

# **Belfast Rapid Transit** Phase 2

Translink

**Public Consultation on Route Options** 

26th July to 4th October 2021



ΛΤΚΙΝS

r of the SNC-Lavalin



**Belfast Region** City Deal

# Our Aim and Vision

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The provision of a customerfocused, high-quality, integrated public transport system, which is sustainable, provides good value for money, enhances competitiveness, helps sustain economic growth, promotes regional development and contributes to social inclusion.



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# Introduction & Background

### **BRT Phase 1**

The Belfast Rapid Transit Phase 1 (BRT1) pilot route network and service opened on 3rd September 2018 under the Glider brand and provides a rapid transit service between East and West Belfast through the City Centre, with a link to Titanic Quarter. The Glider largely replaced the Metro bus service on the Falls Road and Upper Newtownards Road corridors.

### **BRT Phase 2**

The Department for Infrastructure identified the potential to further extend the Belfast Rapid Transit network to North and South Belfast, Lisburn and Castlereagh City Council and Antrim and Newtownabbey Borough Council areas. In addition, the existing Glider G2 route (which currently serves Titanic Quarter) will also be extended to link with Queen's University and Belfast City Hospital. The project is referred to as Belfast Rapid Transit Phase 2 (BRT2).

Image of Colin Connect BRT Interchange, West Belfast Approximately 10 million passengers travelled on the BRT1 corridors in 2019. This was an increase of some 70% relative to patronage prior to commencement of the project.







One 18m Glider can remove over 80 cars

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Public transport travel times reduced by





# BRT Characteristics

# Service and Operational Plans and Integration

Key features of the service operations will include:

- Service to operate between approximately 05:30 and 23:30 on weekdays, 07:00 to 23:30 on Saturdays and 07:00 to 22:00 on Sundays.
- Peak services operating at intervals of 7-8 minutes.
- Halts to be provided at a target spacing of 400m.
- Existing public transport services to be integrated and provide either feeder or residual services.
- Enforcement strategy to ensure no obstruction to the running ways (bus lanes).
- Punctuality and reliability to be monitored with targets of 99% and 95% respectively.

## Glider Vehicles

The existing Glider vehicles have delivered a step change in the quality of public transport for Belfast. They provide a high-quality environment for passengers, improve accessibility for all, offer comfort, space and security accompanied with modern on-board travel information. BRT2 vehicles will adopt this same level of quality and provide:

- On-board areas for wheelchairs and pushchairs/ buggies.
- Multiple double-width doors for boarding and alighting.
- High levels of passenger comfort with low-density seating and good legroom.
- Engines to utilise the latest technologies and be low noise, low vibration and low or zero emission.
- Multiple 'infotainment' screens with realtime information, visual and audible next halt and destination announcements.
- On-board CCTV to be provided for passenger safety and security.
- High standards of maintenance and cleanliness.
- > USB charging and wi-fi.

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### Intelligent Transport Systems (ITS) and Real-Time Information

BRT2 will build upon the success of BRT Phase 1 in East and West Belfast and the opportunities brought by new and emerging technologies. Recommended features for the BRT2 ITS include:

- All BRT2 vehicles to be fitted with an Automatic Vehicle Location (AVL) system used for real-time passenger information, operation of BRT2 priority at signal-controlled junctions and fleet operation and management.
- Real-Time Passenger Information (RTPI) to be provided on-board, at all halts, and through internet and mobile phone services.
- Display signs supported by audio announcements to assist visually impaired users.





### **Running ways**

The running ways consist primarily of dedicated bus lanes, priority at major junctions and elements of mixed traffic roads where enhanced priority is not feasible or practical. Experience from BRT Phase 1 has established the philosophy that BRT measures will lead to reduced road capacity for general traffic.

The introduction of Glider in East and West Belfast has demonstrated that increased delays to general traffic are, in effect, accepted as part of the "trade-off" of providing an enhanced public transport system. Retaining this approach will be fundamental to the successful operation of BRT2 services to ensure that it delivers rapid and reliable journeys.

Cyclists and motorcyclists are permitted to travel in the bus lanes, which has the potential to improve journey times for these road users.

