



Department for
Infrastructure

An Roinn

Bonneagair

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DRAFT BELFAST BICYCLE NETWORK 2017

*/ Consultation
Document*





*Imagine the kind of city we
could have with less motor
traffic – less noise, less
pollution, healthy people and a
more pleasant environment to
spend time in, live in and enjoy.*

Chris Hazzard

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Ministerial Foreword

Chris Hazzard

/ Minister
FOR INFRASTRUCTURE



Transport is about moving people and goods to where they need to be – safely, quickly and, yes, enjoyably.

Most of us travel. Many of us, at some time of the day, are traffic – heavy, slow moving traffic. It is not quick, it is not enjoyable and it is killing us. Poor air quality – much of it coming from the motor vehicles that we drive – contributes to the early death of 40,000 people every year¹. Sedentary lifestyles are one of the main factors responsible for increased risk of certain cancers, type 2 diabetes, heart attack and stroke². A variety of studies warn that sedentary lifestyles are likely to be causing as many deaths as smoking³.

There is a better way and an increasing number of Belfast people are choosing it. They are getting about by bicycle.

Last year's Bike Life report, published by Sustrans revealed that 63% of Belfast people were either wanting to or already were cycling. The annual Travel Survey reveals that, in Belfast, almost half of the journeys we make are less than two miles – that's less than 15 minutes on the bicycle. And the likelihood of keeping dry is over 80%.

Imagine the kind of a city we could have with less motor traffic – less noise, less pollution, healthy people and a more pleasant environment to spend time in, live in and enjoy.

I want to build a network of continuous, coherent, comfortable and attractive bicycle routes, with minimum delays, to encourage more people to choose to travel by bicycle rather than jumping in the car – to give people the freedom and confidence to use the bicycle as an easy and attractive everyday way to travel.

This public consultation gives you an opportunity to share in this ambition. To contribute to the development of the network, to suggest ways in which we can make it easier to cycle in the city and to add to the enthusiasm for cycling that is growing year by year.

1 <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

2 <http://www.nchpad.org/403/2216/Sedentary-Lifestyle-is-Dangerous-to-Your-Health>.

3 <http://www.getbritainstanding.org/health-risks.php>.

* foot notes also apply to Irish text on next page

Réamhrá an Aire

Chris Hazzard

/ AN TAIRE BONNEGAIR

Baineann cúrsaí iompair le daoine agus earraí a bhogadh chuig an áit ar gá dóibh a bheith - go sábháilte, go gasta agus, is ea, go sultmhar.

Bíonn an chuid is mó againn ag taisteal. Is é an rud a chreidimid go mbímid gafa sa trácht, ní bhíonn, is sinne an trácht - trácht trom, malltriallach. Ní bhíonn sé gasta, ní bhíonn sé sultmhar agus tá sé dár marú. Tá baint ag droch-cháilíocht aeir - cuid mhór de ag teacht ó na mótarfheithiclí a bhímid a thiomáint - le bás luath 40,000 duine gach bliain¹. Tá stíl mhaireachtála neamhghníomhach i measc na bpríomhchúiseanna atá le riosca méadaithe cineálacha éagsúla ailse, diaibéiteas chineál 2, taom croí agus stróc². Tá rabhadh i réimse staidéar gur dócha gur stíl mhaireachtála neamhghníomhach is cúis lena oiread céanna bás le caitheamh tobac³.

Tá dóigh níos fearr ann agus tá níos mó de bhunadh Bhéal Feirste ná riamh á roghnú. Bíonn siad ag rothaíocht.

I dtuarascáil Bike Life arna foilsiú ag Sustrans anuraidh, fuarthas amach go raibh 63% de bhunadh Bhéal Feirste ar mian leo tosú ar an rothaíocht nó atá ag gabháil di cheana féin. De réir thuarascáil bhliantúil Travel Survey, tá beagnach leathchuid de na turais níos lú ná dhá mhíle - sin níos lú ná 15 nóiméad ar an rothar. Agus 80% an dóchúlacht go mbeifear tirim.

Samhlaigh an cineál cathrach a bheadh againn dá mba lú an trácht - ba lú an callán, an truailliú, b'fholláine na daoine agus ba phléisiúrtha an timpeallacht lenár saol a chaitheamh agus sult a bhaint aisti.

Is mian liom bealaí leanúnacha, comhtháite, compordacha, tarraingteacha rothaíochta a thógáil, ina mbeidh a laghad moilleanna agus is féidir, le daoine a spreagadh chun dul a rothaíocht seachas léim isteach sa charr - leis an tsaoirse agus an mhuinín a thabhairt do dhaoine an rothar a úsáid mar ghléas furasta, tarraingteach taistil gach lá.

Sa chomhairliúchán phoiblí seo, beidh deis agat bheith páirteach san uailmhian seo. Le d'ionchur féin a bheith agat i bhforbairt an líonra seo, le moltaí a thabhairt chun an rothaíocht sa chathair a éascú agus le cur leis an dúil atá sa rothaíocht atá ag méadú léi bliain ar bhliain.

1.0

Introduction

1.1 The Bicycle Strategy published in August 2015 sets out a three pillar approach to developing cycling across the region. The three pillars are: BUILD a comprehensive network for the bicycle; SUPPORT people who choose to travel by bicycle; and PROMOTE the bicycle as a mode of transport for everyday journeys.

1.2 Under the 'BUILD' pillar, the Bicycle Strategy outlines the importance of developing urban networks as a key part of providing a 'comprehensive network for the bicycle'. This document initiates a public consultation exercise on the first of these urban networks - a Bicycle Network for Belfast.

CONSULTATION

1.3 The consultation process will run to Thursday 13th April 2017. In addition to this consultation document, we will hold a series of public consultation events during the consultation period throughout Belfast. Full details of events will be sent to stakeholders, advertised on our website and through social media and published in the press.

The three pillars are: BUILD a comprehensive network for the bicycle; SUPPORT people who choose to travel by bicycle; and PROMOTE the bicycle as a mode of transport for everyday journeys.

- 1.4 This consultation document outlines the issues which we have identified as important in developing a bicycle network for the city of Belfast. It includes a number of consultation questions throughout and these are summarised in Appendix M. You can send us your views on these specific questions but you are not restricted to these in your response. They are intended simply as a guide in respect of the issues that we have identified. We would also welcome comments in relation to relevant issues that are important to you in the development of a comprehensive network for the bicycle which may not have been covered in this document.
- 1.5 The document identifies eleven potential routes or corridors. Some of these are easily identified and already well known. Others are not so obvious and amount to 'first thoughts'. We would welcome views on all of these proposed corridors.
- 1.6 This consultation document can also be downloaded at www.infrastructure-ni.gov.uk
- 1.7 Please respond to this consultation on line if possible by using <https://consultations.nidirect.gov.uk/dfi-cycling-unit/draft-belfast-bicycle-network-2016>. If you are unable to respond via Citizen Space, please complete and return the form found in Appendix M of this document before the closing date at **5:00pm on Thursday 13th April 2017**.

Responses should be sent to:

cycling.unit@infrastructure-ni.gov.uk
or
Cycling Unit
Department for Infrastructure
Clarence Court
10-18 Adelaide Street
Belfast BT2 8GB
Telephone: 028 9054 0896
(Text relay prefix 18001)

- 1.8 If you require the document in a format such as Braille, audio-tape or large print, please contact us by the email, address or phone number as given.
- 1.9 We will acknowledge receipt of your submission.
- 1.10 We will prepare and publish a Consultation Report outlining the Department's response to the issues raised. In accordance with the requirement of the Freedom of Information Act (2000) all information contained in your response may be subject to publication or disclosure. This may include personal information such as your name and address. If you want your response or your name and address to remain confidential, you should explain why confidentiality is necessary. Your request will be granted only if it is consistent with Freedom of Information obligations. An automatic confidentiality disclaimer generated by your email system will not be regarded as binding on the Department.

2.0

Background

2.1 The purpose in drafting a Bicycle Network for Belfast is to guide the development and operation of the bicycle infrastructure in the city for the next ten years. The proposal to draw up this network follows on from the Bicycle Strategy⁴ which was published on 25th August 2015. It is intended that the plan will set out the manner in which the vision for cycling can be delivered for Belfast.

Question 1:

Do you agree that producing a Bicycle Network for Belfast is an important element of developing a more bicycle-friendly city? What time frame do you think it should cover?

2.2 It is planned that further bicycle networks will be developed for other urban areas and will be based on advancing plans already set out in previous transport plans.

2.3 One of the first strategies published by the former Department for Regional Development (DRD) following its creation in 1999 was the Cycling Strategy 2000. The document's aim/goal was to develop a co-ordinated approach to increasing cycle use and to establish a pro-cycling culture.

2.4 The strategy underlined the importance of cycling being seen as a safe, healthy, flexible, inexpensive and sociable means of travel. It advocated a progressive reassessment of the way roads were used and in particular, it recognised the necessity for re-allocation of road space from car and general traffic use and the increased provision of cycle facilities in urban areas and in new housing, retail and commercial developments.

2.5 These commitments were echoed in the Regional Development Strategy 2001 - 25⁵ (RDS). In setting the scene, the strategy advocated a fresh approach to future transport which meant giving more priority to:

- public transport improvement,
- walking and cycling,
- gradually changing the travel culture,
- extending choice and reducing reliance on the car, particularly for the school run and journeys to work in the Belfast Metropolitan Area and larger urban centres.

2.6 The strategy highlighted the need to change the regional travel culture and to revive the healthy habits of walking and cycling, particularly for relatively short journeys of less than two miles (i.e. around one third of all journeys here). One of the objectives set out in the strategy was to give greater priority to encouraging more walking and cycling (p171). It included a commitment to implement the earlier Cycling Strategy to provide for the progression of cycle networks where the needs and safety of those using bicycles would be given priority.

2.7 Coming out of the RDS, the Regional Transportation Strategy 2002 - 12⁶ (RTS) reflected the wider transportation policy of the earlier document including 'a shift in emphasis away from the car towards more sustainable modes such as walking, cycling and public transport' (p19). The RTS envisaged a modern, efficient and effective transportation system which could have (as one of its principal characteristics) 'safe and extensive walking and cycling networks, used regularly for travel to work, shops, education centres and leisure' (p48).

2.8 The Belfast Metropolitan Transport Plan⁷ (BMTP), published in 2004, built on these themes to propose wide-ranging initiatives to improve facilities for people walking and cycling so that these modes could become a more significant element of overall travel in the Belfast metropolitan area where around 45% of journeys are less than two miles in length.

4 <https://www.infrastructure-ni.gov.uk/publications/bicycle-strategy-northern-ireland>

5 https://www.infrastructure-ni.gov.uk/sites/default/files/publications/drd/sof_2.pdf

6 <https://www.infrastructure-ni.gov.uk/publications/regional-transportation-strategy-2002-2012>

7 <https://www.infrastructure-ni.gov.uk/publications/belfast-metropolitan-transport-plan>



Photograph courtesy of Disability Sports NI

Recognising that a thriving city centre needed a high quality transport system, the former DRD developed a more sustainable transport system to serve the central area.



- 2.9 The BMTP proposed the development of a preferred bicycle network to deliver continuous cycle routes between key locations. It proposed different provision dependent upon specific local circumstances, for example, on heavily trafficked roads, the expectation was that provision for bicycle routes would include fully segregated facilities. The proposed network in Belfast recognised the following five main criteria for network design:
- **Coherence:** cycling infrastructure should form a coherent entity, linking all trip origins and destinations; with a continuous level of provision;
 - **Directness:** routes should be as direct as possible, based on desire lines, since detours and delays will deter use;
 - **Attractiveness:** routes should be attractive on subjective as well as objective criteria. Lighting, personal safety, aesthetics, noise and integration with the surrounding area are important;
 - **Safety:** designs should minimise the danger for all road users; and
 - **Comfort:** bicycle routes need smooth, well-maintained surfaces, regular sweeping, and gentle gradients. Routes need to be convenient to use and avoid complicated manoeuvres and interruptions.

Question 2:

Do you agree that these five criteria from the BMTP are still valid for the development of a network for Belfast? If not, what do you consider the criteria should be? Please explain.

- 2.10 Elements of these proposals were incorporated in the 'Belfast on the Move' project which was implemented in 2011. Recognising that a thriving city centre needed a high quality transport system, the former DRD developed a more sustainable transport system to serve the central area. Its focus was on improved public transport services, better facilities for walking and cycling and a reduction in the dominance of travel by private car. The 'Belfast Streets Ahead' project, promoted by the former Department for Social Development, also sought to improve the environment of the city centre and create a momentum to quality public environments. Its focus was on improving those areas with the highest footfall in the city centre to encourage people to dwell longer in the city centre. This complemented the objective of encouraging sustainable transport while at the same time reducing congestion, noise and danger associated with high volumes of motorised transport.

- 2.11 More recently, the desire to promote an increased mode shift to public transport, walking and cycling was set out in the 2012 revised Regional Transportation Strategy - 'Ensuring a Sustainable Transport Future: a New Approach to Regional Transportation'⁸. This approach underlined the fact that good quality, affordable public transport, together with a safe and secure pedestrian and cycling environment could deliver health and social benefits and were important factors to social inclusion. It also highlighted the point that to make public transport, walking and cycling attractive options, infrastructure needed to be safe, clean, well maintained and well lit. It proposed that walking and cycling should be a viable alternative for many short to medium journeys. Accordingly, it set out a number of strategic objectives including maintaining transport infrastructure (Strategic Objective 3) - to make cycling an attractive option - and providing access (Strategic Objective 4) - cycling routes that enabled people to access key services.
- 2.12 On 26th May 2016, the Executive agreed the draft Programme for Government Framework 2016 - 21. The prime focus of this draft framework is for Government Departments to work together towards the 14 strategic outcomes, supported by 42 indicators.
- 2.13 Given the wide range of benefits that increased cycling measures can bring to an area it is evident that the development of a comprehensive Bicycle Network can help deliver against the following outcomes:

OUTCOME 2:

We live and work sustainably - protecting the environment.

OUTCOME 4:

We enjoy long, healthy, active lives.

OUTCOME 11:

We give our children and young people the best start in life.

OUTCOME 13:

We have created a place where people want to live and work, to visit and invest.

OUTCOME 14:

We connect people and opportunities through our infrastructure.

2.14 Relevant Indicators within the Framework include:

- Increase the use of public transport and active travel
- Increase environmental sustainability
- Improve our attractiveness as a destination
- Increase shared space
- Improve air quality
- Increase quality of life for people with disabilities

2.15 This collaborative working is already taking place with the enhancement of some cycling schemes being developed and constructed in Belfast through joint working project groups.

2.16 We have been working along with the Department for Communities on a section on High Street which will not only provide segregated and innovative cycling lanes, but will also enhance the streetscape making it more attractive for shoppers and visitors to linger.



A photograph of three children riding bicycles on a city street. In the foreground, a boy in a red hoodie and black helmet is smiling. Behind him, a girl in a pink jacket and white helmet is riding. To the right, another girl in a pink jacket and white helmet is riding. In the background, a man in a yellow jacket and yellow helmet is riding. The street has a crosswalk and a traffic light with red lights. There are trees and buildings in the background. The image is framed by a yellow diagonal shape on the top left and a purple circular shape on the bottom left.

3.0

*Vision and
Objectives for
Cycling*



‘A community where people have the freedom and confidence to travel by bicycle for every day journeys’

- 3.1 The Bicycle Strategy sets out this vision for cycling over the next 25 years and reflects the Department for Infrastructure’s ambition that people will be supported to make cycling part of their every day routine. The idea behind this vision stems from a study called ‘Four types of cyclists’ which was carried out in Portland, Oregon, USA⁹. In this study residents of Portland were placed into one of the following four groups based on their relationship to bicycle transport (i.e. using the bicycle personally for transportation rather than recreation):

STRONG AND FEARLESS

People who will ride their bicycle regardless of road conditions

ENTHUSED AND CONFIDENT

People who are comfortable sharing the road with motor traffic but who prefer their own facilities

INTERESTED BUT CONCERNED

People who are curious about cycling and would like to cycle more but they are afraid to ride a bicycle in traffic – they probably would ride if they felt safer

NO WAY NO HOW

People who are not interested in cycling at all for whatever reason.

3.2 In the Portland study the largest group was the 'interested but concerned' group which was estimated at 60% of the population.

3.3 Recent research in the UK has confirmed a broadly similar picture for the seven cities involved in the 'Bike Life' project. This project is being undertaken by the sustainable transport charity Sustrans (in partnership with the Department) and modelled on the Copenhagen Bicycle Account - a biennial report on cycling in the Danish capital.

