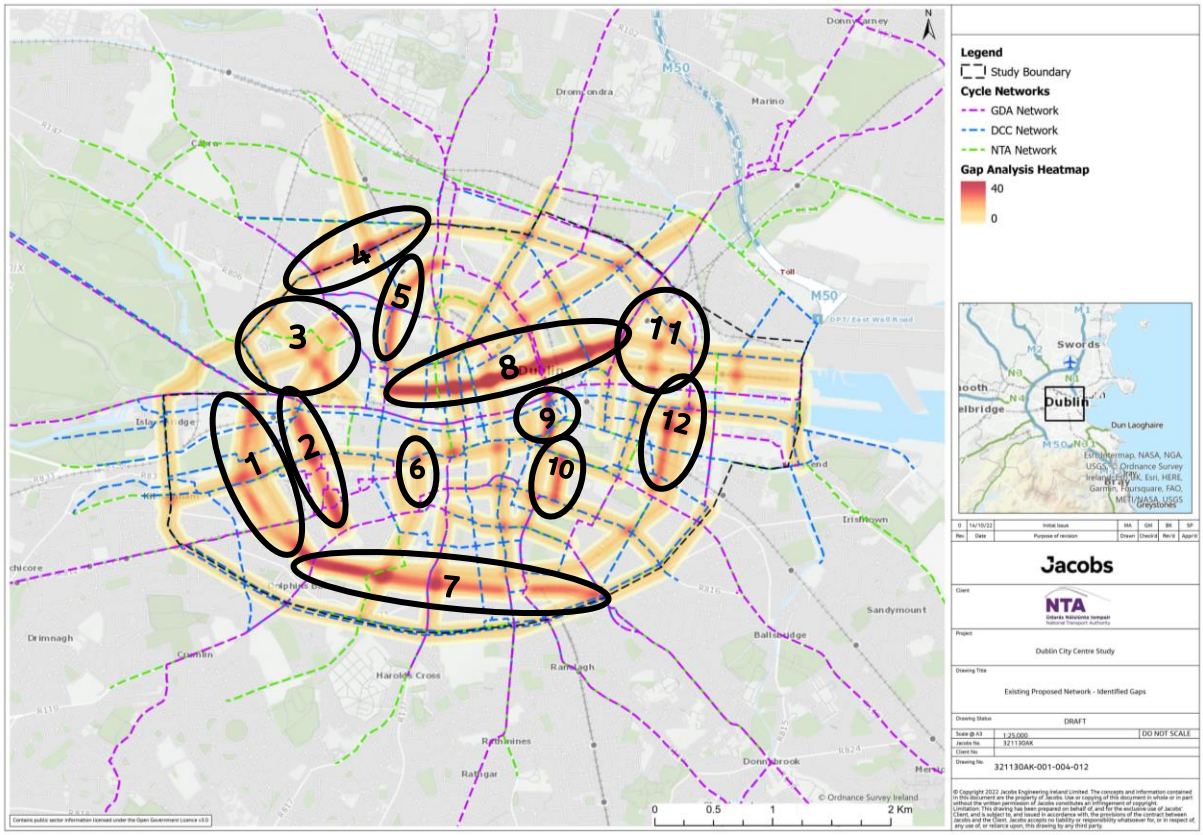

Figure 6-2: Gap Analysis - Identified Clusters

Discussion of each cluster(s) is outlined below to justify/nullify the inclusion of each in the preferred network:

- Clusters 1 and 2 mostly serve as orbital routes within the Dublin 8 area which is predicted to be an area of high population density in 2030. These improvements will allow for greater linkage with Heuston Station and the cluster of hospitals in the area.
- Clusters 1 and 7 could serve to act as a corridor for commuters travelling from Dublin 8 to the employment clusters around Camden Street, Baggot Street and Grand Canal Dock (GCD). The link could also act as an orbital between the arterial routes which currently have no orbital links between D8 and the city centre.
- Clusters 3 and 5 will serve the high-density area of Stoneybatter/Oxmantown and facilitate trip attractors such as Technological University Dublin (TUD) , Heuston Station, and Glasnevin.
- Cluster 4 shows the North Circular Road (NCR) as having a strong trip desire. However, population maps show that there is limited daytime population density along the corridor – particularly outside the study area. As such there

[9] Taken from NTA 2030 Planning Sheet

would likely be an overprovision of primary network here, especially considering proposed corridors on Cabra Road, and the Royal Canal. If the NCR is to be removed, short links should be provided to link O'Devaney Gardens with the Phoenix Park, and Grangegorman with either Phibsborough or the Cabra Road.

- Cluster 6 serves a north to south desire corridor but is not likely to have high demand due to the adjacent Patrick Street and Bridgefoot Street proposals.
- Cluster 8 serves the high demand around the north inner city to/from Connolly Station, as well as the high employment and residential density in the area.
- Cluster 9 and 10 links the major shopping district around Saint Stephens Green and O'Connell Street to Trinity/College Green and is likely to be a high-volume corridor.
- Cluster 11 improves the low cycle lane density seen in the Connolly Station area from all proposed networks, particularly owing to the high expected residential density in North Strand/East Wall – and employment area of the IFSC.
- Cluster 12 serves areas of high job density and adds a continuous cycle corridor from the Baggot Street area to the Quays.

6.3. Gap Analysis Multi Criteria Analysis

To appraise corridors identified in their potential need for primary cycle network designation, an MCA has been employed to assess their suitability for inclusion in the initial preferred network based on the Five Needs of Cyclists. The results of the MCA have informed on the suitability of certain corridors to be part of a primary cycle network alongside other analyses carried out. As such there may be exceptions where less suitable corridors are proposed where there is a strong need for inclusion identified from another analysis sections throughout the optioneering process.

MCA methodology set out in Table 6-1 and Table 6-2 will be used to rank sites.

Table 6-1: MCA Ranking Criteria

Ranking	*Symbol*
Below Average	
Average	
Above Average	

Table 6-2: MCA Outcome Criteria

Outcome	*Description*	*Symbol*
Implement in Initial Preferred Network	All criteria score Average or Above Average	
Desired Primary	Will need further consideration due to average or below average criteria	
Unlikely for Implementation	Considerable Average or Below Average criteria scores	

Criteria used to rank sites are taken from the NCM Five Needs of Cyclists: Safety, Coherence, Directness, Attractiveness and Comfort

Full results of the MCA can be found in Appendix C.

6.4. Initial Preferred Network

Using the three identified relevant networks, and the gaps identified in each, an initial preferred network was formed. Based on preceding analysis, additional links have been proposed to create a network which aligns further with the Five Needs of Cyclists. The corridors proposed in the gap analysis have been included in the initial preferred network for further consideration, if they are deemed suitable for a cycling network. The initial preferred network is formed from the combination of the three studied networks. In places where multiple corridors from the different proposals passed parallel nearby (<50m), the most continuous/coherent corridor in relation to the NTA Cycle Network was retained. In areas where

the Five Needs of Cyclists are not sufficiently met, but a corridor is still deemed useful, desired primary has been denoted, indicating that mitigation measures would be required to safely incorporate a primary cycle corridor and would require further consideration.

Further supporting maps are available in Appendix D.

