Blackstaff Greenway Feasibility Study

BCC- Climate City Resilience Committee

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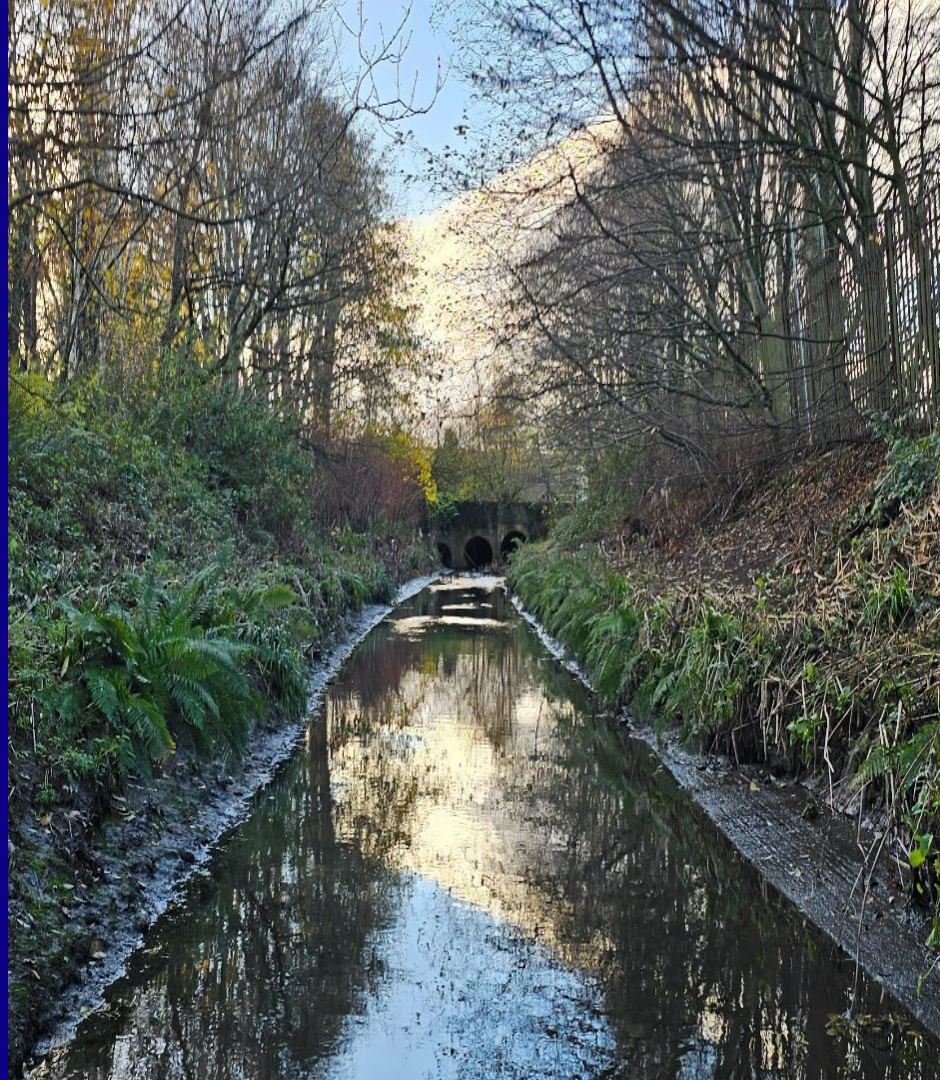


Our vision

“A society where the way we travel creates healthier places and happier lives for everyone.”

Our mission

“We make it easier for everyone to walk, wheel and cycle.”

Contents

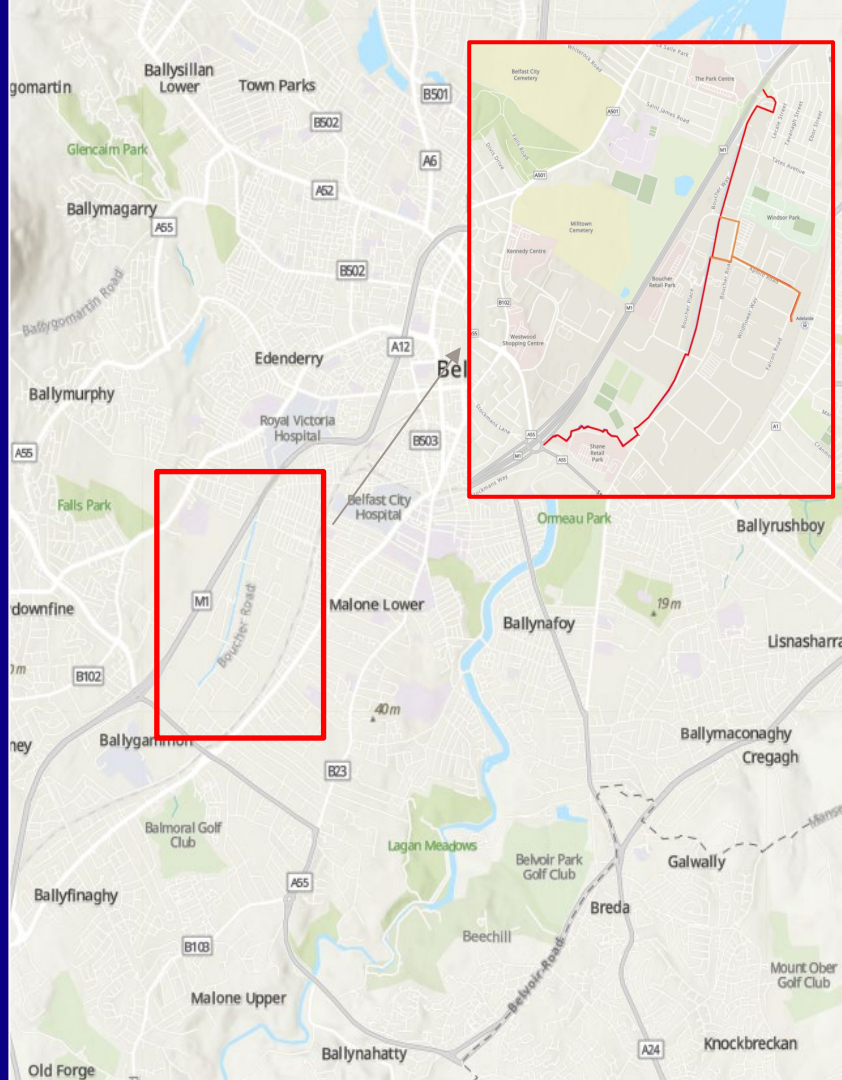
- The Brief
- Guidance and Plans
- Context
- Route Appraisal
- Proposed route
- Moving forward

The Brief

Belfast City Council engaged the services of Sustrans to complete a Feasibility Study into a Blackstaff Greenway.