3.4 The Belfast Bike Life report was published (with reports from the other six cities) on 21st October 2015¹⁰. A central feature of the report is the presentation of the results of a survey of 1,100 Belfast residents. In this study respondents were asked to classify themselves as one of the following five groups (the percentages relating to Belfast are also indicated):

- Experienced, regular bicycle user (10%)
- Occasional bicycle rider (19%)
- New or returning to a bicycle (4%)
- Aspiring to ride a bicycle (30%)
- Non bicycle rider, not aspiring (37%)

3.5 Based on the descriptions given in paragraph 3.4, Group 1 (experienced, regular bicycle user) it broadly covers the 'strong and fearless' and 'enthused and confident' Portland groups. Groups 2 - 4 generally cover the 'interested but concerned' group. Group 5 broadly equates to the 'no way, no how' group. Accordingly, the cohort of the Belfast population which is 'interested but concerned' in terms of every day cycling is around 53% (for the other six cities the figures for this group range from 51 - 55%). In fact even those who were not interested in cycling, supported the provision of better cycling infrastructure.

3.6 The vision for cycling set out in the current Bicycle Strategy has this large cohort of population in mind. The proposal to develop a Belfast Bicycle Network Plan aims to give this large section of the population the freedom and confidence to use the bicycle, with the associated health/wellbeing, environmental, economic benefits making real improvements to the quality of life of the people of Belfast.

Question 3:

Do you agree that the development of a Belfast Bicycle Network is a key element in giving those who would like to cycle (but currently don't) the freedom and confidence to do so?

3.7 This vision sees cycling as an integral part of a transport system that offers a choice of integrated travel modes, emphasising active travel (walking and cycling), public transport and car-sharing. In pursuing the Bicycle Strategy 2015, this vision would mean that in Belfast in 25 years time:

- People using bicycles would become characteristic of the city; and
- Over 12% of all daily trips made in the city would be made on the bicycle.

3.8 The network is about providing dedicated infrastructure for people who wish to cycle and for ensuring that conflicts with other road users are minimised. It is not intended that cycling will always take priority over other users but that specific cycling initiatives will provide a safe environment which will encourage people to use the bicycle with confidence. However, it must be remembered that the road user hierarchy¹¹ requires that the most vulnerable users must be considered first, starting with pedestrians and then bicycles.

3.9 As envisaged in previous documents, we believe the provision of a network of coherent, accessible and comfortable cycle routes with high quality consistent design will be successful in helping a significantly larger number of citizens to cycle in the city as part of their everyday activities. In other words, the objectives of the network would be:

- To develop a comprehensive bicycle network for commuter, amenity and recreational cycling through the expansion of cycling infrastructure and cycling facilities;
- To bring good quality cycle routes within the reach of most people within the city;
- To ensure a consistent level of service in the design of safe infrastructure – providing dedicated infrastructure where there are large volumes of higher speed vehicles and shared facilities where the volume and speed of traffic is low;
- To encourage use of the bicycle and promote safe cycling through increasing the amount of bicycle parking, providing more cycling education programmes for both young people and adults, supporting events to promote cycling.



- 3.10 The Belfast Bicycle Network is primarily focused on developing a Primary coherent city wide bicycle network to provide convenient access to safe cycling facilities for citizens throughout the city. Once the network is agreed it will set out a framework for the development of individual cycling schemes, to be designed and constructed subject to the provision of necessary funding.
- 3.11 Some of this will be new on-road cycle infrastructure and some will be off-road. The focus is on a broad range of cycling - commuting to work, training or education, making short utility journeys to services and shops but also to encourage and provide for recreational or leisure cycling. We recognise that recreational and leisure cycling is often the first step toward other reasons for cycling.

Question 4:

Do you agree that the objectives in 3.9 should be applied to the network? If not, what objectives do you think should be set?

Developing a Network for Belfast

- 3.12 We believe that the network should be developed in two stages. A Primary network which will form a core network which will be the backbone of the entire system. It will carry the highest volume of bicycles, have as much separation from motor traffic as possible in order to provide a comfortable, low-stress experience that will welcome riders of all ages and abilities and utilise existing cycle paths. We envisage that this will consist of eight arterial or radial routes



Photograph courtesy of Sustrans

broadly reaching out to the eight principal points of the compass and three orbital routes connecting the arterial routes around the city centre, around the outer ring and roughly at a midpoint around two miles out from the city centre.

Question 5:

Do you agree that the primary network should be based on the concept of arterial and orbital routes?



- 3.13 The Primary network will be adjacent or close to the majority of Belfast communities, initially giving better access to all. The secondary network will reach further into communities and will provide access to services and other key destinations. This secondary network will carry varying volumes of bicycles depending on the population density and destination. It will have varying levels of separation from motor traffic depending upon the context and character of the area. As we view it at present, it will mainly be comprised of cycle lanes, contra-flow lanes, quiet routes and bicycle priority shared lanes.

- 3.14 In each neighbourhood, the secondary network will be shaped by individual projects, community input, and the goals of this document. The delivery of the network will require years of coordination and commitment and will be constructed incrementally.

Question 6:

Do you agree that the network should be developed in Primary and Secondary stages as outlined in 3.13? If not, how should it be developed?

4.0

Network Development

Cycle tracks and lanes where adults frequently accompany young children on bicycles should be sufficiently wide to allow for cycling two abreast.

User Needs

- 4.1 In order to understand the process of route selection, and the concept of the network, it is important to understand the needs of the different people who either use the bicycle or would like to use the bicycle. There are people of all ages and sizes who have a variety of reasons for using the bicycle - different purposes, different lengths of journey and different levels of skill and confidence. Indeed, any one individual can have many different reasons for cycling and can feel more or less confident depending on the environment or surroundings. People can adopt more than one style of cycling depending on the purpose of the journey they are taking.

- 4.2 **Users of Specialised Equipment:** as the numbers of people cycling increases there will be an increasing number of those with disabilities who will use hand-cranked machines as well as users of trailers, trailer-cycles, tandems and tricycles. In order to provide for this, infrastructure needs to be sufficiently wide, free of sharp bends and minimise pinch-points or other features which require people to dismount.
- 4.3 **Inexperienced:** this includes young children (who normally cycle on the footway), teenagers who are neither familiar with on-road cycling skills nor the rules of the road and adults who are new to cycling or are returning to cycling after many years.
- 4.4 Children should be anticipated in all residential areas and on most leisure cycling routes and may require segregated, direct routes from residential areas to schools. This would encourage parents to allow their children to use the bicycle.
- 4.5 Cycle tracks and lanes where adults frequently accompany young children on bicycles should be sufficiently wide to allow for cycling two abreast, to enable the adult to ride alongside the child when necessary. Network design also needs to take account of personal security issues.
- 4.6 **Casual:** typically this may describe those who enjoy cycling as a recreational activity but who may or may not be comfortable in the on-road environment. Those who undertake casual cycling may use the cycling infrastructure to access local community destinations but usually avoid roads with moderate to high traffic volumes. They will probably obey the rules of the road that they feel are relevant and that they understand and typically prefer residential streets within their neighbourhoods or off-road routes - ideally wide, flat routes which do not require a high level of skill or a high degree of attention to bicycle handling and control. However, they are easily discouraged by unfavourable conditions.
- 4.7 In some instances a casual bicycle rider may be willing to sacrifice directness in terms of both distance and time, for a route with less traffic and more places to stop and rest. It is generally the case that they may travel more slowly than regular riders.



4.8 **Experienced:** they are generally comfortable with both on and off-road riding although there are experienced people who cycle off-road who would avoid on-road cycling. Equally, there are experienced people who cycle recreationally who would never consider commuting by bicycle. Those who are experienced generally have good bicycle handling skills, and are less discouraged by traffic, a lack of on-road designated facilities or adverse conditions. In urban areas, people who cycle for utility reasons tend to prefer on-road cycle lanes.

4.9 Many people who are experienced are confident in most on-road situations, and may use routes with significant traffic volumes if they are more direct than a quieter route.

However, even in this group there are many who would welcome some segregation at busy junctions and on routes carrying high-speed traffic.

4.10 The progression from 'inexperienced' to 'experienced' is a process of gradual skill development and confidence levels. This continuum takes time and commitment to cycling on the part of individual participants. Good bicycle infrastructure encourages individuals to make a personal commitment to developing their skills in this gradual manner.

Question 7:

Do you agree that we should consider requirements of likely users on a scheme by scheme basis, for example routes which will primarily be used by children on the school journey may be best served as shared track?



Trip Purpose

- 4.11 Amenity or utilitarian cycling emphasises journeys with a destination in mind - journeys that are taken not for the sake of the journey but to reach somewhere. Everyday cycling is utilitarian in nature - it is a journey that would be taken anyway by some other means if it wasn't cycled. Recreational or leisure cycling, on the other hand, emphasises the cycling as an activity itself. It is undertaken principally for reasons such as relaxation, fitness or health where the destination is often also the starting point.
- 4.12 People who cycle for utilitarian reasons use the bicycle throughout the year and often in all weather conditions, although seasonally they may switch to public transport or other modes. Many use their bicycle to commute to work or school while others choose to cycle to visit friends or to run errands. Typically, bicycle commuters have good mobility skills, are familiar with the Highway Code and prefer to use cycling infrastructure where possible.
- 4.13 People who cycle for recreation mainly use the bicycle for fitness, leisure or touring. In many cases they do not cycle for utilitarian purposes because of journey time and distance but it is also the case that some feel cycling to work is not feasible because they 'can't carry things on a bicycle'.



Typically, bicycle commuters have good mobility skills, are familiar with the Highway Code and prefer to use cycling infrastructure where possible.

4.14 Some research has found that other obstacles that discourage people who cycle for recreation from moving to utility cycling include inconvenience of cycling, incompatibility with work clothes, plus lack of shower, change room and bicycle parking facilities¹². As standards for work dress have become more casual in recent years, the incompatibility with work clothes has become less of an issue.

4.15 People who cycle casually and for recreation are more likely to use bicycle infrastructure within their neighbourhood or at destinations they arrive to by other modes of transport. In light of the fact that many roads typically have high traffic volumes, on-road bicycle infrastructure is likely to be primarily used by experienced and utilitarian riders.

Types of infrastructure

4.16 The network would consist of different types of infrastructure, each type being best suited to the particular circumstances at that location. Proper segregation is the preferred form of infrastructure for the primary network although this may be varied depending on both the volume and speed of other traffic. The following types of infrastructure may be deployed:

- **Cycle track:** a facility separated from the carriageway and footway by fixed objects such as parked cars, kerbs, bollards or wands and designated for

riding bicycles (appropriate in circumstances where the volume and speed of motor traffic is relatively high and the pedestrian footfall is high).

- **Mandatory Cycle lane:** on-carriageway lane identified by road markings and traffic signs and designated for riding bicycles (appropriate in circumstances where the volume and speed of motor traffic is relatively low and the pedestrian footfall is high). A mandatory lane (demarcated by a solid white line) is for the exclusive use of bicycles. This includes additional segregation by wands.
- **Contraflow cycle lane:** a cycle lane in a one-way street that facilitates cycling in both directions (appropriate in circumstances where the volume and speed of motor traffic is relatively low and the route avoids a long detour for cycling).
- **Shared use path or track:** a path physically separated from motor traffic and designated for shared use with pedestrians (appropriate in circumstances where the volume and speed of motor traffic is relatively high but the pedestrian footfall is low).

- **Bus and cycle lane:** a shared on-road facility designated only for bus, bicycle and other limited vehicles (may be appropriate in circumstances such as the city centre, where the volume and speed of buses is relatively low and there is sufficient width to accommodate a wide 4.5m lane). We believe that separate cycling provision is the best solution and will strive to provide this where possible, but we recognise that bus and cycle lanes may be an interim solution.
- **Shared street:** a street with very low speeds where all modes of travel are able to share the space (footways may be blended with the carriageway) and no particular mode has priority.
- **Quiet route:** a quiet (typically residential) street that provides connectivity to neighbourhood destinations and primary routes where motor traffic volumes are low and priority is given to people walking and using bicycles.
- **Traffic calming:** similar to a quiet route but with added traffic calming (e.g. speed cushions and ramps).

Question 8:

Are there any other kinds of bicycle infrastructure that should be considered? What are they? Do you have any views on which types of infrastructure, if any, should be favoured in developing a network for Belfast?



5.0

The Bicycle Network

Network Requirements

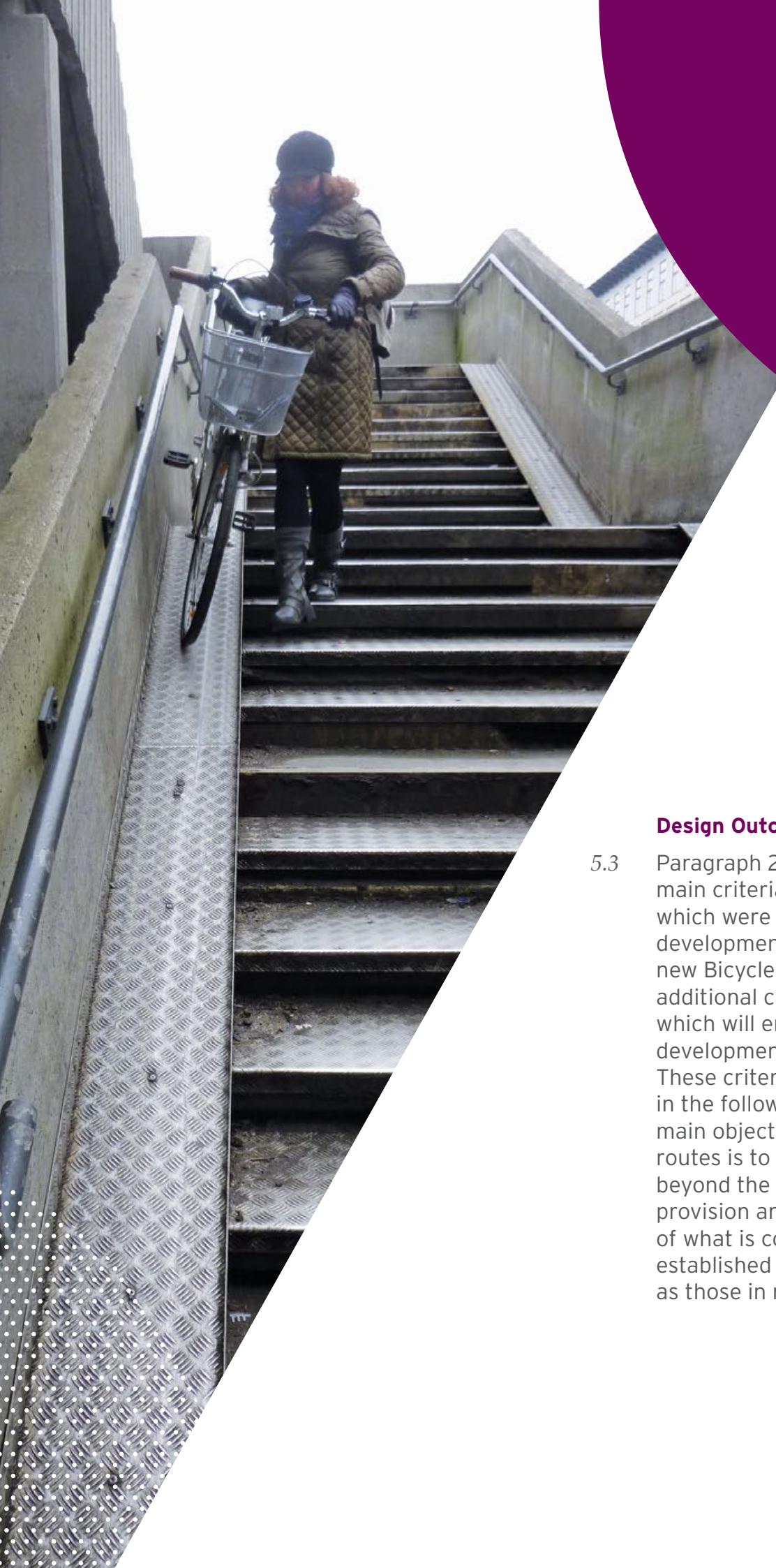
5.1 Building on the themes agreed in the Bicycle Strategy we have drawn up a number of network requirements to assist in defining the general character of the proposed bicycle network in Belfast. In order to develop and maintain a coherent and consistent network it is important that the requirements are referred to:

- at the time of route selection;
- during the design and implementation of individual routes within the network;
- when changes to the network are being contemplated;
- in other relevant planning documents; and
- when the Belfast Metropolitan Transport Plan is reviewed and updated.