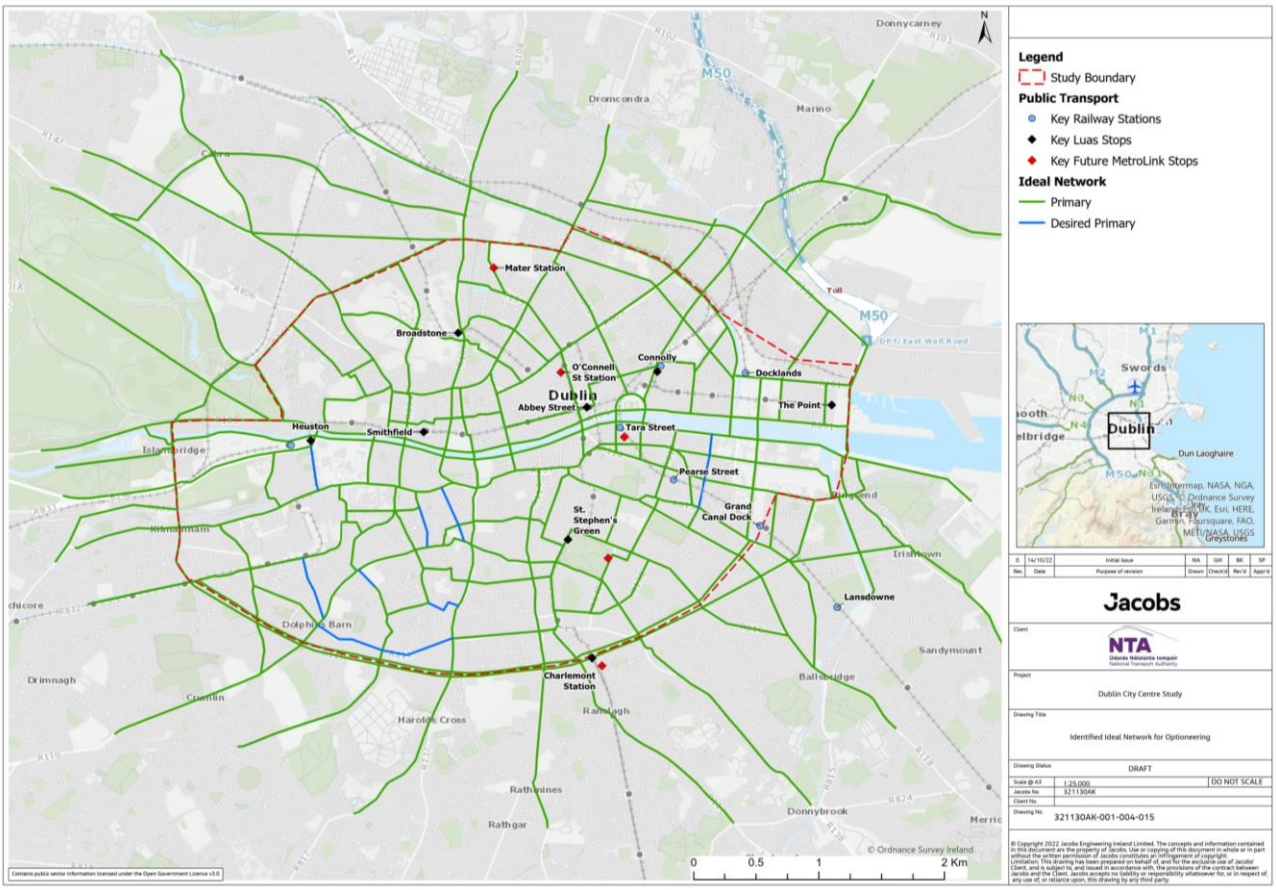

Figure 6-3: Initial Preferred Primary Cycling Network

6.5. Summary of Analysis Carried Out

Throughout the optioneering and cycle network development, several forms of analysis and investigation have been utilised to assess various corridors for inclusion in the emerging preferred primary cycle network. The analyses undertaken are detailed below:

Gap Analysis MCA: Gap analysis of existing proposals for cycle networks in Dublin to identify potential additional corridors which were appraised based on the Five Needs of Cyclists in an MCA.

Utility: Using the additional desire lines for cyclists found in the gap analysis, high level consideration to likely cyclist volumes along each potential new corridor was made using 2030 population density taken from the 2030 NTA Planning Sheet.

Density: To ensure that there was not an overprovision of primary cycling corridors in the city, a heatmap was used to find significant clusters of primary cycling corridors proposed in the initial preferred network which were then re-evaluated and either retained or dropped from consideration for the preferred network.

Sift: The sift notes any corridors that were deemed unsuitable or underserved through stakeholder and internal discussions. This section may overrule prior analysis carried out on certain corridors.

For each analysis section, different corridors have been identified as having merit or issues, of which all are summarized in the below Table 6-4. Specific details and comments on all analysed corridors are available in Appendix E.

The summary (Table 6-4) is split into four outcomes for each section as set out below in Table 6-3:

Table 6-3: Summary Table Key

Ranking	Symbol
Drop	
No issues identified	
Retain (Denote Desired Primary)	
Retain	

As outlined in the initial preferred network – desired primary denotes where a primary cycle lane is deemed suitable, however the receiving streetscape may struggle in its existing layout to accommodate a primary cycle corridor and so mitigation measures – such as rerouting, permeability measures, or parking restrictions – may be required.

Table 6-4: Analysis Summary Table

Street	Gap MCA	Utility	Density	Sift	Outcome
Abbey Street					
Adelaide Road					
Annamoe Terrace					
Arbour Hill					
Ardee Street					
Basin View					
Bellevue					
Berkely Road					
Blackhall Place					
Blackpits					
Bridge Street Lower					
Bridgefoot Street					
Broadstone Garage					
Brookfield Road					
Brunswick Street North					
Cabra Road					
Camden Row					
Chancery Lane					
Commons Street					
D'olier Street					
Dawson Street					
Donore Avenue					
Earlsfort Terrace					
Earl Street South					
East Road					
Echlin Street					
Erne Street					
Francis Street					
Grafton Street					
Grand Canal					
Grand Canal Street Lower					
Grand Canal Quay					
Grangegorman Lower					
Golden Lane					
Guild Street					
Hatch Street					
Hawkins Street					

Hendrick Street					
Henrietta St					
Henry Street					
Holles Street					
Inchicore Road					
Kildare Street					
King Street South					
King Street North					
Long Lane					
Macken Street					
Manor Place					
Market Street South					
Marrowbone Lane					
Mary Street					
Mayor Street					
Meath Street					
Military Road					
Montpellier Hill					
Mount Brown					
New Wapping Street					
North Circular Road					
North Quays					
North Wall Avenue					
O'Devaney Gardens					
Oriel Street					
Oxmantown Road					
Pembroke Cottages					
Pembroke Street					
Pimlico					
Rueben Street					
Sean O'Casey Bridge					
Sherriff Street Lower					
South Circular Road (SCR)					
Steeven's Lane (or adjacent route)					
Talbot Street					
Tara Street					
Townshend Street					
TUD Campus					
Wattling Street					
Westland Row					
Westmoreland Street					

With a list of corridors suited for a primary cycle network, the preferred primary cycling network for Dublin City can be formed. This results in a less dense, but still direct and coherent network.

7. PREFERRED NETWORK

7.1. Preferred Network for Cycling

As a result of preceding optioneering and analysis, the following network (Figure 7-1) has been devised as the preferred primary cycle network. This network considers the Five Needs of Cyclists with attention paid to providing high levels of continuity and directness between key areas of residence, employment and mobility in Dublin City.