### Fares and Fare Collection

Consistent with the Glider operations in East and West Belfast, tickets for BRT2 will be purchased prior to boarding, so as to minimise waiting times at halts. Key features include:

- Fares and ticketing consistent with those on local bus services to enable easy interchange.
- Concessionary fares in line with those associated with existing Glider services.
- Off-board ticketing facilities to minimise halt waiting times supported by on-vehicle ticket inspection.
- Payment systems and tariffs to encourage cashless payment.

# BRT Characteristics

## Halts and Interchanges

In East and West Belfast, the Glider halts have been a key part of the system image offering a distinct and high quality passenger waiting environment. Building on this success, the recommended requirements for the BRT2 halts and interchanges are:

- High quality branded halts with paving, illuminated shelters, seating, off-board ticketing machines and validators, realtime passenger information & CCTV.
- Safe and secure pedestrian routes to be provided to/from halts with pedestrian crossings providing access to halts.
- Bus access kerbs provided at each halt to allow boarding at each door.
- Halt design to be consistent and minimise step height onto vehicles.
- Interchange halts to be provided in the City Centre and at locations of interchange with other public transport services.
- Interchange and/or Park & Ride facilities to be located at key locations with high quality and secure parking facilities for vehicles and cycles where appropriate.





It is essential that the BRT2 routes are able to physically accommodate the priority bus lanes which will enable the BRT2 system to operate reliably. Detailed investigations have been carried out on a number of route options for BRT2 in order to identify the most suitable routes to be taken forward for further investigation. For each potential route we have investigated:

- Road geometry and layouts
- Traffic flows
- Parking
- Adjacent land use

These elements have been assessed as part of a detailed Route Audit Report.

Route Option Assessment Process

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### **Route Options Assessment**

Assessments were carried out to identify the route options, that is, the routes that are deemed to be capable of delivering a scheme which fulfils the following objectives of BRT2:

- Provide a safe, efficient and highquality public transport service;
- Support sustainable economic growth and regeneration;
- Provide equality through enhanced accessibility; and
- Support social inclusion and the integration of communities.

The routes assessed are shown on the city plan on pages 14-15.

### Initial assessment

The initial stage of the Route Options Assessment was to undertake a highlevel assessment of a long list of route options. This allowed unpromising options to be discarded at an early stage. The assessment included a review of:

- how the route could contribute to meeting the project objectives and wider Government policies and strategies; and
- the key viability and acceptability criteria of each route, including how the route could accommodate the necessary BRT infrastructure.

### **Detailed assessment**

A detailed assessment was then undertaken for the most promising route options. The key issues that were assessed in order to refine the viable route options were as follows:

- the suitability of the route to provide priority lanes for the BRT2 service;
- the potential positive impact of the route on public transport journey times and reliability;
- the accessibility of the route to key locations of employment, healthcare, leisure, commerce and regeneration;
- whether or not the route would provide value for money;
- the practical feasibility of implementing the route;
- whether the project would be within available funding if the route is selected;
- the commercial viability of the route; and
- the potential of the route to encourage more people to transfer from private car to public transport.



# Route Options Assessed

A number of options were assessed to identify the most suitable routes to be taken forward for further investigation and detailed assessment. The options assessed for North Route, South Route and the Glider G2 Extension are shown on the plan.

### Glider G2 Extension Options

- Dublin Road
- University Road
- Lisburn Road

#### Via either:

- Fitzwilliam Street
- Elmwood Avenue
- Wellesley Avenue
- Wellington Park
- Eglantine Avenue

### **South Options**

- Ormeau Road
- Ravenhill Road
- Saintfield Road

#### And City Centre connections of:

- Bankmore Link and Great Victoria Street
- Ormeau Avenue
- Durham Street
- Bedford Street
- Cromac Street

### **North Options**

- Antrim Road
- Shore Road
- Crumlin Road

#### And City Centre connections of:

- Royal Avenue
- Donegall Street
- Frederick Street
- York Street
- Millfield
- Dunbar Link





- 2 New bus lane country-bound
- <sup>3</sup> No bus priority measures Glider journeys will be accommodated alongside traffic
- 4 New bus lane city-bound
- 5 New bus lane country-bound
- 6 Conversion to a one-way system from University Road to Lisburn Road with new bus lane

# Glider G2 Extension Route Options

# Route assessed as being suitable

#### **Glider G2 Extension**

This circulatory option runs from the existing G2 network at Howard Street -Great Victoria Street - Bruce Street - Dublin Road - University Road, then connects with the Lisburn Road via Elmwood Avenue and back to the City Centre via Lisburn Road and Great Victoria Street. This route forms an extension to the existing G2 service which extends to the Titanic Quarter via the City Centre network.