Question 9:

Do you support the use of the network requirements as detailed at paragraph 5.1?

5.2 The network requirements are organised under the two headings of Design Outcomes and Guiding Principles.



Design Outcomes

- 5.3 Paragraph 2.9 sets out the five main criteria for network design which were adopted for the development of the BMTP. This new Bicycle Network assumes an additional criterion of adaptability which will ensure that all cycling development is future proofed. These criteria are further expanded in the following paragraphs. The main objective in designing these routes is to take the infrastructure beyond the general level of existing provision and raise it to the level of what is commonly provided in established cycling societies such as those in northern Europe.

5.4 Coherence: cycling infrastructure should form a coherent entity, linking all trip origins and destinations; with a continuous level of provision. This means that the bicycle network should be a visible component of the transport system in the city. Bicycle routes and facilities should be connected to form an overall cohesive bicycle network that makes it possible to use and promote the network as a viable mode of transport throughout the city. To achieve this, the bicycle network should provide connectivity across major barriers (e.g. strategic roads, railways and rivers). The need for new or alternative cycling routes should be reviewed and evaluated during the planning stages for the construction or upgrading of any major structure (e.g. road junctions or bridges) across the barrier in order to appropriately capitalise on opportunities that arise. Signage

and other way finding elements should be developed as an integral part of the system and should be designed to be easily recognisable, clear and concise. Signage should have universally accepted symbols placed in a logical manner and be readily visible.

5.5 Directness: routes should be as direct as possible, based on desire lines, since detours and delays will deter use. Routes should provide access to key services and recreational destinations in the city. It is also important that use of the bicycle network should be generally available to everyone. As such, cycling routes should be accessible from all areas within the city. Access points should be available in strategic locations. Alongside this, it is important to maximise opportunities for future expansion and linkages to surrounding areas and other cycling networks. The location / selection of routes should take advantage of roads capable of accommodating cycling facilities, either in their existing state or through the provision of additional width within the road. New transport infrastructure should be designed to accommodate cycling facilities.



Support facilities such as bicycle parking should be available throughout the network and at major cycling destinations.



Photograph courtesy of Sustrans

- 5.6 **Attractiveness:** the network should appeal to people with a variety of cycling abilities and interests. Routes need to be attractive on subjective as well as objective criteria. Aesthetics, noise and integration with the surrounding area are important. In areas of new development, planning for on and off-road cycling facilities should be an integral part of the land use planning process. Support facilities such as bicycle parking should be available throughout the network and at major cycling destinations. Employers should be encouraged to provide support facilities that are accessible and useable by those who choose to cycle.
- 5.7 **Safety:** the network should be located and designed in a manner to maximise the safety of users. Designs should minimise the danger for all road users. Safety should not be compromised simply in the interests of minimising cost. Current and widely accepted cycling design guidelines and standards should be used as the basis for design. Without compromising safety, cost-effective and innovative design solutions should be sought. Perceived safety in terms of lighting and personal safety is also important.
- 5.8 **Comfort:** bicycle routes need smooth, well-maintained surfaces, regular sweeping, and gentle gradients. Routes need to be convenient to use and avoid complicated manoeuvres and interruptions. The network should be constructed and maintained to acceptable standards: including adequate width, capacity and surface quality. Facilities should be monitored in an appropriate manner. Initial capital costs should not be considered in isolation of ongoing maintenance costs, i.e. whole life cost.
- 5.9 **Adaptability:** cycling infrastructure should be designed to accommodate users of all types of cycle and also increasing numbers over time. The routes also need to be able to provide continuity with public transport modes including the Belfast Bike Share Scheme.
- Question 10:*
- Do you agree with the addition of 'Adaptability' as a network requirement? What other requirements would you like to see included?

Guiding Principles

- 5.10 These principles are fundamental to achieving the Bicycle Strategy Vision and in encouraging more journeys by bicycle. They have been developed having taken into account the main shortcomings of the existing infrastructure – shortcomings which have worked against the achievement of a significant increase in bicycle usage.
- 5.11 **Cycling must be planned for mass transport:** currently, figures indicate that cycling journeys account for 1% of all journeys (TSNI 2012 – 2014)¹³. The Belfast Bike Life report also indicates that there are almost 7 million bicycle journeys in Belfast in 2015¹⁴. The Bicycle Strategy sets out ambitions for 20% of all journeys less than a mile and 10% of all journeys between 1 and 2 miles to be cycled by 2025. In order to achieve, this it is essential that people who use bicycles are given meaningful space as road users. New facilities must take this into account in order that people have the freedom to choose to travel by bicycle.

- 5.12 **Facilities need to be designed for growing numbers:** the number of cycling journeys in Belfast is growing. This has recently been demonstrated in two ways: firstly, statistics derived from the ‘Cycling and Walking to / from work’ report¹⁵ indicate that 3% of commuter journeys in Belfast are by bicycle; and, secondly, almost 330,000 journeys were made using the Belfast Bike Share Scheme during the first eighteen months¹⁶. To accommodate an increasing volume of bicycles, cycle lanes need to be of a sufficient width (as set out in the London Cycling Design Standards. Adequate width is also important to encourage an increase in the use of cargo bicycles and bicycles with trailers. As numbers increase on popular routes, the potential for wider lanes to allow overtaking should be achievable.

Question 11:

Do you agree that the routes should be planned and facilities designed with the achievement of increasing numbers of people cycling in mind?

13 <https://www.infrastructure-ni.gov.uk/sites/default/files/publications/drd/travel-survey-for-northern-ireland-in-depth-report-2012-2014.pdf>

14 http://www.sustrans.org.uk/sites/default/files/bike_life_belfast_2015.pdf

15 <https://www.infrastructure-ni.gov.uk/system/files/publications/infrastructure/cycling-and-walking-to-from-work-in-northern-ireland-201516.pdf>

16 <http://www.belfastbikes.co.uk/media/November%20Web%20Report.pdf>

5.13 Bicycles should be segregated from pedestrians where possible: dedicated space for riding bicycles is our goal and that will mean segregation from other road users - particularly in areas of high density such as busy footways and busy carriageways. However, shared space is a reasonable approach where there is a low level of pedestrian traffic (just as sharing the carriageway is a reasonable approach in quiet or residential streets). In these areas, wide shared footway / cycleways should be provided which can later be segregated if conflict becomes an issue. Segregation or extra width should also be provided at crossings.

5.14 Bicycles should have space separated from volume motor traffic: separation from high volumes of motor traffic creates an improved 'perceived' safety which makes cycling more attractive. This

can be achieved in a number of ways depending on the environment of the street and available road space. Such measures will vary but include full kerb islands, half kerbs on stepped tracks, wands on mandatory cycle lanes and light segregation.

5.15 Quiet and lower-traffic speed streets should be used: many people using a bicycle will naturally revert to routes with lower traffic volumes and speed unless it affects the directness of their route. In these situations, separation and special measures for bicycles will not normally be required. Consideration should be given to creating such environments especially where they also create a better sense of 'space' for residents, commuters, shoppers and visitors. This can be achieved simply by stopping up through routes with, for example, bollards.



- 5.16 **Interventions need not be attempted on every road:** although bicycles may be used on any road (except motorways) it is not necessary to undertake bicycle interventions on every street. In addition, some busy, narrow main roads present particular challenges for providing bicycle infrastructure. However, where alternative roads exist - in parallel to the main road - we will consider designating different roads for different users.

Question 12:

What are your views on segregation between people who walk, people who cycle and people who drive? What are your views about physical segregation between motorised traffic and non-motorised traffic? Do you agree that there are levels of traffic (footway or carriageway) below which physical segregation is not always necessary - such as quiet routes and residential areas?

- 5.17 **Routes need to flow and must take account of how users actually behave:** routes need to be as direct and continuous as possible. The big advantage of a journey by bicycle is that delays are at a minimum. A long detour or obstruction will mean that people will not use the infrastructure but resort to using the footway or carriageway. The deploying of a 'Cyclists Dismount' sign indicates that more work needs to be done to complete the route.

- 5.18 **Routes need to be intuitively understandable by all users:** cycle routes need to be clear to all road users. They should not create doubt along the length of the route or at decision points. Although this can be difficult to achieve where route treatment changes (e.g. where a route becomes part of traffic in quiet or low traffic-volume streets) good signage should avoid the 'abandoned' feeling where a cycle route disappears.

- 5.19 **Provision needs to be consistent and routes needs to be planned as a network:** unconnected piecemeal infrastructure does not encourage bicycle journeys. They need to be designed on a whole-route basis taking account of all functions of the areas through which they pass. This will include cycle parking at appropriate locations, lighting, signage and quality of surface. This document strives to identify such routes for a comprehensive primary network.

Question 13:

How important is the requirement that 'routes need to flow'? What kind of signage should be provided? What facilities should be provided?

- 5.20 **Capital infrastructure may be necessary:** in specific situations the only solution may be substantial infrastructure such as a bridge or tunnel. These need to be considered long term if necessary.

5.21 All designers of cycle schemes should cycle the proposed route:

ideally all schemes should be designed by people who regularly cycle but as a minimum the designer should travel through the area by bicycle to get an understanding of how it feels to be a novice. Designers should also cycle existing infrastructure to understand how it works.

5.22 Routes need to be maintained:

roads get dug up and cycle tracks are rarely brushed leaving them littered with debris and broken glass. In the winter, cycle routes tend not to be salted. Arrangements for proper maintenance should be included in considering the design detail. The same goes for the maintenance of other road infrastructure. Cycling infrastructure should not be sacrificed to compensate for the loss of other road space.

Question 14:

What is the relative importance between construction of a route and its maintenance? What other guiding principles would you suggest? Please explain.

Route Identification

5.23 As a first stage in developing this bicycle network for Belfast, we have identified a number of candidate routes for the primary network. This has included some informal consultation with interested stakeholders.

5.24 We have chosen routes which reflect the main approaches to the city which mirror the main vehicle arterial routes and desire lines. This way we aim to maximise the number of Belfast residents who are within reach of the network.

5.25 We have carried out preliminary assessment on all these routes to ensure the practicality of a potential network. However, we have yet to:

- a. Assess the individual sections of each route using the evaluation factors identified in the following table; and
- b. Identify in detail what alterations or improvements would be required on each individual section of the potential routes in order to deliver 'fit for purpose' cycle infrastructure for the route.





5.26 The purpose of this exercise is to identify and agree routes for inclusion in the primary network. We can then assess and identify details for further consultation on a scheme by scheme basis.

5.27 It is not intended that these routes should be fixed at this stage as consultation with local communities is an essential stage in developing routes that will meet their particular needs – including the skill level of those who will use the routes and the purposes for which people in that locality would wish to cycle. In developing these routes we wish to keep sight of three principles:

- The infrastructure should be inviting enough to encourage those who are inexperienced to cycle on it
- The infrastructure should enable those who are inexperienced to grow in cycling confidence
- Priority needs to be given to providing safe infrastructure in the places where those who are inexperienced most need it rather than in places where it is easiest to provide.

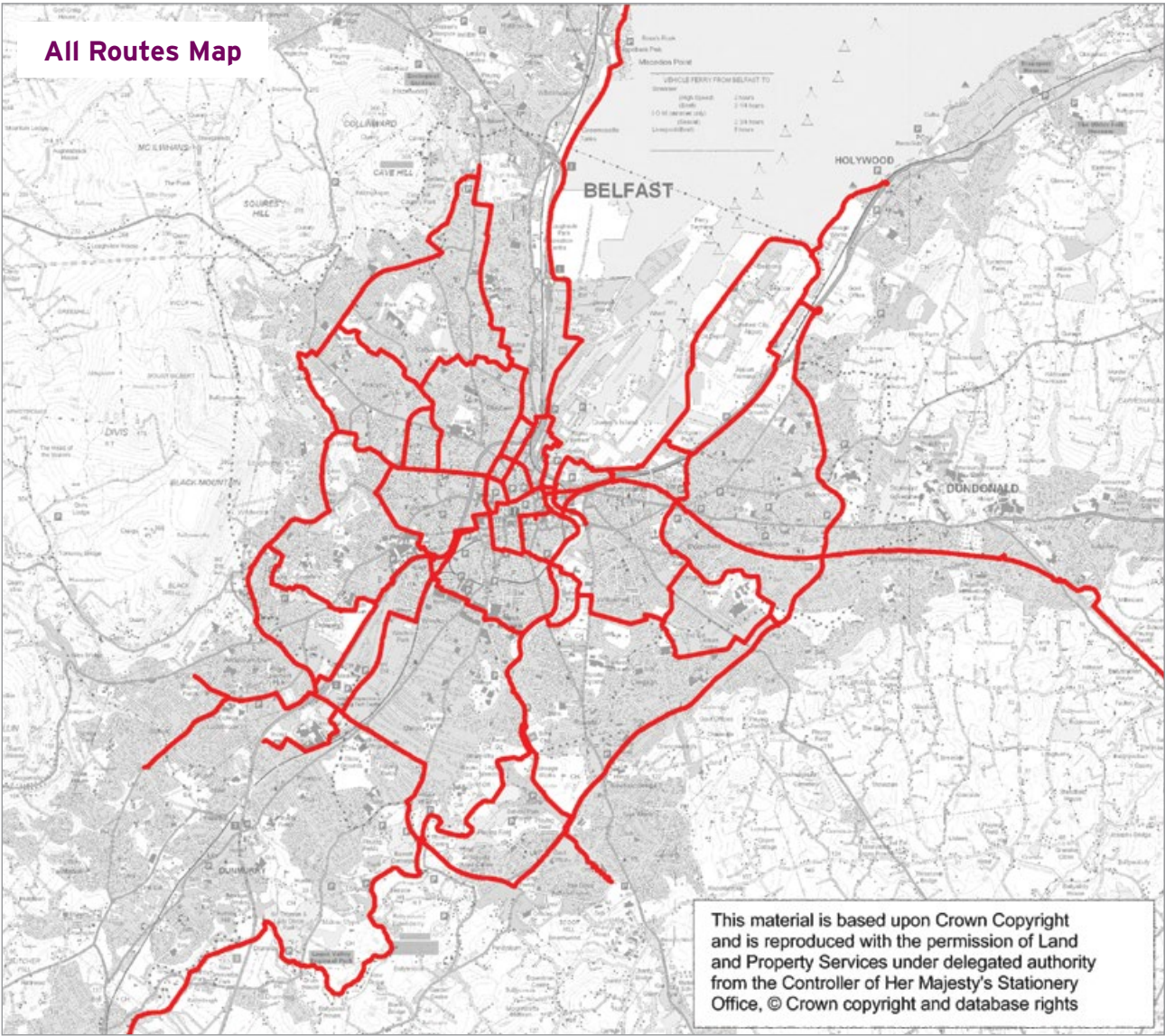
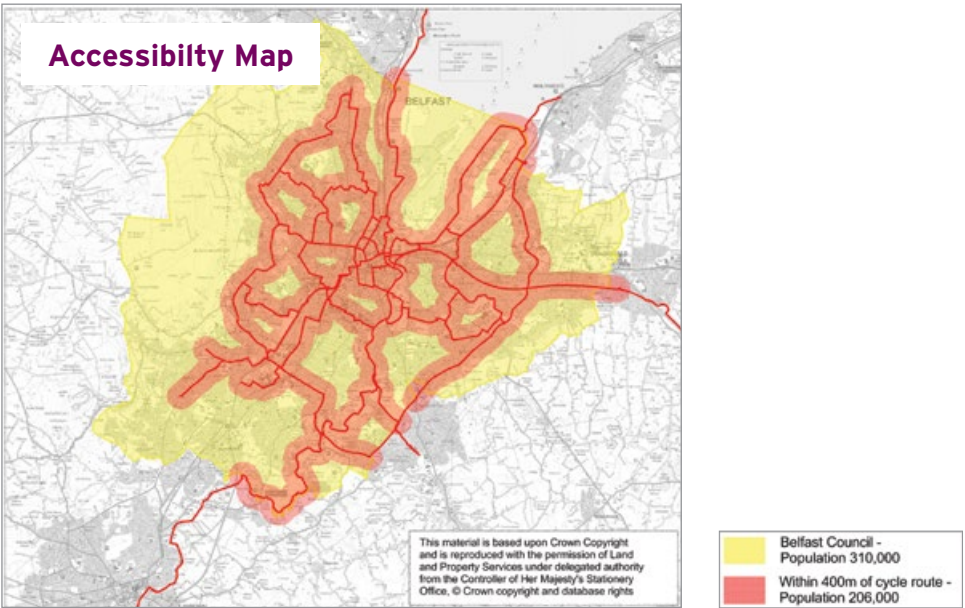
5.28 Appendix L sets out how the selection process will be governed by two principles. These are that the infrastructure provided:

- should not be difficult or inconvenient to use; and,
- should not encourage bicycle or motor vehicle use contrary to the Highway Code.