~ 2km

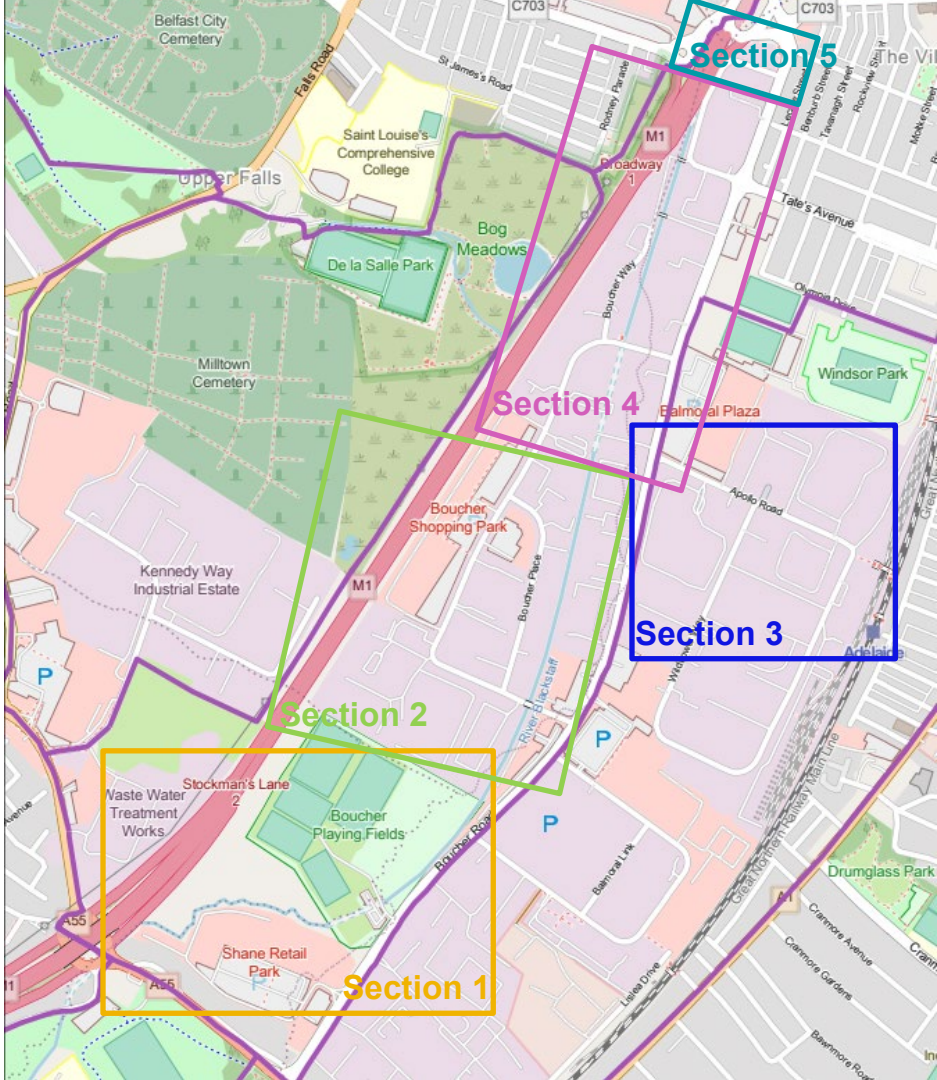
Blackstaff Greenway would follow the route of the Blackstaff River from Stockman's Way roundabout through Boucher Road playing fields and continuing through the Boucher Estate terminating at the ‘Rise’ sculpture. The report will also examine connections to Adelaide Train Station.



Route Optioneering

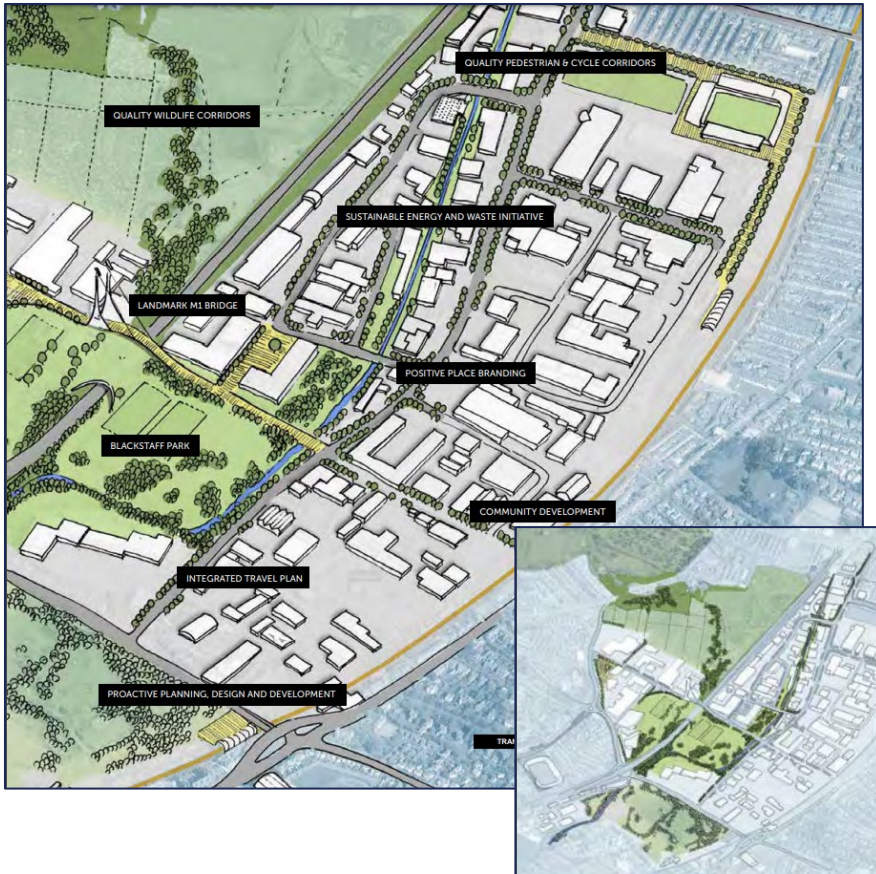
- Desktop Study
- Site Visit with engineer
- Stakeholder engagement
- Preliminary Ecological Assessment

“ To make cycling an attractive alternative to driving short distances, cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles”.
LTN 1/20 4.2.7