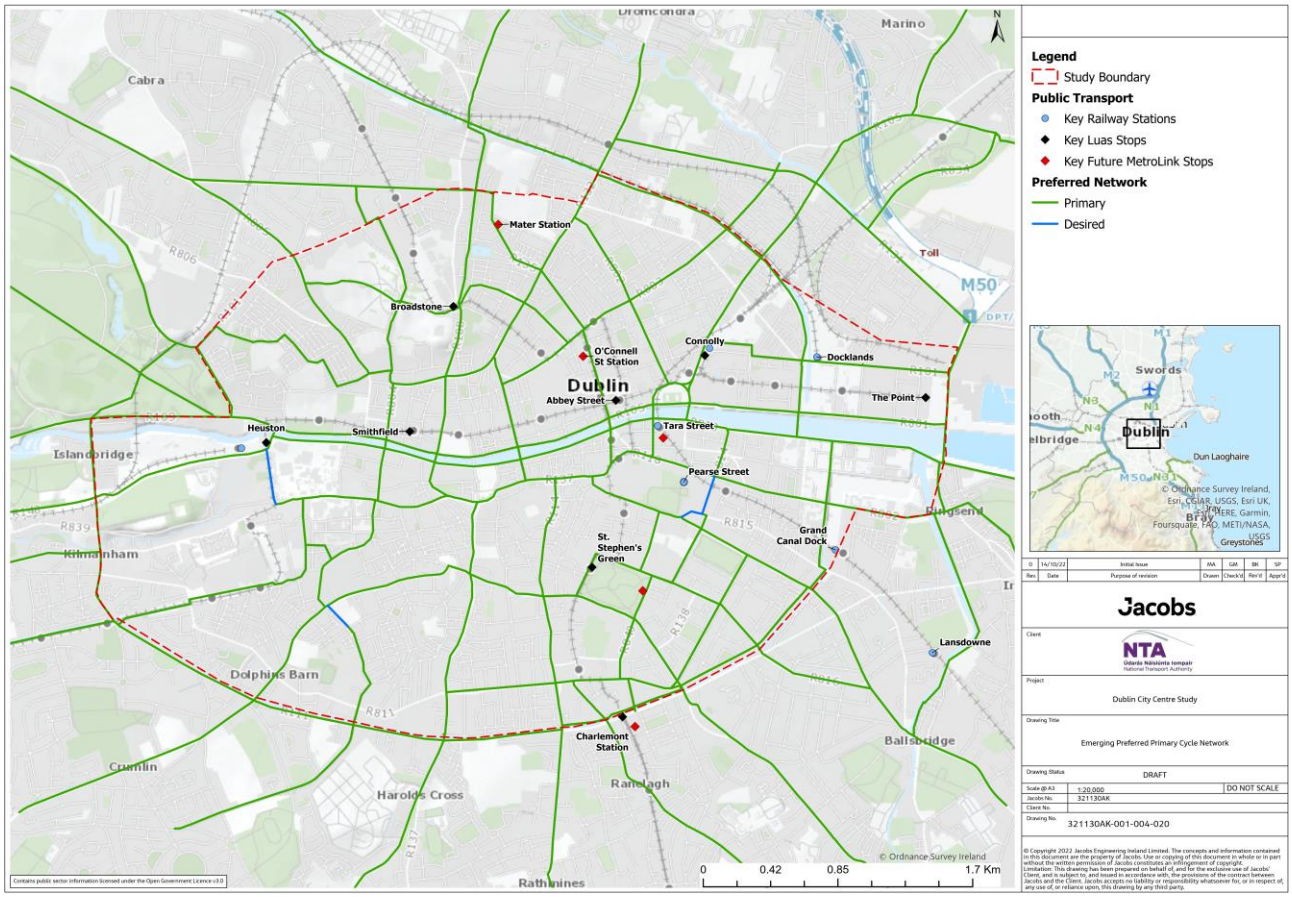

Figure 7-1: Preferred Primary Cycle Network

When overlain (see Figure 7-2) with the three identified networks of consideration: Cycle Network Plan, NTA Cycle Network, and DCC Active Travel Program – additional primary cycle routes leading to key public transport hubs such as Connolly and Heuston stations are identified .

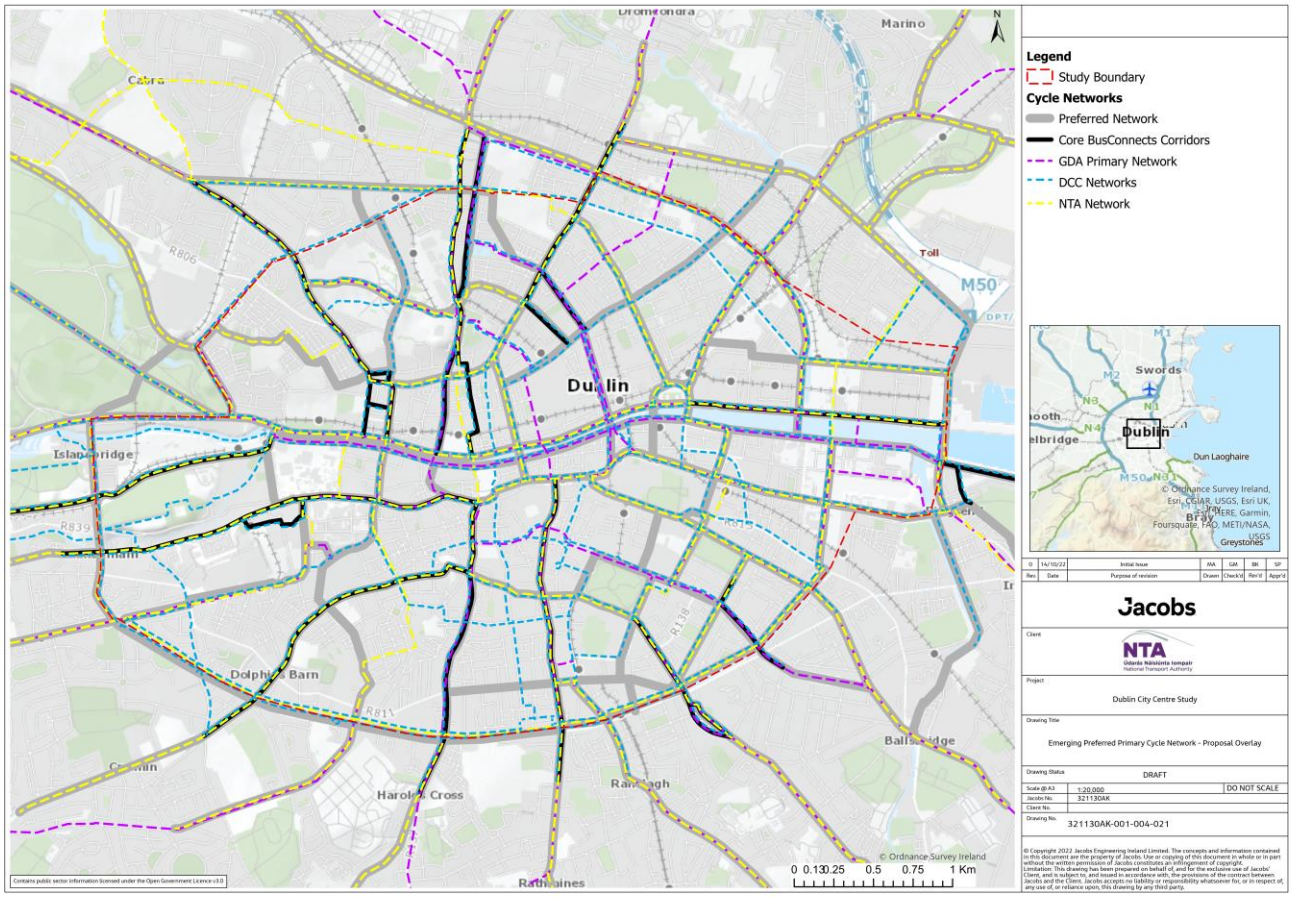

Figure 7-2: Preferred Primary Cycle Network - Proposal Overlay

7.2. Potential Opportunities for Enhancing Cyclist Experience

To support the primary network proposed in Figure 7-1, the following supporting infrastructure would be of benefit to support a modal shift to cycling:

- Mobility Hubs
    - At major transport hubs, it will be beneficial to implement mobility hubs which would incorporate many other proposals such as shared bike schemes, safe cycle parking, changing facilities, and good connectivity to the wider network.
    - Connectivity of key transport nodes (train and metro stations, bus stop clusters, and key Luas stops) to the primary network has been a priority in the cycle network development with the following locations identified as being potential future key mobility hubs:
        - Heuston Station (Luas, Bus, Train)
        - Connolly Station (Luas, Bus, Train)
        - Spencer Dock Station (Luas, Bus, Train)
        - Busáras (Luas, Bus)
        - Glasnevin Interchange (Metro, Bus, Train)
        - Tara Street (Metro, Bus, Train)
        - Pearse Station (Bus, Train)
        - O'Connell Street (Metro, Luas, Bus)
- Safe Cycle Parking

  - For trips undertaken using a personal bicycle, safe parking is essential to provide bicycle owners confidence in using bicycles for trips into the city. This is especially useful for trips coming from residential areas to places the user is likely to spend several hours – such as employment and education centres. It would also be beneficial to incorporate wash/changing facilities at these amenities.
  - It would be beneficial to employ shared cycle stations and parking zones across the city, particularly at mobility hubs, to enable greater access to cycling. This can be implemented alongside safe parking facilities to take advantage of supporting infrastructure such as wash facilities, cycle infrastructure etc.
  - It will be important to manage investment in cycle parking with cognisance of the growing range of bicycle types such as e-bikes, e-cargo bikes etc. to make safe cycle parking accessible for all users and trip types to encourage the continued uptake of cycling as a key mode of transport in Dublin City Centre.

- Further to cycle specific proposals, it is also noted that permeability/accessibility interventions at the following corridors would be of benefit to all active travel modes – and would likely enable more directness and cohesion in active travel networks:
  - Cork Street – Our Lady's Road – Basin View – Steeven's Lane (permeability measures to improve route coherence, along with inclusion within further development masterplans),
  - Saint Stephens Green – Trinity College – Beresford Place (permeability measures to improve route coherence),

It was also identified that a more central and direct cycle link between the Docklands and East Point business park would help to improve the connectivity between the residential areas within the Docklands and this employment site. To achieve this the barrier that the approach lanes to the M50 Port Tunnel would need to be overcome, and further consideration of the potential options for this are required.

