

THE NORTH WEST TRANSPORT PLAN

DRAFT LOCAL TRANSPORT STUDY

NOVEMBER 2019

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Abbreviations

Dfi	Department for Infrastructure
DUA	Derry Urban Area
HGI	Housing Growth Indicator
LDP	Local Development Plan
LTP	Local Transport Plan
LTS	Local Transport Study
New Approach	Ensuring a Sustainable Transport Future: A New Approach to Regional Transportation
NI	Northern Ireland
NISRA	NI Statistical Research Agency
NWTP	North West Transport Plan
PDS	Planning Development Scenario
PfG	Draft Programme for Government of the former NI Executive
POP	Preferred Options Paper
PPS	Planning Policy Statement
PS	Plan Strategy
LPP	Local Policies Plan
RDS 2035	Regional Development Strategy 2035– Building a better Future
RSTN	Regional Strategic Transport Network
RSTNTP	Regional Strategic Transport Network Transport Plan
SDL	Settlement Development Limit
SPPS	Strategic Planning Policy Statement for Northern Ireland – Planning for Sustainable Development
The Act	The Planning Act (Northern Ireland) 2011
The Bicycle Strategy	Northern Ireland Changing Gears – A Bicycle Strategy for Northern Ireland
The Community Plan	Derry City & Strabane District’s Inclusive Strategic Growth Plan 2017-2032 - Our Community Plan
The Council	Derry City and Strabane District Council
TEB	Transport Evidence Base
TPMU	Transport Planning and Modelling Unit

Executive Summary

Introduction

1. The Department for Infrastructure (DfI) has undertaken a Transport Study of the North West area focused on the Derry City and Strabane District Council (DCSDC) area. The purpose of the Transport Study is to set out an objective evidence-based assessment of current and future transport issues in the context of the Council's growth ambitions. The transport measures identified are in line with the Draft Programme for Government of the former NI Executive, current government policies and with the direction of the Council's Strategic Growth Plan and Preferred Option Papers. Throughout the development of the study, DfI has shared the evidence and drafts of the study at the earliest possible opportunity so that consideration of the emerging study could inform the Council's Local Development Plan (LDP) – Draft Plan Strategy stage.
2. In view of the complex issues faced by the Derry urban area, a computer transport model has been used to estimate strategic impacts there. Issues in the town of Strabane have drawn upon a specifically commissioned evidence base whilst standard datasets are used to consider the Council area as a whole. Transport measures beyond the Council area are limited to those required to serve principal transport demands to and from the Derry urban area.
3. The Transport Study has undertaken the following processes in turn:
 - Review of Policy Context
 - Transport Context
 - Development of transport objectives
 - A review of current transport issues
 - Planned Councils Growth and Development
 - Approach to Appraisal
 - Results of Appraisal
 - Conclusions – future transport measures and other issues

Review of Policy Context

4. The review of government policy including the Draft Programme for Government (PfG) of the former NI Executive, the Regional Development Strategy 2035 and Ensuring a Sustainable Transport Future has identified that transport has a key role in meeting economic, environmental and social objectives. It is no longer adequate to plan for transport on a 'predict and provide' basis but that the balance of transport measures should be selected following assessment against multiple objectives informed by a clear statement of the desired outcomes.
5. The review of the DCSDC Strategic Growth Plan and Preferred Options Paper has identified economic, environmental and social priorities in support of the vision "a thriving, prosperous and sustainable City and District with equality of opportunity for all". The Council's ambitions for growth are a central component and include up to 15,000 new jobs, 10,000 additional population and 12,000 new homes. Environmental priorities relate to improving transport linkages between Derry, Strabane, Donegal and externally in addition to local pedestrian paths and cycleways providing access to essential facilities and recreational opportunities. Social priorities include the strengthening of Derry and Strabane as centres of key services and the facilitation of communities through good design.

6. The Council has also informed policy through the advancement of detailed Settlement Studies, Heritage-led Regeneration Initiatives and the City Deal for the Derry ~ Londonderry City Region. Importantly for transport, these have pointed towards the development and place-making potential of the riverfront in Derry and the need for major modal shift or orbital relief roads to reduce traffic there. In Strabane, parking management and a new bridge are proposed as key to improving the quality of the town centre. In addition, the Green-Infrastructure Framework indicates the importance of new greenways in inducing a modal shift from private car across the Council area.

Transport Context

Integrated Land Use and Transport Planning.

