Public Document Pack

Democratic Services Section
Legal and Civic Services Department
Belfast City Council
City Hall
Belfast
BT1 5GS

27th October, 2021

MEETING OF CITY GROWTH AND REGENERATION COMMITTEE

Dear Alderman/Councillor,

The above-named Committee will meet both in the Council Chamber and via Microsoft Teams on Wednesday, 27th October, 2021 at 5.15 pm, for the transaction of the business noted below.

You are requested to attend.

Yours faithfully,

SUZANNE WYLIE

Chief Executive

AGENDA:

1. **Routine Matters**

   (a) Apologies

   (b) Declarations of Interest

2. **Presentations (Pages 1 - 4)**

   (a) Department for Infrastructure - Autumn Report (Pages 5 - 52)

   (b) Department for Infrastructure - Belfast Metropolitan Transport Strategy

   (c) 20's Plenty Campaign (Pages 53 - 94)

Belfast City Council

CITY GROWTH & REGENERATION COMMITTEE

Subject:	Special CGR Committee October: Presentations by DfI and 20s Plenty for Us Campaign
Date:	26th October 2021
Reporting Officer:	Cathy Reynolds, Director of City Regeneration and Development
Contact Officer:	Sean Dolan, Senior Development Manager, City Regeneration and Development

Restricted Reports				
Is this report restricted?	**Yes**		**No**	✓
If Yes, when will the report become unrestricted?				
After Committee Decision				
After Council Decision				
Some time in the future				
Never				

Call-in				
Is the decision eligible for Call-in?	**Yes**	✓	**No**	

1.0	**Purpose of Report or Summary of main Issues**
1.1	The purpose of this report is to draw to Member's attention, the focus of each of the three presentations being made to Committee at its Special Meeting.
2.0	**Recommendations**
2.1	Members are asked to note the focus of each of the three presentations being made to the Special Meeting of the Committee i.e

	- DfI Autumn Report - Belfast Metropolitan Transport Strategy - 20s Plenty for Us Campaign.
3.0	**Main report**
3.1	<u>DfI Autumn Report</u> City Growth & Regeneration Committee at their meeting on 8th September 2021 agreed to receive the DfI Autumn Report Update to the Special Meeting of the Committee on 26th October 2021. Members will recall that DfI presented their Spring 2021 Report update to a Special Meeting of the City Growth & Regeneration Committee on 23rd June 2021. At that meeting Members raised the following issues with the Department; • York Street Interchange Independent Assurance Review; a letter has also been issued from this Committee to the Minister following a Notion of Motion passed on the 4th October requesting the Independent Assurance Review to be shared immediately with Council to enable the Council to make an informed response on whether the Council continues with the Corporate support for the project; • Safe Cycle Network; a number of issues were raised on the implementation fo the Safe Cycle Network, the lack of infrastructure and supporting facilities to bring about effective modal change through active travel provision; • Junctions Working group; Members raised concern on the delays on bringing forward effective designs and implementation of the planned works to the Inner Ring Junctions, in particular the Fredrick St Junction and the significant additional movements at this junction to enable the modal change required to ensure the successful transition of the Ulster University to the City Centre Campus; • Maintenance of the Existing Public Realm; Members raised concerns regarding the condition and maintenance of the existing streetscape and appearance of public spaces throughout the city centre
3.2	The Autumn update will cover Network Development / Strategic Road Improvement, Network Transport Telematics, Network Maintenance and Network Planning.
3.3	<u>Belfast Metropolitan Transport Strategy</u> Members requested a presentation from DfI, in relation to the Belfast Metropolitan Transport Strategy, at the City Growth and Regeneration Committee on 8th September 2021. This followed a presentation from DfI on the Belfast Rapid Transit Phase 2 where

	various issues were raised by Members and in particular the intention to put in place a two-way bus corridor with adjacent bus stops on Donegall Place. DfI officials confirmed attendance at the Special meeting of the City Growth and Regeneration Committee on 26th October to provide Members with an update on the BMTS. <u>20s Plenty for Us Campaign</u> At its meeting on 11 August 2021, Members of the Committee recommended that, in accordance with the Council decision of 4th May, the Chief Executive exercise her delegated authority to agree to invite representatives of the 20s Plenty Campaign to present its work at a future meeting. The 20s Plenty Campaign advocate for a speed limit of 20mph to be normal on residential streets in towns and village centres, and, have confirmed their attendance at the Special meeting of the City Growth and Regeneration Committee on 26th October 20212 to present their work.
4.0	**Financial & Resource Implications**
	NA
5.0	**Equality or Good Relations Implications/Rural Needs Assessment**
	NA
6.0	**Appendices**
	None

This page is intentionally left blank

Department for
Infrastructure
An Roinn
Bonneagair
www.infrastructure-ni.gov.uk

EASTERN DIVISION

Report to
BELFAST CITY COUNCIL
Autumn 2021

Donegall Road cycle lane

CONTENTS **PAGE**

FOREWORD BY THE EASTERN DIVISION ROADS MANAGER

Kevin Monaghan
Divisional Roads Manager

Mayor, Aldermen and Councillors

I am very pleased to present my Autumn Report to Belfast City Council.

Eastern Division covers the two Council areas of Belfast and Lisburn & Castlereagh. It is one of four Divisions, each of which manages, improves and maintains the transport network and is the primary contact point for those who walk, wheel, cycle or drive and for public representatives.

This report deals with works already completed in the Belfast City Council area during the year 2021/22 and sets out our programme of schemes being undertaken for the remainder of the financial year and onwards.

In 'Planning for the Future of Transport: Time for Change' which was published in June 2021, the Minister set out her ambition that active travel becomes a pillar of change within towns and cities in an effort to cut emissions, to improve health and wellbeing, and to better connect families and communities. The Department is at the forefront of delivering the Minister's ambition and will increasingly be taking opportunities to increase the allocation of road space for walking, wheeling, cycling and public transport on our urban streets; recognising the role that these streets have as community places; and their ability to help us achieve our new outcomes. Council will, therefore, see an increasing level of investment being targeted at delivering a higher standard of walking and cycling infrastructure and for delivering 'Making Belfast an Active City - Belfast Cycling Network 2021'. A dedicated team has been set up in the Division to deliver this.

This year we have continued to deliver our programmes whilst dealing with the impacts of Covid-19 on our organisation and contractors. This has required us to adopt different ways of working, including greater use of digital technology for communications. Our spring Council meeting, which was held by video link, is a good example of this approach and I hope you agree, has worked well.

I am pleased to report that we successfully delivered all of our planned programmes and services for 2020/ 21. We are also working hard with our consultants and contractors, to plan and deliver our programmes for 21/ 22.

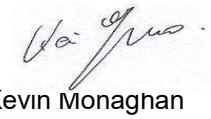
My allocations have now been confirmed and I am pleased to note that on the Capital side these are similar to last year, with funds being made available for blue/ green infrastructure, including walking and cycling; for structural maintenance, safer routes to schools and traffic information and control. Unfortunately, the Department has encountered resource difficulties across Northern Ireland with its external contractors, who are responsible for delivering its Minor improvement programmes. Whilst we shall do our best to deliver as much of our planned programmes as possible, there is a risk that some schemes may not be delivered in this financial year. They will, of course, be progressed as contractor resources become available.

The overall 2021/22 structural maintenance capital budget is £80m for Northern Ireland and of this, £17m has been set aside for a roads recovery fund, which is being used to address areas of immediate need across the road network. I also am pleased to report our Resource allocations will allow us maintain the road network in a similar way to last year, including sufficient funding to repair street lights across the year.

Our team will also continue to develop local transport and safety schemes and maintenance programmes to enhance safety and provide measures to enable more people to walk and cycle a part of their everyday routine. As the year progresses we will continue to bid for additional funding to

maintain the integrity of the road network and additional schemes will be implemented as funding becomes available through the year.

I would encourage Councillors to continue to contact the relevant members of my staff in relation to operational matters and they will do their best to assist.



Kevin Monaghan

INTRODUCTION

Eastern Division is part of the Roads structure, within the Department for Infrastructure, made of separate business units (within Network Services Directorate) for those who order services and for those who provide services in the Engineering Directorate ((Design & Consultancy Services and Operations & Maintenance) (see figure 1 below)..

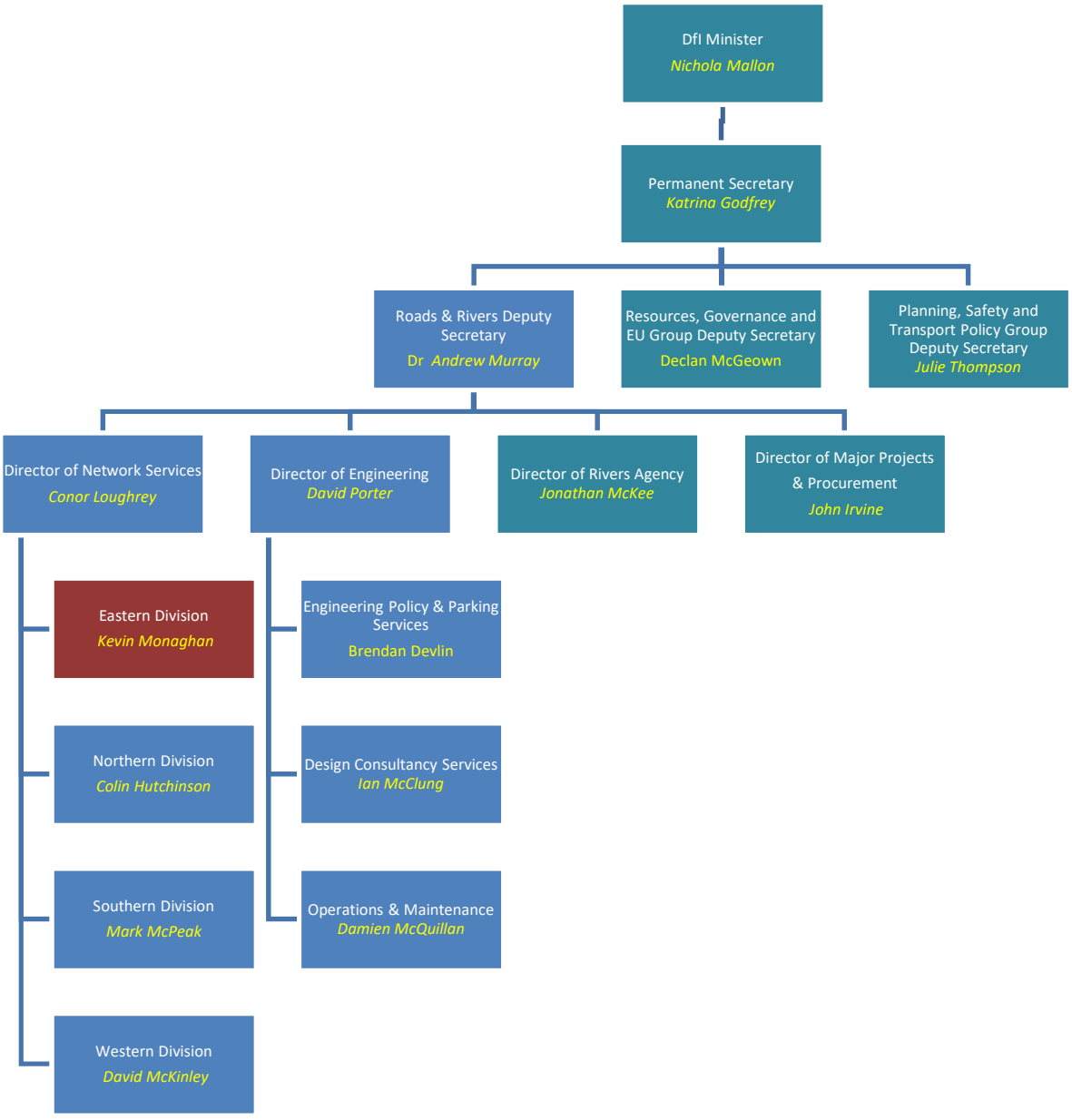


Figure 1 – Organisation Context

Eastern Division Management Structure

Kevin Monaghan (90526140)
kevin.monaghan@infrastructure-ni.gov.uk
Divisional Roads Manager

Philip Robinson (90526183) philip.robinson@infrastructure-ni.gov.uk
Network Traffic and Street Lighting

Traffic Management minor improvements, pedestrian priority, traffic orders, signing, collision remedial schemes, Street Lighting, resident and disabled parking, car parks and pay and display spaces, blue / green active travel team. BRT infrastructure delivery and QBC & bus priority. 'Park and Ride schemes.

Geoff Lawther (Acting) (90526285) geoff.lawther@infrastructure-ni.gov.uk
Network Planning

Development Control, Private Streets and Transport Assessments

Roy Gordon (9025 4500) roy.gordon@infrastructure-ni.gov.uk
Network Transport Telematics

Traffic signal control, operation of the Traffic Information and Control Centre, Traffic and travel information and European projects INSTANT and STREETWISE.

Christine Tolerton (Acting) (90589769)
Christine.tolerton@infrastructure-ni.gov.uk
Business Support
Financial control, land acquisition and disposal, retained human resources, building management and office supplies, council reports, business plan and communications.

Paul King (90526187) paul.king@infrastructure-ni.gov.uk
Network Development / Strategic Route Improvements/Blue-Green

Minor works programme, maintenance and strengthening of structures, Forward Planning, Developing and progressing Strategic Highway Improvements within Eastern Division

Trevor McClay (90554019) trevor.mcclay@infrastructure-ni.gov.uk
Network Maintenance

Maintenance of adopted roads and footways including inspections, resurfacing, drainage, grass cutting and weed control, winter gritting and liaison with the utility companies.

2.0 ADDRESSING CLIMATE CHANGE AND SUPPORTING SUSTAINABLE TRAVEL

Principal Engineer – Paul King (90526187)
paul.king@infrastructure-ni.gov.uk

He is supported by the following staff:

Works and Structures - Girvin Miskimmin (9025 4043)
girvin.miskimmin@infrastructure-ni.gov.uk

This team is responsible for minor road improvement works and Structures.

Strategic Road Improvement 1 – Roisin Wilson (44 618156)
roisin.wilson@infrastructure-ni.gov.uk

This team is responsible for progressing the development of the York Street Interchange Scheme.

Strategic Road Improvement 2 – Basil Hassard (9052 6168) (Job sharing) basil.hassard@infrastructure-ni.gov.uk

This team is responsible for development of the Tillysburn Park & Ride scheme, A55 Knock Road widening, Sydenham By-pass widening, the M1 / A1 Link at Sprucefield and A1 Improvements (Hillsborough).

Strategic Road Improvement 2 – Lionel Walsh (9052 6273 (Job sharing) lionel.walsh@infrastructure-ni.gov.uk

This team is responsible for development of the Tillysburn Park & Ride scheme, A55 Knock Road widening, Sydenham By-pass widening, the M1 / A1 Link at Sprucefield and A1 Improvements (Hillsborough).

Blue / Green Active Travel - Charles Dickinson (90526280)
charles.dickinson@infrastructure-ni.gov.uk

This team manages active travel with an increasing level of investment being targeted at delivering a higher standard of walking and cycling infrastructure.