This route facilitates significant priority for BRT2 using the existing roads and will enhance accessibility to Queen's University and Belfast City Hospital as well as serving the communities of Sandy Row, Donegall Pass, Botanic and Holylands. Elmwood Avenue is proposed to be converted to one-way operation in the direction of Lisburn Road with the existing on-street parking retained.

# Routes assessed as being unsuitable

#### Glider G2 Extension Anti-clockwise along University Street / Lisburn Road

This anti-clockwise route runs from Lisburn Road via either Fitzwilliam Street, Wellesley Avenue, Wellington Park or Eglantine Avenue, connecting to the City Centre via University Road and Dublin Road. This route forms an extension to the existing G2 service which extends to the Titanic Quarter via the City Centre network.

This option was ruled out due to the need to board and alight on the opposite side of the road for Queen's University and Belfast City Hospital. All connection routes, with the exception of Elmwood Avenue, between University Road and Lisburn Road were ruled out due to the constrained nature of the streets and significant loss of on-street residential car parking required to manoeuvre a Glider vehicle and facilitate high-levels of bus priority.



# South Route Options

Route assessed as being suitable

#### Ormeau Road

This option runs from the existing G1/ G2 network at City Hall along Great Victoria Street - Bruce Street - Bankmore Link - Ormeau Road - Saintfield Road - Cairnshill Park & Ride.

From the City Centre, this option enhances access to/from Ormeau Road via a new bus-only connection on Bankmore Link (see point 3 on map). It also provides dedicated cycle lanes which enhances onward connections to the proposed Lagan Pedestrian and Cycle Bridge at the Gas Works. The route makes use of and extends existing bus lane provision along Great Victoria Street and connects to the new Belfast Transport Hub from Great Victoria Street by way of a short walk.

Along Ormeau Road, the scheme passes through mainly high-density residential areas. The required level of bus priority can be achieved within the existing highway boundary for the majority of the route (high-level of existing bus lane provision). Ormeau Road/Saintfield Road has strong public transport patronage and is designated as a Core Quality Bus Corridor in the Belfast Metropolitan Transport Plan. The route would enhance access to Forestside Shopping Centre and would connect to the existing Cairnshill Park & Ride which would be extended as part of the BRT2 project.

# Routes assessed as being unsuitable

#### **Ravenhill Road Option**

This option runs along Ravenhill Road - East Bridge Street - Ormeau Road/ Ravenhill Road Roundabout Junction.

The required level of bus priority cannot be provided along significant stretches of Ravenhill Road without highway widening, which would cause loss of on-street residential parking and would require 3rd party land acquisition.

In addition, this route would connect to the City Centre via the existing G1 route, which would result in duplication of services between Short Strand and the City Centre.

#### **Cairnshill to Carryduff**

#### This option runs from Cairnshill Park & Ride - Saintfield Road - Carryduff Roundabout.

Knockbracken Healthcare Centre and We are Vertigo represent the only notable attractors. There are low levels of frontage activity and low levels of residential density and as such, potential to attract future patronage is low. At some point in the future the residential developments that are planned for the area between Cairnshill and Carryduff may reach a size that will warrant a bespoke, regular interval service. Extension of a BRT2 service could be considered at that time.

#### **City Centre Connections**

A number of South City Centre connection route options were ruled out as follows:

- Ormeau Avenue
- › Durham Street
- > Bedford Street
- › Cromac Street

These routes offer limited carriageway width and the constrained City Centre nature results in lack of ability to provide high-levels of bus priority.