Proposed routes

5.29 The primary network is illustrated below in the following map. These are not settled plans but an indication of possible routes based on the knowledge of the planning team. Further detail on the individual proposed routes is set out in the Appendices.

5.30 The proposed primary network will be accessible to two thirds of all Belfast City Council Residents (within 400m). Beyond this primary network, the secondary plan will ensure that all communities have even closer access to bicycle infrastructure.



- 5.31 We believe that the people living in the different areas of the city through which these proposed routes pass and people who cycle in these areas are well placed to comment on these proposals and this is the main reason for the consultation.

Question 15:

With reference to the appendices please set out your views on the proposed routes. We are interested in the positives or negatives associated with the various sections of the proposed routes.

Question 16:


What are the specific issues that may arise if bicycle infrastructure was constructed along the proposed route?

Question 17:

What other alternative routes are available?

Other Implementation Issues

- 5.32 The Belfast Bicycle Network will be phased in over time. The Primary Network, which will serve as a trunk system from the suburbs to the city centre, will be developed over the next ten years – starting in the areas where there is already a higher level of cycling. As this network is rolled out, work will be carried out on the Secondary Network. This will increase network density, improve access to the network and provide more connections to services for local areas.
- 5.33 Consistent design guidelines will be adopted to ensure that cycle infrastructure is coherent and a consistent level of service across the city. The London Cycling Design Standards have been used for the design of the most recent bicycle schemes in Belfast and it is proposed that these standards will be adopted for the agreed routes in the final network.
- 5.34 A variety of supporting initiatives will be introduced by both Government and other potential stakeholders working co-operatively.
- 5.35 The cycling infrastructure in the city will be effectively integrated with the wider cycling infrastructure across the region. In particular, use will be made of dismantled railways and disused canals or riverside paths where available.

- 
- A photograph of a person cycling on a paved path. In the foreground, a blue circular sign with a white bicycle symbol is visible. The path is bordered by a metal railing on the left and a road with parked cars on the right. Bare trees and a bright sun are in the background, creating a warm, golden-hour atmosphere. A large yellow diagonal graphic element is on the right side of the page.
- 5.36 In November 2016, we published a Strategic Plan for Greenways. This document sets out the plans for a network of greenways, connecting towns and cities to the villages and countryside from east to west and north to south across all eleven councils¹⁷.
- 5.37 As part of an enhanced programme to accommodate cycling, facilities such as bicycle-friendly gates, cycle parking, maintenance of cycleways and priority at traffic signals will be pursued.
- 5.38 Out of the 128km of proposed network, it is estimated that 40% of it already exists. However, it may not be of sufficient standard, for example in relation to width and lighting.

6.0

What Next

Consultation

- 6.1 We want you to consider the routes proposed and respond to our consultation with your views. When we have considered all the responses we will be able to finalise the Belfast Bicycle Network.
- 6.2 Following this, work will be undertaken to assess proposals in detail on a scheme by scheme basis as explained in Chapter 5. Further consultation will be carried out on each scheme.
- 6.3 As with any other transport network, even when constructed, the Belfast Bicycle Network will be of little use if no-one is aware of it. An important part of the network is to sign and map the routes to improve accessibility and to facilitate travelling around Belfast by bicycle. As routes are established, branded signage with route numbers will be developed to make it easier to use the network.

Timescale

- 6.4 This document focuses on the primary network for implementation over the next ten years. The expansion will be incremental, but work has already started on three flagship schemes in Belfast city centre which include parts of Routes 3, 4, 5 and 6.
- 6.5 As well as specific bicycle schemes, opportunities to develop routes as part of other upgrades to the transport network will also be undertaken, such as part of Route 8 with the proposed upgrade to York Street Interchange.
- 6.6 The proposed network aims to provide safe and attractive space which will give people the freedom and confidence to travel by bicycle. Many of the routes will not be along side or near the public road such as through parks. We have already had discussions with some authorities to ensure that routes can be developed. The Councils and other bodies will have a key role in the delivery of this network.

Funding

- 6.7 The need for sufficient resources to drive increased levels of cycling has been the subject of extensive debate and has been recognised in Section 21 of the Infrastructure Act (2015). This acknowledgment of the need for sufficient resources followed on from the influential report from the All Party Parliamentary Group on Cycling 'Get Britain Cycling'. Published in April 2013, that report recommended a cycling budget of at least £10 per person per year, increasing to £20¹⁸.
- 6.8 The Bicycle Strategy suggests cycling investment of £12.5 million capital per annum within five years (split 2:1 between capital and resource¹⁹) and £18 million per annum within ten years across the region in order to achieve the ambitions set out in the strategy. Delivering this network is also predicated on funding at that level.
- 6.9 In 2015/16 £800,000 was provided for the three bicycle infrastructure schemes referred to at paragraph 6.4. A further £1 million is available for two more flagship schemes which will be built over the next year. Altogether these five schemes will provide 3km of dedicated cycling provision in Belfast and will link together existing sections of bicycle infrastructure to create better connectivity.



18 <https://www.infrastructure-ni.gov.uk/sites/default/files/publications/drd/a-bicycle-strategy-for-northern-ireland.pdf>, page 33

19 Resource is money that is spent on day to day maintenance of a scheme. Capital is money that is spent on initial building costs.

APPENDIX A

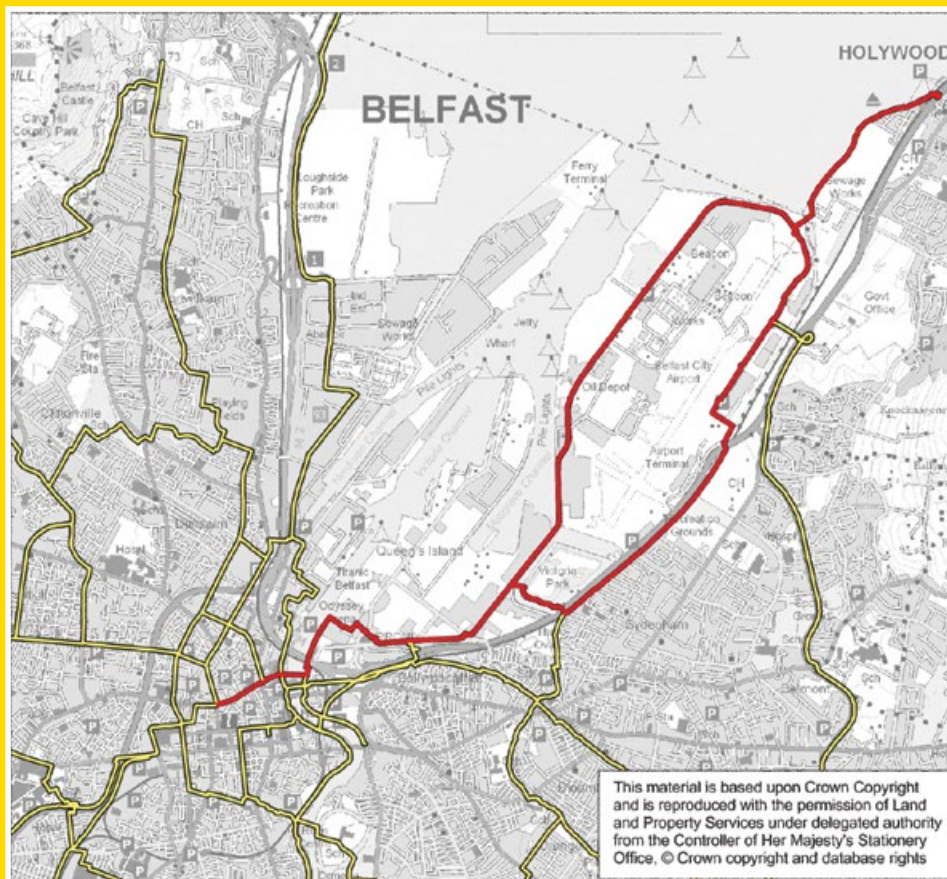
The Northeast Route **Route 1**

CASTLE PLACE (BELFAST) TO REDBURN SQUARE (HOLYWOOD)
- 9.0KM.

This route will be part of the wider Strategic Greenway Network

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It continues east down High Street, past the Albert Clock into Queen's Square. After crossing Donegall Quay it proceeds across the Lagan Weir bridge, turns north and follows Queen's Quay past the Odyssey. It follows the river path behind the Odyssey, passes the Public Record Office and joins Sydenham Road. After the roundabout it joins Airport Road for 5km turns left into a private gated road and follows the coast road to the Esplanade (Holywood). Via the pedestrian path under the railway and the subway (with ramps) it ends in Redburn Square. An alternative route could be via the Sam Thompson bridge, Victoria Park and Holywood Exchange either along the southeastern side of the railway or as part of a road widening scheme on the Sydenham bypass. An alternative starting point is Arthur Street, travelling east along Chichester Street, through the Courts, across Oxford Street to the Waterfront. Heading south along the riverside path a short distance taking the railway bridge crossing, across to the east side of the river and join a potential route through the Sirocco works, parallel to the railway line, leading to Titanic Quarter Station.



Details

SECTION	CURRENT PROVISION
Castle Place	No specific provision - the street is restricted access but there is a high volume of bus usage
High Street (Cornmarket - Bridge Street)	No specific provision - the street is restricted access
High Street (Bridge Street - Victoria Street)	Eastbound feeder lane to ASL in the middle of the road on approach to Victoria Street
Queen's Square	Restricted access street - wide pavement on north side with a marked cycle path
Lagan Weir bridge	Shared foot and cycle way (wide)
Queen's Quay	Shared foot and cycle way on west side (riverside path)
Abercorn Basin	Shared space
Abercorn Basin - Titanic Boulevard (via cycleway across Queen's Road)	Shared space beside Abercorn Basin and toucan crossing over Queen's Road - poorly marked path along Titanic Boulevard
Sydenham Road (Titanic Boulevard - 'Dee Street' roundabout)	Segregated two way cycle track on north side
Airport Road (Conn's Water bridge - Airport Road West)	Road
Airport Road West (Airport Road - Wastewater Treatment Works Access Road)	Road - there is a wide grassy area along the seaward side of the road
Wastewater Treatment Works Access Road	Restricted access road (quiet road)
Coast road - Kinnegar Avenue	Restricted access road (quiet road)
The Esplanade (private road section)	Restricted access private road (quiet road)
The Esplanade (public road section)	Road
Railway underpass	Shared foot and cycle path
Marine Parade subway	Ramp and shared foot and cycle path
Redburn Square / Hibernia Street	Road

SECTION	CURRENT PROVISION
ALTERNATIVE ROUTE between Sam Thompson bridge and Airport Road West	
Sam Thompson bridge	Toucan crossing on Airport Road - shared foot and cycle bridge
Victoria Park (Sam Thompson bridge - Sydenham Bypass underpass)	Shared foot and cycle path
Sydenham Bypass underpass	Shared vehicular access to Victoria Park
Sydenham Greenway(between Park Avenue and Inverary Drive)	Shared foot and cycle path (narrow)
Inverary Drive (Larkfield Road - Inverary Avenue)	Quiet road
Recreational ground northeast of Inverary Avenue	None
Cycle bridge over railway	None
Sydenham Bypass underpass	Vehicular exit only from Belfast City Airport with cycle lane
Road between Sydenham Bypass underpass and Ikea site	Quiet road (gated)
Southwest boundary of Ikea carpark	Road with wide area to southwest
Airport Road West (Ikea carpark - Wastewater Treatment Works Access Road)	Road with wide grassy area along the boundary with Belfast City Airport
ALTERNATIVE STARTING POINT	
Chichester Street	On road and shared space through the Courts
Waterfront Path	Shared foot and cycle path (off road)
Railway Bridge	Shared foot and cycle path (off road)
Greggs Quay	Shared foot and cycle path (off road)
Sirocco Works	undeveloped site

Possible improvements on this route could include:

Improvement of the shared area ethos in the very centre of the city; improvement of street environments to create a better sense of space; better segregation along the route and clearer marking of the cycle way; better priority at road crossings and junctions; new bridge crossing (for the alternative route); direct connection with the Connswater Community Greenway at Sam Thompson bridge; improved access to destinations along the route; widened and shared foot and cycleways where footfall is low; improved alignments and provision of new toucan crossings; resurfacing, signage and lighting.

APPENDIX B

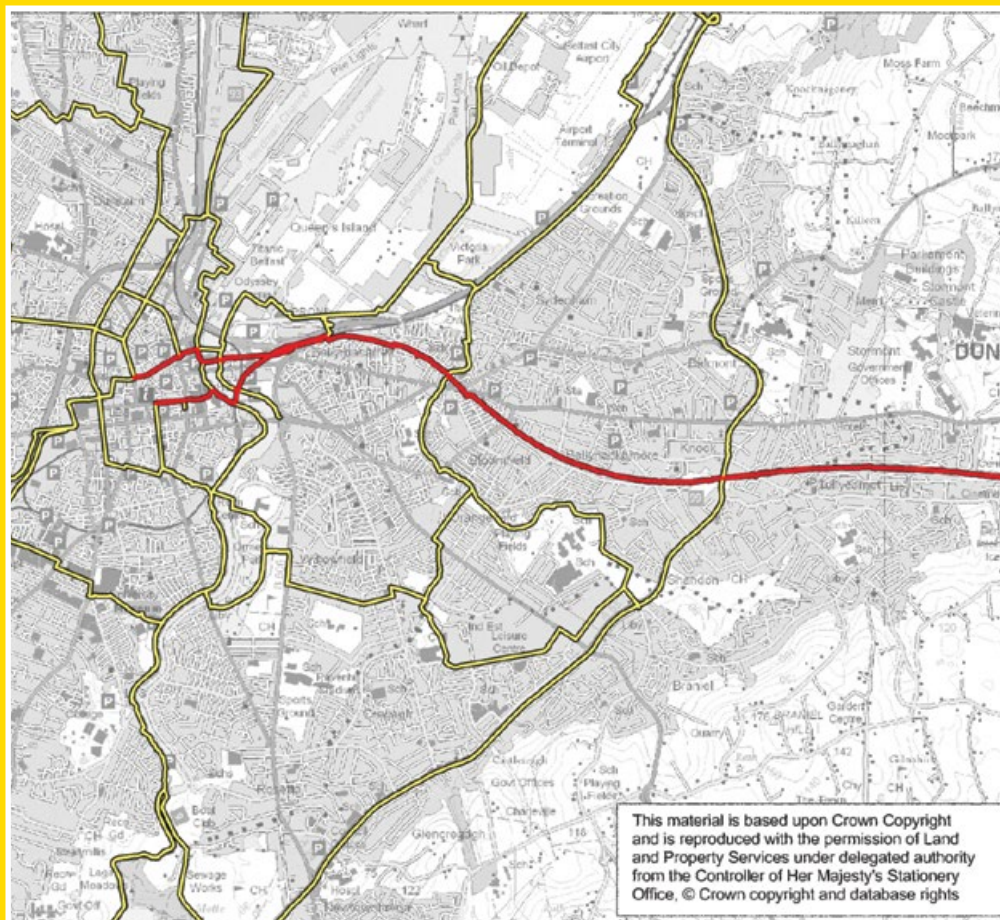
The East Route **ROUTE 2**

CASTLE PLACE (BELFAST) TO THE SQUARE (COMBER) - 15KM.

This route will be part of the wider Strategic Greenway Network

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It continues east down High Street, past the Albert Clock into Queen's Square. After crossing Donegall Quay it turns south and follows Queen Elizabeth Bridge, along Middlepath Street to Titanic Quarter railway station where it enters an underpass to Ballymacarrett Road (and Island Street). At Dee Street, it follows the Ballymacarrett Walkway to the Hollywood Arches. Via Ravenscroft Avenue and the car park on the left it joins the Comber Greenway for 10km. At the end of the Greenway it joins Belfast Road, passes a mini-roundabout joins Mill Street (which becomes Castle Street) and finishes at the Square (Comber).