2.1 BLUE /GREEN SCHEMES 2021/22 Works Completed

Scheme	*Status*
Comber Greenway (3000nr whips planted at various locations)	Completed

BLUE /GREEN SCHEMES 2021/22 Programme of Works

Scheme	*Status*
Ligoniel Bus Terminus (800nr whips proposed)	Scoping
Armitage Close (approx. 200m2 low level shrubbery proposed)	Scoping
Limestone Road Cycle Lane	Programmed
Comber Greenway Signage	Programmed
Ardcarn Drive / Stoney Road Cycle Link	Programmed
Comber Greenway Street Lighting	Programmed
Twaddell Avenue Roundabout- Tree planting	Programmed
Westlink-Interim measures greening of structures	Programmed
Five number pedestrian crossings with cycling facilities	Programmed
Brunswick Street (Parklets and similar)	Programmed
Castle Place (Parklets and similar)	Programmed
Adelaide Street (Parklets and similar)	Programmed
Linenhall Street / West (Parklets and similar)	Programmed
Improved Walking & Cycling York Street to UU	Programmed
Castlereagh Road -Enhancement for Zero-Emission vehicles	Programmed

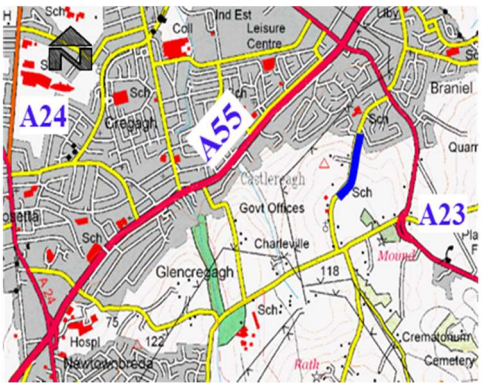
2.2 TILLYSBURN PARK AND RIDE

A proposal has been developed for a Park and Ride site at the Tillysburn Junction, on vacant ground between situated Holywood Road and Sydenham Bypass. The scheme is now progressing to the initial stages of planning application. A Pre-Application Discussion (PAD) submission was made to Belfast City Council Planning on 5 August 2021. Following this a Pre-Application Community Consultation (PACC) will commence.

2.3 MINOR WORKS 2021/22 Works completed

Scheme	Status

MINOR WORKS 2021/22 Programme of Works

Scheme	Status
Church Road, Castlereagh. Provision of 430m of new footway along the eastern side of Church Road to link existing footway at Grey Castle Manor with the entrance to the Henry Jones playing fields and provide continuous pedestrian access along Church Road.  	Programmed*

*Additional to programme.

2.4 MAINTENANCE OF STRUCTURES 2021/22 Inspections & Works Completed

Scheme	Status
REMEDIAL WORK ON MASONRY STRUCTURES	
Structure No 90390 – Upper Springfield Road, Undermining to Wing Wall	Completed

MAINTENANCE OF STRUCTURES & Works 2021/22 Programme of Inspections

Scheme	Status
PRINCIPAL INSPECTIONS	
Structure No 20126 – East Bridge Street	Programmed

Scheme	Status
Structure No 20135 – Islandbawn Street/Clowney	Programmed
Structure No 20162 – Ann Street, Subway	Programmed
Structure No 20163 – High Street, Subway	Programmed
Structure No 20169 – Boyne Bridge	Programmed
Structure No 20180 – Tillysburn, Underpass	Programmed
Structure No 20183 – Ballymacarrett, Railway Arch	Programmed
Structure No 20184 – Dee Street Bridge(Railway)	Programmed
Structure No 20188 – Victoria Park, Subway	Programmed
Structure No 20189 – Sydenham Bypass, Footbridge	Programmed
Structure No 20190 – Tillysburn, Railway Bridge	Programmed
Structure No 20191 – Tillysburn, Subway A	Programmed
Structure No 20192 – Tillysburn, Subway B	Programmed
Structure No 20193 – Tillysburn, Subway C	Programmed
Structure No 20195 – North Road Bridge	Programmed
Structure No 20196 – Clara Park, Culvert(confined space)	Programmed
Structure No 20222 – Lislea Avenue, Footbridge	Programmed
Structure No 20232 – Finaghy Road North, Footbridge	Programmed
Structure No 20233 – Farmhill Bridge	Programmed
Structure No 20234 – Blacks Road/Rail Bridge	Programmed
Structure No 20242 – Boucher Crescent 1	Programmed
Structure No 20243 – Boucher Crescent 2	Programmed
Structure No 20244 – Glenmachen Place	Programmed
Structure No 20245 – Stockmans Lane, Subway	Programmed
Structure No 20248 – Donegall Road/City Hospital	Programmed
Structure No 20251 – Lower Windsor Avenue, Footbridge	Programmed
Structure No 20252 – Lisburn Road/University Road, Road over Rail Bridge	Programmed
Structure No 20253 – Botanic Avenue, Road over Rail Bridge	Programmed
Structure No 20254 – Ormeau Road, Road over Rail Bridge	Programmed
Structure No 20259 – Beersbridge Road	Programmed
Structure No 20261 – Ladas Drive/Loop River Culvert	Programmed
Structure No 20266 – Knockvale Grove	Programmed
Structure No 20284 – Tullycarnet Subway	Programmed
Structure No 20322 – Bridge End, Subway	Programmed

Scheme	Status
Structure No 90562 – Drum Bridge North	Programmed
Structure No 90563 – Drum Bridge South	Programmed
Structure No 90669 – Summerhill Drive, Culvert Programmed	Programmed
REMEDIAL WORK ON MASONRY STRUCTURES	
Structure No 20184 – Dee Street Bridge – Vegetation Removal(over rail)	Programmed
Structure No 90397 – Upper Dunmurry Lane – Masonry Repairs to Parapet, Invert Repairs and New Scour Protection	Programmed
REMEDIAL WORK ON CONCRETE/STEEL STRUCTURES	
Structure No 20250 – Tates Avenue Bridge – New Anti-Slip Surfacing and Highlighting of Step Nosings	Programmed
Structure No 20262 – Bells Bridge, Ladas Drive, Belfast – Concrete Repairs to Box Culvert.	Programmed
OTHER ANCILLARY WORKS	
Galwally Park – Replacement of Damaged Sections of Fencing and Installation of High Containment Kerb	Programmed
McGaughan Park – Vegetation Removal and Masonry Repairs	Programmed

2.5 YORK STREET INTERCHANGE SCHEME

Preferred Option to improve York Street Interchange

Delivery of the York Street Interchange scheme remains a high priority for the Department. This scheme will address a major bottleneck on the strategic road network, replacing the existing signalised junction at York Street with direct links between Westlink, M2 and M3, the three busiest roads in Northern Ireland. The publication of the Public Inquiry Inspector's Report and the Departmental Statement have completed the statutory processes for the York Street Interchange with the exception of the Vesting of the required lands. The Vesting will take place at a later date.

The procurement process to award a contract for the detailed design phase of this scheme was halted in early 2017 as result of a legal action. This legal action concluded in September 2019, with the award of contract being set aside.

In July 2020 the Minister announced an external review into the scheme to provide assurance on how and to what extent the scheme reflects key Ministerial, Executive and Council objectives and priorities. This included interviews with stakeholders and was conducted in November 2020. In March 2021 the Minister announced the outcome of the review, accepting the six recommendations from it and outlined proposals to address them. Consultants have been asked to carry out some further work, particularly around place making and to maximise ambition in terms of what can be delivered for communities, connectivity and the wider living places agenda. The Minister will also consider a review of potential options for a future procurement strategy.

The commencement of construction for the York Street Interchange will depend on the satisfactory completion of an economic assessment, completion of the statutory process and subject to funding being made available in future budget settlements.

3.0 NETWORK TRAFFIC AND STREET LIGHTING

Principal Engineer – Philip Robinson (9052 6183)
philip.robinson@infrastructure-ni.gov.uk

He is supported by the following staff:

Traffic Management 1 - Vacant

This team deals with traffic improvement schemes in Belfast.

Traffic Management 2 - Graeme Salmon (9052 6238)
graeme.salmon@infrastructure-ni.gov.uk

This team deals with traffic improvement schemes in Lisburn and Castlereagh and collision remedial schemes in all council areas.

Traffic Management 3 – Stephen McMeekin (9052 6245)
stephen.mcmeekin@infrastructure-ni.gov.uk

This team is responsible for residents' parking, development of car parking, cycle measures and traffic calming.

Street Lighting - Evans Gibson (9052 6266)
evans.gibson@infrastructure-ni.gov.uk

This team is responsible for Street Lighting and the illumination of signs.

Transportation - Harry Armstrong (9052 6256)
harry.armstrong@infrastructure-ni.gov.uk

This team is responsible for delivery of BRT Infrastructure, the Quality Bus Corridor (QBC) programme, other bus priority measures and Park and Ride.

3.1 COLLISION REMEDIAL SCHEMES 2021/22 Works Completed

Scheme	*Status*

COLLISION REMEDIAL SCHEMES 2021/22 Programme of Works

Scheme	*Status*
Andersonstown Rd/ Stewartstown Rd/ Shaw's Rd junction	At Design Stage
Andersonstown Rd/ Finaghy Road North junction	At Design Stage
Sydenham Bypass Bangor bound carriageway at City Airport	In association with resurfacing

3.2 TRAFFIC SCHEMES 2021/22 Works Completed

Scheme	*Status*

TRAFFIC SCHEMES 2021/22 Programme of Works

Scheme	*Status*
Schemes will be identified and will be progressed should funds become available	Ongoing

3.3 TAXIS 2021/22 Works Completed

Scheme	*Status*

TAXIS 2021/22 Programme of Works

Scheme	*Status*
Belfast taxi rank review	Ongoing

3.4 PEDESTRIAN MEASURES 2021/22 Works Completed

Scheme	*Status*

Scheme	Status
Kilbroney House - Dropped kerbs and tactile paving scheme	Completed
Monagh Road - Dropped kerbs and tactile paving scheme	Completed
Montreal Street - Dropped kerbs and tactile paving scheme	Completed
O'Neill Street - Dropped kerbs and tactile paving scheme	Completed
Ormeau Road – Dropped kerbs and tactile paving scheme	Completed
Sheridan Street - Dropped kerbs and tactile paving scheme	Completed
Somerset House - Dropped kerbs and tactile paving scheme	Completed
Tudor Avenue - Dropped kerbs and tactile paving scheme	Completed
Brookvale area - Dropped kerbs and tactile paving scheme	Completed
New Barnsley at Matt Talbot Nursery School - Pedestrian Guard-rail	Completed
Oldpark Terrace at Our Lady's Primary – Pedestrian Guard-rail	Completed

PEDESTRIAN MEASURES 2021/22 Programme of Works

Scheme	Status
A55 Knockbreda Road / Cregagh Road Pedestrian Crossing at Cregagh Glen	Design ongoing
Antrim Road - Dropped kerbs and tactile paving scheme	Programmed
Bentham Drive - Dropped kerbs and tactile paving scheme	Programmed
Carlisle Parade - Dropped kerbs and tactile paving scheme	Programmed
Lomond Avenue - Dropped kerbs and tactile paving scheme	Programmed
Milltown Area - Dropped kerbs and tactile paving scheme	Programmed
Ormeau Road Pedestrian Crossing at Farnham Street	Design ongoing
Ravenhill Road Pedestrian Crossing at Cherryvale	Design ongoing
Ravenhill Road Pedestrian Crossing at My Lady's Road	Investigation ongoing
Ridgeway Street - Dropped kerbs and tactile paving scheme	Programmed
Shannon Street - Dropped kerbs and tactile paving scheme	Programmed
Springmartin Road - Dropped kerbs and tactile paving scheme	Programmed
Whiterock Road Pedestrian Crossing at Brittons Parade	Design ongoing
Woodview Place - Dropped kerbs and tactile paving scheme	Programmed

3.5 SAFER ROUTES TO SCHOOLS 2020/21 Works Completed

Scheme	***Status***
PART TIME 20MPH AT SCHOOLS – TRANCHE 1	
Aquinas Grammar School/St Joseph's College/St Michael's PS Part Time Speed limit Scheme – Ravenhill Road	Completed
Our Lady Of Lourdes PS/ Ben Madigan PS Part Time Speed Limit Scheme- Antrim Road	Completed
Ballysillan PS Part Time Speed Limit Scheme - Ballysillan Park	Completed
Belfast Royal Academy Part time Speed Limit Scheme - Cliftonville Road	Completed
Carr's Glen PS Part Time Speed Limit Scheme - Oldpark Road	Completed
Boy's Model Part Time Speed Limit scheme – Ballysillan Road	Completed
Currie PS/ Holy Family PS Part Time Speed Limit Scheme - Limestone Road	Completed
Cliftonville PS/ Bunscoil Bheann Mhadagain Part Time Speed Limit Scheme - Cliftonville Road	Completed
Dominican College Part Time Speed Limit Scheme - Fortwilliam Park	Completed
Knocknagoney PS Part Time Speed Limit Scheme - Knocknagoney Road	Completed
Leadhill PS Part Time Speed Limit Scheme - Casaeldona Park	Completed

SAFER ROUTES TO SCHOOL 2021/22 Programme of Works

Scheme	***Status***
PART TIME 20MPH AT SCHOOLS – TRANCHE 1	
Loughview PS Part Time Speed Limit Scheme - Church Road	In progress
PART TIME 20MPH AT SCHOOLS – TRANCHE 2	
St Oliver Plunkett Primary School Part Time Speed Limit Scheme - Glen Road	Programmed
All Saints College Part Time Speed Limit Scheme - Glen Road	Programmed
St Marys Christian Brothers Grammar School Part Time Speed Limit Scheme - Glen Road	Programmed
St Teresa's Primary School Part Time Speed Limit Scheme - Glen Road	Programmed
Cranmore Integrated Primary School Part Time Speed Limit Scheme - Finaghy Road North	Programmed

Scheme	Status
Malone Integrated College Part Time Speed Limit Scheme - Finaghy Road North	Programmed
St John the Baptist Primary School Part Time Speed Limit Scheme - Finaghy Road North	Programmed
Finaghy Primary School Part Time Speed Limit Scheme - Finaghy Road South	Programmed
Blessed Trinity College Part Time Speed Limit Scheme - Somerton Road Entrance	Programmed
St Vincent de Paul Primary School Part Time Speed Limit Scheme - Ligoniel Road	Programmed
Ligoniel Primary School Part Time Speed Limit Scheme - Ligoniel Road	Programmed
Our Lady and St Patrick's College Part Time Speed Limit Scheme - Gilnahirk Road	Programmed
Gilnahirk Primary School Part Time Speed Limit Scheme - Gilnahirk Road	Programmed
Ashfield Girls School Part Time Speed Limit Scheme - Holywood Road	Programmed
Ashfield Boys School Part Time Speed Limit Scheme - Holywood Road	Programmed
Our Lady Queen of Peace Primary School Part Time Speed Limit Scheme – Cherry Road	Programmed
Hazelwood Integrated College Part Time Speed Limit Scheme - Whitewell Road	Programmed
Hazelwood Integrated Primary School Part Time Speed Limit Scheme - Whitewell Road	Programmed
Cavehill Primary School Part Time Speed Limit Scheme - Upper Castle Park/North Circular Road	Programmed
Elmgrove Primary School Part Time Speed Limit Scheme – Beersbridge Road	Programmed