# North Route Options

### Route assessed as being suitable

#### Antrim Road

This option runs from the existing G1/G2 network at Belfast City Hall to Donegall Place - Royal Avenue - Donegall Street -Clifton Street - Carlisle Circus Roundabout - Antrim Road - Proposed Park & Ride/ Interchange facility on O'Neill Road.

From the City Centre, this option enhances access along Antrim Road, with extended and upgraded bus lanes. A Park & Ride/Interchange location is proposed on O'Neill Road to facilitate those who wish to use their car for part of their journey or interchange to a local bus service/active travel. Along Antrim Road, the scheme passes through a mix of low (outer sections) and high (inner sections) density residential areas. The required level of bus priority can be achieved within the existing highway boundary for the majority of route (high-level of existing bus lane provision), with only some sections of the route requiring new bus lanes. Antrim Road benefits from high levels of existing bus patronage serving an established population catchment. It is also designated as a Core Quality Bus Corridor in the Belfast Metropolitan Transport Plan. This route would enhance access to Mater Hospital, Belfast Castle, Belfast Zoo and a number of education facilities.





- Suitable Routes Unsuitable Routes G1 Existing G2 Existing
- 1 Localised widening to facilitate new bus lanes in both directions to proposed Park & Ride/ Interchange location on O'Neill Road
- 2 New bus lanes in both directions. Localised widening required outside of highway boundary
- 3 Existing nearside lane to become new bus lane
- 4 New bus lane in city-bound direction only. Some localised widening required outside of highway boundary
- 5 Bus Lane set backs at traffic signals: Donegall Park Avenue. Dargan Road, Fortwilliam Park
- 6 Extend and upgrade existing bus lanes in both directions
- 7 Possible removal of right turning pockets at Skegoneil Ave, O'Dempsey Street, Mineral Street, Harrisburg Street, Pitsburg Street, Arosa Parade and North Queen Street
- 8 Possible removal of parking bays between North Derby Street and Grove Place
- 9 New bus lane city-bound and upgrade of existing bus lane country-bound
- 10 New bus lane country-bound and new contra flow bus lane city-bound
- 11 Tie in with York Street Interchange scheme
- 12 New bus lanes in both directions
- 13 Proposed two-way bus/cycle only route
- 14 Glider to utilise existing College Square East infrastructure, upgraded to include Glider halts and infrastructure



# North Route Options

### Routes assessed as being suitable

#### Shore Road to O'Neill Road

This option runs along Donegall Place - Royal Avenue - York Street - York Road - Shore Road - Longwood Road - Proposed Park & Ride/Interchange location at O'Neill Road, as shown by the dashed line on the map.

From the City Centre, this option enhances access along Shore Road, with extended and upgraded bus lanes. A Park & Ride/Interchange location is proposed on O'Neill Road to facilitate those who wish to use their car for part of their journey or interchange to a local bus service/active travel.

Along Shore Road, the scheme passes through a mix of medium to highdensity residential areas. The required level of bus priority can be achieved within the existing highway boundary for the majority of the route (high-level of existing bus lane provision), with new bus lanes between Longwood Road and O'Neill Road. Shore Road benefits from high levels of existing bus patronage supported by an established population catchment. It is also designated as a Core Quality Bus Corridor in the Belfast Metropolitan Transport Plan. This route would enhance access to Ulster University, Cityside Retail Park, Abbey Centre, Longwood Retail Park, Seaview Stadium, Grove Leisure Centre, Valley Leisure Centre as well as commercial premises along Church Road.

#### Shore Road to Longwood Road

This option runs along Donegall Place - Royal Avenue - York Street - York Road - Shore Road - Longwood Road.

From the City Centre, this option enhances access along Shore Road, with extended and upgraded bus lanes. A Park & Ride/Interchange location is proposed at Longwood Road to facilitate those who wish to use their car for part of their journey or interchange to a local bus service/active travel.

Along Shore Road, the scheme passes through a mix of medium to highdensity residential areas. The required level of bus priority can be achieved within the existing highway boundary for the majority of the route (highlevel of existing bus lane provision). Shore Road benefits from high levels of existing bus patronage supported by an established population catchment. It is also designated as a Core Quality Bus Corridor in the Belfast Metropolitan Transport Plan. This route would enhance access to Ulster University, Cityside Retail Park, Abbey Centre, Longwood Retail Park, Seaview Stadium and Grove Leisure Centre.