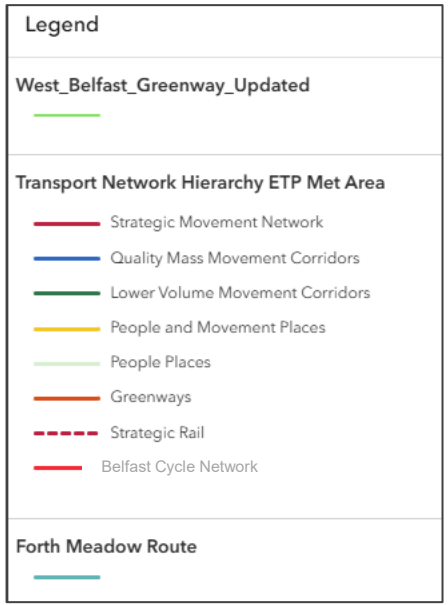
Relevant Guidance and Plans

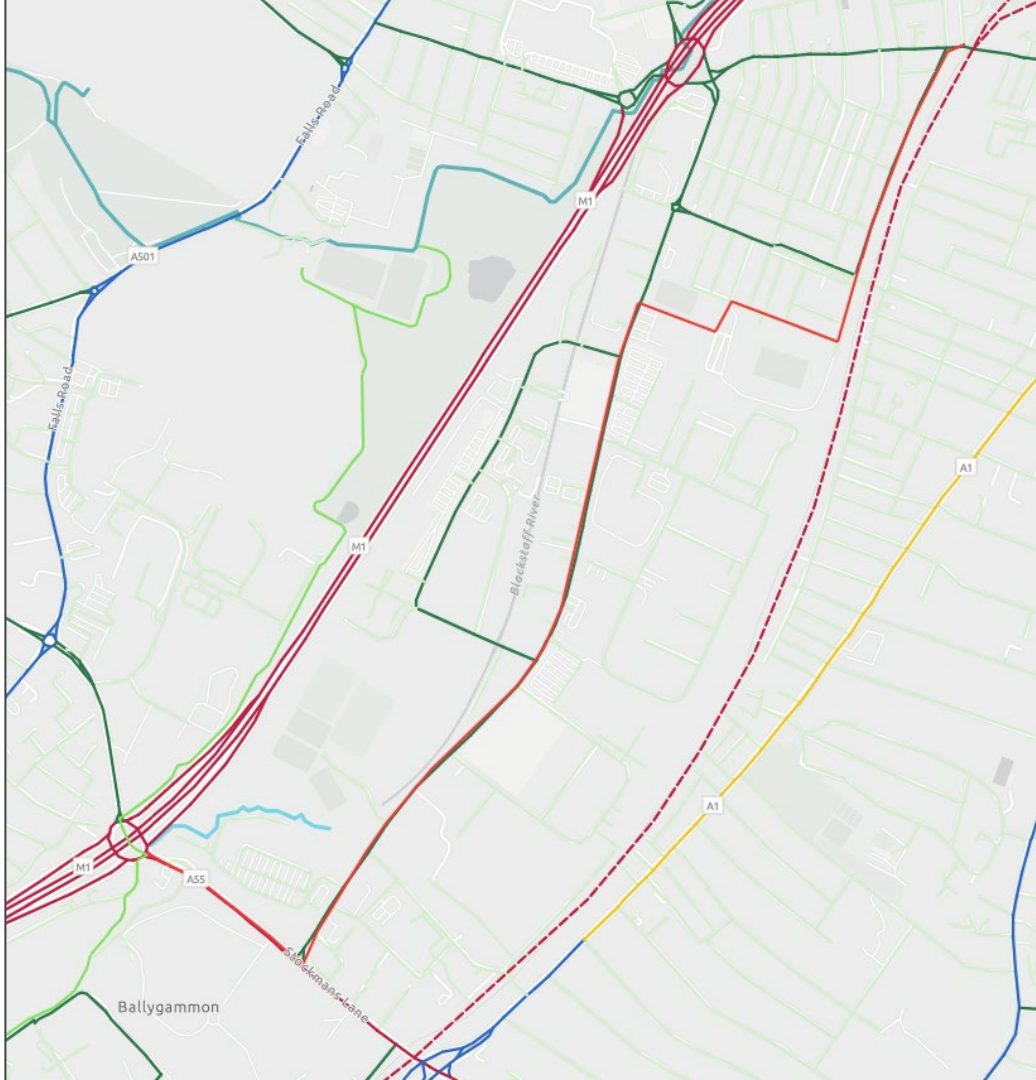
- Department for Transport LTN 1/20 Cycle Infrastructure Design
- Cycling by Design, Transport Scotland
- National Cycle Network (NCN) Principles
- NI Gear Change
- Belfast Local Development Plan 2035
- Transform South/West – Enhancing Place, Connecting Opportunities, Serving Belfast (2016)
- Belfast Cycle Network 2022-31
- Eastern Transport Plan



The Study Area

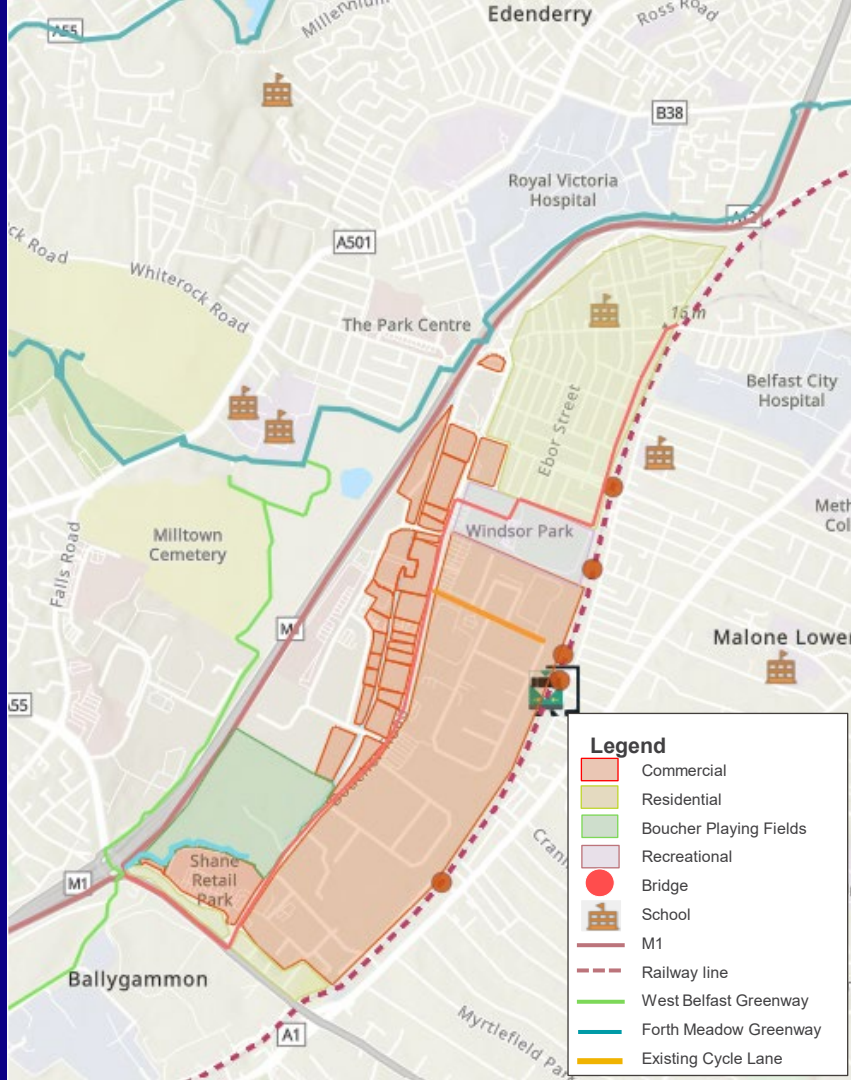
Current & Future Transport Network





Existing Characteristics

- Vehicle dominated
- Commercial and industrial use development directly adjacent to the river
- Low permeability
- Limited green space
- Recreation – Windsor Stadium and Olympia
- Limited existing cycle infrastructure
- 1 school in the immediate vicinity



Why a greenway?