8. APPENDICES

8.1. Appendix A – Gap Analysis

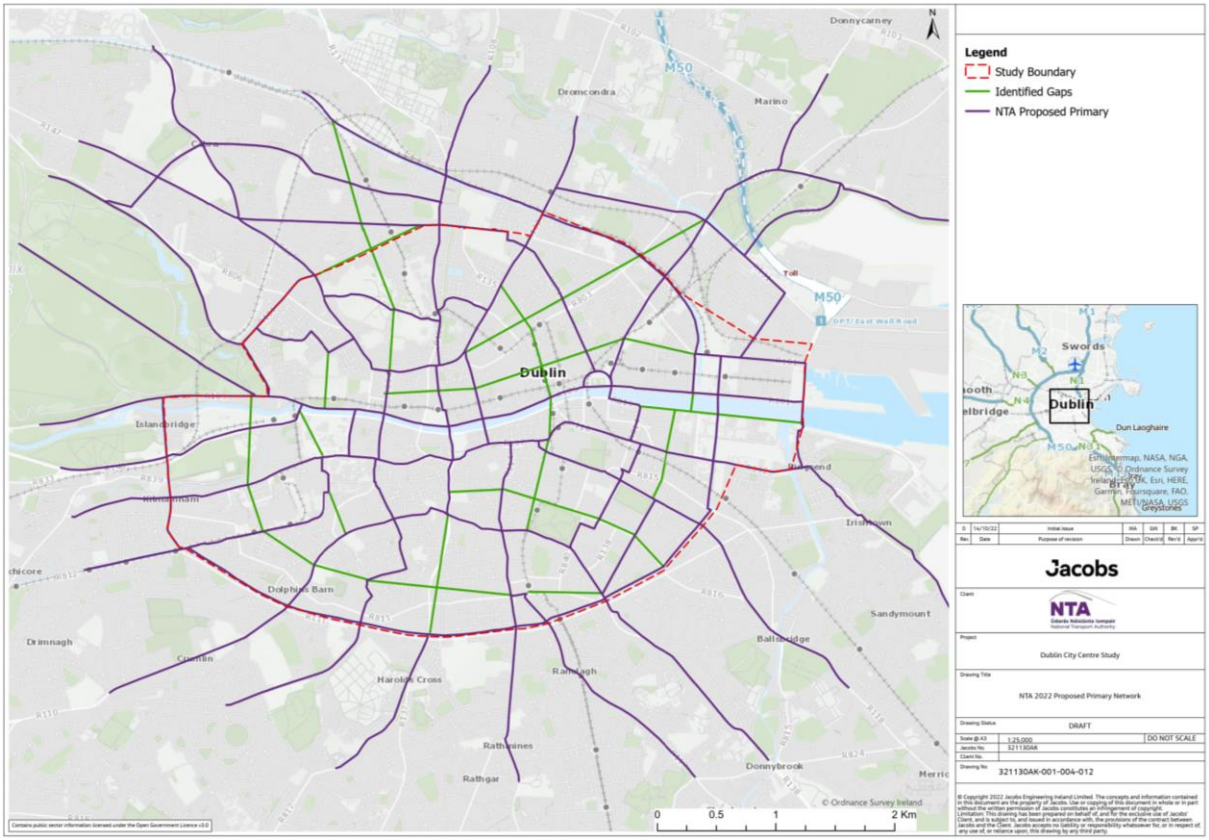

Figure 8-1: NTA Project Team Internal Draft - Gap Analysis

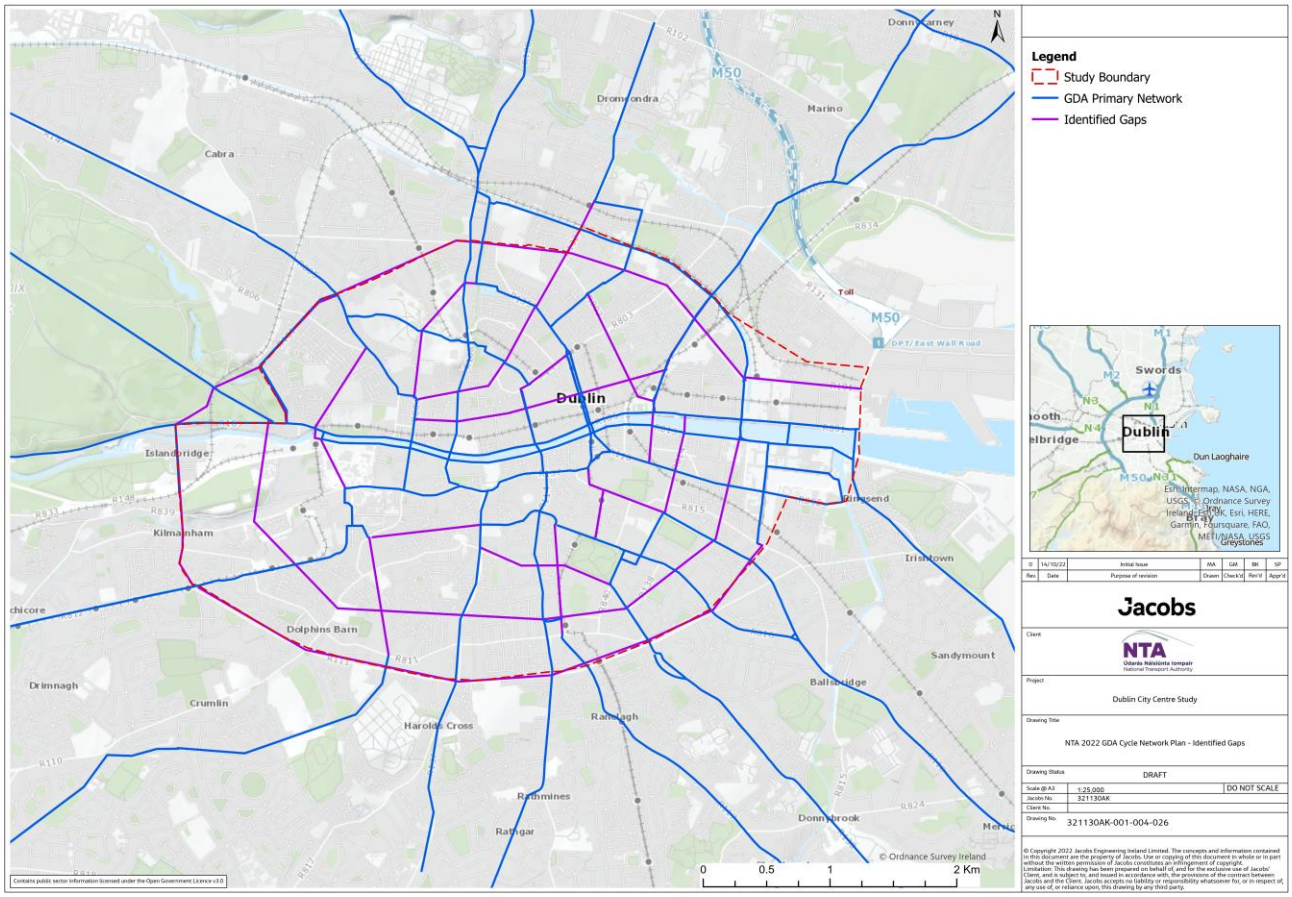

Figure 8-2: NTA 2022 GDA Strategy Primary Cycle Network - Gap Analysis

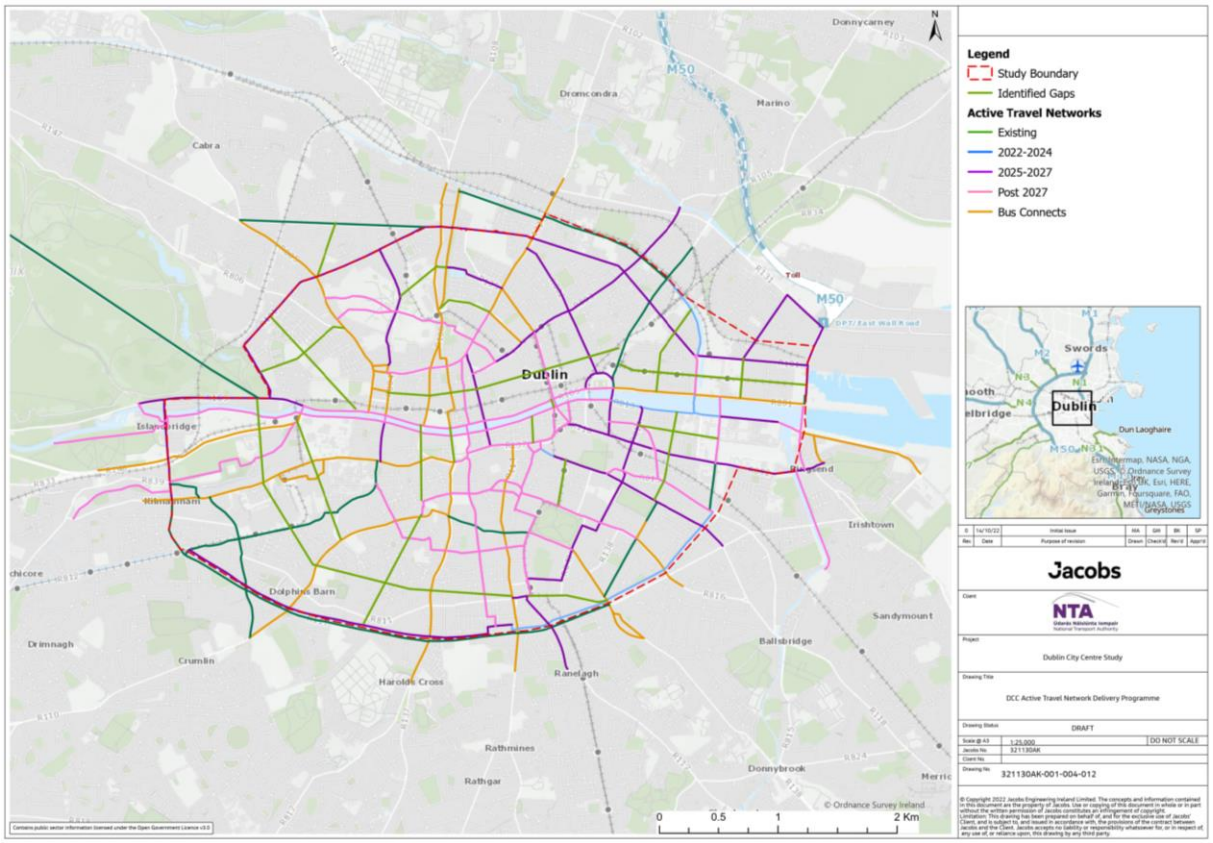

Figure 8-3: DCC Active Travel Network Delivery Program - Gap Analysis

8.2. Appendix B – Population Density

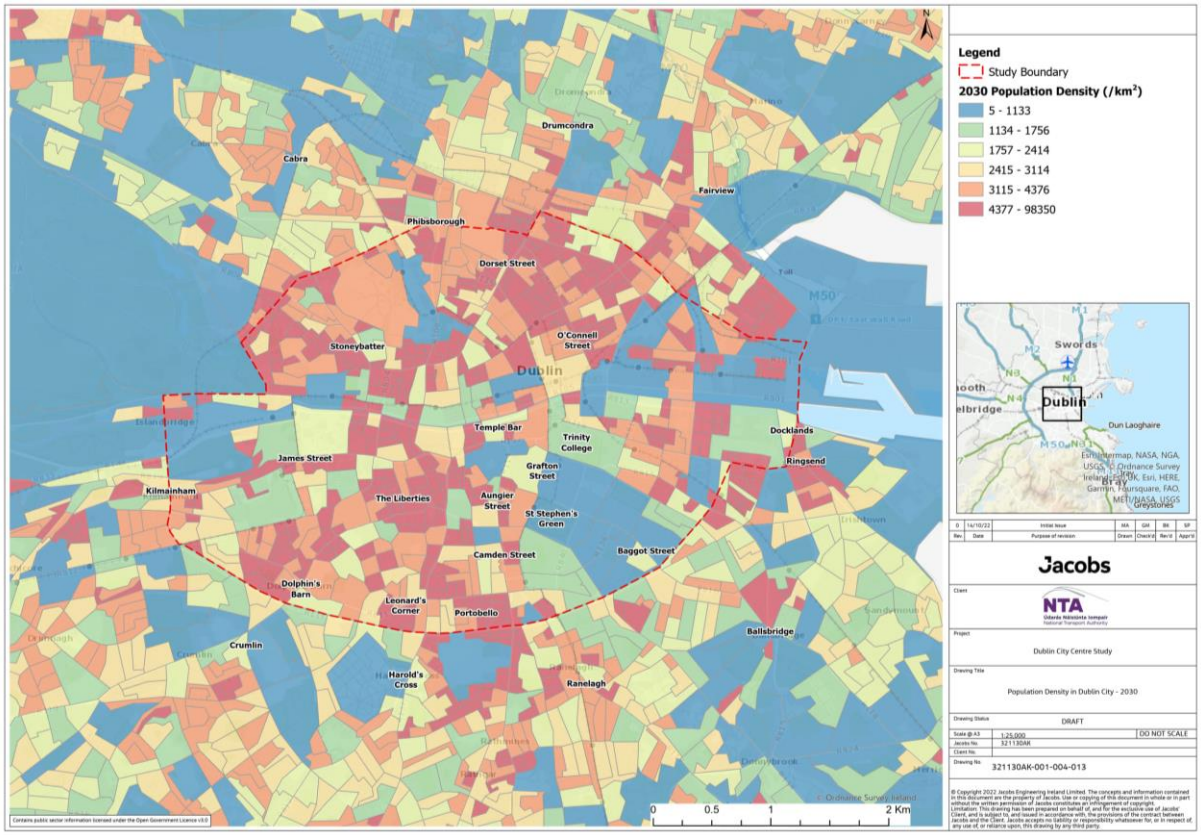

Figure 8-4: Dublin City Population Density 2030