7. The integration of land-use and transport planning processes provides a unique opportunity to combine the shared regional and local ambitions which are set out in the PfG and also in the Community Plan and LDP. The integration of land use and transport planning has the potential to reduce the need for travel, make better use of existing transport infrastructure and ensure that new transport infrastructure and services are effective, efficient and minimise their impacts on the environment. Integration is especially important in urban areas where there are practical choices to be made in terms of the location and type of development that may have substantial knock-on impacts on local environments and hence travel behaviour. In general terms, stronger city centres and greater development densities along public transport corridors can increase the use of sustainable and active travel modes. Conversely, dispersed development and low densities, whilst generally not adding to city centre traffic congestion, tend to further increase car dependency.
8. **Urban Transport Networks.**
The layout of Derry City and its transport network is strongly influenced by the River Foyle. The regional road links comprise the A2 which crosses the city and provides links the Letterkenny to the west and Limavady and Coleraine to the east, the A6 towards Dungiven and Belfast, the A5 towards Strabane, Omagh and Dublin and the N13 in the Republic of Ireland towards Letterkenny and Donegal. The Foyle Bridge, Skeoge Link and Crescent Link provide an outer orbital route to the east which has already attracted substantial development and hence additional local traffic. The Craigavon Bridge is much more centrally located and links inner urban areas whilst feeding the riverside routes on both banks. The city centre has a natural historic focus on the Walled City and Guildhall on the west bank. The commercial centre has been further developed along the riverside axis with the Foyleside and Quayside Shopping Centres complete with extensive car parks, counterbalanced to some degree by the central bus station on Foyle Street and the popular pedestrian and cycling bridge to Ebrington. The city is of adequate size to support an urban bus network, comprising 14 routes. Rail services operate eastwards from the station on the Cityside connecting to Coleraine and Belfast.
9. Strabane's layout has been influenced by the Mourne River. The City centre is to the north of the river while the span of the Settlement Development Limit (SDL) reaches similar distances on each side of the river. While the A5 crosses the Mourne River and skirts strategic traffic around the town, the crossing at Bridge Street provides for local traffic accessing the town centre. In addition, there is a pedestrian bridge linking the Ballycolman Estate south of the river to Meetinghouse Street just outside the town centre on the north side of the river.

Transport Objectives

10. The review of the policy context has generated the following seven transport objectives for the development and assessment of transport options in the Study Area:

Objective 1 - Improving external linkages: Enhance accessibility by road and public transport to the City of Derry from Letterkenny, Belfast, Dublin, Strabane and other gateways / hubs, to support greater levels of inward investment and tourism.

Objective 2 - Improving public transport accessibility: Ensure financially viable and sustainable public transport accessibility to essential services including health and education for people living in DCSDC.

Objective 3 - Improving active travel accessibility: Ensure there are attractive and safe active travel networks (walking and cycling) linking all residential, retail, leisure, culture, office and commercial uses within the urban areas of the DCSDC.

Objective 4 - Providing high quality public realm: Deliver high quality public realm in Derry City Centre (especially the central riverfront area) and Strabane town centre with reduced vehicle dominance and permeability / walkability, to make them attractive, shared spaces to live and work and improve safety for active modes.

Objective 5 - Improving town centre accessibility: Enhance transport accessibility and manage traffic congestion in Derry City and Strabane town to strengthen Derry's role as the principal city of the cross border North West City Region.

Objective 6 - Improving public safety including air quality: Enhance safety for all modes of travel, reduce the number and severity of casualties and improve air quality. Transportation should contribute to / not worsen the health and well-being of the people of the region.

Objective 7 - Promoting sustainability and resilience: Protect and enhance the built and natural environment by ensuring our transport systems operate sustainably and can integrate climate change adaptation requirements.

Current Transport Issues

11. A review of the current transport networks in the study area has concluded in general terms:
- **Regional accessibility** is focussed on Belfast. The A6 provides a direct road alignment with frequent Goldline coach services whilst an hourly rail service operates via Coleraine. The A6 road is currently being upgraded to provide dual-carriageway standards at capacity bottlenecks. The A5 route towards Dublin is currently only single carriageway but is planned for upgrade as part of the A5WTC scheme. Bus services to Dublin Airport and Dublin City Centre operate around the clock, 8 times per day.