Details

SECTION	CURRENT PROVISION
Castle Place	No specific provision - the street is restricted access but there is a high volume of bus usage
High Street (Cornmarket - Bridge Street)	No specific provision - the street is restricted access
High Street (Bridge Street - Victoria Street)	Eastbound feeder lane to ASL in the middle of the road on approach to Victoria Street
Queen's Square	Restricted access street - wide pavement on north side with a marked cycle path
Donegall Place (Queen's Square - Queen Elizabeth Bridge)	Shared foot and cycle way on east side
Queen Elizabeth Bridge	Shared foot and cycle way on north side
Middlepath Street	Road
Middlepath Street to Ballymacarrett Road (via Titanic Quarter station)	Cycle lane access to Titanic Quarter station and shared use underpass
Ballymacarrett Road - Island Street	Bicycle bypasses at traffic calming
Dee Street crossing	Toucan crossing (off set)
Ballymacarrett Walkway	Shared foot and cycle way (off road)
Hollywood Arches	Toucan crossings
Ravenscroft Avenue	Marked cycle path
Comber Greenway (Ravenscroft Avenue - Beersbridge Road)	Shared foot and cycle way (off road) - toucan crossing at Beersbridge Road
Comber Greenway (Beersbridge Road - Sandown Road)	Shared foot and cycle way (off road) - toucan crossing at Sandown Road
Comber Greenway (Sandown Road - Knock Road)	Shared foot and cycle way (off road) - toucan crossing at Knock Road
Comber Greenway (Knock Road - Kings Road)	Shared foot and cycle way (off road) - toucan crossing at Kings Road
Comber Greenway (Kings Road - East Link Road)	Shared foot and cycle way (off road) - toucan crossing at East Link Road
Comber Greenway (East Link Road - Comber Road)	Shared foot and cycle way (off road) - toucan crossing at Comber Road

SECTION	CURRENT PROVISION
Comber Greenway (Comber Road - Millmount Road)	Shared foot and cycle way (off road) - toucan crossing at Millmount Road
Comber Greenway (Millmount Road - Belfast Road, Comber)	Shared foot and cycle way (off road)
Belfast Road, Comber	Road
Mill Street, Comber - The Square, Comber	Road

Possible improvements on this route could include:

Improvement of the shared area ethos in the very centre of the city; improvement of street environments to create a better sense of space; direct link from Hollywood Arches to city centre with better segregation along the route and clearer marking of the cycle way; better priority at road crossings and junctions; new bridge crossings at Hollywood Arches, East Link Road and Comber Road; reopen underpasses at Kings Road and Abbey Road; improved accesses to destinations along the route; extend greenway to create a direct link to Comber town centre; widened and shared foot and cycleways where footfall is low; improve alignments and provision of new toucan crossings; widening of the existing greenway, resurfacing, signage and lighting.

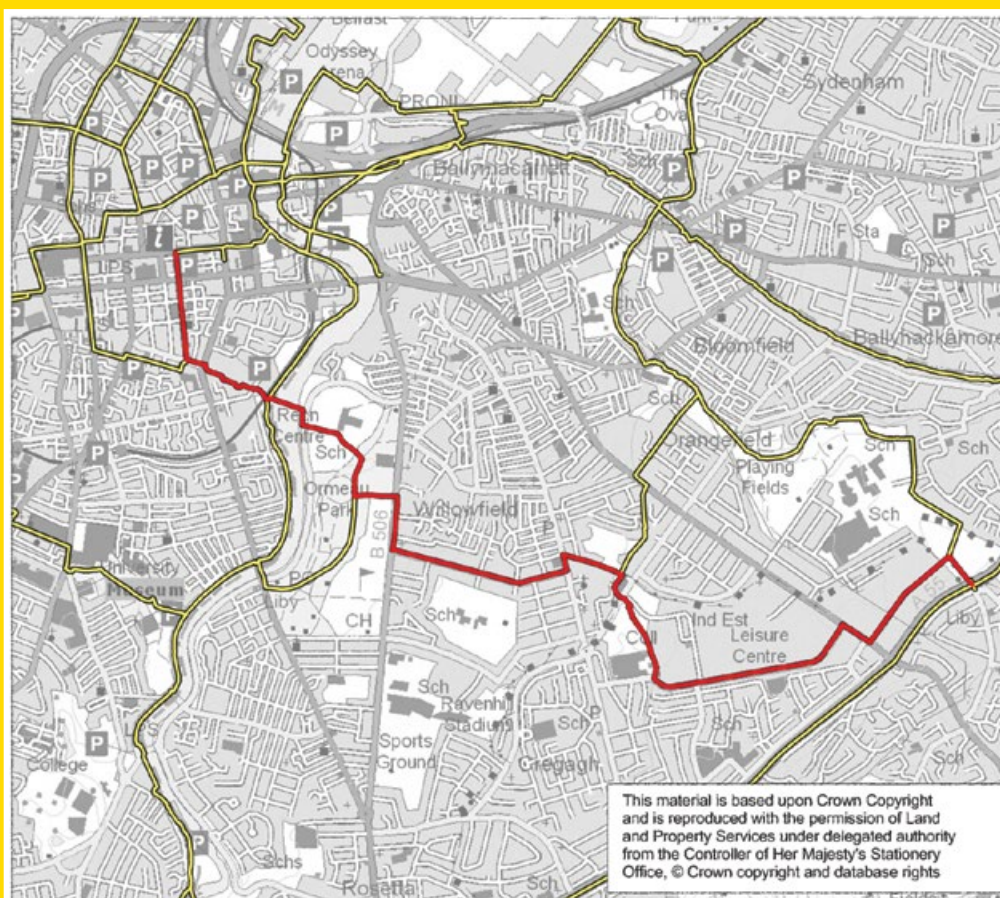
APPENDIX C

The Southeast Route **Route 3**

ARTHUR STREET (BELFAST) TO
WHINCROFT ROAD (BELFAST) - 6.4KM

DESCRIPTION:

The route starts at Arthur Street in Belfast city centre and proceeds south along Upper Arthur Street, Alfred Street and Ormeau Avenue to the Gasworks site. Passing under the railway bridge leads to the site for the proposed Lagan pedestrian and cycle bridge. Crossing the River Lagan, the route proceeds through Ormeau Park to Ravenhill Road and the junction with Ardenlee Avenue. It follows Ardenlee Avenue to the Cregagh Road, Gibson Park Avenue and Ladas Way where it joins the Connswater Community Greenway. Following the Greenway to Montgomery Road it continues to Castlereagh Road and Prince Regent Road. At the end of Prince Regent Road it crosses waste ground to the junction of Knock Road and Glen Road. It crosses the road and finishes in Whincroft Road.



Details

SECTION	CURRENT PROVISION
Arthur Street	Pedestrian access only - cycle parking
Upper Arthur Street	Segregated two way cycle track on west side
Alfred Street	Segregated two way cycle track on west side
Ormeau Avenue	Shared foot and cycle way and toucan crossings at Cromac Street
Gasworks site	Shared foot and cycle way (off road)
Ramp access to riverside walkway	Shared ramp with chicane
Riverside walkway	Shared foot and cycle way (off road)
Lagan pedestrian and cycle bridge (proposed)	None
Ormeau Embankment crossing (proposed)	None
Ormeau Park (Ormeau Embankment - Ormeau Park east entrance)	Shared foot and cycle way (off road)
Ravenhill Road (Ormeau Park east entrance - Ardenlee Avenue)	Advisory cycles lanes on both sides of the road
Ardenlee Avenue (Ravenhill Road - Cregagh Road)	Traffic calming
Cregagh Road crossing	None
Cregagh Road (Ardenlee Avenue - Dromore Street)	Bus lane northwards
Gibson Park Avenue - Ladas Way	Quiet street (no through road)
Connswater Community Greenway (Ladas Way - Ladas Drive)	Under construction
Connswater Community Greenway (Ladas Drive - Montgomery Road)	Under construction
Montgomery Road (Connswater Community Greenway - Castlereagh Road)	Road
Castlereagh Road (Montgomery Road - Prince Regent Road)	Road
Prince Regent Road	Road

SECTION	CURRENT PROVISION
Waste ground between Prince Regent Road and Knock Road	None
Knock Road crossing	Pedestrian crossing
Glen Road (Knock Road - Whincroft Road)	Road
Whincroft Road	Road

Possible improvements on this route could include:

Increase the number of cycle parking spaces; direct link from NCN 9 (Lagan riverside path) to city centre; new bridge across the River Lagan; off-road cycle paths through Ormeau Park; better segregation along the route (e.g. Ardenlee Avenue and Montgomery Road); direct link to Connswater Community Greenway at Ladas Drive; improved access to destinations along the route; widened and shared foot and cycleways where footfall is low; improved alignments and provision of new toucan crossings (priority crossings); direct link to Connswater Community Greenway at Outer Ring / Glen Road, Braniel; resurfacing, signage and lighting.

APPENDIX D

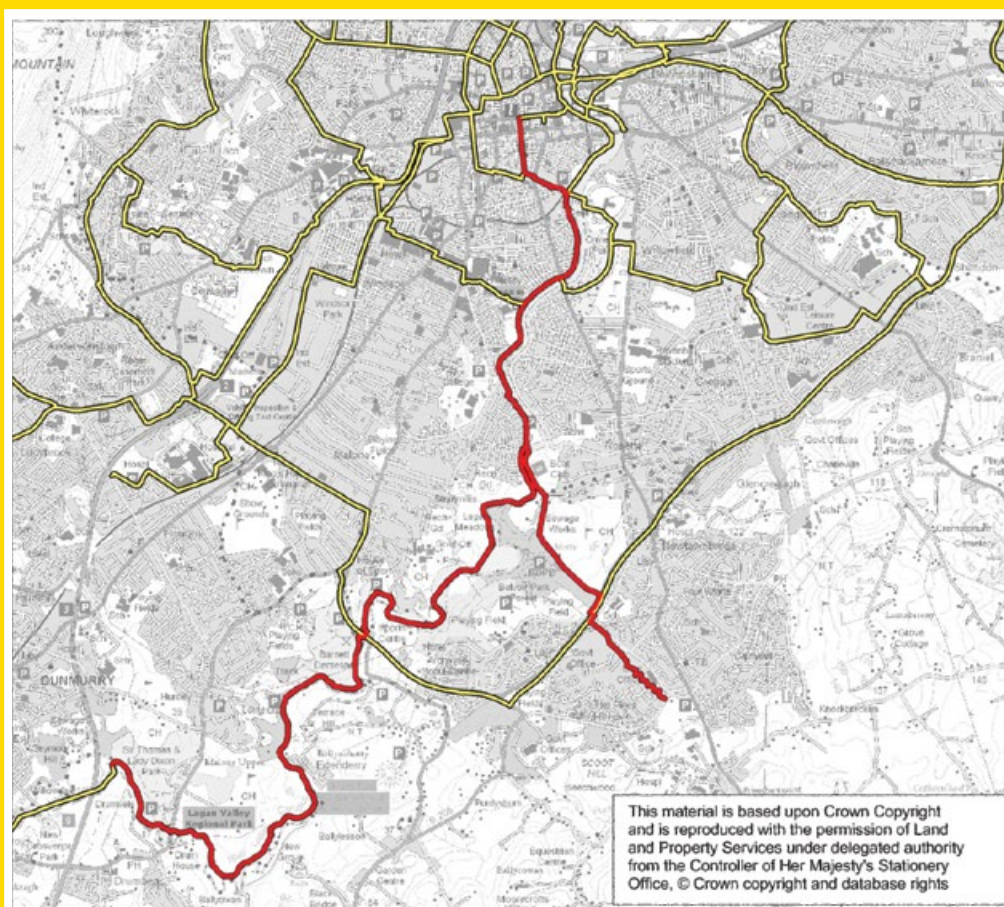
The South Route **Route 4**

ARTHUR STREET (BELFAST) TO CAIRNSHILL PARK AND RIDE (BELFAST) - 8.5KM; AND CIVIC CENTRE (LISBURN) - 18.8KM.

This route will be part of the wider Strategic Greenway Network

DESCRIPTION:

The route starts at Arthur Street in Belfast city centre and proceeds south along Upper Arthur Street, Alfred Street and Ormeau Avenue to the Gasworks site. Passing under the railway bridge it heads south along the riverside walk and follows the Stranmillis Embankment to Governor's Bridge, the cycle path to Lockview Road and joins the Lagan towpath. A planned pedestrian and cycle bridge would carry the eastern arm of the route across to Lagan Meadows and a new path would skirt Belvoir Park Forest and join Belvoir Road at the footbridge. The route would cross the bridge, follow Beechill Road and finish at Cairnshill Park and Ride. The western arm of the route would follow the Lagan towpath to the Civic Centre in Lisburn.



Details

SECTION	CURRENT PROVISION
Arthur Street	Pedestrian access only - cycle parking
Upper Arthur Street	Segregated two way cycle track on west side
Alfred Street	Segregated two way cycle track on west side
Ormeau Avenue	Shared foot and cycle way and toucan crossings at Cromac Street
Gasworks site	Shared foot and cycle way (off road)
Ramp access to riverside walkway	Shared ramp with chicane
Riverside walkway to Ormeau Road	Shared foot and cycle way (off road)
Ormeau Road crossing	Toucan crossing
Stranmillis Embankment (Ormeau Road - King's Bridge)	Segregated two way cycle track on east side (river side)
King's Bridge crossing	Two pedestrian crossings
Stranmillis Embankment (King's Bridge - Governor's bridge)	Segregated two way cycle track on east side (river side)
Governor's Bridge	Shared foot and cycle underpass
Walkway (Governor's Bridge - Lockview Road)	Shared foot and cycle way (off road)
Lockview Road	Shared foot and cycle way - traffic calming
Lagan Towpath (Lockview Road - Stranmillis Weir)	Shared foot and cycle way (off road)
East Section to Cairnshill Park and Ride:	
River Lagan crossing at Stranmillis Weir (Lagan Meadows)	None
River Lagan crossing - Galwally Avenue	None
Galwally Avenue	Road
Galwally Avenue - Belvoir Road	None
Belvoir Road (access road to footbridge)	Shared foot and cycle way
Belvoir Road footbridge	Shared foot and cycle way
Newtownbreda Road (footbridge - Beechill Road)	Road

Beechill Road (Newtownbreda Road - roundabout)	Road
Beechill Road roundabout	Road
Purdysburn Road (roundabout - Cairnshill Park and Ride entrance)	Road
West Section to Lisburn Civic Centre:	
Lagan Towpath (Stranmillis Weir - Lagan Crossing at Lock Keeper's Inn)	Shared foot and cycle path
Lagan Crossing	Narrow bridge
Lagan Towpath (Lagan Crossing - Newforge Lane)	Shared foot and cycle path
Newforge Lane - Old Shaw's Bridge	Segregated cycle path
Lagan Towpath (Old Shaw's Bridge - Upper Malone Road)	Shared foot and cycle path
Upper Malone Road underpass	Shared foot and cycle path (narrow)
Lagan Towpath (Upper Malone Road - Lagan River Crossing)	Shared foot and cycle path
Lagan River Crossing	Narrow bridge
Lagan Towpath (Lagan River Crossing - M1 underpass)	Shared foot and cycle path
M1 underpass	Tunnel (unlit)
Lagan Towpath (M1 underpass - Tullynacross Road)	Shared foot and cycle path
Tullynacross Road crossing	None
Lagan Towpath (Tullynacross Road - Bridge Street, Lisburn)	Shared foot and cycle path
Bridge Street crossing	None
Lagan Towpath (Bridge Street, Lisburn - Civic Centre, Lisburn)	Shared foot and cycle path

Possible improvements on this route could include:

Increase the number of cycle parking spaces; direct link from NCN 9 (Lagan riverside path) to city centre; new bridge across the River Lagan at Lagan Meadows; new underpasses at Ormeau Road and Kings Bridge junctions; off-road cycle paths through Lagan Meadows and Belvoir Park Forest; widening of bridge crossings along the Lagan; improved access to destinations along the route; widened and shared foot and cycleways where footfall is low; provision of new toucan crossings (priority crossings) as appropriate; widening of existing towpath; resurfacing, signage and lighting.