3.6 TRAFFIC SIGNS 2021/22 Works Completed

Scheme	Status
Cranmore Gardens – No through road sign	Completed
Grays Lane between Antrim Road & Shore Road – Pedestrian & School warning signs	Completed
Knockdene Park – upgrade to one-way traffic signage	Completed
Montgomery Street – One way sign	Completed
Park Avenue at Victoria Park Subway – Pedestrian warning signs/No footway plates	Completed

Scheme	Status
Slievecoole Park - No through road sign	Completed
Stirling Way - No through road sign	Completed

TRAFFIC SIGNS 2021/22 Programme of Works

Scheme	Status
Castlegrange at Ballygowan Road – speed limit signs	Programmed
Traffic signs will be provided as required	Ongoing

3.7 CARRIAGEWAY MARKINGS 2021/22 Works Completed

Scheme	Status
Antrim Road at Community Hub – I bar marking	Completed
Ardoyne Walk/Ardoyne Avenue - corner restrictions	Completed
Arthur Lane, Belfast – Turn Right + arrow	Completed
Castlereagh Place / Castlereagh Street - corner restrictions	Completed
Cliftondene Cres/Oldpark Road - corner restrictions	Completed
Garnerville Drive/Garnerville Park – corner restrictions	Completed
Gransha Avenue/Gransha Drive - corner restrictions	Completed
Greenmount/Whincroft Road - corner restrictions	Completed
Magdala Street – I bar marking	Completed
Malone Park Lane at Balmoral Avenue – corner restrictions	Completed
North Howard Street – corner restrictions	Completed
Ravenhill Gardens/Ravenhill Road - corner restrictions	Completed
Ulsterville Avenue at Alleyway- I bar marking	Completed
Waterford Street /Falls Road - corner restrictions	Completed

CARRIAGEWAY MARKINGS 2021/22 Programme of Works

Scheme	*Status*
Carriageway markings will be provided as required	Ongoing

3.8 LEGISLATION 2021/22 Works Completed

Scheme	*Status*
WAITING RESTRICTIONS	
Adelaide Park - At Any Time (No loading)	Completed
Antrim Road at PSNI Station - At Any Time	In progress
Ashleigh Manor – At any time	Completed
Balfour Avenue – At any time	Completed
Balmoral Link – At any time	Completed
Balmoral Road – At any time	Completed
Balmoral Road – Provision of Limited waiting restrictions	Completed
Barrack Street – At any time	In progress
Beechlands, Belfast - At Any Time	Completed
Berry Street – Loading Restrictions	Completed
Bethany Street, Belfast - At Any Time	In progress
Boucher Crescent near Boucher Road at Filling station - At Any Time	In progress
Castlereagh Road – At any time	Completed
Castleview Road – At any time	Completed
Catherine Street – At any time	Completed
Collingwood Avenue – At any time	Completed
Coolfin Street, Belfast – At Any Time	In progress
Coolmore Street, Belfast – At Any Time	In progress
Cregagh Park – At any time	Completed
Cromac Street (Cromac Place to Cooke St) – At any time	Completed

Scheme	Status
Crumlin Road near Florence Place – At any time	Completed
Daphne Street, Belfast – At Any Time	In progress
Duncrue Road at Dargan Road – At any time	Completed
Duncrue Street at Herdman Channel Road – At any time	Completed
Durham Court – At Any Time	In progress
Durham Street – At Any Time	Completed
Egeria Street, Belfast – At Any Time	In progress
Fane Street – Mon-Fri, 9am-6pm	In progress
Fortuna Street, Belfast – At Any Time	In progress
Friendly Street – At Any Time	Completed
Gardiner Place – At any time	In progress
Henry Place – Mon-Fri, 8am-6pm	In progress
Herdman Channel Road at Duncrue Street – At any time	Completed
Holywood Road, south of Belmont Road at Filling Station – At Any Time	In progress
Ladas Drive opposite Alexander Road – At any time	Completed
Ladas Way (Ladas Drive to Ladas Park) – At any time	Completed
Lincoln Avenue – At any time	Completed
Lindsay Street – At any time	Completed
Lisburn Road – At any time	Completed
Lockview Road – Mon-Fri, 8am-6pm	In progress
Lucerne Parade – At any time	In progress
Malone Road – At any time	Completed
McGurk's Way – At any time & Mon-Sun, 8am-6pm	Completed
Middlepath Street – At any time	Completed
North Bank – At any time	Completed
North Howard Street, north west of Falls Road – At Any Time	In progress
Orby Street - At Any Time	Completed

Scheme	***Status***
Peter's Hill – Mon-Fri 8am-4.30pm	Completed
Seymour Row – Waiting Restrictions	Completed
South Bank – At any time	Completed
Station View – Mon-Fri 8.30-6pm	Completed
Stewart Street (Nos 25-15) – At any time	Completed
Stewart Street at McAuley Street – Mon-Sun, 8am-6pm	Completed
Stewart Street at Playground – At any time	Completed
Stockmans Lane (Andersonstown Road to Stockmans Avenue) – At any time	Completed
Stranmillis Embankment - Mon-Sat, 8am-6pm	In progress
Thalia Street, Belfast - At Any Time	In progress
The Mount – Mon-Fri, 8am-6pm	Completed
University Square Mews - At Any Time	In progress
Upper Green at Upper Dunmurry Lane – At any time	Completed
Upper Newtownards Road – At any time (No loading)	Completed
Wolff Close, lower Newtownards Road - No Waiting Monday to Friday 8.30 a.m. to 4.00 p.m	In progress
TRAFFIC ORDERS	
Ballysillan Drive, Belfast – One way traffic	Completed
Fulton Street, Belfast – One way traffic	Completed
Monagh Crescent, Belfast – One way traffic	Completed
Norglen Crescent, Belfast – One way traffic	Completed
Brunswick Street, Belfast – Experimental Traffic Control scheme – Prohibition of Traffic	Completed
Union Street, Belfast – Experimental Traffic Control scheme – Prohibition of Traffic	Completed
AMENDMENT TO THE FOOTWAYS ORDER	
Prevention of parking on a footway adjacent to a bus lane or bus stop	In Progress
AMENDMENT TO THE PROHIBITION OF WAITING AT SCHOOLS ORDER	
John Paul II Primary School, Whiterock Road, Belfast – School Keep Clears	In Progress

LEGISLATION 2021/22 Programme of Works

Scheme	*Status*
WAITING RESTRICTIONS	
Connswater Street – At any time	Programmed
Kingsdale Park – At any time	Programmed
Lislea Drive – At any time	Programmed
Marmont Drive - At any time & Working day	Programmed
North Queen Street - At any time & Working day	Programmed
Legislation will be created as required	Ongoing
TRAFFIC ORDERS	
Castle Place, Belfast – Experimental Traffic Control scheme – prohibition of vehicles from the northern carriageway and provision of cycle lane	In Progress
Legislation will be created as required	Ongoing

3.9 DISABLED PARKING BAYS 2021/22 Works Completed

Scheme	*Status*
BAYS PLACED:-	
3 Greenville Road, Belfast	Completed
51 Kennington Avenue, Belfast	Completed
16 Ulsterdale Street , Belfast	Completed
9 Rochester Street, Belfast	Completed
38 Aigburth Park, Belfast	Completed
11 Titania Street, Belfast	Completed
8 Canada Street, Belfast	Completed
26 Fortwilliam Crescent, Belfast	Completed
8 Parkmount Terrace, Belfast	Completed
97 Shore Road, Belfast	Completed
20 Stracam Corner, Belfast	Completed
48 Oakman Street, Belfast	Completed

Scheme	Status
219 Cregagh Street, Belfast	Completed
40 Pacific Avenue, Belfast	Completed
31 Ballysillan Drive, Belfast	Completed
22 Lisavon Drive, Belfast	Completed
12 Strandburn Gardens, Belfast	Completed
BAYS REMOVED:-	
40 Aigburth Park, Belfast	Completed
13 Castleview terrace, Belfast	Completed
15 Knocknagoney Green, Belfast	Completed
19 Rochester Street, Belfast	Completed
19 Castleview Terrace, Belfast	Completed
8 Willowholme Parade, Belfast	Completed
6 Redcar Street, Belfast	Completed

DISABLED PARKING BAYS **2021/22 Programme of Works**

Scheme	Status
BAYS TO BE REMOVED:-	
31 Ulsterville Gardens, Belfast	Proposed
BAYS TO BE PLACED:-	
50 Castlecoole Park, Belfast	Objections Received
64 Breda Road, Belfast	Objections Received
11 Green Mount, Belfast	Objections Received
40 Kimberley Street, Belfast	Proposed
43 Annadale Flats, Belfast	Proposed
205 Cregagh Street, Belfast	Proposed
43 Tullyard Way, Belfast	Proposed

3.10 STREET LIGHTING 2021/22 Works Completed

Scheme	***Status***
Adam Street	Completed
Airfield Heights LED Retrofit	Completed
Ballygowan Rd (Knock Junction – Glen Road)	Completed
Beechlawn Avenue Area LED Retrofit	Completed
Beechlawn Park Area LED Retrofit	Completed
Bellevue Street / Sugarfield Street	Completed
Castlereagh Road Phase 1	Completed
Corporation Square	Completed
Dunbar Link	Completed
Edgcumbe Gardens	Completed
Glenside Parade Area LED Retrofit	Completed
Glenside Park LED Retrofit	Completed
Hawthornden Way	Completed
Invernook Park	Completed
Knock Road	Completed
Lower Shankill/ Peters Hill	Completed
Ravenhill Gardens LED Retrofit	Completed
Sunningdale Area LED Retrofit	Completed
Upper Springfield Road	Completed
Wheatfield Crescent LED Retrofit	Completed
Whitewell Rd/ Floral Rd	Completed
Woodland Grange Area LED Retrofit	Completed

Scheme	***Status***
Alexandra Park Ave/Jelico Ave	Programmed
Bruce Street	Programmed
Brucevale Court	Programmed*
Cameronian Drive LED Retrofit	Programmed*
Castlereagh Road Phase 2	Programmed
Cherryvalley Park/ Gardens	Programmed*
Creighton Road LED Retrofit	Programmed*
Curtis Street	Programmed
East Link Road	Programmed
Forthriver Parade Area	Programmed
Houston Drive & Park LED Retrofit	Programmed*
Inverary Drive LED Retrofit	Programmed*
Kings Road (Knock - Ice Bowl) LED Retrofit	Programmed*
Lagmore Area LED Retrofit	Ongoing
Loughrey Court LED Retrofit	Programmed
Malone Rd Phase 1 (University Rd - Stranmillis Rd)	Programmed
Malone Rd Phase 2 (Stranmillis Rd - Balmoral Ave)	Programmed
Malone Rd Phase 3 (Balmoral Ave - House of Sport)	Programmed
Marina Park LED Retrofit	Programmed*
Middlepath Street LED Retrofit	Programmed*
Millfield/ Carrick Hill	Ongoing
Milltown Road, Belfast	Programmed
Monagh Area LED Retrofit	Ongoing
Mount Vernon Road	Programmed
North Belfast Est. – Blackmountain Area	Programmed*
Oakvale Area, Dunmurry LED Retrofit	Programmed*

Scheme	Status
Old Golf Course Road LED Retrofit	Programmed*
Poleglass Area LED Retrofit	Ongoing
Royal Avenue	Programmed*
Sandy Row Area LED Retrofit	Programmed
Slievegallion Drive	Programmed*
Springfield Rd (Whiterock Rd – West Circular Rd)	Ongoing
Springfield Road (Phase 4)	Programmed
Stoney Road	Programmed
Stranmillis Embankment LED Retrofit	Programmed*
Stranmillis Road (Annadale Embankment - Malone Rd)	Programmed
Susan St, Duke St & Tower Court	Programmed
Twaddell Avenue	Programmed
Twinbrook Area LED Retrofit	Ongoing
Upper Malone Road LED Retrofit	Programmed*
Wandsworth Road	Programmed*

*Additional to programme

3.11 CYCLE MEASURES 2021/22 Works Completed

Scheme	Status

CYCLE MEASURES 2021/22 Programme of Works

Scheme	Status
Sydenham Greenway Consultation	Formal consultation to be completed
Sydenham Greenway	On hold until findings of consultation
Island Street / Dee Street	At design stage

Scheme	Status
Limestone Road / Cavehill Road (Phase 1 & Phase 2)	Phase 1 – Limestone Road Design complete Phase 2- Cavehill Road – at design stage
Peace IV	Formal Consultation to be completed
Montgomery Road	At design stage
Albertbridge Road	Under review
Shaftsbury Square	Under review
Donegall Road	Under review

3.12 TRAFFIC CALMING 2021/22 Works Completed

Scheme	Status

3.12 TRAFFIC CALMING 2021/22 Programme of Works

Scheme	Status
Orpen Road, Porter Park & Orpen Drive	Under review

It should be noted that all Traffic Calming schemes are subject to a legislative process and to the availability of funding before they can proceed.

The legislative process provides for representations / objections to be received on our proposals. Where residents do not support individual schemes or where objections are received, it may not be possible to deliver our intended programme. In this event substitutions, on a Division-wide basis, may be made throughout the financial year.

3.13 RESIDENTS' PARKING

- Residents parking scheme in Rugby Road / College Park Avenue area fully operational 16 April 2018. Review of scheme completed, findings being considered.
- Residents' Parking Iveagh Area – Informal Consultation completed March 2019. Designs for Zone 1 being developed to enable formal consultation to be carried out.

3.14 TRANSPORTATION MEASURES 2021/22 Works Completed

Scheme	*Status*
Reallocation of road space on North Street at its signalised junction with Royal Avenue to better direct public transport services, cycling and general traffic flow on approach to the junction.	Completed

TRANSPORTATION MEASURES 2021/22 Programme of Works

Scheme	*Status*
Reallocation of road space on the Castlereagh Road/Ballygowan Road corridor to provide new/extended lengths of bus lane to facilitate improved public transport and cycling.	Legislation in progress. Out for public consultation.
Reallocation of road space on Albert Bridge and East Bridge Street to facilitate pedestrian social-distancing, cycling and public transport. Scheme being delivered by Eastern Division.	Design complete. Legislation in progress.
Reallocation of road space on the Cregagh Road and Holywood Road corridors to provide new/extended lengths of bus lane to facilitate improved public transport and cycling.	Preliminary investigations underway.
Amendments to bus stop locations and parking bays on North Street to better facilitate public transport services.	Design complete. Legislation in progress.
Erinvale Avenue – Provision of waiting restrictions in bus turning area.	Legislation in progress. Preliminary consultations in progress.