- **Pedestrian infrastructure** in urban areas is generally adequate but standards are not consistent. The rivers in both Derry and Strabane have limited crossing points causing many routes to be indirect. Whilst most of the older residential areas in Derry are within 30 minutes walk of the city centre, the more recent extensions to the north and east are not. The steep slopes within Derry's walled city also leads to difficulties for some pedestrians. The small geographic extent of Strabane makes it generally walkable within 30 minutes. Pedestrian infrastructure in the urban centres often lacks priority over traffic making it unattractive to users.
- **Cycling infrastructure** provision in the Derry urban area is quite good and a Cycling Masterplan is being delivered. All of the city is within 20 minutes from the centre. Cycle infrastructure in Strabane is more limited with a focus on shared pedestrian / cycle roadside paths to the south of the town centre. All of the town is within a 10 minute cycle.
- **Foyle Metro bus services** provide good coverage of the Derry urban area and generally operate between 8am and 8pm on weekdays and at popular times at the weekend to provide access to the city centre. However, notably only route 12 serving Glengallagh and the southern end of Buncrana Road and Strand Road operates at high frequency.
- **Ulsterbus Strabane town services** operate at approximately one hour headways weekday mornings and at popular times on Saturday. The services provide access to essential services in the town centre from the more distant residential areas to the east and south.
- **Regional bus services** includes Goldline limited stop services to Belfast and Dublin and routes serving Donegal and the rural hinterlands of Strabane and Derry. In general these are timed to serve people travelling to employment or tertiary education, although the Belfast services operates frequently from 6 am to 9 pm approximately.
- **NI Railways** operate hourly services to Coleraine and Belfast 6 days per week between 7am and 9pm approximately. A reduced timetable operates on Sundays. Whilst journey times to Coleraine are competitive with private car, there is limited provision for commuter travel.
- **Urban Traffic Congestion** is generally focused on the morning and evening peak periods. In Derry the east - west spine between Dungiven Road, Craigavon Bridge, Strand Road and Buncrana Road displays congestion over extended periods. Whilst this may be due in part to some strategic traffic travelling to and from the city centre, the commercial uses close to the spine, which generate local access traffic, are also likely to be a major contributor. In Strabane the town is bypassed to the west by the A5 road. Traffic delays are focused in the town centre.
- **Parking provision.** In the commercial and retail areas in the centre of Derry, parking provision is focused in off-street car parks including a number of public multi-storey car parks which have the highest charge rates. Here on-street parking is generally limited to one hour stays between 8am and 6.30pm but no charges are made. Elsewhere private car-parking and free customer parking are the normal practice and uncontrolled on-street parking may also be available where safety and traffic capacity allow. Parking provision in Strabane is focused in the town centre to the north of the River Mourne. There are a number of free to use spaces for customers of the retail parks in the west by the A5 road and a number of paid and free

public car parks in the commercial core in Upper and Lower Main Street. In the commercial core there is also free on-street parking with length of stay restricted to 60 minutes.

Growth

12. The NI Statistical Research Agency (NISRA) has predicted trend forecasts of population throughout NI broken down by Council area; this represents a 'Business as usual' scenario. Under this NISRA scenario, from 2012 – 2022 population in the Derry City and Strabane would grow relatively slowly at 1.2% compared to the NI average of 5.2%. However, the Council's POP plans for more rigorous growth to 2032 and foresees a population increase from the current 149.5k up to 160k (7%) and a requirement for up to 12k new homes. It also foresees and increase of up to 15k jobs (28%) to 2032 over the existing figure of 53.6k.
13. In spatial terms, the POP includes the preference for the growth to be focussed primarily in the urban areas of Derry and Strabane but with some development also distributed across other settlements.

Approach to Appraisal

14. The levels of growth presented in the POP and their focus on the urban areas suggests that traffic congestion might be further exacerbated and become a constraint in the Derry urban area, whilst public transport and sustainable modes should be investigated as potential solutions there. Modal choice will also be important in terms of economic, environmental and social objectives. As a consequence, a computerised transport model was used to explore the changes in transport demand and network performance in the Derry Urban Area arising under alternative development growth scenarios and transport infrastructure proposals.
15. The model's primary outputs were first used to assess the consistency and intuitive credibility of the model and subsequently to undertake a strategic assessment of impacts. Additionally, secondary outputs from the model were used to populate an appraisal framework and hence to undertake a quantitative assessment against the seven objectives. The primary outputs of the model are the changes in:
 - Levels of transport demand (ie the number of trips)
 - Modes of transport used (ie car, bus, train ,walk or cycle)
 - Traffic levels on key links in the road network (eg the river bridges)
 - Congestion on the road network (ie journey times).
16. Beyond the Derry Urban Area, appraisal in the town of Strabane and the surrounding rural area was undertaken qualitatively drawing upon the transport evidence base.