Active Travel Demand

30% of Belfast residents want to drive less

Equity

School in the vicinity. Many without access to a car.

Access to key destinations

Olympia Leisure Centre, Windsor Park Stadium, Adelaide Train Station, Boucher Playing Fields. Large retail hubs

Greening the Grey

Climate resilience & enhancing biodiversity

Public Health & Wellbeing

Reduce risk of chronic diseases & improve quality of life

Business Satisfaction

31 collisions between 2017 – 2019 in the study area

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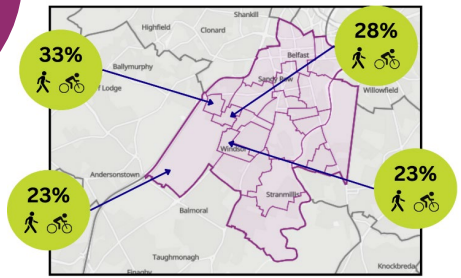
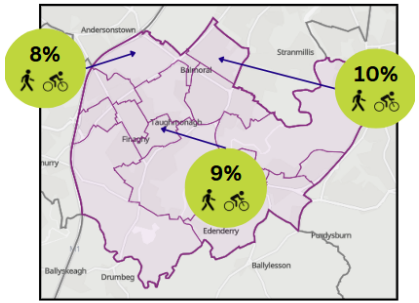
Botanic



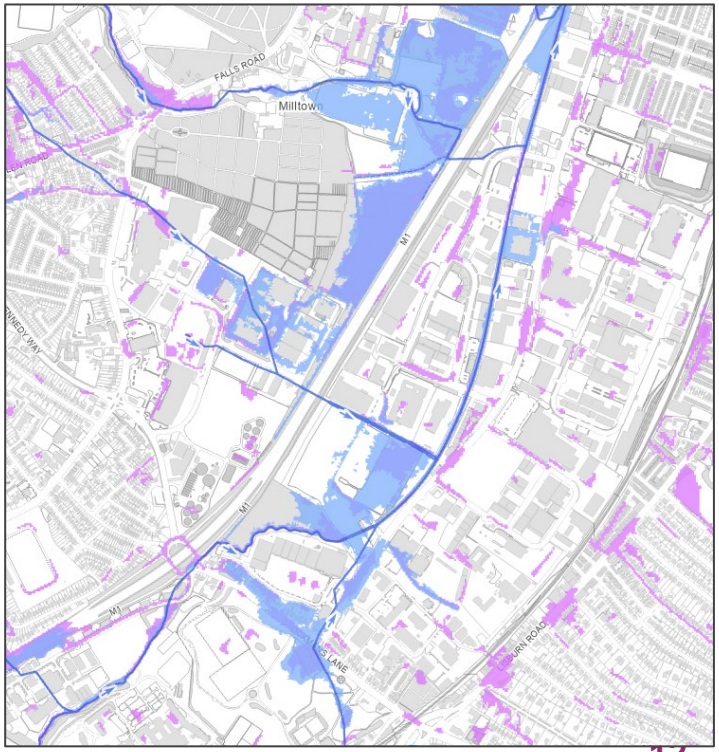
Balmoral



Source: Census NI. 25% of Botanic residents walk or cycle to work/study despite the lack of safe infrastructure.

Site Considerations

- Flood risk
- Highways
- Utilities
- Air Pollution
- Heritage
- Contamination
- Land use
- Topography



Surface & Fluvial Flood Map

Integration

Boardwalk Example, Lias Lane, Midlands. Source: Sustrans

Route Optioneering

- Desktop Study
- Site Visit with engineer
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- Preliminary Ecological Assessment

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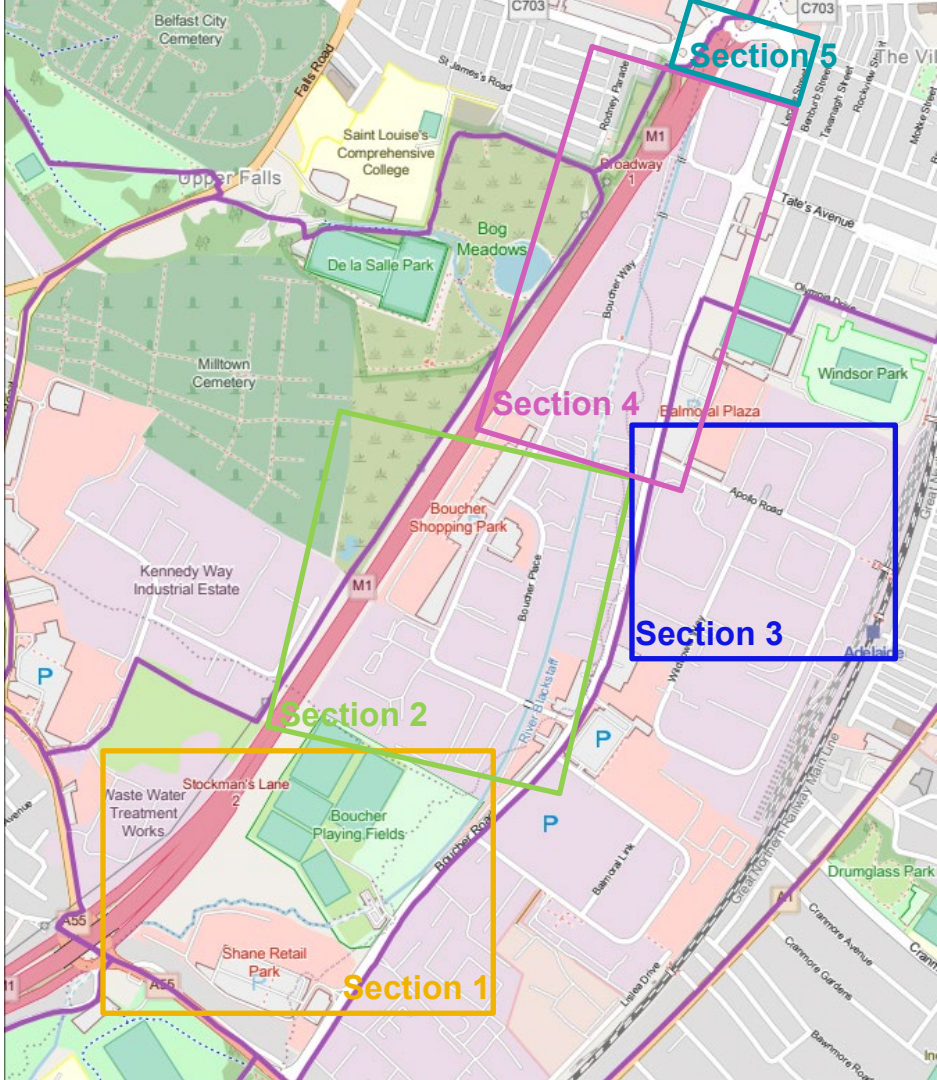
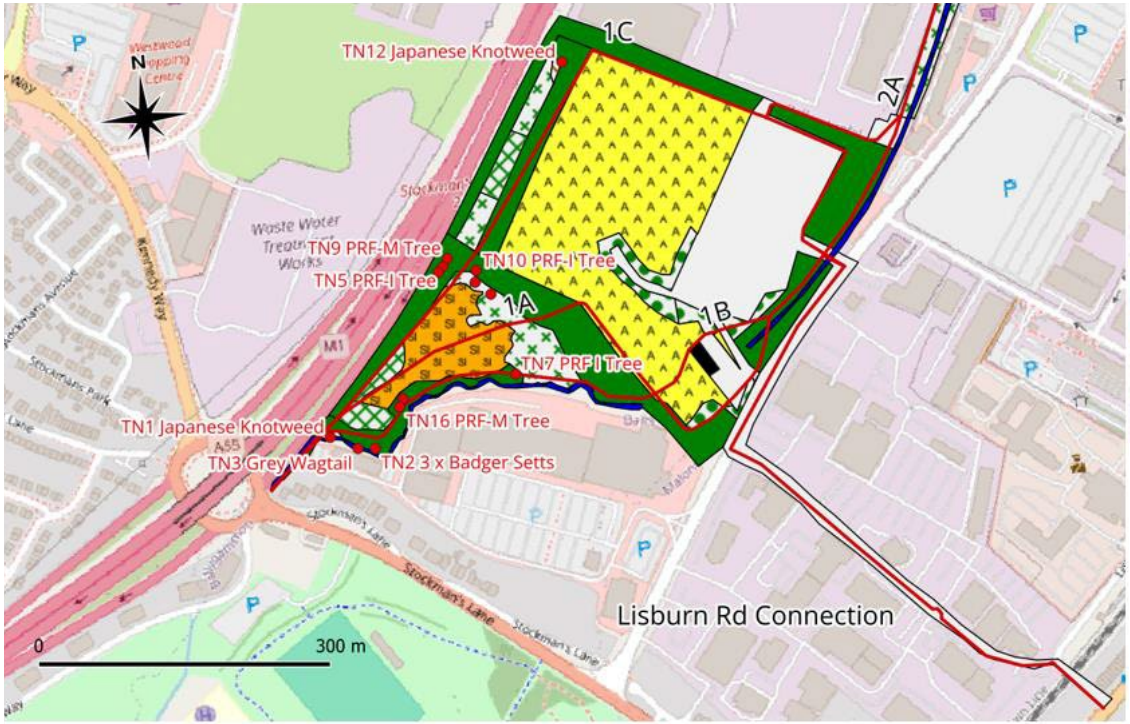
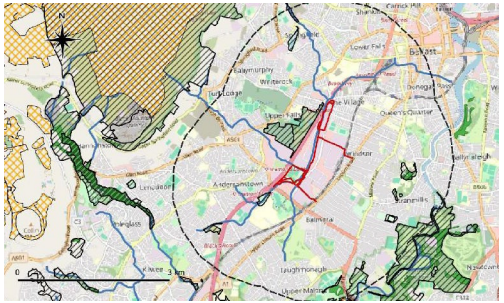