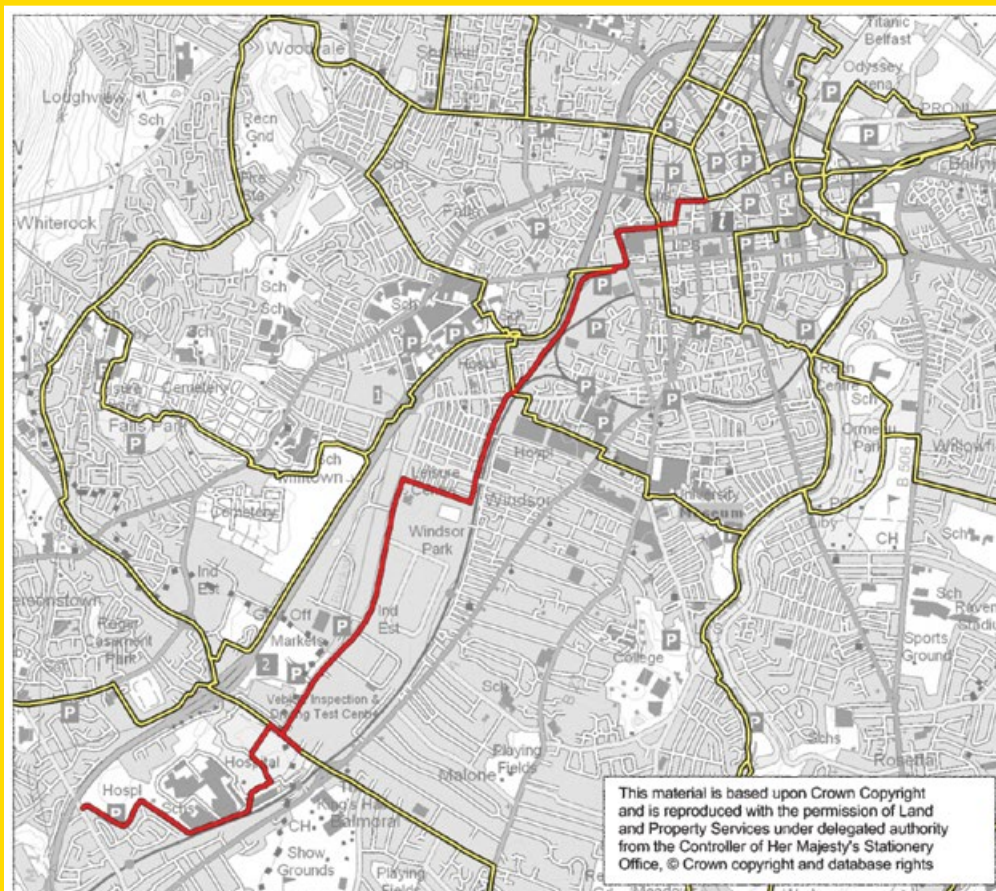
APPENDIX E

The Southwest Route **ROUTE 5**

CASTLE JUNCTION (BELFAST)
TO FINAGHY ROAD NORTH (BELFAST) - 6.7KM

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It continues west via Castle Street into Queen Street and College Street where it enters College Square North. It follows Durham Street to Grosvenor Road. It is proposed that it will connect with the planned transport hub and follow the existing walkway to the west of the railway to Donegall Road. It continues along Donegall Avenue, turns west into Olympia Drive, through the grounds of Olympia Leisure Centre and continues along Boucher Road, across Stockman's Lane to Musgrave Park. Passing through the park it connects to Musgrave Park Hospital and follows the connecting road past the site of the former Malone College finishing on Finaghy Road North.



Details

SECTION	CURRENT PROVISION
Castle Street	Bus lanes
Queen Street	Bus lane northwards and protected contraflow cycle lane southward
College Street	Bicycle Street
College Avenue crossing	Cycle crossing
College Square North	Shared and protected cycle track
Durham Street (College square North - Grosvenor Road)	Shared and protected cycle track
Grosvenor Road	Shared foot and cycle way
Transport Hub	None
Transport Hub - Donegall Road	Shared foot and cycle path (off road) west side of railway
Donegall Road crossing	Pedestrian crossing
Donegall Avenue (Donegall Road - Olympia Drive)	Traffic calming
Olympia Drive	Road
Olympia Leisure Centre	Private Road
Boucher Road (Apollo Leisure Centre - Stockman's Lane)	Road
Stockman's lane crossing	Pedestrian crossing
Musgrave Park (Stockman's Lane - Musgrave Park Hospital)	Shared foot and cycle path (off road)
Access road to hospital (from entrance to Musgrave Park - old entrance to former Malone College site)	Road
Access road to former Malone College (Musgrave Park Hospital - Finaghy Road North)	Quiet private road (gated)

Possible improvements on this route could include:

Direct link from city centre to the proposed Transport hub; widening and lighting of existing path close to Roden Street; stopping up streets but retaining bicycle access; protected contraflow cycle lanes; sections of segregated cycle track; off-road cycle paths; use of alley ways; better access to Boucher retail area; better access to Musgrave Park; widened and shared foot and cycleways where footfall is low; toucan crossings; resurfacing, signage and lighting.

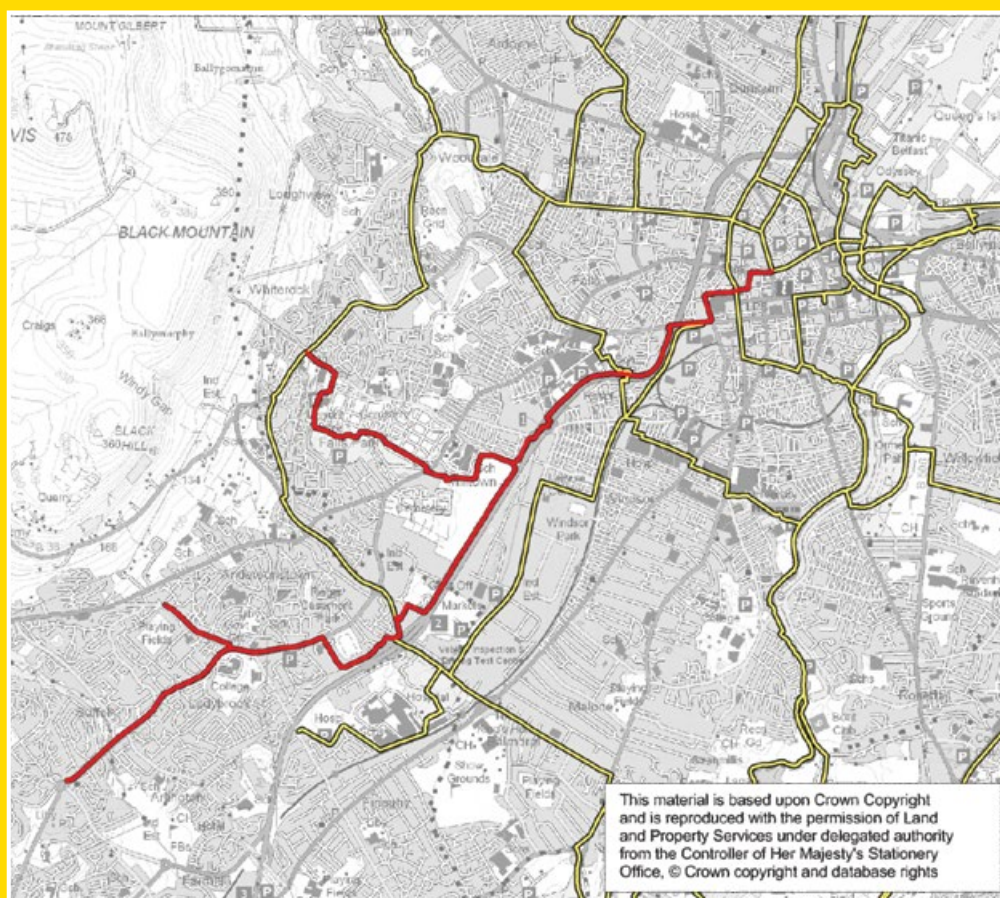
APPENDIX F

The West Route **ROUTE 6**

CASTLE JUNCTION (BELFAST) TO WHITEROCK ROAD (BELFAST) - 5.5KM; AND SHAW'S ROAD (BELFAST) - 7.7KM

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It continues west via Castle Street into Queen Street and College Street where it enters College Square North. It follows Durham Street to Grosvenor Road and the shared pedestrian / cycle path alongside the northbound carriageway of the Westlink. Crossing Broadway and Donegall Road (west of the roundabout) the northern arm would proceed through Bog Meadows to Milltown Row, Falls Road and Falls Park. Travelling through the Park towards Norglen Drive, the route passes west of Whiterock Leisure Centre and joins Whiterock Close. After joining Whiterock Road it finishes at the junction with Springfield Road. The southern arm would proceed alongside the M1 motorway across Kennedy Way to the rear of Andersonstown Leisure Centre, through the Leisure Centre to Andersontown Road and along the green area on the north side of Shaw's Road as far as Shaw's Close; or/and green spaces alongside Stewartstown Road to Michael Ferguson Roundabout.



Details

SECTION	CURRENT PROVISION
Castle Street	Bus lanes
Queen Street	Bus lane northwards and protected contraflow cycle lane southward
College Street	Bicycle Street
College Avenue crossing	Cycle crossing
College Square North	Shared and protected cycle track
Durham Street (College square North - Grosvenor Road)	Shared and protected cycle track
Grosvenor Road (Durham Street - Westlink)	Shared foot and cycle way on north side
Westlink	Shared foot and cycle way on northwest side
Broadway Roundabout (Westlink to Donegall Road)	Toucan crossings and dropped kerbs
Bog Meadows	Concrete path at northeast end - narrow rough trails throughout
North Section to Whiterock:	
Milltown Row	Road
Falls Road crossing	Pedestrian crossing
Falls Park	Shared foot and cycle way (off road)
Whiterock Close	Road
Whiterock Road (Whiterock Close to Springfield Road)	Road
Springfield Road crossing	Pedestrian crossing
South Section to Shaw's Road:	
Bog Meadows - Wastewater Treatment Works	None (waste ground)
Waste ground north of Wastewater Treatment Works	None
Blackstaff Road - Kennedy Way	Road
Kennedy Way crossing	None

Kennedy Way - rear of Andersonstown Leisure Centre	None - earth bank along side of motorway
Andersonstown Leisure Centre	Open space
Andersonstown Road	Road
Shaw's Road (as far as Shaw's Close)	Road but green area along the north side
Stewartstown Road (as far as Michael Ferguson Roundabout)	Road with open spaces alongside

Possible improvements on this route could include:

Direct segregated link to the city centre from Grosvenor Road; dedicated access to Bog Meadows at Broadway roundabout; improved access to Bog Meadows and Falls Park; protected contraflow cycle lanes; sections of segregated cycle track; off-road cycle paths; widened and shared foot and cycleways where footfall is low; new and realigned toucan crossings; resurfacing, signage and lighting.

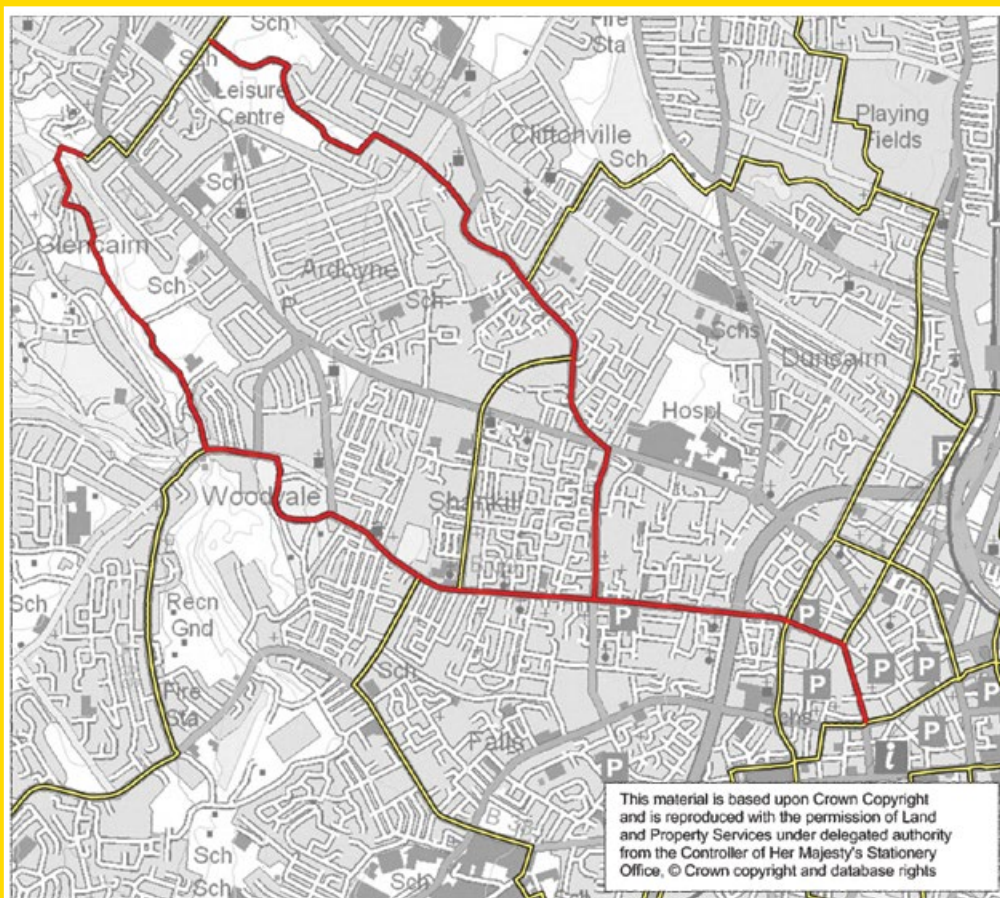
APPENDIX G

The Northwest Route **ROUTE 7**

CASTLE JUNCTION (BELFAST) TO FORTHRIVER ROAD (BELFAST) - 4.5KM; AND BALLYSILLAN ROAD (4.5KM)

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It heads north via Royal Avenue, turns into North Street and Peter's Hill where it joins the main artery of the proposed Greater Shankill Greenway. It follows Shankill Road and Woodvale Road, through Woodvale Park and joins Ballygomartin Road. Turning right into Cairnmartin Road it joins paths that run northeastward through Somerdale Park and Clarendon Park. It continues through the green areas to the right of Forthriver Road and finishes near the top of Forthriver Road. A Northern arm leaves Shankill Road at Agnes Street, joins the Oldpark Road and Deerpark Road, passing through the grounds of Ballysillan Leisure Centre and finishes on Ballysillan Road.



Details

SECTION	CURRENT PROVISION
Royal Avenue (Castle Place - North Street)	Restricted access road
North Street (Royal Avenue - Millfield)	Road
Peter's Hill	Advisory cycle lane west - bus lane east
Shankill Road (Peter's Hill - Agnes Street)	Advisory cycle lane west - bus lane east
West Section to Forthriver Road:	
Shankill Road (Agnes Street - Tennent Street)	Advisory cycle lane west - bus lane east
Shankill Road (Tennant Street - Lanark Way)	Advisory cycle lane west - bus lane east
Shankill Road (Lanark Way - Woodvale Road)	Advisory cycle lanes
Woodvale Road (Shankill Road - Woodvale Park)	Advisory cycle lanes
Woodvale Park	Shared foot and cycle way (off road)
Ballygomartin Road (Woodvale Park - Cairnmartin Road)	Road
Cairnmartin Road (Ballygomartin Road - Somerdale Park)	Traffic calming with cycle bypasses
Somerdale Park	Shared foot and cycle path (off-road) (narrow)
Clarendon Park as far as the footpath between Forthriver Road and Glenside Park	None
Clarendon Park - Forthriver Road	Shared foot and cycle path (off road)
North Section to Ballysillan Road:	
Agnes Street (Shankill Road - Crumlin Road)	Road
Crumlin Road crossing	Road
Oldpark Road (Crumlin Road - Hillview Road)	Road
Oldpark Road (Hillview Road - Oldpark Avenue)	Road

SECTION	CURRENT PROVISION
Oldpark Road (Oldpark Avenue – Deerpark Road)	Road
Deerpark Road (Oldpark Road – Alliance Gardens)	Traffic calming
Alliance Gardens (Deerpark Road – Alliance Drive)	Traffic calming
Alliance Drive	Road (waste ground on north side)
Grounds of Ballysillan Leisure Centre	Shared foot and cycle way (off road)
Ballysillan Road crossing	None

Possible Improvements on this route could include:

Incorporation of the plans for a Greater Shankill Greenway; direct link for walking and cycling to the city centre; improved vitality and reduce car reliance on Shankill Road; sections of segregated cycle lane; off-road cycle paths; linking of Forthriver to Woodvale Park; better use of road space including widened and shared foot and cycleways where footfall is low; improved bicycle access to destinations; toucan crossings; signage and lighting.