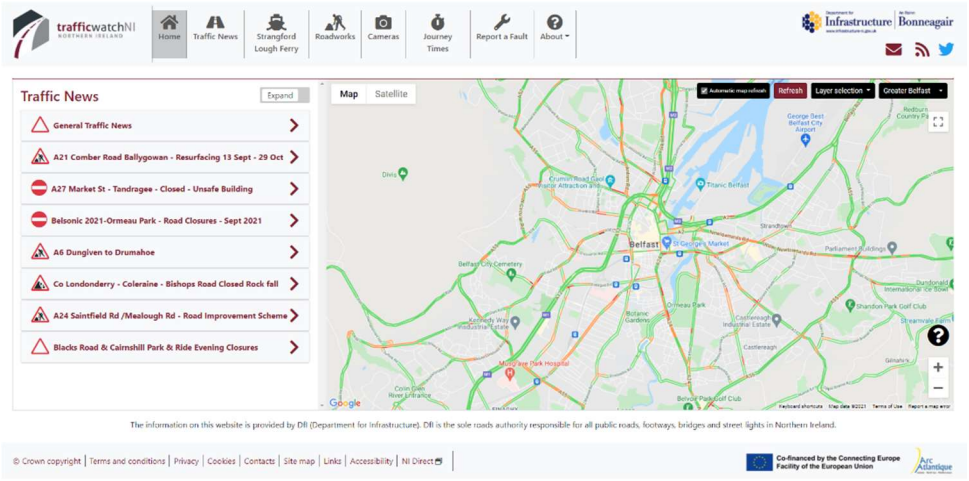
4.0 NETWORK TRANSPORT TELEMATICS

Principal Engineer – Roy Gordon (9025 4500)
roy.gordon@infrastructure-ni.gov.uk

He is supported by the following staff:

Ian Duff (90 254518)
ian.duff@infrastructure-ni.gov.uk
This team is responsible for the day to day running of the Traffic Information and Control Centre. It is responsible for the installation, maintenance and operation of Intelligent Transport Systems (ITS) including traffic control on the urban and motorway networks and the provision of traffic and travel information.

Gary McCracken (90 254510)
gary.mccracken@infrastructure-ni.gov.uk
This team is responsible for the installation and maintenance of all traffic signals as well as NI wide contracts for the supply of traffic signs, school safety signs and vehicle activated signs.
The team is also responsible for the internal dissemination of collision records, the Road Safety Engineering Report and traffic counting including the publication of the Annual Traffic and Travel Information (Census) Report.



TICC TrafficwatchNI website

M1 / A12 Westlink Managed Route

4.1 NETWORK TRANSPORT TELEMATICS 2021/22 Works Completed

Scheme	***Status***
TRAFFIC AND TRAVEL INFORMATION	
We will upgrade the TrafficwatchNI website to ensure it remains robust, secure and fit for purpose.	Phase 1 & 2 completed Phase 3 commenced
URBAN CLOSED CIRCUIT TELEVISION (CCTV) CAMERAS	
We will continue to identify new locations where the provision of cameras will enhance the coverage of the CCTV network to improve traffic control capabilities.	Ongoing
TRAFFIC CONTROL SYSTEMS	
We will continue the rollout of Server to Server Bus priority on Quality Bus Corridors throughout Belfast.	Ongoing
TRAFFIC MANAGEMENT	
Utilise TICC's communications and control infrastructure together with the CCTV network to ensure traffic flows are monitored and effectively managed on the urban and motorway networks.	Ongoing
We will monitor traffic signal timings to ensure they are appropriate for the prevailing traffic conditions.	Ongoing
Botanic Avenue / University Street, Belfast – signal junction upgrade incorporating extra low voltage equipment and puffin crossing facilities.	Completed
Crumlin Road / Ligoniel Road, Belfast – signal junction upgrade in conjunction with Department for Communities public realm scheme. Incorporating extra low voltage and puffin crossing facilities.	Completed
CENTRAL ROAD SAFETY UNIT	
This unit will continue to have a strategic overview of road safety and the analysis of collision data on roads across the Province.	Ongoing

Scheme	*Status*
TRAFFIC AND TRAVEL INFORMATION	
We will continue to enhance the TrafficwatchNI website to ensure it remains robust, secure and fit for purpose. Currently we are increasing the number of CCTV sites available on the website from 20 to 60, with plans to increase this further to 160 CCTV sites.	Ongoing
We will upgrade our Automatic Number Plate Recognition (ANPR) Cameras on the network. The new ANPR cameras are high quality and use the latest optical recognition technology which will continue to provide reliable and timely journey times to Road Users.	Ongoing
URBAN CLOSED CIRCUIT TELEVISION (CCTV) CAMERAS	
We will continue to identify new locations where the provision of cameras will enhance the coverage of the CCTV network to improve traffic control capabilities.	Ongoing
TRAFFIC CONTROL SYSTEMS	
We will continue the rollout of Server to Server Bus priority on Quality Bus Corridors throughout Belfast.	Ongoing
We will upgrade our Urban Traffic Control System (UTC) to ensure the system remains robust and secure.	Ongoing
We will commence design on IP to the Roadside for our Motorway network to enable growth in Intelligent Mobility and Connected Vehicles.	Investigations underway
TRAFFIC MANAGEMENT	
We will monitor traffic signal timings to ensure they are appropriate for the prevailing traffic conditions.	Ongoing
We will utilise TICC's communications and control infrastructure together with the CCTV network to ensure traffic flows are monitored and effectively managed on the urban and motorway networks.	Ongoing

Scheme	*Status*
Signal junction upgrades incorporating extra low voltage equipment and puffin crossing facilities at the following sites: • Malone Road / Stranmillis Road • North Queen Street / Duncairn Gardens • Springfield Road / Whiterock Road • Cavehill Road / Westland Road • Castlereagh Road / Upper Knockbreda Road • Great Georges Street / Nelson Street	Programmed
MOTORWAY NETWORK SAFETY	
We will undertake feasibility into replacing the end-of-life Motorway Emergency Roadside Telephone (ERT) system and subject to adequate funding commence design on a replacement system.	Ongoing
PEDESTRIAN MEASURES	
Controlled crossing equipment upgrades incorporating extra low voltage equipment and puffin crossing facilities at the following sites: • Castlereagh Street at Orby Street • Castlereagh Street at Houston Park	Ongoing
CENTRAL ROAD SAFETY UNIT	
This unit will continue to have a strategic overview of road safety and the analysis of collision data on roads across the Province	Ongoing

5.0 NETWORK MAINTENANCE

Principal Engineer– Trevor McClay (9025 4019)
trevor.mcclay@infrastructure-ni.gov.uk

He is supported by the following staff:

Belfast South Section Engineer – David Williams (9025 4609) david.williams@infrastructure-ni.gov.uk

1a Airport Road, Belfast, BT3 9DY
(As Belfast North below)

Belfast North Section Engineer – Michael McKendry (9025 4043) michael.mckendry@infrastructure-ni.gov.uk

1a Airport Road, Belfast, BT3 9DY
This team is responsible for contact with the public and elected representatives, highway inspections, resurfacing, responsive repairs, routine maintenance, winter gritting, road opening consents and licences, public liability claims and liaison with the service utility companies.

Support Services Manager- Bill Fulton (9052 6182) bill.fulton@infrastructure-ni.gov.uk

This team is based in Stormont Estate and is responsible for general co-ordination, bidding, allocating monitoring finances, maintenance of safety fences, contract monitoring, statistics and enforcement.

5.1 CARRIAGEWAY RESURFACING 2021/22 Works Completed

Scheme	*Status*
BELFAST SOUTH	
From April 2021 to September 2021, 7.89 lane km of carriageway has been resurfaced in the Belfast South area. This equates to over 29,064Sqm and includes the schemes listed below.	
Earl Haig Area (including Ardenlee Street and Ranleigh Street)	Completed
A2 Bridge End Flyover	Under review
A55 Parkway – Holywood Road to Belmont Road	Completed
Roseberry Road	On site
Piney Lane including Piney Walk and Piney Way	Completed
Malton Drive – Upper Malone Road to Finnis Drive	On site
Moyle Walk	Completed
Ravenscroft Avenue	Under review
Sunbury Avenue	Under review
Sandford Avenue	Under review
BELFAST NORTH	
From April 2021 to September 2021, 10.33 lane km of carriageway has been resurfaced in the North Belfast area. This equates to approximately 33,119 sqm and includes the completed schemes listed below.	
Oldpark Terrace	Under review
Moyard Parade	Under review
Coolnasilla Close	Completed
Dargan Road	Completed
Suffolk Road	Completed
Ballysillan Park	Under review
Downview Park West	Completed
Oakhurst Ave	On-site
Oldpark Road	Under review
Glengoland Crescent	Completed
Glengoland Gardens	Completed
Glengoland Park	Completed
Colinwell Road	Completed

CARRIAGEWAY RESURFACING 2021/22 Programme of Works

Scheme	*Status*
BELFAST SOUTH	
Cherryvalley	Programmed*
Ballymacarrett Road	Programmed*
Old Holywood Road	Programmed*
Lisburn Road – Balmoral Avenue to Kings Hall	Programmed*
Tullycarnett area – Lothian Avenue, Lochinver Drive and Leven Drive	On site*
Larkfield Avenue/ William Alexander Park	Programmed*
A55 Hawthornden Way – Upper Newtownards Road to Belmont Road	On site*
A55 Belvoir Road – Tesco junction to Milltown Road	Programmed*
Orby Gardens – Orby Park to Orby Road	Programmed
Belvoir Crescent	On site
Cricklewood Crescent	Programmed
Marylebone Park	Programmed
BELFAST NORTH	
Kelbourne Park	Programmed*
Wolfhill Road	On site*
Glencolin Drive	Programmed *
Loughview Close	On site *
Armonagh Parade	Programmed *
Beechmount Grove	Programmed
Abbeydale Drive	Programmed

*Additional to programme

5.2 FOOTWAY RESURFACING 2021/22 Works Completed

Scheme	Status
BELFAST SOUTH	
From April 2021 to September 2021, 1.2 km of footway has been resurfaced in the Belfast South area. This includes the schemes listed below.	
Earl Haig Area (including Ardenlee Street and Ranleigh Street)	Completed
Roseberry Road	On site
Piney Lane including Piney Walk and Piney Way	Completed
Malton Drive – Upper Malone Road to Finnis Drive	On site
Moyle Walk	Completed
Sunbury Avenue	Under review
Sunbury Avenue	Under review
BELFAST NORTH From April 2021 to September 2021, 1.37 km (2,744sqm) of footway has been resurfaced in the Belfast North area. This includes the schemes listed below.	
Coolnasilla Close	Completed
Brompton Park	On Site
Highbury Gardens	On Site
Holmdene Gardens	On site
Strathroy Park	On Site
Norwick Drive	On Site
Eskdale Gardens	On Site
Stratford Gardens	Completed
Etna Drive	Completed

FOOTWAY RESURFACING 2021/22 Programme of Works

Scheme	Status
BELFAST SOUTH	
Orby Gardens – Orby Park to Orby Road	Programmed
Belvoir Crescent	On site

Scheme	Status
Cricklewood Crescent	Programmed
Marylebone Park	Programmed
BELFAST NORTH	
Fairhill Park	Under review
Hillhead Heights	Programmed
Hillhead Ave	Programmed
Hillhead park	Programmed
Stewartstown Road, Service Road At Hillhead Estate	Programmed

5.3 DRAINAGE 2021/22 Works Completed

Scheme	Status
BELFAST SOUTH	
Ashton Park – repairs to 300mm dia culvert	Completed
A55 Belvoir Road – new 300mm dia sewer to culvert in Orchard Mews	Completed
A55 Milltown Road – new manholes and connecting Sewers to Milltown Hill	On Site
Wynchurch Road and Rosetta Road – drainage investigation of local storm sewer	Completed
1 Rosepark – new manhole and connecting storm sewer	Completed
12-16 Sicily Park – 2 new gullies and connections to combined sewer	Completed
Clonduff Drive – new manhole and connecting storm sewer	Completed
BELFAST NORTH-	

DRAINAGE 2021/22 Programme of Works

Scheme	Status
BELFAST SOUTH	
Finaghy Road North – installation of non-return valve to footway gully	Programmed
BELFAST NORTH	
Alexandra Park Ave- 600mm Diameter Twinwall culvert installation	Programmed

5.4 SURFACE DRESSINGS 2021/22 Works Completed

Scheme	Status
BELFAST SOUTH	
No schemes programmed	
BELFAST NORTH	
No schemes programmed	

SURFACE DRESSINGS 2021/22 Programme of Works

Scheme	Status
BELFAST SOUTH	
No further schemes programmed	
BELFAST NORTH	
No further schemes programmed	

5.5 LIAISON WITH UTILITIES 2021/22 Works Completed

Scheme	Status
NORTHERN IRELAND WATER	
Service connection to customers	Ongoing
PHOENIX GAS	
Service connection to customers	Ongoing
VIRGIN MEDIA	
Service connection to customers	Ongoing
CABLE & WIRELESS	
Service connection to customers	Ongoing
POWER NI	
Service connection to customers	Ongoing
BT	
Service connection to customers	Ongoing

LIAISON WITH UTILITIES 2021/22 Programme of Works

Scheme	*Status*
NORTHERN IRELAND WATER	
Service connection to customers	Ongoing
PHOENIX GAS	
Service connection to customers	Ongoing
VIRGIN MEDIA	
Service connection to customers	Ongoing
CABLE & WIRELESS	
Service connection to customers	Ongoing
POWER NI	
Service connection to customers	Ongoing
BT	
Service connection to customers	Ongoing

6.0 NETWORK PLANNING

Principal Engineer – Vacant

Supported by the following staff:

Private Streets – Russell Moore (9052 8103)

russell.moore@infrastructure-ni.gov.uk

This team manages the Private Streets Determinations, 3(4c) License agreements, bonds, adoption certificates and liaison for Environmental Improvements for the Division. This team also provides administrative support to Divisional Network Planning.

Development Control Team 2- Stephen Cash (9262 6670)

stephen.cash@infrastructure-ni.gov.uk

This team deals with development control for the Lisburn & Castlereagh Council area including the review of associated Transport Assessments and Strategic/Significant Planning Applications.

Development Control Team 3 – Geoff Lawther (9052 6285)

geoff.lawther@infrastructure-ni.gov.uk

This team deals with development control for Belfast Council area including the review of associated Transport Assessments and Strategic/Significant Planning Applications.

Development Planning – Conleth Sloan (9052 6284)

conleth.sloan@infrastructure-ni.gov.uk

This team deals with development planning for the Division, Advice to Local Transport Plans and Community Plans, Titanic Quarter development control and input to regeneration/public Realm projects.

6.1 ADOPTIONS

Adoptions completed from last spring report

Location	*Length Adopted (M)*
Gibson Street	21m of remote footway, 10m of traditional carriageway & 101.5m^2 of parking provision.
Kinross Avenue/Granton Heights	70m of traditional carriageway, 54m of remote footway and 20m^2 of bitmac patching on carriageway.
Loughside Chase	130m of traditional carriageway including associated footways and turning head.
Stirling Green/Stirling Way	**Stirling Green:** 247m of traditional carriageway (including turning head). **Stirling Way:** 97m of traditional carriageway (including head).
Westway Hill ***(Enforcement Site)***	110m of traditional carriageway and associated footways, 122m of shared surface and associated service strips and 150m^2 of Mews/Court.

6.2 PLANNING APPLICATIONS

DfI Roads Development Management teams provide specialist information and transportation advice to Belfast City Council Planning Service or DfI Planning (as the case may be), on road related matters associated with proposed development applications.

This page is intentionally left blank

20's Plenty for Us

…making your place a better place to be

Belfast City Council

20mph limits – making Belfast a better place to be.
27th October 2021

Rod King MBE 20's Plenty for Us

rod.k@20splenty.org

#ActOn20mph www.20splenty.org @20splentyforus

Some ideas!

How do we share equitably and safely the public spaces between buildings that we call streets?

How do speed limits question our values, rights and justice for vulnerable road users?

Is an urban speed limit pulled out of the air in 1934 appropriate for 21st century mobility needs?

20's Plenty assists Local Authorities and Governments to balance movement, safety and the economy and create better streets for people.