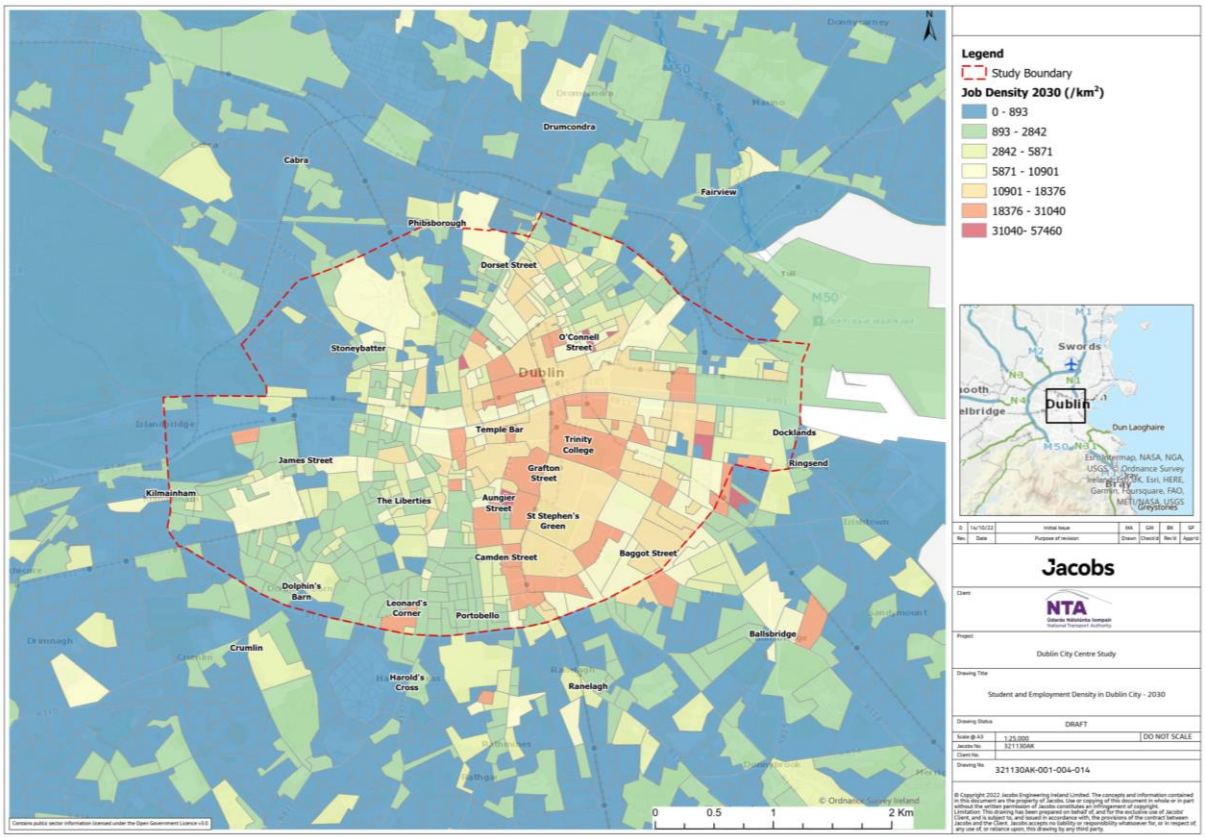

Figure 8-5: Dublin City Daytime Population Density 2030

8.3. Appendix C - Multi Criteria Analysis

Table 8-1: MCA Key

Ranking	Symbol
Below Average	
Average	
Above Average	

Table 8-2: MCA Outcomes Key

Outcome	Description	Symbol
Implement in Initial Preferred Network	All criteria Average or Above Average	
Desired Primary	Envisaged to be necessary link but falling down in certain criteria.	
Drop from Consideration	Considerable Average or Below Average criteria	