APPENDIX H

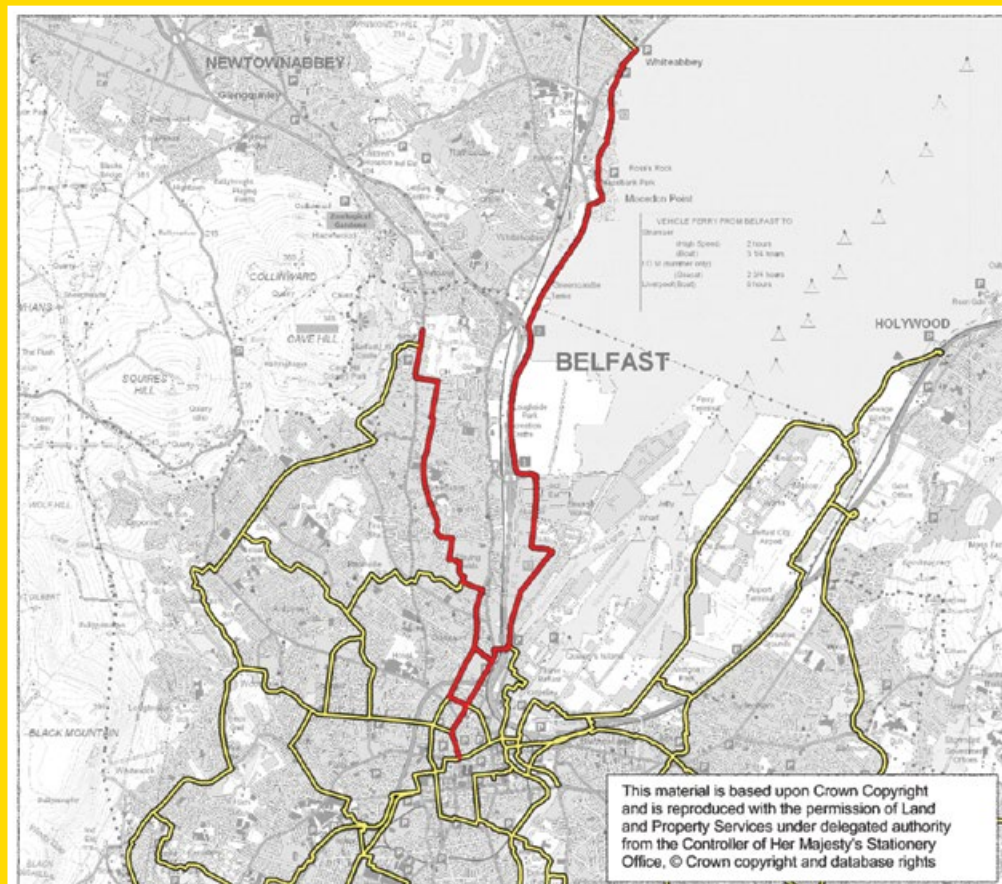
The North Route **ROUTE 8**

CITY HALL (BELFAST) TO GRAY'S LANE (BELFAST) - 6.3KM;
AND WHITEABBEY (NEWTOWNABBEY) - 10KM.

The eastern arm of this route will be part of the wider Strategic Greenway Network

DESCRIPTION:

The route starts in Belfast city centre at Castle Place. It heads north via Royal Avenue to Frederick Street. The western arm follows Frederick Street into North Queen Street as far as Alexandra Park Avenue. Following Alexandra Park Avenue, through the Grove Playing Fields to Jellicoe Avenue, Skegoneill Avenue, Somerton Road and Innisfayle Road. After a left turn into Downview Avenue it emerges on to Antrim Road and finishes at Gray's Lane. The eastern arm continues along York Street to Yorkgate station, through the M2 underpass to Whitla Street, north on to Duncrue Street and Duncrue Road where it joins the North Foreshore pedestrian / cycle path after crossing Dargan Road. It finishes at Whiteabbey near the start of the Newtownabbey Way.



Details

SECTION	CURRENT PROVISION
Royal Avenue (Castle Place - North Street)	Restricted access road
Royal Avenue (North Street - Donegall Street)	Road
York Street (Donegall Street - Frederick Street)	Road
Western Section to Gray's Lane:	
Frederick Street	Road
North Queen Street (Frederick Street - Duncairn Gardens)	Road
North Queen Street (Duncairn Gardens - Alexandra Park Avenue)	Road
Alexandra Park Avenue (North Queen Street - northeast corner of Grove Playing Fields)	Traffic calming
Grove Playing Fields	Off road path
Jellicoe Avenue (from Grove Playing Fields - Skegoneill Avenue)	Traffic calming
Skegoneill Avenue (Jellicoe Avenue - Somerton Road)	Traffic calming
Somerton Road (Skegoneill Avenue - Parkmount Road)	Road
Innisfayle Road (Parkmount Road - Downview Avenue)	Road
Downview Avenue (Innisfayle Road - Antrim Road)	Road
Antrim Road (Downview Avenue - Downview Lodge)	Bus lanes
Antrim Road (Downview Lodge - Gray's Lane)	Road
Eastern Section to Whiteabbey:	
York Street (Frederick Street - Brougham Street)	Road
York Road (Brougham Street - M2 Underpass)	Shared foot and cycle way

SECTION	CURRENT PROVISION
M2 Underpass	Tunnel (lit)
Duncrue Street / Nelson Street crossing	Toucan crossing
Duncrue Street / Whitla Street crossing	Toucan crossing
Duncrue Street (Whitla Street – roundabout at Bretland House)	Segregated foot and cycle way
Duncrue Street roundabout	Dropped kerbs
Duncrue Street (roundabout – Duncrue Road)	Segregated foot and cycle way
Duncrue Road (Duncrue Street – Dargan Crescent)	Segregated foot and cycle way
Duncrue Road (Dargan Crescent – Dargan Road)	Segregated foot and cycle way
Dargan Road crossing	Toucan crossing
North Foreshore (Dargan Road – Hazelbank Park)	Shared foot and cycle path (off road)
North Foreshore (Hazelbank Park – Shore Road (Whiteabbey))	Shared foot and cycle path (off road)
Shore Road (Whiteabbey) (North Foreshore – Whiteabbey village)	Segregated foot and cycle way
Shore Road crossing	Pedestrian crossing
Link to Newtownabbey Way	Road

Possible Improvements along length could include:

Direct walking and cycling link from north Belfast to city centre utilising a safe route across the line of the Westlink (North Queen Street); direct link from the North Foreshore route to the city centre via the M2 underpass and the proposed provision from Yorkgate Station along York Street and the proposed York Street Interchange; sections of two way segregated cycle track; quiet road treatments (utilising a road parallel to Antrim Road); better priority at road crossings and junctions; widened and shared foot and cycleways where footfall is low; toucan crossings; signage.

APPENDIX I

The Inner Ring Route **ROUTE 9**

THIS ROUTE BROADLY FOLLOWS THE LINE OF THE A12 INNER RING WITHIN BELFAST CITY CENTRE BUT DIVERGES TO THE EAST TO FOLLOW THE WEST BANK OF THE RIVER LAGAN - 5KM

DESCRIPTION:

This is a circular route which, in a clockwise direction, includes Great Victoria Street, Fisherwick Place, College Square East, Millfield, Carrick Hill, Frederick Street, Great Patrick Street, Dunbar Link, Queen's Square, Donegall Quay, the old Sand Quay, the Riverside Path, the Gasworks, Bankmore Street and Bruce Street.



Details

SECTION	CURRENT PROVISION
Great Victoria Street (Bruce Street to Grosvenor Road)	Bus lane northwards
Fisherwick Place	Bus lane in middle of road northwards
College Square East	Bus lane southwards
College Avenue	Bus lane southwards
Millfield	Road
Carrick Hill	Road
Frederick Street	Road
Great Patrick Street (York Street - Nelson Street)	Road
Dunbar Link	Road
Victoria Street (Dunbar Link - Queen's Square)	Road (partly one way)
Queen's Square	Restricted access street - wide pavement on north side with a marked cycle path
Donegall Quay (Queen's Square - Queen Elizabeth Bridge)	Segregated foot and cycle way on east side
Queen Elizabeth bridge - Queen's Bridge	Toucan crossings and shared foot and cycle way
Old Sand Quay (Queen's Bridge - Laganbank Road)	Shared space
Laganbank Road	Shared foot and cycle way
Riverside Path (East Bridge Street - Gasworks Site)	Toucan crossing on East Bridge Street and shared foot and cycle path (off road)
Gasworks site	Shared foot and cycle way (off road)
Bankmore Street	Road
Bruce Street	Road

Possible Improvements along length could include:

Continuous sections of segregated cycle track throughout the route; linking the riverside walking and cycling path to the city centre; provision of links to all the arterial routes close to the city centre; improvement of toucan crossings and priority uncontrolled crossings; signage and clarification of routes.

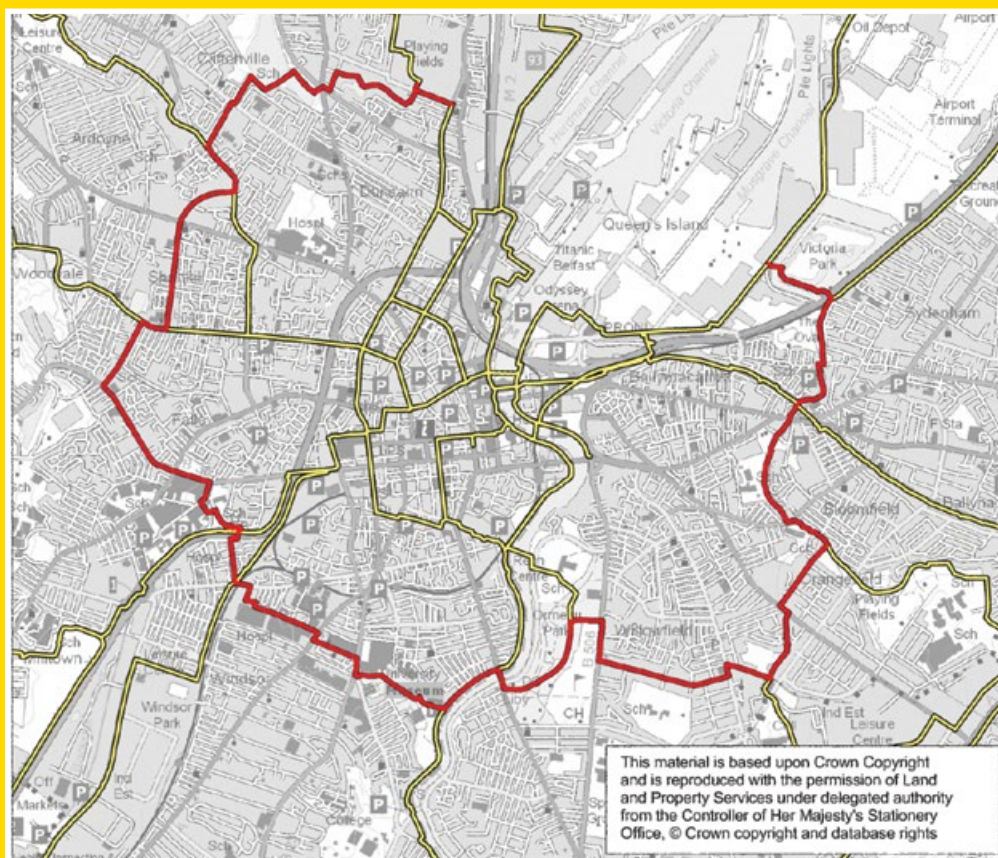
APPENDIX J

The Middle Ring Route **ROUTE 10**

SAM THOMPSON BRIDGE (BELFAST) TO ALEXANDRA PARK (BELFAST) - 15.1KM

DESCRIPTION:

The route starts at Sam Thompson bridge on Route 1 and follows the Connswater Community Greenway to Ladas Way. It continues along Ardenlee Avenue (Route 3), through Ormeau Park to the Ormeau Bridge and Stranmillis Embankment (Route 4). Passing through Botanic Gardens it follows Elmwood Avenue to Belfast City Hospital and traverses the hospital site on to Donegall Road to Roden Street where it intersects Route 5. Continuing along Roden Street it crosses the Westlink (Route 6) and passes through the Royal Victoria Hospital site to Grosvenor Road, Springfield Road, Lanark Way and Shankill Road (Route 7). Following Tennent Street and Hillview Road it emerges on to Oldpark Road. A right turn into Oldpark Avenue brings the route to the side entrance of Waterworks Park. Through the park to the Antrim Road junction and Alexandra Park joins North Queen Street (Route 8).



Details

SECTION	CURRENT PROVISION
Sam Thompson bridge	Toucan crossing on Airport Road - shared foot and cycle bridge
Victoria Park (Sam Thompson bridge - Sydenham Bypass underpass)	Shared foot and cycle path
Sydenham Bypass underpass	Shared vehicular access to Victoria Park
Connswater Community Greenway (underpass - Mersey Street)	Shared foot and cycle way (riverside path)
Mersey Street crossing	None
Connswater Community Greenway (Mersey Street - Connswater Street)	Shared foot and cycle way (riverside path)
Connswater Community Greenway (Connswater Street - Newtownards Road)	Shared foot and cycle way
Newtownards Road crossing	Pedestrian crossing
Connswater Community Greenway (Newtownards Road - Connswater Link)	Shared foot and cycle way (riverside path)
Connswater Link crossing	None
Connswater Community Greenway (Connswater Link - Beersbridge Road)	None
Beersbridge Road crossing	Island crossing
Connswater Community Greenway (Beersbridge Road - Loop River confluence)	Narrow path
Connswater Community Greenway (Loop River confluence - Castlereagh Road)	Under construction
Castlereagh Road crossing	Pedestrian crossing
Connswater Community Greenway (Castlereagh Road - Ladas Way)	Under construction
Gibson Park Avenue - Ladas Way	Quiet street (no through road)
Cregagh Road (Ardenlee Avenue - Dromore Street)	Bus lane northwards
Cregagh Road crossing	None
Ardenlee Avenue (Ravenhill Road - Cregagh Road)	Traffic calming

SECTION	CURRENT PROVISION
Ravenhill Road (Ormeau Park east entrance - Ardenlee Avenue)	Advisory cycles lanes on both sides of the road
Ormeau Park (east entrance - main entrance)	Shared foot and cycle way (off road)
Ormeau Road (Ormeau Park main entrance - Ormeau Bridge)	Shared foot and cycle way and toucan crossing
Ormeau Bridge	Shared foot and cycle way
Ormeau Road crossing	Toucan crossing
Stranmillis Embankment (Ormeau Road - Botanic Gardens east entrance)	Segregated two way cycle track on east side (river side)
Botanic Gardens (east entrance - Stranmillis Road entrance)	Shared foot and cycle path (off road)
Stranmillis Road / Malone Road crossing	Pedestrian crossings
University Road (Malone Road - Elmwood Avenue)	Road
Elmwood Avenue (University Road - Lisburn Road)	Road
Lisburn Road crossing	None
Jubilee Road (Lisburn Road - carpark at west end)	Road
New route via carpark and rough ground to Donegall Road	None
Donegall Road railway bridge	Advisory cycle lanes
Donegall Road crossing	Pedestrian crossing
Roden Street (Donegall Road - Milner Street)	Traffic calming
Westlink crossing	Shared foot and cycle bridge
Mulhouse Road	Road
Royal Victoria Hospital grounds (Mulhouse Road - Grosvenor Road)	Road
Grosvenor Road (RVH entrance - Falls Road)	Road
Falls Road crossing	Pedestrian crossing
Springfield Road (Falls Road - Lanark Way)	Advisory cycle lanes

SECTION	CURRENT PROVISION
Springfield Road crossing	None
Lanark Way (Springfield Road - Shankill Road)	Road
Shankill Road (Tennant Street - Lanark Way)	Advisory cycle lane west - bus lane east
Shankill Road crossing	Pedestrian crossing
Tennant Street (Shankill Road - Crumlin Road)	Road
Crumlin Road crossing	Pedestrian crossing
Hillview Road	Road
Oldpark Road (Hillview Road - Oldpark Avenue)	Road
Oldpark Road crossing	None
Oldpark Avenue	Traffic calming
Cliftonville Road crossing	None
Waterworks Park (Cliftonville Road entrance - Cavehill Road / Antrim Road)	Shared foot and cycle path
Cavehill Road / Antrim Road junction crossing	Pedestrian crossing
Camberwell Terrace (Antrim Road - Castleton Gardens)	Quiet road
Castleton Gardens (Camberwell Terrace - Jubilee Avenue)	Quiet road
Alexandra Park (Castleton Gardens entrance - Deacon Street entrance)	Shared foot and cycle path
Deacon Street	Quiet road

Possible Improvements along length could include:

Continuous sections of segregated cycle track throughout the route; direct links between several city parks (Victoria Park, Orangefield Park, Ormeau park, Botanic Gardens, Waterworks park, Alexandra Park); off-road cycle paths; links between Royal Victoria Hospital, Belfast City Hospital and Queen's University; links between the eight arterial routes at inner suburbs; widened and shared foot and cycleways where footfall is low; realignment of toucan crossings; new toucan crossings; resurfacing, signage and lighting.