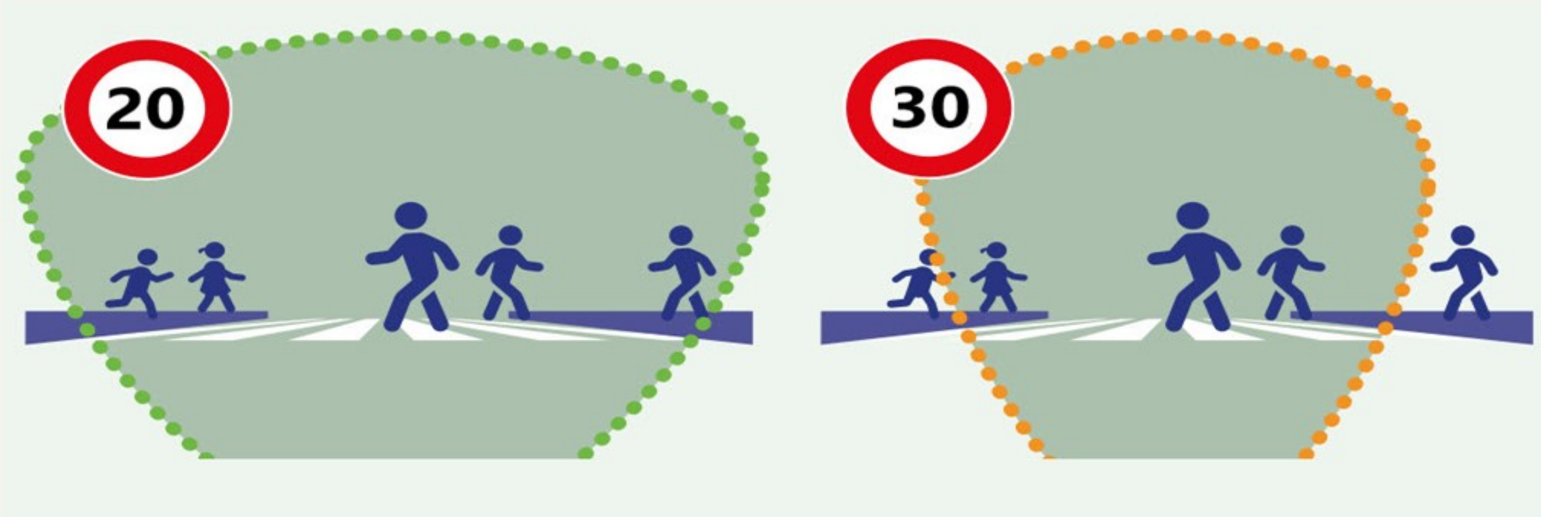
Align with global best practice, WHO & the UN.

Areas to cover

1. Common objectives
2. Cities already saying 20's Plenty
3. The global case for a 20mph/30kmh urban default limit
4. What to expect as an outcome
5. Key considerations to maximise success
6. Why just Belfast, why not Northern Ireland?
7. Questions and hopefully answers!

1. Common Objectives

- Increase child and adult activity levels
- Promote healthy active travel options
- Meet climate change obligations
- Reduce casualties
- Reduce inequalities
- Lower emissions
- Less congestion
- Place making



The field of vision at 20mph /30mph

Multiple Mobility Challenges

36% of primary age parents are afraid to let children walk or cycle due to fast traffic (say Living Streets)

One in 5 adults (20%) 40-60 years is physically inactive

Early onset ill-health through inactivity burdens public services

Casualties cause huge societal costs £M

Dissatisfaction with 30mph- only 10% want 30mph on residential streets.

Growth of faster, silent e-bikes, e-scooters, e-cargo bikes, e-cars raises risks

30mph is ‘past its use by date’

A 30mph default is NOT fit for purpose or credible

Already rejected by 28M people’s local or national authorities (42% of UK population)

30mph isn’t helping resident's health, relationships or business
Streets are for life, not just for motors

In urban areas, a 30mph peak speed doesn’t reduce overall journey time significantly.

Will a 30mph limit ever support active travel? No

Will 30mph limit roads ever fulfil duty of care? No

People, especially children and elderly make mistakes

30mph speed limits are not evidenced to help with any of these objectives.

30mph is not healthy, green or liveable

Crouch to see from an 8 year old's level. 30mph HGVs are scary. Pre-teens eyesight can't reliably cope with judging speeds over 20mph

Inadequate Active Travel infrastructure

- In settlements 30mph can ONLY be made safe with protected infrastructure and crossings. 30mph is too fast in places lacking pavements or cycle routes.
- A lack of, or narrow, pavements deters walkers.
- 20mph speed limits do not exclude need for physical changes to streets.

2. Cities already saying 20's Plenty

Majority of 40 largest urban authorities

All Inner London Boroughs

Cardiff and Edinburgh

Many shire counties

Wales to set a national 20mph urban/village limit from 2023

Scotland to set 20mph as a "norm" by 2025

28 million people set to live in 20mph places

3. The global case for a 20mph/30kmh urban default limit

WHO says 20's Plenty as a default?

SUSTAINABLE DEVELOPMENT GOALS

February 2020

Stockholm Declaration – Resolution 10

10. *Focus* on speed management, including the strengthening of law enforcement to prevent speeding and mandate a maximum road travel speed limit of 30 km/h in areas where vulnerable road users and vehicles mix in a frequent and planned manner, except where strong evidence exists that higher speeds are safe, noting that efforts to reduce speed will have a beneficial impact on air quality and climate change as well as being vital to reduce road traffic deaths and injuries;

August 2020

TN TRANSPORT NETWORK

The trusted independent voice for transport and mobility

UN flies the flag for 20mph limits worldwide

Chris Rumes
24 September 2020

Free Registrat

Register here to get FRE
articles on Transport-Ne

**The United Nations has backed the use of 30km/h (
20mph) limits as part of a worldwide drive to cut ro
injuries by half.**

Page 95

FIA FOUNDATION

Home | Our Work | Blog | Connect | About us

UN General Assembly urges halving of global road traffic deaths by 2030

September 2, 2020 by FIA Foundation
Categories: Road Safety, Child Health Initiative | Tags: Manifesto 2030, Sustainable Development Goals, UN Decade of Action for Road Safety

UN General Assembly mandate WHO to Love30 for UN Global Road Safety Week – May 2021

About

The UN General Assembly mandated WHO and the UN regional commissions to plan and host periodic UN Global Road Safety Weeks. Held since 2007, the #Love30 campaign of the 6th UN Global Road Safety Week advocates for Streets for Life by making 30 km/h (20 mph) speed limits the norm for cities worldwide in places where people mix with traffic.

May 2021


6TH UN GLOBAL ROAD SAFETY WEEK
17 - 23 May 2021
Streets for Life
#Love30
Why #Love30?

81% of NGOs globally pushed for 30km/h

30km/h and 20mph – Key reasons

Global road fatalities of 1.4m

Global Climate Emergency

Global aspiration for better places

4. What to expect as an outcome

- 20mph is popular
- How 20mph help resolve issues
- 20mph means active travel infrastructure is less costly
- Compliance is improving with scale and new technology
- 20mph is Fair to All and Popular
- Lives saved and road trauma reduced
- Reduced emissions

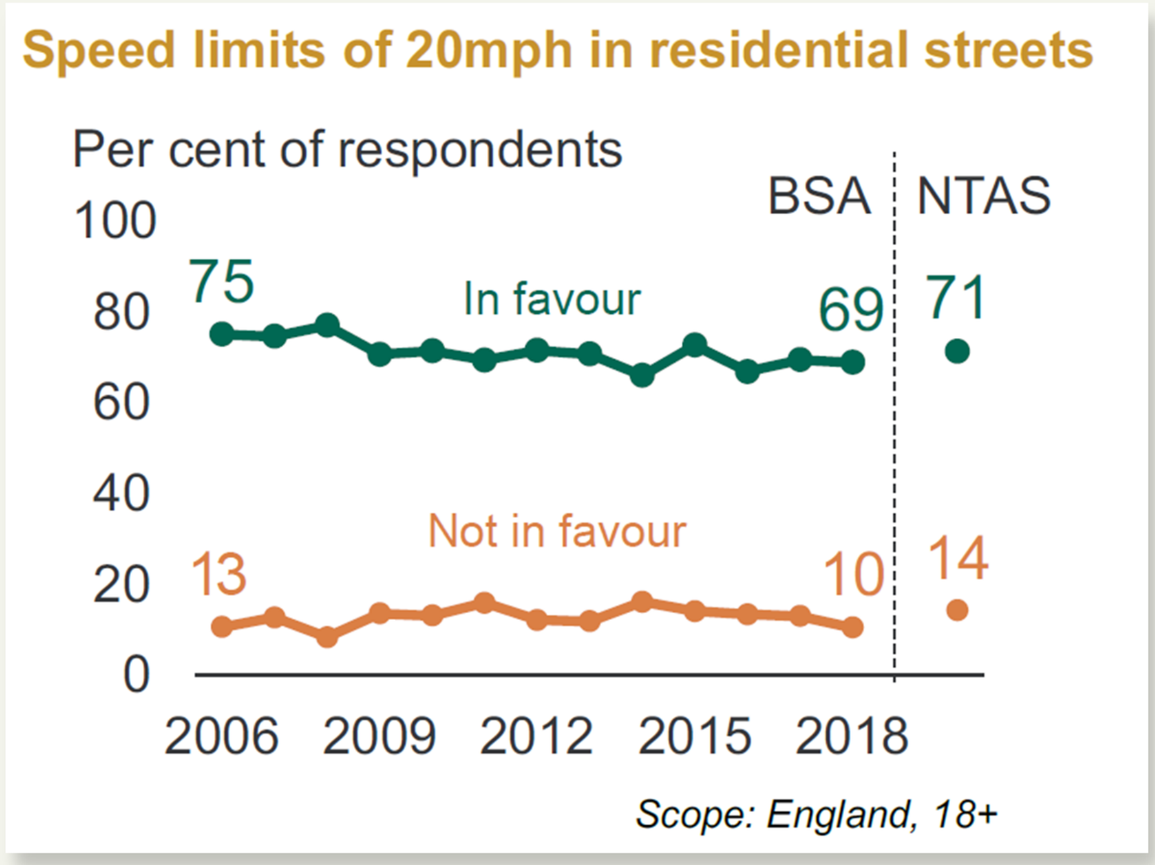
20mph is popular

70% say 30mph is not the right speed limit for residential streets only 10% think it is

Many requests for 20mph are queuing up

Council elections 2021 favoured those with green credentials

How can Councillors give residents what they want fairly and cost effectively?



source: DfT National Travel Attitudes Survey NTAS

How 20mph help resolve issues

Wide range of benefits

Supports active travel – rates of cycling to school tripled in Edinburgh.

Evaluations show cycling and walking rise.

People feel safer; streets become more pleasant.

Casualties reduce 20%.

20mph means active travel infrastructure is less costly

Protected cycle lanes and pavements aren’t required if motor and cycle traffic can fairly share the road at speeds consistent with duty of care to the vulnerable

Streets are for all road users, not just those in vehicles

Compliance is improving with scale and new technology

On faster roads, speeds fall 4-5mph+ for signed 20mph schemes
Additional psychological measures – centre line removal reduces speeds by another 1-2mph

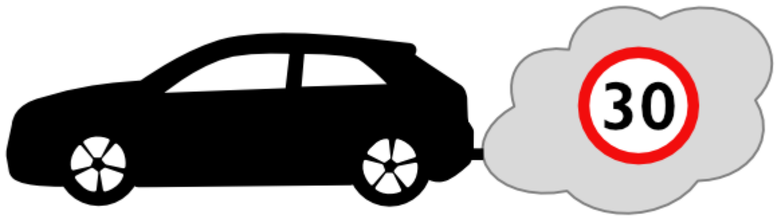
From April 2022 all new car models will have Intelligent Speed Assistance to keep drivers within the speed limit.
Compliance increases over time
Compliant drivers set the pace for others
Community Speedwatch can play a part

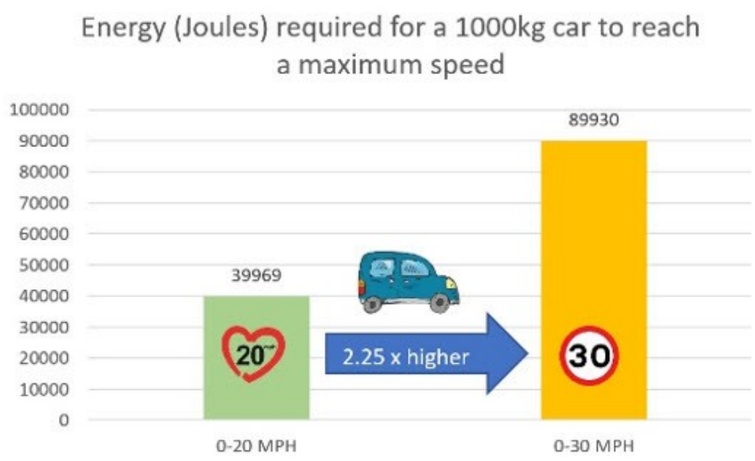
20mph is Fair to All and Popular

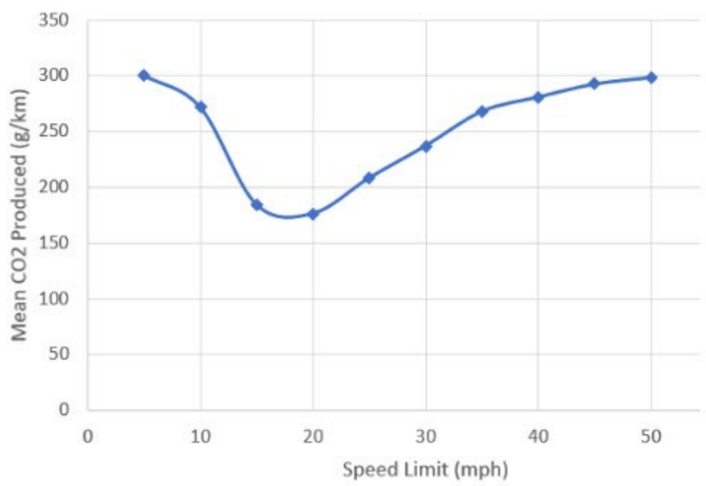
20mph is fairer to all road users. Risk is reduced to all and especially to vulnerable walkers and cyclists. It offers duty of care

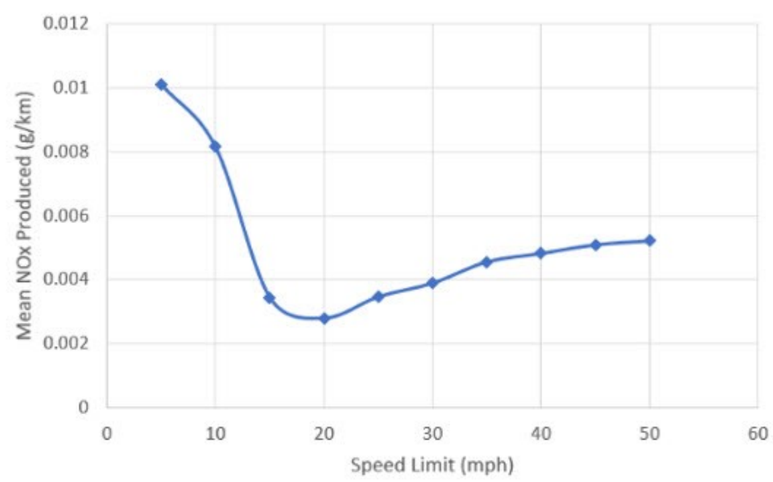
70% consistently say they want 20mph for residential streets. Popularity rises after implementation (Atkins)

New research shows that 20mph limits reduce CO^2 and NOx by 25% compared to 30mph









See https://www.20splenty.org/new_research_on_emissions

Calderdale

"Our vision is to make our streets safe and pleasant. This is for all children and adults, no matter how they travel or where they live. To help, we have brought in 20mph speed limits in residential areas across the Borough."