Ecology

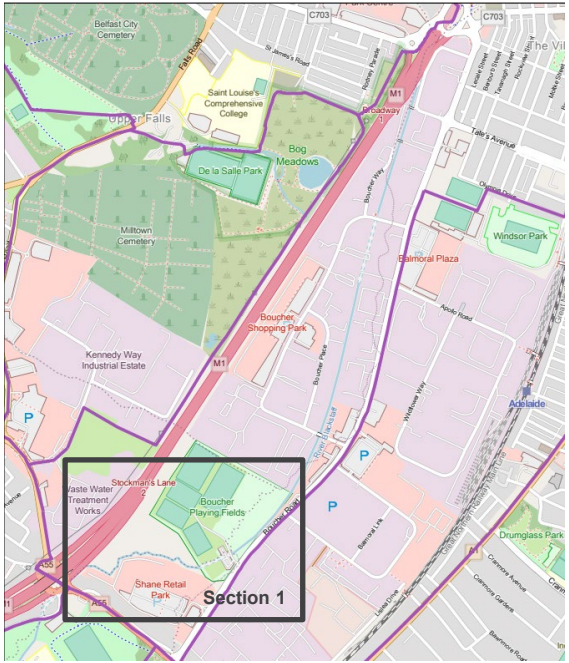


Legend

- Target Notes
- Route Options
- J 1.4 Amenity Grassland
- J 3.6 Buildings
- A 2.1 Dense Continuous Scrub
- G 2.1 Eutrophic Running Water
- J 5 Other Habitat
- B 2 Neutral Grassland
- C 3.1 Other Tall Herb and Fern Ruderal
- A 2.2 Scattered Scrub
- A 3.1 Parkland / Scattered Trees
- A 1.1.1 Semi-natural Broadleaved Woodland

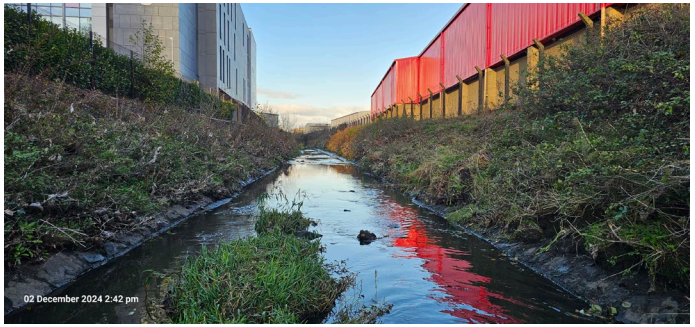


Section 1 – Boucher Playing Fields



Section 2


Belfast City Cemetery
Falls Road
C703
St James's Road
Saint Louise's Comprehensive College
Upper Falls
Broadway
M1
Bog Meadows
De la Salle Park
Milltown Cemetery
Boucher Way
Windsor Park
Balmoral Plaza
Boucher Shopping Park
Kennedy Way Industrial Estate
Boucher Place
Section 2
Adelaide
Stockman's Lane
Waste Water Treatment Works
Boucher Playing Fields
Balmoral Ln
Drumglass Park
Shane Retail Park
A55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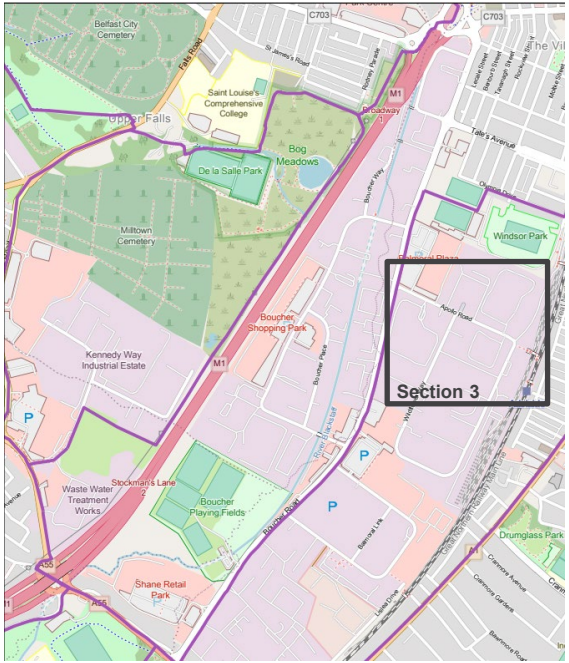
Section 2- Cantilever Solution