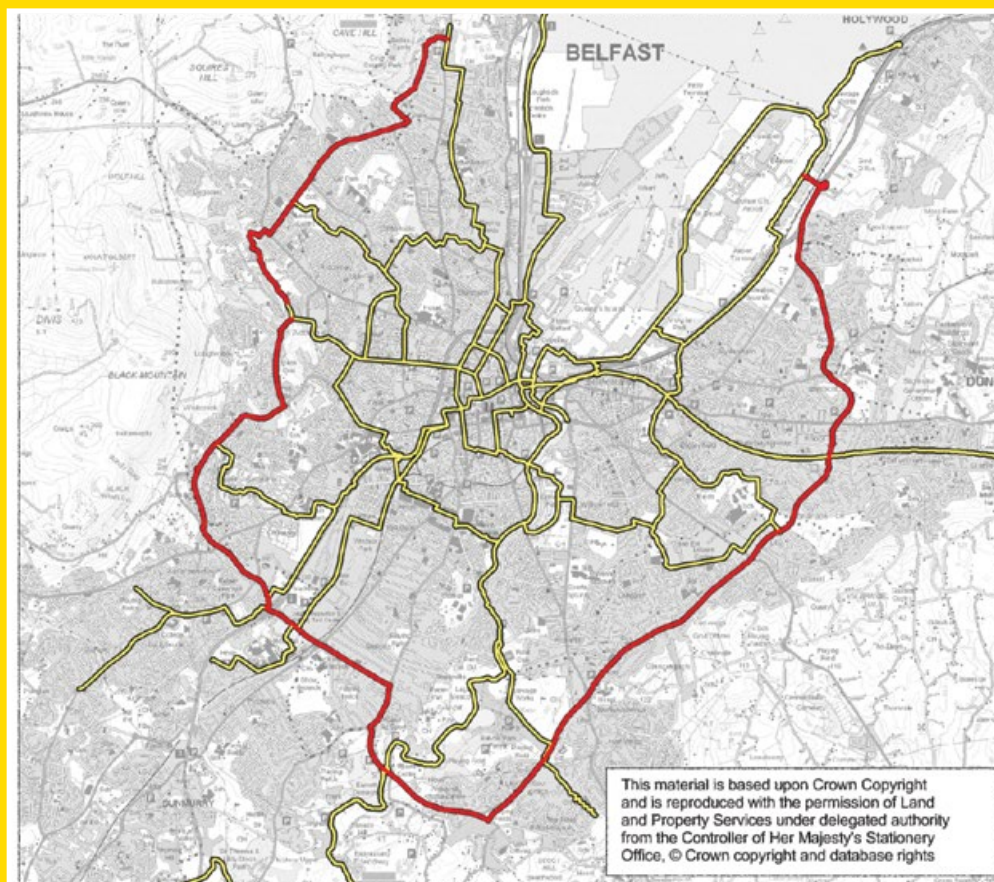
APPENDIX K

The Outer Ring Route **ROUTE 11**

THIS ROUTE GENERALLY FOLLOWS THE LINE OF THE A55 OUTER RING AROUND THE CITY - 27.8KM

DESCRIPTION:

The route starts at Airport Road West (Route 1), passes Hollywood Exchange and joins the A2 Belfast Road. At the Tillysburn junction it follows the Hollywood Road onto Parkway and continues along A55 Parkway via Hawthornden Way, Knock Road (Routes 2 and 3), Upper Knockbreda Road, Belvoir Road (Route 4 east), Milltown Road (Route 4 west), Balmoral Avenue, Stockman's Lane (Route 5), Kennedy Way, Springfield Road (Route 6), West Circular Road, Ballygomartin Road (Route 7). It then passes through Clarendon Park to join the footpath linking Forthriver Road to Glenside Park. It continues along Ballysillan Road to North Circular Road and via Old Cavehill Road and the grounds of Belfast Castle finishes on Antrim Road just south of Gray's Lane (Route 8).



Details

SECTION	CURRENT PROVISION
Airport Road West (Ikea carpark - Wastewater Treatment Works Access Road)	Road with wide grassy area along the boundary with Belfast City Airport
Airport Road West crossing	None
A2 access road	Road
A2 (Holywood Exchange access road - Tillysburn roundabout)	Shared foot and cycle way
Tillysburn roundabout	Underpass and crossing on eastern side
Hollywood Road (Tillysburn roundabout - Parkway)	Shared foot and cycle way on both sides of road
Parkway (Holywood Road - Belmont Road)	Shared foot and cycle way on both sides of road
Belmont Road crossing	Dropped kerbs
Hawthornden Way (Belmont Road - Upper Newtownards Road)	Segregated foot and cycle way on both sides of road
Upper Newtownards Road crossing	Traffic lights
Knock Road (Upper Newtownards Road - Kings Road)	Road
Kings Road crossing	Traffic lights
Knock Road (Kings Road - Sandown Road / Shandon Park)	Advisory cycle lane southwards part way
Sandown Road / Shandon Park crossing	Traffic lights
Knock Road (Sandown Road / Shandon Park - Glen Road)	Road and segregated foot and cycle ways part way
Glen Road crossing	Traffic lights
Knock Road (Glen Road - Ballygowan Road)	Segregated foot and cycle ways part way on both sides of road
Ballygowan Road crossing	Traffic lights
Upper Knockbreda Road (Ballygowan Road - Cregagh Road)	Cycle lanes
Upper Knockbreda Road (Cregagh Road - Upper Galwally)	Cycle lanes
Upper Galwally / Glencreagh road crossing	Traffic lights

SECTION	CURRENT PROVISION
Upper Knockbreda Road (Upper Galwally - Saintfield Road)	Road
Saintfield Road crossing	Traffic lights
Belvoir Road (Saintfield Road - Milltown Road)	Shared foot and cycle path on northwest side
Milltown Road crossing	Pedestrian crossing
Milltown Road (Belvoir road - Shaw's Bridge)	Shared foot and cycle ways
Milltown Road (Shaw's Bridge - Malone Road roundabout)	Shared foot and cycle ways on both sides of road
Malone Road roundabout	Dropped kerbs
Malone Road (roundabout - Balmoral Avenue)	Road
Balmoral Avenue (Malone Road - Lisburn Road)	Road
Lisburn Road crossing	Traffic lights
Stockman's Lane (Lisburn Road - Boucher Road)	Road
Boucher Road crossing	Traffic lights
Stockman's Lane (Boucher Road - M1 roundabout)	Road
M1 roundabout crossing	Dropped kerbs and central walkway
Kennedy Way (M1 roundabout - Andersonstown Road)	Road
Andersonstown roundabout	Road
Kennedy Way (Andersonstown Road - Glen Road)	Road
Glen Road roundabout	Road
Monagh Bypass (Glen Road - Monagh Link)	Road
Monagh Link (Monagh Bypass - Monagh Road)	Road
Monagh Road (Monagh Link - Springfield Road)	Traffic calming
Springfield Road (Monagh Road - Whiterock Road)	Road

SECTION	CURRENT PROVISION
Springfield Road (Whiterock Road - West Circular Road)	Advisory cycle lanes
Roundabout	Road
West Circular Road (Springfield Road - Ballygomartin Road)	Road
Ballygomartin Road (West Circular Road - Cairnmartin Road)	Road
Cairnmartin Road (Ballygomartin Road - Somerdale Park)	Traffic calming with cycle bypasses
Somerdale Park	Shared foot and cycle path (off-road) (narrow)
Clarendon Park as far as the footpath between Forthriver Road and Glenside Park	None
Footpath to Glenside Park	Shared foot and cycle path (off road)
Glenside Park	Quiet road
Crumlin Road crossing	Pedestrian crossing at Ballysillan Road
Crumlin Road (Glenside Park - Ballysillan Road)	Road
Ballysillan Road (Crumlin Road - North Circular Road)	Road (Advisory cycle lanes between Boys Model school and Cavehill Road)
North Circular Road (Ballysillan Road - Old Cavehill Road)	Road
Old Cavehill Road (North Circular Road - Upper Castle Park)	Quiet Road
Old NIW site	None
Belfast Castle Grounds (to north exit on Antrim Road)	None

Possible Improvements along length could include:

Improved consistency of provision; sections of segregated cycle track; off-road cycle paths; links to the eight arterial routes; barriers between cycle track and carriageway where there is high volume fast traffic flow; improved alignment at road crossings; improved access to destinations along the route; widened and shared foot and cycleways where footfall is low; toucan crossings; resurfacing, signage and lighting.

APPENDIX L

CRITERIA FOR ROUTE SELECTION	SUB-CRITERIA
<i>Coherence</i>	<ol style="list-style-type: none"> 1. Does the proposed route provide connections to existing on or off-road infrastructure? 2. Does the route provide connections to planned on or off-road infrastructure? 3. Does the route provide links across major barriers? 4. Is the route continuous through junctions? 5. Is appropriate priority provided for bicycle users? 6. Is there good signage?
<i>Directness (and accessibility)</i>	<ol style="list-style-type: none"> 1. Is the route circuitous (more direct or less direct) compared to using the public road? 2. Does the route enable maintaining a constant speed or is the route impeded by numerous road / street crossings? 3. Does the route adequately serve residential areas / services / education / employment? 4. Does the route link with public transport?
<i>Attractiveness</i>	<ol style="list-style-type: none"> 1. Is there lighting on the route? 2. Is open space available or is the route narrow and constrained? 3. Does the route have the potential to be developed as a Greenway? 4. Is there sufficient secure parking along the route? 5. What are the air quality and noise pollution levels? 6. Is the route impeded by street clutter?
<i>Safety</i>	<ol style="list-style-type: none"> 1. Does the route provide protection for bicycle users? 2. Is there a high volume of public transport or HGV traffic? 3. Is there potential for significant conflicts from traffic turning across the route (e.g. left hand turns or driveways)? 4. Is there kerbside activity which could be reallocated? 5. Is the speed and volume of traffic sufficiently low where separation is not provided? 6. Is the route well lit and is it sufficiently visible that people who are cycling will feel secure?
<i>Comfort</i>	<ol style="list-style-type: none"> 1. Is it possible to lay a good quality machine laid running surface? 2. Is there a high level of kerbside activity?
<i>Adaptability</i>	<ol style="list-style-type: none"> 1. Does the route provide a smooth transition between modes? 2. Can the route facilitate growth in the future?

APPENDIX M

Summary Of Consultation Questions

You are free to comment on any aspect of this consultation document but the consultation questions raised throughout the document are summarised below. Responses can be made online by using the following link or you can respond by email or post to the addresses provided at paragraph 1.7.

Question 1:

Do you agree that producing a Bicycle Network for Belfast is an important element of developing a more bicycle-friendly city? What time frame do you think it should cover?

Question 2:

Do you agree that these five criteria from the BMTP are still valid for the development of a network for Belfast? If not, what do you consider the criteria should be? Please explain.

Question 3:

Do you agree that the development of a Belfast Bicycle Network is a key element in giving those who would like to cycle (but currently don't) the freedom and confidence to do so?

Question 4:

Do you agree that the objectives in 3.9 should be applied to the network? If not, what objectives do you think should be set?

Question 5:

Do you agree that the primary network should be based on the concept of arterial and orbital routes?

Question 6:

Do you agree that the network should be developed in Primary and Secondary stages as outlined in 3.13? If not, how should it be developed?

Question 7:

Do you agree that we should consider requirements of likely users on a scheme by scheme basis, for example routes which will primarily be used by children on the school journey may be best served as shared track?

Question 8:

Are there any other kinds of bicycle infrastructure that should be considered? What are they? Do you have any views on which types of infrastructure, if any, should be favoured in developing a network for Belfast?

Question 9:

Do you support the use of the network requirements as detailed at paragraph 5.1?

Question 10:

Do you agree with the addition of 'Adaptability' as a network requirement? What other requirements would you like to see included?

Question 11:

Do you agree that the routes should be planned and facilities designed with the achievement of increasing numbers of people cycling in mind?

Question 12:

What are your views on segregation between people who walk, people who cycle and people who drive? What are your views about physical segregation between motorised traffic and non-motorised traffic? Do you agree that there are levels of traffic (footway or carriageway) below which physical segregation is not always necessary - such as quiet routes and residential areas?

Question 13:

How important is the requirement that 'routes need to flow'? What kind of signage should be provided? What facilities should be provided?

Question 14:

What is the relative importance between construction of a route and its maintenance? What other guiding principles would you suggest? Please explain.

Question 15:

With reference to the appendices please set out your views on the proposed routes. We are interested in the positives or negatives associated with the various sections of the proposed routes.

Question 16:

What are the specific issues that may arise if bicycle infrastructure was constructed along the proposed route?

Question 17:

What other alternative routes are available?

BELFAST BICYCLE NETWORK

Have your say /

1. Do you agree that producing a Bicycle Network for Belfast is an important element of developing a bicycle friendly city? If so what timeframe do you think it should cover?

YES ☐ **NO** ☐

2. Do you agree that the following five criteria are still valid for the development of a network for Belfast? If not what do you consider the criteria should be?

Coherence, Directness, Attractiveness, Safety and Comfort

YES ☐ **NO** ☐

3. Do you agree that the development of a Belfast Bicycle Network is a key element in giving those who would like to cycle freedom and confidence to do so?

YES ☐ **NO** ☐

4. Do you agree that the following objectives should be applied to the Belfast Bicycle Network? If not what objectives do you think should be set?

- Develop a comprehensive bicycle network for commuter, amenity & recreational cycling
- Bring good quality cycling routes within reach of most people in the city
- To ensure a consistent level of service in the design of safe infrastructure
- Encourage use of bicycle and promote safe cycling

5. Do you agree that the primary network should be based on the concept of arterial and orbital routes? If no please state reason.

YES **NO**

6. Do you agree that the network should be developed in Primary and Secondary stages as outlined? If not how should it be developed?

YES **NO**

7. Do you agree that we should consider requirements of likely users on a scheme by scheme basis eg routes which will primarily be used by children on the school journey may be best served as a shared track? Please provide comments.

YES **NO**

8. Are there any other types of bicycle infrastructure that should be considered? If yes what are they? Do you have any views on which types of infrastructure if any should be favoured in developing a network for Belfast.

YES**NO**

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9. Do you support the use of the network requirements as detailed at paragraph 5.1?

YES**NO**

--

10. Do you agree with the addition of 'Adaptability' as a network requirement? What other requirement would you like to see included.

YES**NO**

--

11. Do you agree that the routes should be planned and the facilities designed with the achievement of increasing numbers of people cycling in mind?

YES**NO**

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12. What are your views on segregation between people who walk, cycle or drive, between motorised and non motorised traffic? Do you agree that there are levels of traffic (footway or carriageway) for which physical segregation is not always necessary such as quiet or residential routes.

13. How important is the requirement that routes need to flow? What kind of signage or facilities should be provided?

14. What is the relative importance between construction of a route and its maintenance? What other guiding principles would you suggest? Please explain.

15. With reference to the appendices in the Bicycle Network please set out your views if any on the proposed routes. We are interested in both the positives or negatives associated with the various sections of the proposed routes

16. What are the specific issues that may arise if bicycle infrastructure was constructed along the proposed route?

17. What other alternative routes are available?

Please return the completed questionnaire either by post or email to:

Department for Infrastructure,
Cycling Unit,
Clarence Court,
10-18 Adelaide Street Belfast,
BT2 8GB

cycling.unit@infrastructure-ni.gov.uk

**Deadline for responses is
5.00pm Thursday 13th April 2017**





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Infrastructure

An Roinn

Bonneagair

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