Public Health engagement to "Love your street"

Casualties fell 30-40%.

80% popularity

Police enforced

Cost £821k, £1.6k per km of road

Benefit: £3+M in casualties avoided (first 3 years)

https://calderdale.gov.uk/council/councillors/councilmeetings/agendas-detail.jsp?meeting=24991

Cheshire West and Chester

2016 – Cabinet agreed signed only 20mph speed limits on the borough's residential roads where mean speeds were less than 24mph and around schools where the mean speed is less than 30mph.

Aims: reduce speeds, reduction in road traffic collisions and increase health by encouraging active, sustainable travel by children walking and cycling to school.

Casualties fell by 43%

Almost all residents are supportive

4 year roll out, £800k,

Benefit: £3.5M in casualties avoided (in first 3 years)

http://cmttpublic.cheshirewestandchester.gov.uk/ieListDocuments.aspx?MId=6155&x=1

Bath and North East Somerset

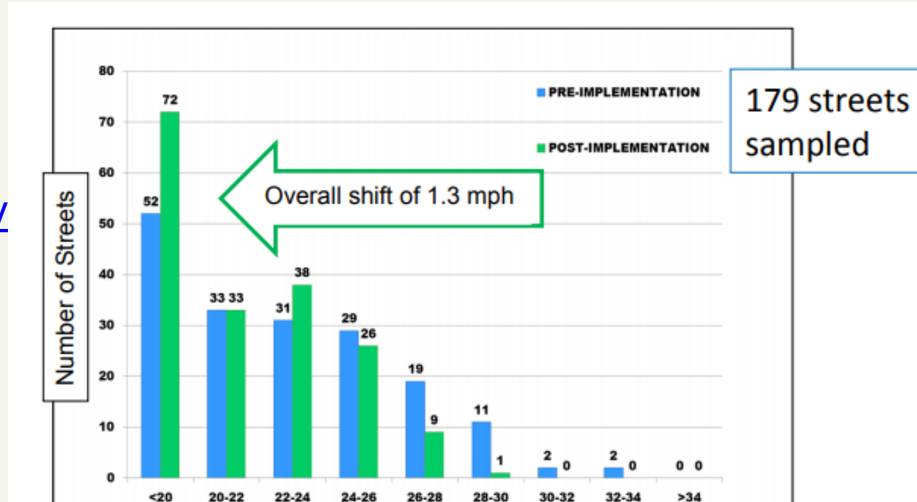
To tackle the climate and ecological emergency and improve health the Council is increasing its efforts to introduce traffic management measures which encourage greater walking and cycling, especially for commuters. Reduced vehicle speeds can be an influential factor in encouraging people to walk and cycle more often and can give them greater confidence.

Police enforcement

In Bath casualties fell 23% on 20mph roads, 27% on all roads

£802k (2012-17). 20mph is being extended

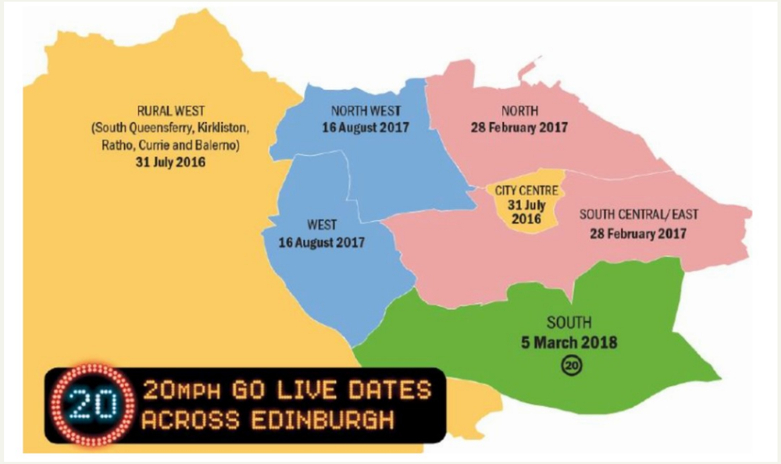
https://www.bathnes.gov.uk/services/streets-and-highway-maintenance/highway improvements-traffic-management/self-service-20-mph



City of Edinburgh Council

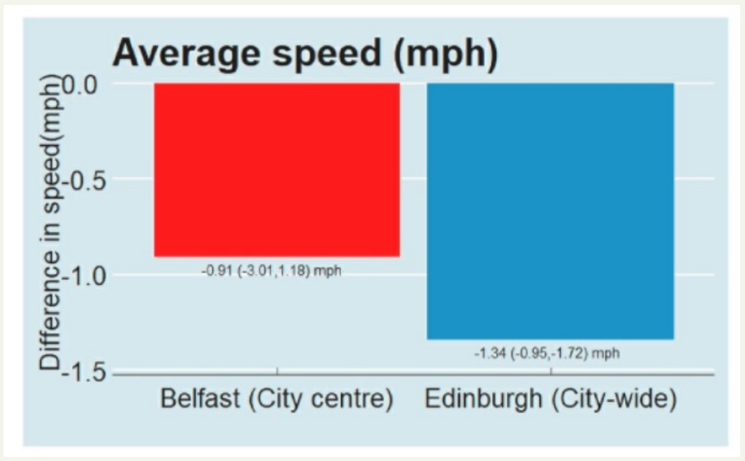
In March 18 became Scotland's first city to implement city-wide 20mph limits.

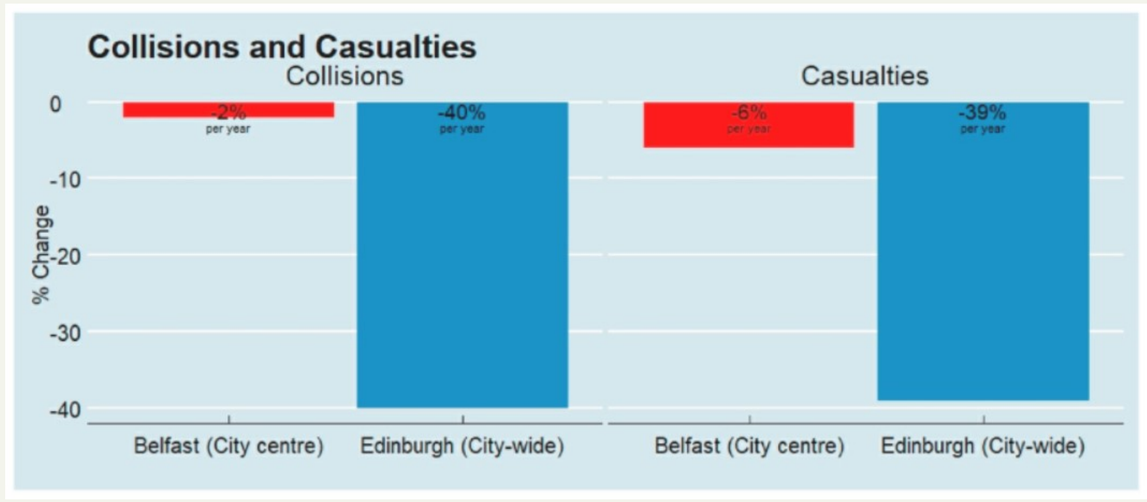
Most limits introduced without calming.



Key outcomes:-

Academic review of Edinburgh (City-wide) compared to Belfast (City centre) 20mph schemes – Report provided.





5. Key considerations to maximise success

- The big mistake would be to think this is about Traffic Engineering
- Maximise number of driver/owners of 20mph benefits
- Make it community-wide
- Marketing and Engagement, Engagement, Engagement
- Put into context of community benefits
- Provide value based benefits to compliers
- Create multi-agency collaborative team
- Involve & be inclusive of all sectors, even if opposed
- Bust the myths - challenge opposing views, quantify issues & turn into benefits
- Create the social norm that 20 is Plenty where people live, work and shop

6. Why just Belfast, why not Northern Ireland?

- Dept for Infrastructure is the sole highway authority with speed limit responsibility
- If 20mph is right for Belfast then why not all NI communities
- Make it community-wide across the whole NI community
- Gain economies of scale in implementation, engagement, etc.
- Remove need for 20mph repeater signs
- Join Wales and Scotland in saying that 20's Plenty where people are
- Create the social norm that 20 is Plenty throughout NI where people live, work and shop

20's Plenty for Us

…making your place a better place to be

20's Plenty for Us can help to provide a blueprint for meeting community demand for 20mph in more places

Thank you & questions?

Rod King MBE
rod.k@20splenty.org
@20splentyforus
www.20splenty.org

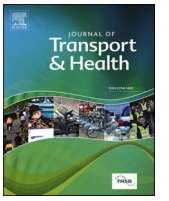
This page is intentionally left blank

Journal of Transport & Health 22 (2021) 101141

Contents lists available at ScienceDirect

Journal of Transport & Health

journal homepage: www.elsevier.com/locate/jth



Use of natural experimental studies to evaluate 20mph speed limits in two major UK cities

Karen Milton [a,*], Michael P. Kelly [b], Graham Baker [c], Claire Cleland [d], Andy Cope [e], Neil Craig [f], Charlie Foster [g], Ruth Hunter [h], Frank Kee [d], Paul Kelly [c], Glenna Nightingale [i], Kieran Turner [i], Andrew J. Williams [j], James Woodcock [k], Ruth Jepson [i]

[a] Norwich Medical School, University of East Anglia, UK
[b] Primary Care Unit, Department of Public Health and Primary Care, University of Cambridge, UK
[c] Physical Activity for Health Research Centre (PAHRC), Institute for Sport, Physical Education and Health Sciences, University of Edinburgh, UK
[d] School of Medicine, Dentistry, and Biomedical Sciences, Queen's University Belfast, UK
[e] Sustrans, UK
[f] Public Health Scotland, UK
[g] Centre for Exercise, Nutrition and Health Sciences, University of Bristol, UK
[h] Centre for Public Health, Queen's University Belfast, UK
[i] Scottish Collaboration for Public Health Research and Policy, University of Edinburgh, UK
[j] Division of Population and Behavioural Science, School of Medicine, University of St Andrews, UK
[k] Centre for Diet and Activity Research, University of Cambridge, UK

ARTICLE INFO

Keywords:
20mph
Speed limit
Policy
Evaluation

ABSTRACT

Introduction: Reductions in traffic speed can potentially offer multiple health and public health benefits. In 2016, implementation of 20mph (30kph) speed limit interventions began in Edinburgh (city-wide) and Belfast (city centre). The aims of this paper are to describe 1) the broad theoretical approach and design of two natural experimental studies to evaluate the 20mph speed limits in Edinburgh and Belfast and 2) how these studies allowed us to test and explore theoretical mechanisms of 20mph speed limit interventions.

Methods: The evaluation consisted of several work packages, each with different research foci, including the political decision-making processes that led to the schemes, their implementation processes, outcomes (including traffic speed, perceptions of safety, and casualties) and cost effectiveness. We used a combination of routinely and locally collected quantitative data and primary quantitative and qualitative data.

Results: The evaluation identified many contextual factors influencing the likelihood of 20mph speed limits reaching the political agenda. There were substantial differences between the two sites in several aspects related to implementation. Reductions in speed resulted in significant reductions in collisions and casualties, particularly in Edinburgh, which had higher average speed at baseline. The monetary value of collisions and casualties prevented are likely to exceed the costs of the intervention and thus the overall balance of costs and benefits is likely to be favourable.

Conclusions: Innovative study designs, including natural experiments, are important for assessing the impact of 'real world' public health interventions. Using multiple methods, this project

* Corresponding author. Norwich Medical School, University of East Anglia, Norwich Research Park, Norwich, Norfolk, NR4 7TJ, UK.
E-mail address: k.milton@uea.ac.uk (K. Milton).

https://doi.org/10.1016/j.jth.2021.101141
Received 19 April 2021; Received in revised form 18 June 2021; Accepted 15 July 2021
Available online 20 July 2021

enabled a deeper understanding of not only the effects of the intervention but the factors that explain how and why the intervention and the effects did or did not occur. Importantly it has shown that 20mph speed limits can lead to reductions in speed, collisions and casualties, and are therefore an effective public health intervention.

Introduction

Transport related policies and practices impact health through collisions, air and noise pollution and perceived lack of safety (Jacobsen et al., 2009; Morrison et al., 2003; National Institute of Health and Care Excellence, 2017) and by providing (or not) environments conducive to active travel (Winters et al., 2017). Traffic speed, in particular, is a key risk factor in road traffic incidents for collision and injury severity (World Health Organization [WHO], 2017). For pedestrians and cyclists especially, the relationship between speed and injury is even more acute (WHO, 2017). Reductions in traffic speed can therefore potentially offer multiple health and public health benefits. These may include reducing the risk of traffic collisions and the resulting severity of injuries, encouraging greater uptake of physical activity (through increased walking and cycling) and making streets more pleasant and liveable.

On restricted roads in the United Kingdom (UK) (roads in built-up areas), the national speed limit is 30 miles per hour (mph) (UK Public General Acts, 1960). However, implementing 20mph speed restrictions in the UK has become increasingly common (Tapp et al., 2015; Toy et al., 2014). For example, city-wide 20mph speed restrictions were introduced in Portsmouth (Atkins, 2018) and Bristol (Bornioli et al., 2020), and other local authorities have introduced 20mph restrictions on a smaller, more localised scale on a pilot basis (see Cleland et al., 2019 for a summary). Typically, two approaches have been taken. Most commonly physical infrastructure is installed, such as speed bumps or chicanes. These are usually called 20mph *'zones'* (Grundy et al., 2008). The other approach is to install 'signs and/or lines', without any other physical infrastructure. The latter are conventionally referred to as 20mph *'limits'* (Toy, 2012). A recent review identified 11 published studies globally involving 20mph speed reduction interventions, nine involved zones and two involved limits (Cleland et al., 2019). The review concluded that 20mph 'zones' are effective in reducing collisions and casualties; however, there was insufficient evidence to draw robust conclusions on the overall public health effectiveness of 20mph 'limits'.