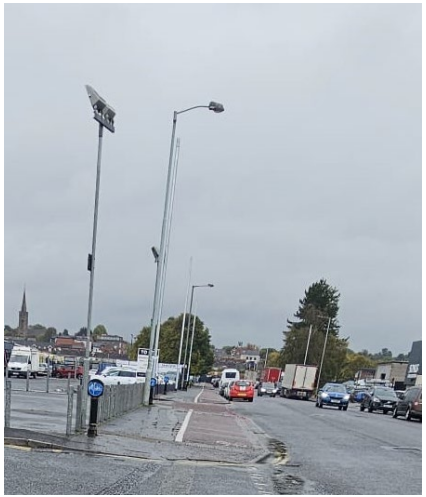
Figure 5-1: DBFL Option A proposal

Source: Royal Canal Urban Greenway Feasibility study

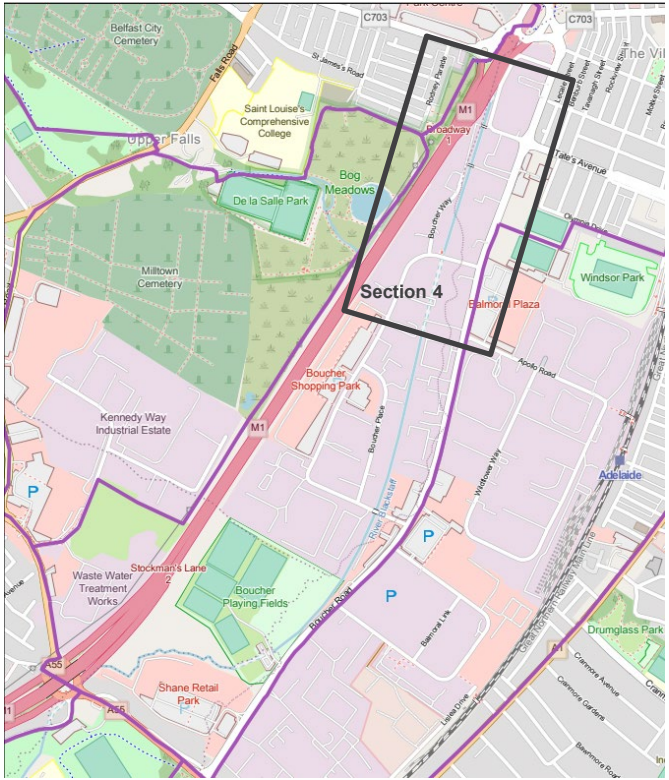
Connswater Greenway, Castlereagh Rd. Source: Sustrans

Section 3 – Adelaide Train Station Connection





Section 4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Milltown Cemetery
Section 4
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Balmoral Plaza
Boucher Shopping Park
Apollo Road
Kennedy Way Industrial Estate
Boucher Place
Adelaide
Wildrose Way
Waste Water Treatment Works
Stockman's Lane
Boucher Playing Fields
Boucher Road
Drumglass Park
Shane Retail Park
A55


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Section 5


Section 5
Belfast City Cemetery
Falls Road
Saint Louise's Comprehensive College
Upper Falls
Bog Meadows
De la Salle Park
Milltown Cemetery
Broadway
M1
Boucher Shopping Park
Kennedy Way Industrial Estate
Balmoral Plaza
Windsor Park
Adelaide
Waste Water Treatment Works
Stockman's Lane
Boucher Playing Fields
Rainey Road
Drumglass Park
Shane Retail Park
A55


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BOUCHER BUSINESS
Tiles & bathrooms at Fantastic Prices


McDonald's

Full Greenway

Partial Greenway

No Greenway

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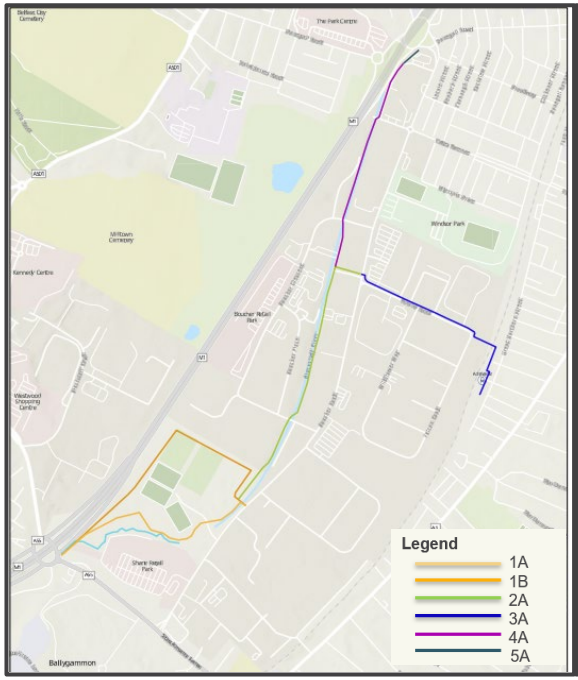
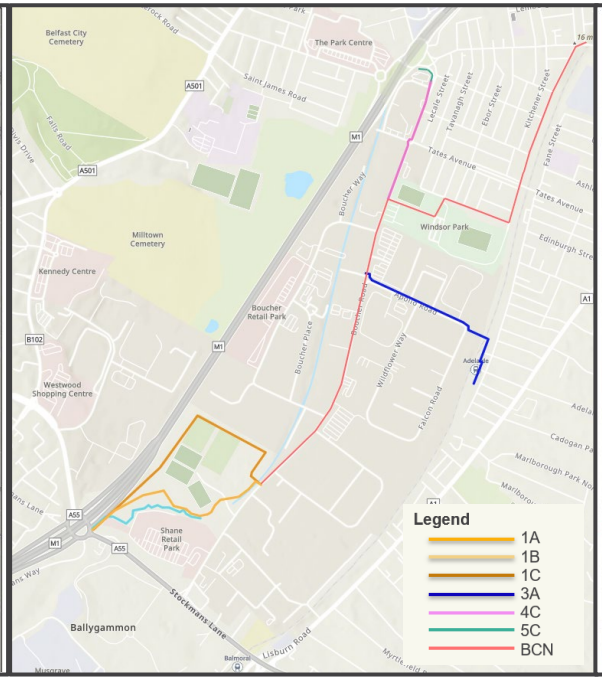
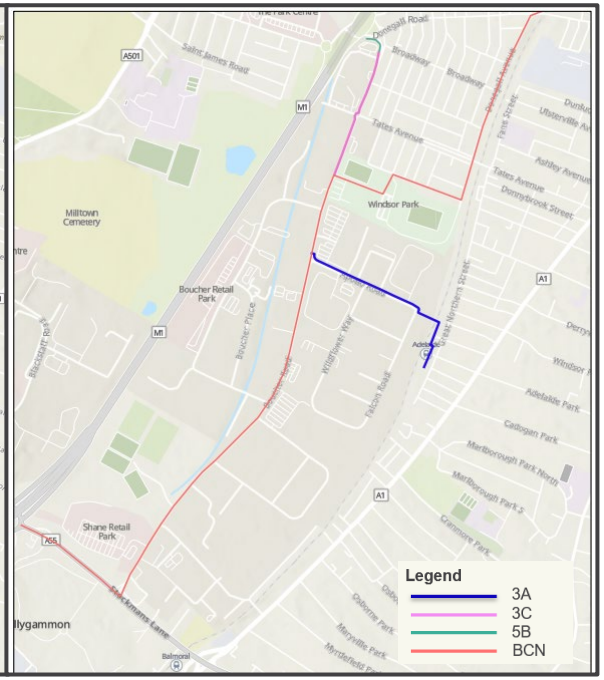
Option 1*