Table 8-3: MCA Analysis Results

Cluster	Street	Safety	Coherence	Directness	Attractiveness	Comfort	Outcome
1	South Circular Road						
	Rueben Street						
	Brookfield Road						
	Military Road						
2	Marrowbone Lane						
	Steeven's Lane (or adjacent route)						
	Echlin Street						
	Market Street South						
	Basin View						
	Donore Avenue						
	Watling Street						
3	Oxmantown Road						
	O'Devaney Gardens						
	Arbour Hill						
	Manor Place						
	Montpellier Hill						
4	North Circular Road						
	Cabra Road						
	Annamoe Terrace						
5	Grangegorman Lower						
	TUD Campus						
	Broadstone Garage						
6	Bridgefoot Street						
	Bridge Street Lower						
	Pimlico						
	Meath Street						
7	South Circular Road						
	Grand Canal						
	Adelaide Road						

	Hatch / Pembroke Street						
	Blackpits / Donore Avenue						
	Camden Row/Long Lane						
8	Talbot/Henry Street						
	Abbey Street						
	Mary Street						
	North Quays						
9	Westmoreland Street						
	D'olier Street						
	Hawkins Street						
10	Grafton Street						
	Dawson Street						
	Kildare Street						
	Golden Lane / York Street						
	Stephens Street Upper / King Street South						
	Tara Street						
11	Mayor Street						
	Commons Street						
	Oriel Street						
	Sherriff Street						
	Guild Street						
12	Holles / Erne Street						
	Macken Street						
	Townshend Street						
	Grand Canal Quay						

8.4. Appendix D – Initial Preferred Network for Optioneering

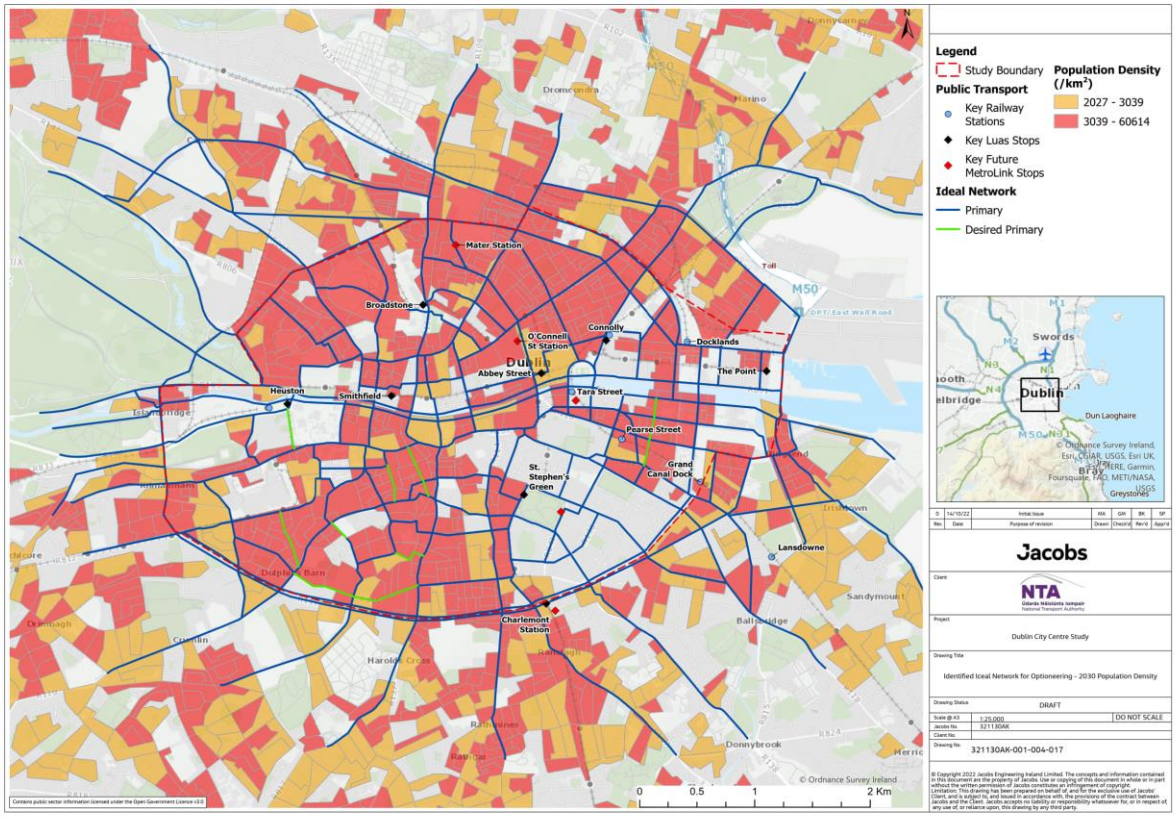

Figure 8-6: Initial Preferred Network Overlain with Population Density (Above Average)

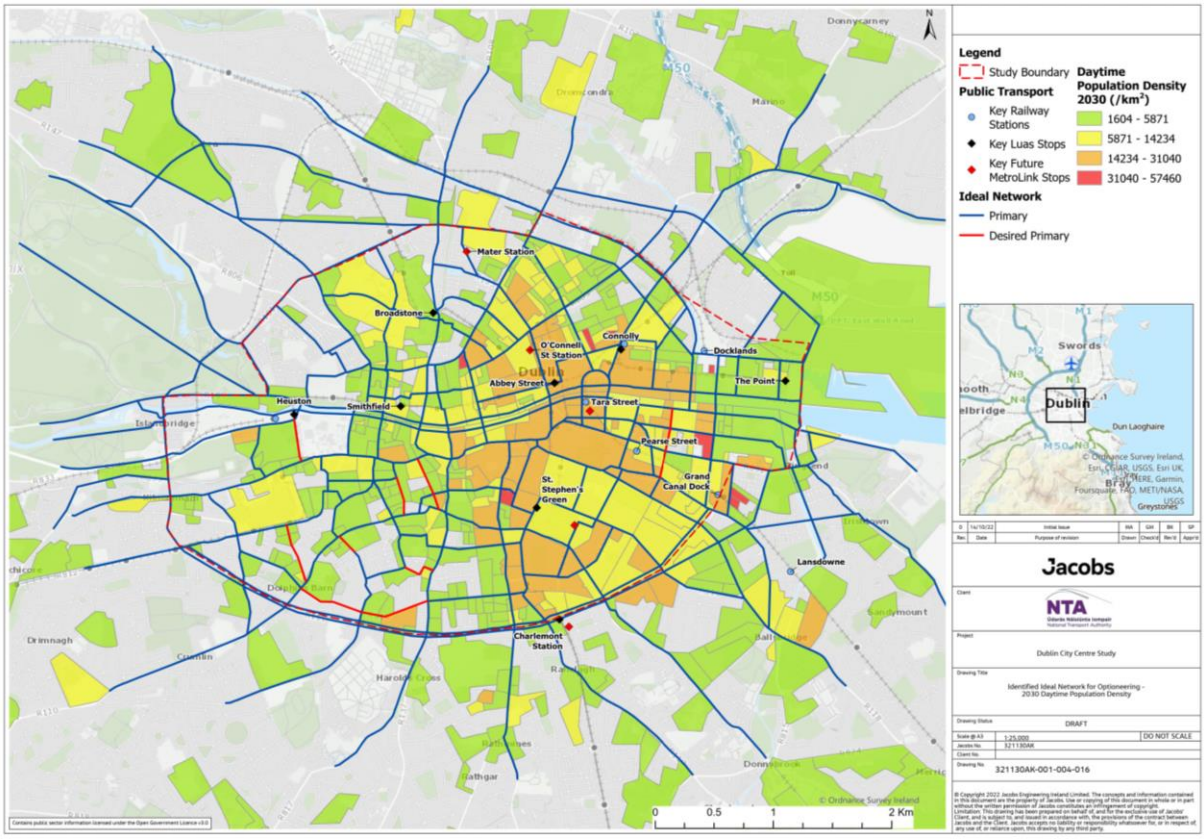

Figure 8-7: Initial Preferred Network Overlain with Daytime Population Density (Above Average)