In 2016, implementation of 20mph speed limit interventions began in Edinburgh (city-wide) and Belfast (city centre). Edinburgh implemented a city-wide 20mph speed limit network between July 2016 and March 2018. Around 50% of streets in Edinburgh were already 20mph; the aim was for this to be increased to 80% of streets, with the remaining 20% of streets – mostly arterial – maintaining a 30 or 40mph limit. The scale-up of 20mph limits was implemented in four phases across seven areas, with each taking approximately 16 weeks to put in place. When complete there were in total 1572 roads that were 20mph - approximately 771 miles (1240.3 km). Belfast implemented 20mph speed limits on 76 streets in the city centre. This was the part of the city with the highest levels of

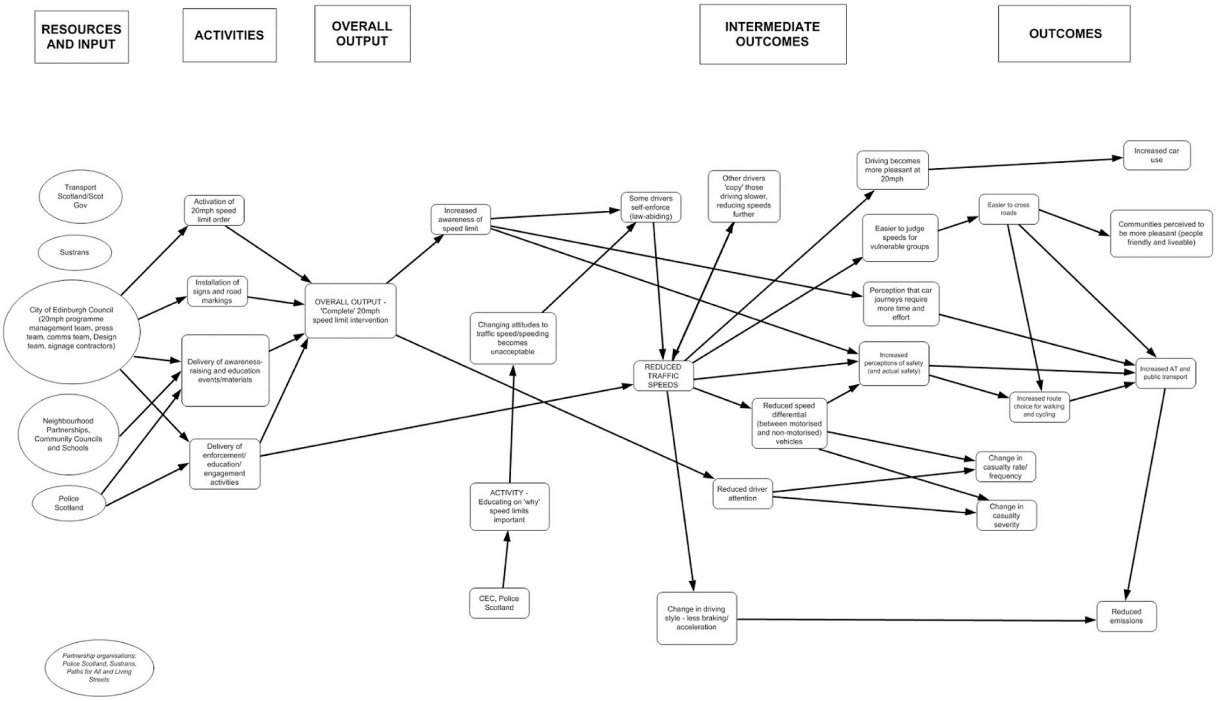


Fig. 1. 20mph programme theory, from Turner et al. (2018).

pedestrian movement, cycle activity and bus facilities. The 20mph streets in Belfast were surrounded by a network of 30mph and 40mph streets. The Belfast city centre scheme came in to force in February 2016 and was implemented in a single phase (Department of the Environment, 2011) but at the same time as a range of other transport infrastructure changes were taking place (www.infrastructure-ni.gov.uk/topics/transport-initiatives/belfast-move).

In 2017, the UK National Institute for Health Research (NIHR) funded concurrent evaluations of the 20mph speed limit interventions in Edinburgh and Belfast ('Is 20mph plenty for health?'). The aims of this paper are to describe 1) the broad theoretical approach and design of two natural experimental studies to evaluate the 20mph speed limits in Edinburgh and Belfast and 2) how these studies allowed us to test and explore theoretical mechanisms of 20mph speed limit interventions.

Methods

Theoretical approach

We used a theory-based approach (Stame, 2004). This acknowledges that evaluation should make explicit the theories underlying the assumptions about how things work, and the evaluation steps (and methods) should be designed and built based on the best way to test those theories given the resources available and the context in which the evaluation is being conducted. This is done by elaborating assumptions, revealing causal chains, and engaging all concerned stakeholders. A significant part of this study also involved a process evaluation to understand implementation, mechanisms of change, and context (Moore et al., 2015).

Following the Medical Research Councils (MRC) guidance on complex interventions (Craig et al., 2008), considerable preliminary work was undertaken with stakeholders in Edinburgh to develop an initial programme theory. This was used to guide the outcome and process evaluations in both cities (Turner et al., 2018). The model from that preliminary work - outlining the intervention theory, activities and outcomes - is shown in Fig. 1. This programme theory highlights the pathways through which the reduced peak and average speeds (proposed to result from the lower speed limit) are purported to lead to health-related outcomes. Consequently, this study was designed to not only address the question of the effects and impacts of the intervention but also how and why the intervention and effects/impacts occurred or did not occur.

Study design

The research team had to confront a number of challenges:

- The pre-implementation and implementation activities took place over an extended time period (2000–2016) and much of it before our research began. These were dynamic continuing processes and occurred in complex systems of multiple actors and organisations, with particular local histories, contexts and vested interests.
- What was done in Edinburgh and Belfast was different. The same ends were sought in both cities – to reduce traffic speed – but in order to achieve that goal, the interventions were implemented differently and on different scales.
- These were not single interventions at single moments in time. What was implemented in both places consisted of a number of different elements. They involved legislation, signage, public education and enforcement, to varying degrees, and many individuals and organisations participated.
- The interventions took place in multiple and very different locales (between the cities and within Edinburgh) at different times.
- There were other travel initiatives taking place at the same time, including the introduction of a rapid transit system and extension of city centre bus lane provision in Belfast and active travel promotions in Edinburgh.
- The mechanisms leading to the outcomes from the different components (legislation, signage, public education, enforcement) were not known empirically in advance nor was it known which parts of the various activities were more potent or possibly less or ineffective.

Guided by our programme theory, we developed a pragmatic, theory based, mixed-methods evaluation within a natural experimental study. Similar mixed-methods approaches have been used in other transport related natural experiment studies (e.g. the NIHR PHR funded 'On the buses' study, Green et al., 2014; and the EPSRC funded 'iConnect' study, Ogilvie et al., 2012; Ogilvie et al., 2017).

Data collection

The 'Is 20mph plenty for health?' study used a combination of routinely and locally collected quantitative data and primary quantitative and qualitative data, specifically selected to assess the pre-stated theories. The project consisted of several work packages (WP), each with different research foci. Full details can be found in the final project report (Jepson et al., 2021) and publications specific to each component of the work, but in summary:

The objectives of WP1 were to assess the impact of introducing 20mph speed limits on: driver perceptions; public support; perceptions of safety; perceptions of the pleasantness of the environment; traffic speed and volume; the number and type of road casualties; and the number of journeys made by walking or cycling. The data for WP1 were primarily (although not exclusively) already being collected by third parties – the local and national government, external contractors, and Sustrans – and not necessarily for the purpose of evaluating the 20mph limits.

The objectives of WP2 were to understand the implementation processes and activities, barriers and facilitators to successful

implementation in Edinburgh and Belfast, and to evaluate how and why behaviour change may, or may not have occurred, predominantly through primary qualitative enquiry with key implementation actors and groups of the population exposed to the speed limit interventions.

The objectives of WP3 were to investigate the factors behind the decisions to implement the schemes in the two cities in the first place and to their possible transferability to other places. This involved documentary analysis and interviews to investigate the political decision-making processes that preceded the implementation of 20mph speed restrictions in the two cities.

The objective of WP4 was to undertake an economic evaluation of the intervention, comprising cost-benefit analysis (CBA) and cost-consequence analysis (CCA), using the range of data collected in the other work packages.

Ethics

Ethical approval was obtained from the Moray House School of Education Ethics Committee at The University of Edinburgh.

Results

Using a theory-based approach, we were able to assess different parts of the programme theory to determine their importance and impact, as well as the overall effects of the intervention. It should be noted that due to a lack of adequate and robust data, we were not able to test all aspects of the programme theory. Within this section we provide an overview of the findings emerging from the key work packages. Full details of the project findings can be found in the final report (Jepson et al., 2021).

Pre-implementation

The evaluation shed light on the many contextual factors influencing the likelihood of 20mph speed limits reaching the political agenda in the first place. While the original programme theory highlighted the role of local stakeholder groups, our research identified a much broader range of factors that determine whether 20mph speed limits reach the political agenda including global and national policy, local histories, politics, bureaucracy, evidence, and the public.

In both Edinburgh and Belfast, it was not the case that a quick decision was made and the intervention was implemented. In both cities there was around a twenty-year history from 20mph limits being recognised as a potential public health and transport intervention, to the point where the schemes became a reality. In neither city were there major landmark events that caused a radical shift in policy. Rather 'baby steps' were taken to nudge closer and closer to the idea and the eventual reality over a sustained period of time, such that what unfolded was seemingly inevitable.

During this long lead-in period, different factors were important at various times throughout the discussions. The initial rationale for slower speeds in both cities was road safety, and scientific evidence was critical in the early discussions, although most of the cited evidence was on the link between speed and risk, rather than the effectiveness of 20mph limits *per se*. As the interventions came closer to being a reality, practical considerations became more pertinent in discussions, such as the potential impact on bus timetabling and fast food delivery times.

A key facilitator in both cities was the shift in the intended design of the speed limit interventions from 'zones' to 'limits', removing the need for physical infrastructure. This made the intervention considerably cheaper and more feasible to implement at scale, making it more attractive to decision makers. A critical feature in both cities was that the issue never became party political; there were key individuals across parties and other stakeholder groups who were in support of the initiative. It was also important to build public support, by seeking opinion and responding to opposition.

Implementation processes

There were four implementation components of the intervention in both cities: 1) legislation; 2) signage; 3) public education; and 4) enforcement. However, there were substantial differences between the two sites in several aspects related to implementation such as the governance, delivery partners involved, and the scale, timeframe and phasing approach of the various implementation components.

Implementation was broadly considered as being 'delivered as intended' in both Edinburgh and Belfast, with few practical issues noted by delivery partners. Only minor amendments to implementation were made during delivery. For example, changes to signage were made in Belfast in response to public feedback that the signs weren't visible enough. Approximately 8 months into implementation, the original signs with a white background were replaced with signs with a yellow background.

A joint and integrated public education and awareness campaign was viewed as an integral component of implementation in Edinburgh. This was delivered from the outset of implementation, with dedicated staffing and funding allocated to this component of implementation. In contrast in Belfast, this component of implementation was delivered on a very small scale with few delivery partners involved. The scheme in Edinburgh was perceived by the general public as being highly visible, attributable in part to the education and awareness activities which took place. In contrast, a lack of awareness of the 20mph speed limit initiative reported by some population groups was an important finding in Belfast.

In both sites, police enforcement was influenced by resources and competing priorities (Jepson et al., 2021). Enforcement was viewed by delivery partners as being implemented as intended, with 20mph speed limits viewed as initiatives that should be self-enforcing. Active enforcement was often reactive in nature in response to public complaints, and then with a focus on the

education of drivers. This is in-line with how other speed limits are generally enforced. However, this contrasted with the perception from the general public of what enforcement should consist of. In both Edinburgh and Belfast, enforcement activities were perceived by the general public as being insufficient, and the view was expressed that enforcement should focus more on the issuing of fines.

Behaviour change and outcomes

In both sites, a range of perceptions were described by the general public about the impact of the initiative on driver behaviour (Cleland et al., under review; Williams et al., under review). Some were positive, such as compliance with the scheme, which affected the overall speed on roads. However, some possible unintended consequences of the initiative were perceived – such as a worsening in driver behaviour, increased overtaking and decreased driver attention (Cleland et al., under review). Views from the general public in both Edinburgh and Belfast would suggest that 20mph speed limit initiatives had not directly led to, or contributed to, decision making about active travel choices, but limited data were available to determine whether the 20mph speed limit initiatives led to any increases in journeys made on foot or by bike.

A range of outcomes were anticipated from the outset including reductions in traffic speed, volume, collisions and the severity of casualties. We assessed the impact of the interventions on these outcomes. A summary of the overall observed change in average traffic speed and volume are shown in Figs. 2 and 3 and collision and casualty data are shown in Fig. 4. In Edinburgh, 12 months after the policy change average speeds on affected roads had reduced by 1.34 mph (95% CI 0.95 to 1.72), but the volume of vehicles did not change significantly. The average 7-day volume of traffic decreased by 87 vehicles (95% CI -112 to 286). Across Edinburgh the number of collisions in a year reduced by 367 (40% reduction) with 409 fewer casualties (39% reduction) (Nightingale et al., under review). These reductions equate to 36% (collisions) and 35% (casualties) when adjusted for secular trends. In Edinburgh, road traffic fatality rates decreased by 23%. Thus, even relatively modest reductions in speed led to significantly improved levels of safety.

Average speed fell in Belfast by 0.91 mph (95% CI -3.01 to 1.18) though this was not statistically significant. This could be for a number of reasons for example: a) the average speed before the intervention was already close to 20mph; and b) it aligns with data from local practice that suggests signage only produces an approximate 1mph reduction (City of Edinburgh Council, 2013). The average 7-day volume of traffic within Belfast city centre decreased by 133 vehicles (95% CI -252 to −15), with significant increases in objectively assessed liveability, especially in relation to traffic and transportation. The change in average traffic volume may also be due to new bus lanes, the introduction of a Rapid Transit System, and other urban transport changes that happened in Belfast city centre during the implementation of the 20mph speed limits. There was a 2% significant reduction in collisions and a 6% reduction in casualties in Belfast city centre up to 3 years following the introduction of the 20mph speed limits. Road traffic fatality rates decreased by 44.3%.

A broad range of other potential outcomes or unintended consequences emerged from the research, and particularly from the qualitative findings from WP2. For example, while it was initially envisaged that slower speeds would lead to fewer collisions and reduced severity of injuries, and this is indeed what was observed, there was a perception that reduced speeds had the potential to lead to more collisions; people reported they may lead to reduced attention on the road due to concentrating on the speedometer, the potential for people to check their mobile phone more often when travelling at slower speeds, and more pedestrians walking into the street, which all have the potential to increase collision rates (Cleland et al. under review). Further research is required to better understand driver behaviour (and potentially cyclist and pedestrian behaviour) and the myriad of factors that might explain increases or decreases in collisions and casualties. Future research should, where possible, utilise objective measures to overcome differences between perceptions and real changes in behaviours and outcomes.

Economic evaluation

A range of factors meant that the planned economic evaluation was not possible in its entirety, due to data not being available as expected. For example, no data were available on enforcement or maintenance costs, or changes in active travel or emissions. In addition, the limitations arising from the natural experimental design increased the uncertainty in attributing observed effects to the

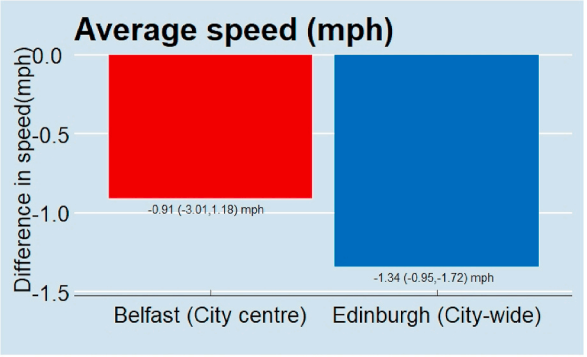


Fig. 2. Changes in average vehicular speed, with labels indicating the point estimate of change and the accompanying 95% Confidence Interval.