Option 2



Option 3



*Assessed as a shared path and a walking/wheeling only path

Multi-criteria Analysis

1. Safety
2. Comfort
3. Directedness
4. Attractiveness
5. Cohesion

LTN 1/20

6. Accessibility
7. Engineering difficulties
8. Biodiversity Enhancement
9. Land ownership issues
10. River Regeneration

Requirement	Option 1 (Cycling &Walking Shared Path): Stockman's Lane to Rise Sculpture along Blackstaff River Full 3m wide walking, wheeling and cycling path		Option 1 (Walking/Wheeling only): Narrow/Walking Option Where restricted, 2m walking & wheeling path		Option 2: Stockman's Lane to Rise Sculpture via Boucher Road Playing Field, the BCN and Section 4 & 5		Option 3: The BCN + Section 3, 4C & 5B	
Safety	There are 4 minor road crossings, 2 junctions (roundabouts at either end) and the crossing of a busy road to reach Apollo Road. With appropriate design the route will be safe. Maintenance of route required – branches and leaves can provide safety hazards.		There are 4 minor road crossings, 2 junctions (roundabouts at either end) and the crossing of a busy road to reach Apollo Road. With appropriate design the route will be safe. Maintenance of route required – branches and leaves can provide safety hazards.		With fully segregated cycle tracks this will be safe.		Full segregation of the cycle track will ensure safety but not to the same level as an off-road path.	
Comfort	Comfortable gradients. Granted a minimum width of 3m along the length of the route this is expected to be a comfortable shared path with limited potential conflict between users. 4 minor road crossings between Stockman's Lane Roundabout and Rise Sculpture could cause a lot of stopping and starting unless designed as crossings where people walking, wheeling and cycling have priority.		Comfortable gradients. Narrow path but comfortable for walking and wheeling only. When assessed against Cycling Level of Service (CLOS) this is not a comfortable path. 4 minor road crossings between Stockman's Lane Roundabout and Rise Sculpture could cause a lot of stopping and starting unless designed as crossings where people walking & wheeling have priority.		Comfortable gradients. Comfortable width be provided in the park and cycle track will follow LTN 1/20 Standards. 4 controlled junctions along the route will cause major stopping and starting for cyclist. Other uncontrolled entrances to busy businesses will also cause stoppages. User required to navigate a roundabout at section 4.		Comfortable gradients. Cycle track will be of comfortable width for cyclists, following LTN 1/20. 7 Controlled junctions along the route will cause major stopping and starting for cyclist. Other uncontrolled entrances to busy businesses will also cause stoppages. User required to navigate a roundabout at section 4.	
Directness	While this is the shortest option at 2240m long. The 4 road crossings could increase the journey time if people walking, wheeling and cycling do not have priority. Deviation factor: 1.1		While this is the shortest option at 2440m. The 4 road crossings could increase the journey time if people walking, wheeling and cycling do not have priority. Not as direct as option 1A for a cyclist. Deviation factor: 1.1		Length 2360m The 6 road crossings could increase the journey time if people walking, wheeling and cycling do not have priority. Deviation factor: 1.2		Length 2635m The 6 road crossings could increase the journey time if people walking, wheeling and cycling do not have priority. Deviation factor: 1.3	
Attractiveness	Very attractive if it is appropriately designed, opening the River up to the public, providing a safe walking/wheeling and cycling route rich in wildlife and heritage.		Very attractive if it is appropriately designed, opening the River up to the public, providing a safe walking/wheeling route rich in wildlife and heritage.		Attractive within Playing Fields but on-road section not attractive.		On a busy main road in a car dominated area. Currently not a pleasant walk, wheel or cycle, and very substantial changes would be required to address this.	
Cohesion	Connects to West Belfast Greenway, Forth Meadow Greenway & Adeliade Train Station.		This does not provide a cohesive route for a cyclist but is connected and intuitive for a walker/wheeler.		Connects to West Belfast Greenway, Forth Meadow Greenway & Adeliade Train Station.		Connects to West Belfast Greenway, Forth Meadow Greenway, Olympia Leisure Centre & Adeliade Train Station.	

Highest Scoring Route

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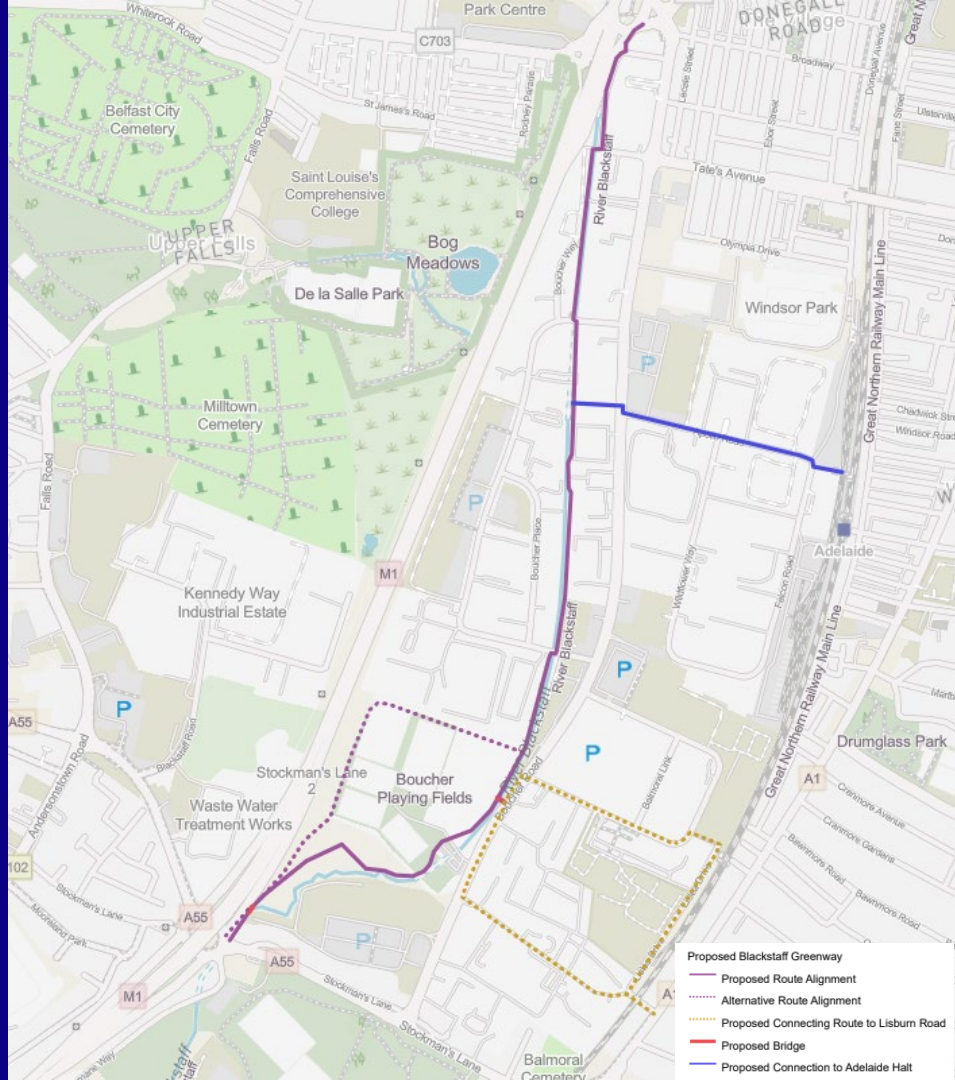