# North Route Options

## Routes assessed as being unsuitable

#### Antrim Road extending beyond O'Neill Road

This section runs along Antrim Road - Glengormley Town Centre.

The required level of bus priority cannot be achieved along this section of the Antrim Road or Ballyclare Road without highway widening which would require 3rd party land acquisition. BRT services would be required to run on-street in mixed traffic and would therefore be subject to peak delays, resulting in unreliable journey times. The junction of Ballyclare Road/Hightown Road currently experiences high traffic volumes and as such bus priority would be challenging to achieve without a significant impact on general traffic. An extension to Sandyknowes roundabout was ruled out on the basis that Sandvknowes facilitates strategic traffic movements and as such any impact on general traffic to achieve bus priority at this location would be a high risk to stakeholder and public acceptability.

#### Shore Road extending beyond Longwood Road

This option runs from it's junction with Longwood Road - Doagh Road -Station Roundabout (via either Doagh Road or A2 Station Road) - O'Neill Road - Prince Charles Way - Ballyclare Road - Proposed Park & Ride/ Interchange at Global Point Avenue.

The required level of bus priority cannot be achieved along the Doagh Road without significant highway widening which would require 3rd party land acquisition. BRT services would therefore be required to run along the A2 which carries strategic traffic movements from the north-east coast and facilitates access to the M5 motorway. Reallocation of road space from general traffic to bus lanes would result in a significant detriment to general traffic and lead to unacceptable levels of congestion in this area. Moving beyond the A2 at Station Road the area typically exhibits a mix of low to medium density residential areas, with low levels of frontage activity (i.e. local shops and services) and has a lack of significant attractors or generators which are needed to provide the patronage levels required to service a rapid transit scheme.



#### **Crumlin Road**

This option runs along Clifton Street - Carlisle Circus Roundabout - Crumlin Road - Ballysillan Road -North Circular Road - Antrim Road - Carlisle Circus Roundabout.

The required levels of bus priority cannot be provided along Crumlin Road without highway widening, which would cause loss of on-street residential parking and would require 3rd party land acquisition. BRT services would be required to run on-street in mixed traffic and would therefore be subject to peak delays, resulting in unreliable journey times. There are limited attractors in the area beyond the Mater Hospital and Crumlin Road Gaol. Due to the lack of ability to provide a dedicated interchange or Park & Ride site, a BRT route using Crumlin Road would need to operate as a circular route in conjunction with the lower section of the Antrim Road which is not efficient nor desirable for a public transport service.

#### **City Centre Connections**

A number of North City Centre connection route options were ruled out as follows:

- > Frederick Street
- Millfield
- > Great Patrick Street

These routes were ruled out as they would require BRT to operate along the Inner Ring Road and as such there was limited opportunity to provide highlevels of bus priority. They also do not offer a high level of City Centre access.

## Summary

### **Route Options for Consultation**

Based on the assessments carried out, the three route options for consultation are presented in this section. Following this public consultation, further modelling and analysis will be undertaken to establish the preferred option.

#### O'Neill Road to Cairnshill Park & Ride via Antrim Road and Ormeau Road

- The Antrim Road option which runs from the existing G1/G2 network at City Hall - Donegall Place - Royal Avenue - Donegall Street - Clifton Street - Carlisle Circus Roundabout -Antrim Road to a proposed Park & Ride/ Interchange facility on O'Neill Road.
- The Ormeau Road option which runs from the existing G1/G2 network at City Hall - Great Victoria Street - Bruce Street -Bankmore Link - Ormeau Road - Ormeau Road / Ravenhill Road Roundabout -Saintfield Road to Cairnshill Park & Ride.
- The Glider G2 Extension runs from the existing G2 network at Howard Street -Great Victoria Street - Bruce Street - Dublin Road - University Road, then connects with the Lisburn Road via Elmwood Avenue and back to the City Centre via Lisburn Road and Great Victoria Street. This route forms an extension to the existing G2 service which extends to the Titanic Quarter via the City Centre network.