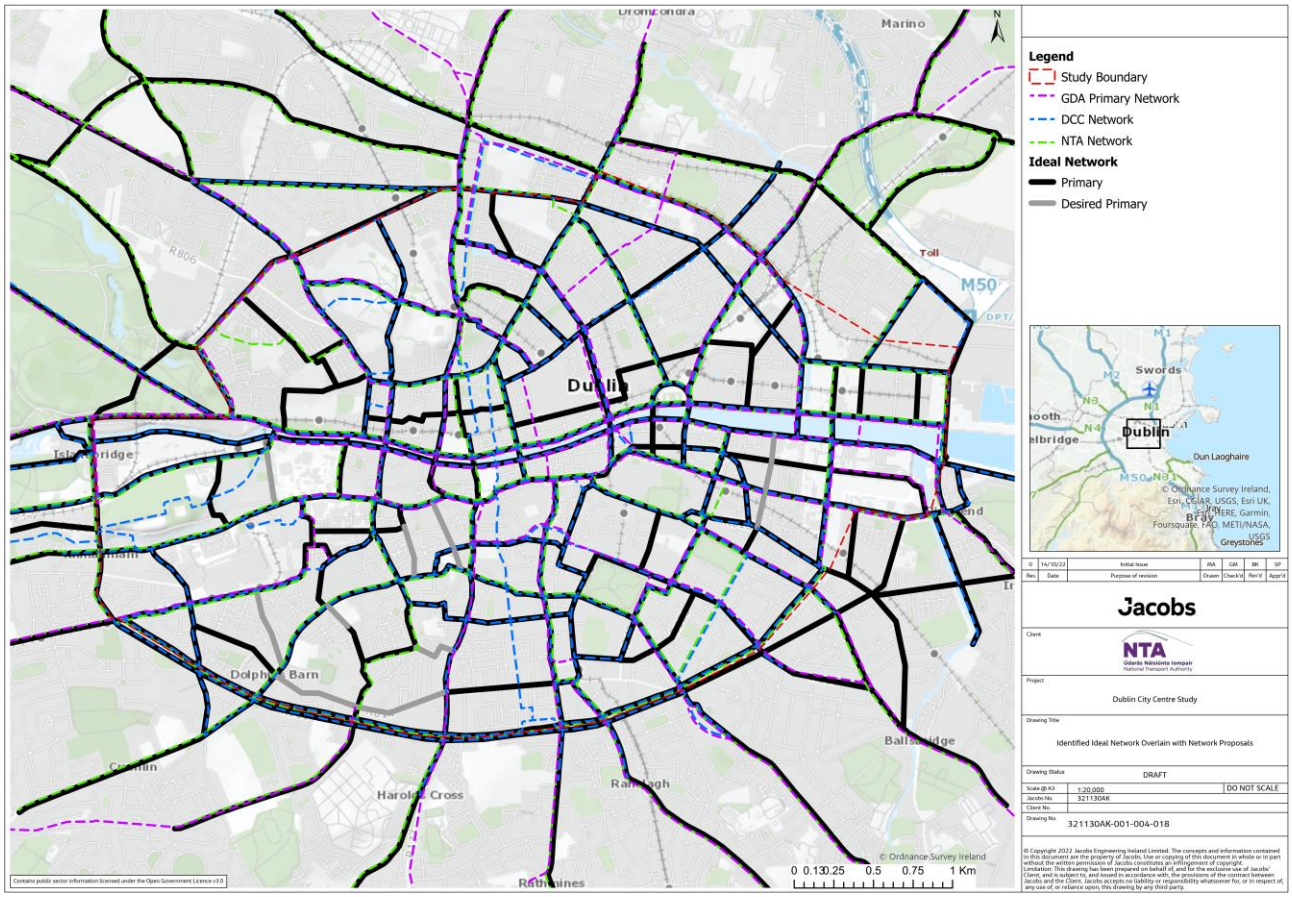

Figure 8-8: Initial Preferred Network Overlain with Network Proposals

8.5. Appendix E – Detailed Analysis and Optioneering

8.5.1. Corridor Utility for Trip Making

One of the key considerations in the design of a primary cycling network is the high demand for cycling on them. While the whole city requires some form of primary cycling infrastructure, some parts need more than others due to increased trip generation and attraction. As such, it is necessary to identify areas with overprovision of primary cycling corridors and comment on the likely demand on these corridors and whether there is overprovision in certain areas of the city. In some cases, corridors will see their potential demand fulfilled by nearby corridors with greater route directness/coherency, while others will simply not have the demand in the first place. Consideration is given to population maps outlined in Appendix B and Appendix D.

Table 8-4: Corridor Utility for Trip Making

Corridor	*Comment on Corridor's Trip Making Utility*	*Potential Alternative*	*Outcome*
South Circular Road (SCR)	Acts as inner orbital connecting all of the southwest arterial roads closer to the south inner city population centres than the Grand Canal corridor.	Grand Canal (300m S)	Drop West of Clanbrassil Street.
Clarence Mangan Road / Blackpits / Donovan's Lane	Links high population area around Donore Avenue to the main N-S corridor on Clanbrassil	SCR (250m S) or Mill Street (250m N)	Keep
Rueben Street	Connects Cork Street/Coombe to James's Hospital & Heuston	SCR or Marrowbone Lane	Keep
Francis/Meath Street	Supplemented by Patrick Street – No Utility	Patrick Street (<200m)	Drop
Military Road/Irwin Street	Links St. James's area to Heuston Station	Steeven's Lane (400m)	Keep
Steeven's Lane	Vital to link Dublin 8 with Heuston Station	Military Road, Bridgefoot Street or Watling Street	Keep

Market Street South	Links Grand Canal Harbour to Marrowbone Lane – but supplemented by surrounding roads.	Thomas Street, Marrowbone Ln	Drop
Marrowbone Lane (south end)	Creates continuity from Cork Street to Thomas Street	Ardee Street (500m)	Keep
Donore Avenue	Fills in N-S corridor from Kimmage to Grangegorman	Cork Street/ Clanbrassil Street (500m)	Keep
Hatch Street/ Pembroke Street	Inner orbital linking Camden Area to Baggot Street - continuation of SCR orbital	Adelaide Road, Saint Stephen's Green, Grand Canal	Keep
Kildare Street	Needed to Link Stephens Green to Trinity and beyond to the north city	South William (500m) or Merrion Sq. (300m)	Keep
Holles Street/Erne Street	Creates good N-S link from high population Docklands to high employment Baggot/Pembroke area	Lombard Street, Grand Canal Sq. (300+m)	Keep
Bridge Street Lower	Alternative to Winetavern street – creates alternative strong N-S link	Winetavern Street, Bridgefoot Street (300m)	Keep
Oxmantown Road/Ard Righ Road/Arbour Hill	Serves high population area and links to wider network. Retain O'Devaney gardens – Stoneybatter corridor but remove Arbour Hill.	Prussia Street (300m), NCR (500m)	Drop
Berkely Road	Serves proposed Metro Stop	Phibsborough Road(300m)	Keep
Commons Street, Oriel Street, Sherriff Street Lower	Serves high population, employment, and transport areas. Links to royal canal greenway. Keep Sheriff Street but drop Commons/Oriel Street	Amiens Street, Guild Street (300m+)	Keep
Talbot Street, Abbey Street, Mary Street	Links Connolly to O'Connell Street and on to employment area of Smithfield. Intersects an area with very high projected employment and population.	Quays (150 – 350m)	Keep
Tara Street	Serves proposed Metro Stop and high employment area	Luke St, Moss Street (<200m)	Keep
Townshend Street / Hannover Street	Links GCD to city centre and high population/employment areas. Supplemented by Pearse Street and Quays	Quays, Pearse Street (<200m)	Drop

8.5.2. Network Density Analysis

To ensure that there is not an overprovision of primary cycle corridors – it is important to consider the network density. In discussions and workshops with stakeholders, 500m was the distance between primary cycling corridors that was deemed most suitable for this analysis. As with Section 8.5.1, likely trip demand, nearby corridors and population densities will be considered.