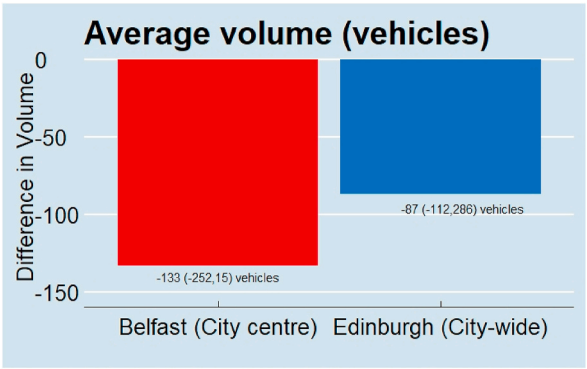


Fig. 3. Changes in average vehicular volume, with labels indicating the point estimate of change and the accompanying 95% Confidence Interval.

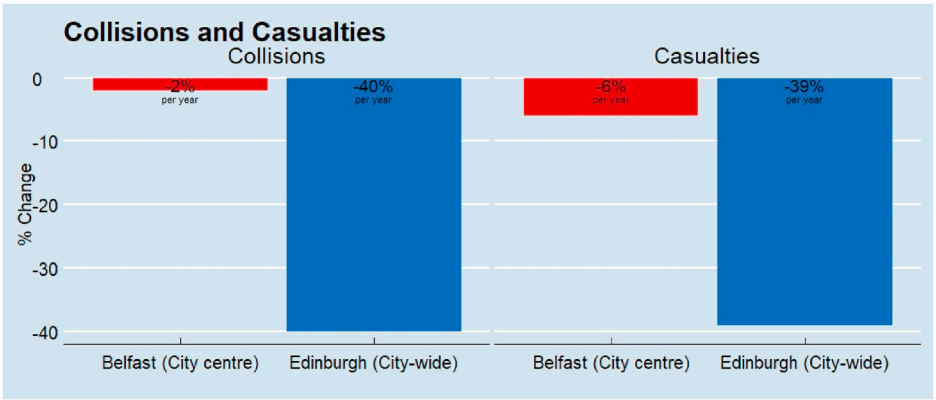


Fig. 4. Changes in road traffic collisions and casualties, as observed percentage reductions.

intervention. Therefore, we adopted a decision theoretic approach, asking the questions: how effective would the intervention have to be for the benefits to exceed the costs and how likely is the level of benefits achieved in the Edinburgh and Belfast schemes to have exceeded that?'

We were able to obtain cost data for the Edinburgh scheme, covering design, supervision and project management, construction, awareness raising, and speed and traffic volumes. Using these data on costs and the available casualty data, we were able to explore the potential monetary value of the benefits of the scheme. The cost of the Edinburgh scheme totalled £2.81m in current prices or £2.76m in real prices, calculated using the retail price index (RPI) with 2016 as the base year. This total does not include enforcement or maintenance costs. No mechanisms were put in place to record time spent on enforcement of speed limits specifically in the 20mph areas because it is part of wider speed monitoring activities, and the council confirmed that maintenance costs would be subsumed within general road maintenance budgets.

The monetary value of reduced casualties and deaths would need to exceed the costs of the intervention (£2.76m in 2016 prices). Department for Transport data on average costs of road traffic accidents classified by casualty severity are shown in Table 1. Given the estimated outcomes in terms of reduced fatalities, casualties and collisions, it is likely that the monetary value of these outcomes exceeds the costs of the scheme under a range of plausible scenarios reflecting the uncertainties surrounding the outcomes observed.

Table 1
Average value of prevention per reported casualty and per reported road accident.

Accident/casualty type	Cost per casualty	£ (2016 prices)
		Cost per accident
Fatal	1,841,315	2,053,814
Serious	206,912	237,527
Slight	15,951	24,911
Average for all severities	59,358	83,893
Damage only	-	2211

Source: Department for Transport statistics, September 2017. https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-annual-report-2016

These conclusions are cautious at this stage. A full economic evaluation would need to consider:

- duration of benefit net of secular downward trends in casualties
- time profile and discounting of benefits and costs, given the vast majority of costs are incurred up front whereas the stream of benefits in terms of causalities avoided would likely continue into the future
- sensitivity analysis, for example, testing the sensitivity of the conclusions to assumptions made about the proportion of the observed changes in collisions and casualties (and liveability) attributed to the 20mph limits and the duration of benefit
- including a wider range of benefits in the analysis if and when data, for example on active travel and emissions, become available.

However, many of these factors would be likely to tip the balance in favour of the economic case for 20mph limits.

Discussion

This research has contributed a number of important findings to the evidence base on 20mph speed limits. In both cities, there was about a twenty-year political history over which momentum for 20mph gathered. Once the decision to implement was made, the interventions were largely delivered as intended, albeit with variation in the dose of delivery across different components, particularly public education and enforcement. In Edinburgh, large reductions in collisions and casualties were observed, which is in line with what we would expect from reductions in speed. Reductions in speed, collisions and casualties were also observed in Belfast. It was not possible to determine whether the interventions had any impact on walking and cycling.

This was a challenging project methodologically. Implementing 20mph speed restrictions requires multiple partners and actions, is not easy to do, and determining its effectiveness in realising public health goals is multiplex. We were researching something that was happening in real time, and in ways that were not under our control. As such, observational and natural experimental methods were employed (Craig, 2008) and we integrated evidence and data drawn from a range of sources including routinely and locally collected quantitative data, and primary collected quantitative and qualitative data. The use of these methods brings challenges to the conclusions that can be drawn from the results, although the approach allowed us to conduct a study with high ecological validity.

While drawing on routinely and locally collected data provided historical trends or baselines from before the start of project, as well as resource savings, it also had several disadvantages; for example, in terms of how and where the data were collected. This was the case for the data on walking and cycling; automatic counter data were incomplete due to machine malfunction, and once obtained it transpired that route user intercept survey data were not collected in areas where and when the new speed limits were implemented, meaning effects of the intervention could not be assessed.

An important limitation with which we grappled, was the presence of multiple confounding interventions and factors in the City of Edinburgh including traffic management, road works, a national doubling of the active travel budget, the weather, and the embedding of a new tram system. In Belfast matters were complicated by bus lanes and a rapid transport system being introduced in the city centre around the same time (www.infrastructure-ni.gov.uk/topics/transport-initiatives/belfast-move). Thus, it is not possible to determine the discrete impact of 20mph versus the role that these other complementary actions played. This is a common challenge when attempting to formulate theories of change for complex interventions operating within complex systems (Ofek 2017; Patton, 2010). However, these are the realities that researchers face when undertaking an assessment of an intervention in real life, and not in highly controlled conditions.

Overall, the approach taken to evaluating these large-scale interventions that may affect public health was pragmatic, cost efficient, and provided a nuanced understanding of key aspects of pre-implementation, implementation and post-implementation processes. While the evaluation faced a number of challenges and has associated limitations, we believe that the strengths outweigh the limitations, and further development of such methods is to be encouraged.

Future research directions

There are a number of health-related outcomes that we were unable to gather data on including the impact of the interventions on walking and cycling levels and noise and air pollution. We were unable to assess the impact of the interventions on inequalities or carry out a full economic evaluation. In addition, we did not look at travel times, which is important in economic transport appraisal. These are important areas for future research.

An important finding from the current research is that what is perceived in local communities and what is observed by researchers are not always consistent. Therefore, future research should, where possible, utilise objective measures to assess behaviours and outcomes. This might include direct observation of walking and cycling behaviour as well as utilising sensor data from vehicles to track changes in driver behaviour.

In this study we were able to use similar evaluation approaches in both cities, which aided comparability; although there were differences in the scale and implementation of the two schemes, meaning they are not directly ‘comparable’. A recommended framework for evaluating speed reduction interventions would help to ensure future studies utilise similar methods and tools, facilitating comparability between 20mph limit interventions and also aiding comparability of the effectiveness of limits versus zones. Furthermore, future studies of this kind would benefit from the recruitment of matched comparison communities.

Conclusions

Innovative study designs, including natural experiments, are important for assessing the impact of 'real world' public health interventions in real time. This study involved the evaluation of two natural experiments of city-wide and city centre scale interventions to reduce traffic speed. We adopted a theory-based approach to systematically test assumptions and establish mechanistic pathways to explain the links between intervention components and outcomes. Using multiple methods, this project has enabled a deeper understanding of not only the effects of the intervention but the factors that explain how and why the interventions and the effects did or did not occur. Importantly it has shown that 20mh speed limits, which are cheaper to implement than zones, lead to reductions in speed, collisions and casualties, and are therefore an effective and potentially cost-effective public health intervention.

Author statement

All authors conceived the study design. KM and MPK led the draft manuscript. All authors contributed important intellectual content and approved the final manuscript.

Funding

This research was funded by the National Institute for Health Research (NIHR), grant number 15/82/12.

Author contributions

All authors conceived the evaluation design and contributed to data collection, analysis and interpretation. KM and MPK drafted the manuscript. All authors edited the manuscript for important intellectual content and approved the final version.

Declaration of competing interest

RH is a member of the NIHR Public Health Research (PHR) funding panel that funded the study. All other authors declare that they have no competing interests.

References

Atkins, A.E.C.O.M., Maher, M., 2018. 20 mph Research Study. Process and impact evaluation technical report. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757302/20mph-technical-report.pdf.

Bornioli, A., Bray, I., Pilkington, P., Parkin, J., 2020. Effects of city-wide 20 mph (30km/hour) speed limits on road injuries in Bristol, UK. Inj. Prev. 26, 85–88.

Cleland CL, Baker G, Turner K, Jepson R, Kee F, Milton K, Kelly MP, Nightingale G, Hunter RF. A Qualitative Exploration of the Mechanisms, Pathways and Public Health Outcomes of a City Centre 20mph Speed Limit Intervention: the Case of Belfast, United Kingdom. Health & Place. Under review.

Cleland, C., McComb, K., Kee, F., Jepson, R., Kelly, M.P., Milton, K., Nightingale, G., Kelly, P., Baker, G., Craig, N., Williams, A.J., Hunter, R., 2019. Effects of 20 mph interventions on a range of public health outcomes using the meta-narrative method. Journal of Transport & Health. https://doi.org/10.1016/j.jth.2019.100633.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., Petticrew, M., 2008. Developing and Evaluating Complex Interventions: the New Medical Research Council Guidance. MRC, London.

Department of the Environment NI, 2011. Northern Ireland's Road Safety Strategy to 2020. Department of the Environment, Belfast.

Green, J., Steinbach, R., Jones, A., Edwards, P., Kelly, C., Nellthorp, J., Goodman, A., Rberts, H., Petticrew, M., Wilkinson, P., 2014. 'On the buses': evaluating the impact of introducing free bus travel for young people on the public health. Publ. Health Res. 2 (1).

Grundy, C., Steinbach, R., Edwards, P., Wilkinson, P., Green, J., 2008. 20 Mph Zones and Road Safety in London: a Report to the London Road Safety Unit. London School of Hygeine and Tropical Medicine, London.

Jacobsen, P.L., Racioppi, F., Rutter, H., 2009. Who owns the roads? How motorised traffic discourages walking and bicycling. Inj. Prev. 15 (6), 369–373.

Jepson, R., Baker, G., Cleland, C., Cope, A., Craig, N., Hunter, R., foster, C., Kee, F., Kelly, M., Kelly, P., Milton, K., Nightingale, G., Turner, K., Williams, A.J., Woodcock, J., 2021. Evaluation of the 20mph Speed Limit Networks in Edinburgh and Belfast on a Range of Public Health Outcomes: A Mixed Methods Approach. National Institute of Health Research.

Moore, G.F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., Moore L O'Cathain, A., Tinati, T., Wight, D., Baird, J., 2015. Process evaluation of complex interventions: Medical Research Council guidance. BMJ 350. https://doi.org/10.1136/bmj.h1258.

Morrison, D.S., Petticrew, M., Thomson, H., 2003. What are the most effective ways of improving population health through transport interventions? Evidence from systematic reviews. J. Epidemiol. Community Health 57 (5), 327–333.

National Institute of Health and Care Excellence (NICE), 2017. Air Pollution: Outdoor Air Quality and Health. NICE guideline [NG70], London: NICE.

Nightingale, G., Kelly, P., Williams, A.J., Hunter, R.F., Woodcock, J., Turner, K., Cleland, C.L., Baker, G., Kelly, M., Cope, A., Kee, F., Milton, K., Foster, C., Jepson, R., 2021. An evaluation of changes in traffic speed and volume following 20mph speed limits intervention in the City of Edinburgh. Journal of Transportation submitted for publication).

Ofek, Y., 2017. An examination of evaluation users' preferences for program- and actor-oriented theories of change. Evaluation 23 (2), 172–191.

Ogilvie, D., Bull, F., Cooper, A., Rutter, H., Adams, E., Brand, C., Ghali, K., Jones, T., Mutrie, N., Powell, J., Preston, J., Sahlqvist, S., Song, Y., 2012. Evaluating the travel, physical activity and carbon impacts of a 'natural experiment' in the provision of new walking and cycling infrastructure: methods for the core module of the iConnect study. BMJ Open 2 (1), e000694.

Ogilvie, D., Foley, L., Nimegeer, A., Olsen, J.R., Mitchell, R., Thomson, H., Crawford, F., Prns, R., Hilton, S., Jones, A., Humphreys, D., Sahlqvist, S., Mutrie, N., 2017. Health impacts of the M74 urban motorway extension: a mixed-method natural experimental study. Publ. Health Res. 5 (3) https://doi.org/10.3310/phr05030.

Patton, M.Q., 2010. Developmental Evaluation. Applying Complexity Concepts to Enhance Innovation and Use. Guilford Press, New York.

Stame, N., 2004. Theory-based evaluation and types of complexity. Evaluation 10 (1), 58–76.

Tapp, A., Nancarrow, C., Davis, A., 2015. Support and compliance with 20mph speed limits in Great Britain. Transport. Res. F Traffic Psychol. Behav. 31, 36–53.

Toy, S., 2012. Delivering Soft Measures to Support Signs-Only 20mph Limits. University of the West of England, Bristol.

Toy, S., Tapp, A., Musselwhite, C., Davis, A., 2014. Can social marketing make 20mph the new norm? Journal of Transport and Health 1 (3), 165–173.

Turner, K., Jepson, R., MacDonald, B., Kelly, P., Biggs, H., Baker, G., 2018. Developing and refining a programme theory for understanding how twenty mile per hour speed limits impact health. Journal of Transport & Health 10, 92–110. https://doi.org/10.1016/j.jth.2018.08.004.

UK Public General Acts, 1960. Road Traffic Act. UK Parliament, London, England.
Williams AJ, Manner J, Nightingale G, Turner K, Kelly P, Baker G, Cleland C, Hunter R & Jepson R. Public attitudes to, and perceived impacts of 20mph (30km/h) limits in Edinburgh: the speed limits perceptions survey (SLiPS). TRF: Traffic Psychology and Behaviour. Under review.
Winters, M., Buehler, R., Götschi, T., 2017. Policies to promote active travel: evidence from reviews of the literature. Current Environmental Health Reports 4, 278–285.
World Health Organization, 2017. Save Lives – A Road Safety Technical Package. World Health Organization, Geneva, Switzerland.

This page is intentionally left blank