The way forward…

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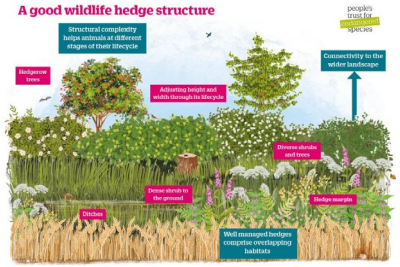
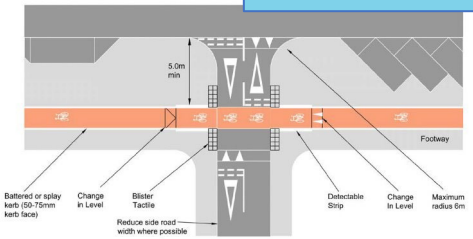
Cross-sectoral Delivery

Greenway Route - Strand 1
- Shared walking, wheeling and cycling path
- 5 Route sections
- Potential alignment/substitute to BCN

Nature Recovery – Strand 2
- Riverbed flood alleviation
- Biodiversity enhancement and extension of the bog meadows
- Water filtration and contamination treatment





Engagement – Strand 3
- Strengthening of natural and built heritage
- Greenway/Blueway accessibility enhancement
- Well-being and life quality improvement for businesses and people

Phased out delivery

Average time per phase

Feasibility	Feasibility Study	Time required
Concept Design	*Land negotiations	2-3 months
	Community Engagement	2 months pre-design, 2 weeks post design, 2 when planning application submitted
	Outline design drawings	1 month
	Topographical survey	1month
	Pre-application planning meeting & advice from BCC	2 months
	PEA	1 month
	Ecological Surveys	4 months
Planning & Ecology	Application Development	2 months pre-design, 2 weeks post design, 2 when planning application submitted
	Application submission & determination	3 months
	Licence application (if required e.g. dormouse)	1 month
Technical Design (RIBA Stage 4)	Technical Design	1 month
	Planning (condition discharge)	2 months
	Tender & Mobilisation	1 month
*Construction (RIBA Stage 5)	Construction	2 months

Cost estimates

Route Section	Item description	Unit	Cost per unit	Quantity	Low total cost	Notes
Greenway Route	New traffic free path (standard construction)	m	£291	1,447	£421,077	Costs are dependent on surface finish and path width. Cost are also dependent on any engineering complexities such as need for no-dig construction techniques or minor retaining features.
	New traffic free path (flood zone construction)	m	£394	329	£129,593.10	Section through Boucher Road Playing Field is in a high flood risk zone. Building based on this will reduce long term maintenance cost.
	New traffic free path (boardwalk above riverbank)	m	£2,500	265	£662,500.00	In some space constrained sections where landowner negotiations do not result in space provided, the path may need to be built as a path on a structure above the riverbank.
	Urban Quietway	m	£200	277	£55,400.00	Along Glenmachan Place until the route reaches McDonalds
	Footway or shared use path with kerb realignment	m	£1,500	110	£165,000.00	Footway improvements on Glenmachan Place
	Toucan crossing	no	£130,000	2	£260,000.00	Toucan crossings are proposed due to traffic conditions present.
	New bridge: River Blackstaff (large, span >5m)	m	£16,043			
	Ancillary items (fencing, drainage, signs, seating)	rate	10%			
Branch to Adelaide Halt	Smaller scale junction re-model	no	£300,000			
	Cycle track/shared use path with kerb realignment	m	£1,500			
	Parallel zebra crossing	no	£60,000			
	Raised table side road crossing	no	£12,000			
	Bridge to station and Great Northern Street					
	Ancillary items (fencing, drainage, signs, seating)	rate	10%			
	Works total				£3,522,596.11	

All sections	Ecology	%	23	£792,584.12	Indicative allowance for new route
All sections	Design & Preparation	%	10	£352,259.61	Indicative allowance for future design and preparation
All sections	Land & Legal	%		£-	This is currently excluded from this cost estimate, and will depend on landowner negotiations and the strategy taken forward
All sections	Contractor's preliminaries	%	20	£704,519.22	
All sections	Surveys (Topographical, utilities etc.)	%	1.5	£52,838.94	Required to enable the design
	Subtotal with Design & preliminaries			**£5,371,959.94**	
All sections	Optimism bias	%	46	£2,471,101.17	Calculated in accordance with the Department for Transport's Analysis Guidance
	Grand total excluding VAT			**£7,843,060.24**	**Excludes inflation**

The way forward

→ Identify funding

Greenway/ AT Route - Strand 1
- DfI Greenway Development Funding
- Developer Contributions

Nature Recovery – Strand 2
- DAERA Nature Recovery Challenge Fund

Engagement – Strand 3
- Belfast City Council or DfC provision for community engagement
- Heritage Lottery Fund
- Corporate Social Responsibility

Other Partnership opportunities:

- Horizon Europe under Cluster 5:Climate, Energy and Mobility. (CIVITAS)
- Shared Island Funding - find a similarly constrained example in the Republic of Ireland & share learnings throughout design development
- Partner with local universities for environmental research or student-led design contributions

Climate Mitigation and Adaptation

→ Tackling Climate Change throughout the project Strands

Greenway/ AT Route - Strand 1

- Connected residential areas to green and blue infrastructure via active travel

Nature Recovery – Strand 2

- Expansion on the bog meadows in Boucher Playing Field
- Rain gardens in industrial/ business parks
- Million Tree Strategy: opportunities to plant more trees in the connection link, e.g. Border of Boucher Playing Field and Boucher Road; along section 4 culverted area.

Engagement – Strand 3

- Promote behavioural change
- Engage businesses and communities in the design process of SuDS and new public facilities along the Blackstaff river.
- Engage with business to develop their Climate Resilience Plans/ Business resilience and long-term operational sustainability.

We work for and with communities, helping them come to life by walking, wheeling and cycling.

We campaign to create healthier places and happier lives for everyone.

Join us on our journey.

aine.mcbeth@sustrans.org.uk

www.sustrans.org.uk

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