#### O'Neill Road to Cairnshill Park & Ride via Shore Road and Ormeau Road

 The Shore Road option which runs from the existing G1/G2 network at City Hall -Donegall Place - Royal Avenue - York Street
York Road - Shore Road - Longwood
Road - Church Road to a proposed Park & Ride/Interchange facility on O'Neill Road.

- The Ormeau Road option which runs from the existing G1/G2 network at City Hall - Great Victoria Street - Bruce Street -Bankmore Link - Ormeau Road - Ormeau Road / Ravenhill Road Roundabout -Saintfield Road to Cairnshill Park & Ride.
- The Glider G2 Extension runs from the existing G2 network at Howard Street -Great Victoria Street - Bruce Street - Dublin Road - University Road, then connects with the Lisburn Road via Elmwood Avenue and back to the City Centre via Lisburn Road and Great Victoria Street. This route forms an extension to the existing G2 service which extends to the Titanic Quarter via the City Centre network.

#### Longwood Road to Cairnshill Park & Ride via Shore Road and Ormeau Road

- The Shore Road option which runs from the existing G1/G2 network at City Hall -Donegall Place - Royal Avenue - York Street
  York Road - Shore Road - Longwood Road to a proposed Park & Ride/ Interchange facility on Longwood Road
- The Ormeau Road option which runs from the existing G1/G2 network at City Hall - Great Victoria Street - Bruce Street -Bankmore Link - Ormeau Road - Ormeau Road / Ravenhill Road Roundabout -Saintfield Road to Cairnshill Park & Ride.
- The Glider G2 Extension runs from the existing G2 network at Howard Street -Great Victoria Street - Bruce Street - Dublin Road - University Road, then connects with the Lisburn Road via Elmwood Avenue and back to the City Centre via Lisburn Road and Great Victoria Street. This route forms an extension to the existing G2 service which extends to the Titanic Quarter via the City Centre network.



# **Next Steps**

# Further Investigation of Route Options

The responses to this consultation will be an important step in determining the preferred route options for BRT2. In addition, further investigations of road geometry, junction arrangements, Park & Ride and halt locations will be undertaken in order to further inform the selection of the preferred route layouts.

### Development of Service Operations

Further development and assessment of the route options will involve the preparation of preliminary service operation plans for each option. This task will be undertaken in conjunction with Translink. It will include the review of existing bus services along the network and recommendations on the integration of other feeder/ residual services to support BRT2.

## **Further Consultations**

Further public consultation will be undertaken prior to implementation of the scheme.

# Your Views on Route Options

The purpose of this consultation is to get your views on the routes considered and on the selection of the options presented for consultation. The Department will publish a summary of responses following completion of the consultation process. Your response, and all other responses to the consultation, may be disclosed on request. The Department can only refuse to disclose information in exceptional circumstances. Appendix 1 overleaf will give you guidance on the legal position about any information given by you in response to this consultation.

### **Dfl Contact Details**

Mr Clive Robinson, BRT Programme Manager, Department for Infrastructure, Transport Projects Branch, Clarence Court, 10-18 Adelaide Street, Belfast, BT2 8GB (+44) 800 054 1160 BRT2@infrastructure-ni.gov.uk







## **Appendix 1** Freedom of Information Act 2000 -Confidentiality of Consultations

The Freedom of Information Act gives the public a right of access to any information held by a public authority, namely, the Department in this case. This right of access to information includes information provided in response to a consultation. The Department cannot automatically consider as confidential information supplied to it in response to a consultation. However it does have the responsibility to decide whether any information provided by you in response to this consultation, including information about your identity, should be made public or treated as confidential.

This means that information provided by you in response to the consultation is unlikely to be treated as confidential, except in very particular circumstances. The Lord Chancellor's Code of Practice on the Freedom of Information Act provides that: The Department should only accept information from third parties in confidence if it is necessary to obtain that information in connection with the exercise of any of the Department's functions and it would not otherwise be provided.

The Department should not agree to hold information received from third parties 'in confidence' which is not confidential in nature. Acceptance by the Department of confidentiality provisions must be for good reasons, capable of being justified to the Information commissioner.

This publication can also be made available in alternative accessible formats on request.







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