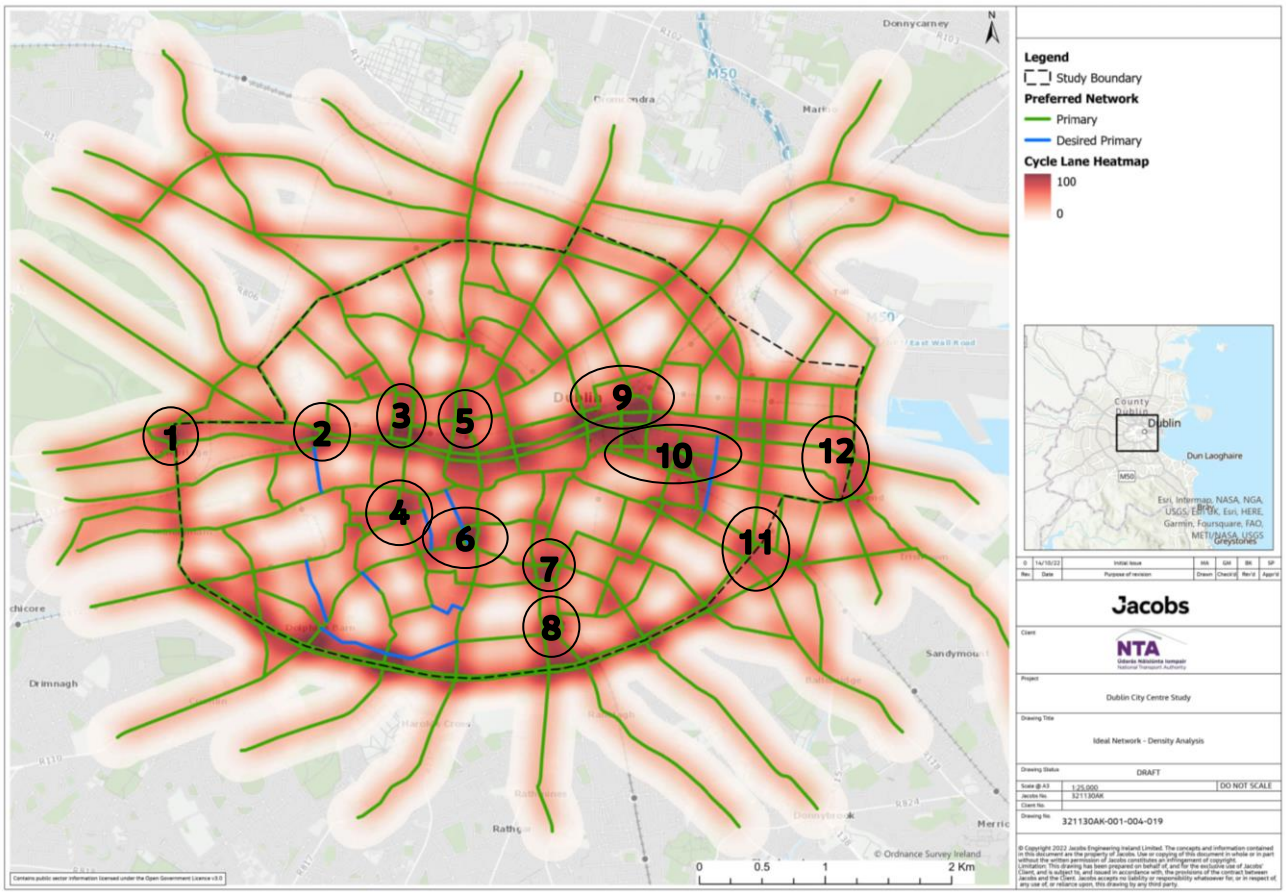

Figure 8-9: Initial Preferred Network - Density Analysis

Table 8-5: Density Analysis Summary

	Area	Comment	Outcome
1	Islandbridge	Detour from Chapelizod Road to Heuston and War Memorial Gardens is indirect	Drop
2	Heuston	Major trip generator	No Change
3	Blackhall Place	Overprovision – Hendrick Street and Blackhall place can be removed as per BusConnects Plans.	Drop
4	School Street	Remove School Street & Earl Street South as they are supplemented by Thomas Street. Remove link from Donore Avenue via Ardee Street as it is incoherent and supplemented by Patrick Street and Donore Avenue.	Drop
5	Markets	Primary N-S Corridor – Existing Chancery Lane/Greek Street corridor lacks coherence – Church Street safer and more direct	Drop
6	St. Patrick's	Remove Meath/Francis Street for safety and lack of trip utility due to surrounding N-S corridors. Remove Golden Lane due to lack of utility with surrounding E-W corridors.	Drop
7	Kevin Street	Key Intersection – Can remove Camden Row/Long Lane as it is not as direct or comfortable as the nearby Kevin Street/The Coombe corridor.	Drop
8	Portobello	Key Intersection	No Change
9	Customs House	Key Intersection	No Change
10	Townshend Street	Townshend Street is supplemented by South Quays and Pearse Street. Holles Street is uncomfortable/unsafe due to narrowness and traffic.	Drop
11	Barrow Street	Overprovision on Barrow Street and Grand Canal Street Lower. Remove double provision either side of Grand Canal.	Drop
12	Ringsend	Unnecessary bridge from Bridge Street to GCD and Pembroke Cottages – Remove	Drop

8.5.3. Final Network Sift / Other Identified Issues

Throughout the process of analysis, and in discussions with the project team and stakeholders, the following corridors were identified for additional discussion as to their inclusion or removal.

Table 8-6: Final Network Sift

Area	*Comment*	*Outcome*
Inchicore Road	Inchicore Road superseded by Emmet Road and Chapelizod Bypass	Drop
Rueben Street	Supplemented by Marrowbone Lane Unsafe and Uncomfortable due to narrow street with residential parking.	Drop
Steeven's Lane	Narrow Street with Luas – Necessity to reroute through St. Patrick's Hospital or any future Guinness developments for safer corridor. Mark as Desired Primary.	Keep
Grand Canal / SCR	North bank corridor is unlikely due to lack of public access in parts. SCR also unnecessary between Cork & Clanbrassil Street due to nearby canal corridor – likely to be secondary corridor.	Drop
Wattling Street	Wattling Street and Rory O'More Bridges are narrow and mostly superseded by Steeven's Lane so can be removed.	Drop
Connolly – Smithfield	Lack of continuity and high volume of pedestrians hinders what would be a very key route – remove and allow Quays to take extra demand	Drop
Leeson Street	Preferred network is discontinuous and does not link well with SCR orbital. Revert corridor to Adelaide Road. This change leads to a major cycle intersection at Leeson Street Bridge. Fill in gap at Saint Stephens Green northeast corner.	Reroute
Westland Row	Corridor is vital to link several corridors and provide a strong N-S link, however the narrowness of Westland Row may provide less than ideal safety and so will have to be denoted Desired Primary.	Keep
The Point/ North Wall	Too much N-S provision – remove North Wall Avenue, East Road, Park Lane, Oriel Street and New Wapping Street	Drop
Oxmantown	Utilise the NTA Internal proposed corridor through O'Devaney Gardens as it is more useful than Oxmantown Road which is quite close to Prussia/Manor Street and not continuous from the network to the north.	Reroute
Kings Inn	Link from Kings Inn to Parnell Street is unsafe and indirect – there should be adequate capacity on the Parnell Square – Granby Road – Broadstone corridor, which is more direct, safer, and utilises a CBC.	Reroute
Sean O'Casey Bridge	Bridge is not suitable for cyclists and would not be capable of providing the level of service required for a primary cycling corridor.	Drop
Harcourt Street	Due to modal conflict and limited space on Harcourt Street, this corridor will be removed, with it being supplemented by an additional link from Saint Stephen's Green to the Grand Canal via Earlsfort Terrace and Harcourt Terrace.	Reroute
Mount Brown	Due to limitations on available space, James's Street/Mount Brown will be removed from the primary as per BusConnects plans, as an appropriate quality cycleway would not be possible within the existing bounds of the street. This change will only apply between the SCR and Steeven's Lane.	Drop
King Street North	As per BusConnects plans, Brunswick Street North will be used to connect cycle lanes from Manor Street to Queen Street rather than Blackhall Place. As per this plan, Blackhall Place will also be removed from the network.	


NTA
Údarás Náisiúnta Iompair
National Transport Authority
Jacobs