Results of Appraisal

17. Initially the transport model was used to estimate changes in transport demand arising from the NISRA 'Business as Usual' scenario and the Derry City and Strabane Council's proposed growth combined with the ambitions of other Councils across Northern Ireland. Compared to

2013 transport demand in 2030 across NI was forecast to grow by 5% under the 'Business as Usual' scenario and 6% under the combined Councils' scenario.

18. However, within the Derry City and Strabane Council Area, the POP scenario is forecast to increase transport demand by 10% in terms of trips starting and 25% in terms of trips finishing. The model was also used to test a 'best practice' assumption that the 15k increase in employment development was focused in the city centre and hence accessible by public transport. Subsequently the model was used to test the impact of a range of transport measures presented as illustrative measures.
19. Initially the appraisal framework was used to test the individual impact of 9 illustrative transport measures assuming the POP growth scenario to 2030. The measures tested were illustrative only and did not represent a commitment to any particular scheme by the Department. In general terms each of the measures resulted in positive operational impacts and those measures producing a modal switch from private car returned the best scores across the range of objectives.
20. Consideration of the appraisal framework highlighted the following conclusions for the 9 illustrative transport measures considered in the Derry Urban Area:

Strategic Inter Urban Roads – Inter-urban road schemes provide significant journey time reductions for users (and unmodelled safety, journey time reliability and bus speed improvements). They do not appear to generate substantial additional traffic or modal switch and have a negative impact on the quality of the public realm and public safety, including air quality.

Orbital Urban Roads – Outer Orbital road schemes provide substantial journey time reductions for through traffic users (and unmodelled safety, journey time reliability improvements), but limited relief and journey time reductions for local traffic on existing radial routes. They do not appear to generate substantial additional traffic or modal switch.

Arterial Urban Roads – The Buncrana Road scheme provides substantial journey time reductions for users at peak times (and unmodelled safety, journey time reliability improvements). It does not appear to generate substantial additional traffic or modal switch.

Intelligent Transport Systems – An upgraded urban traffic control system would reduce traffic delays across the road network. However, on its own it would also attract additional users from bus to car, reducing its effectiveness and subsequently it would have a negative impact on the quality of the public realm and public safety, including air quality.

Foyle Metro (2 tests) – Faster and more frequent bus services would result in a modal switch from private car and from walk and cycle. However, bus patronage is very low in Derry and substantial increases would be needed to justify bus priority measures which would remove road capacity.

Cycling – Improvements in cycling infrastructure would bring substantial growth in cycle use arising from modal switch from private car, bus and from walk. However the scale of the switch from private car would not in itself produce a significant reduction in traffic congestion. The low

proportion of the mode share means that while there are many benefit to the individuals, overall there is little impact on the objectives.

Walking – Improvements in pedestrian infrastructure across the urban area would result in a substantial increase in walking with the largest modal switch from private car. The estimated scale of the switch suggests there may be significant reductions in traffic congestion.

Demand Management – Additional City Centre parking charges of £5 per day, on their own, are estimated to have limited impact in switching car users to public transport or walking. It may be that the charges would need to be higher or combined with improvements in other

21. On the basis of the results of the illustrative measures the model was used to test the effect of combining a number of measures arranged as alternative networks. The networks allowed the following to be identified and confirmed:

Combination of Inter-urban and Radial Road Schemes - Reduction in journey times to and from Derry (inter-urban) and on the key cross-city route (Buncrana Road – Victoria Road). Also contribute to a reduction in vehicular travel time across the network.

Combination of Sustainable Travel Schemes and Parking Charges - The bus, walk and cycle schemes combine to produce significant changes in mode switch from car. The changes are most marked in terms of travel within the urban area.

Orbital Roads - Slight reduction in vehicular travel time across the network and journey time savings on the Buncrana Road – Victoria Road cross-city route.

Focusing Employment Growth in the City Centre - doubling of modal switch from car to sustainable modes; a significant increase in vehicular travel time across the network; and lessening of the impact of the orbital roads.

22. The following overall conclusions were drawn from the model testing within the Derry Urban Area:

- Due to the size of the city and hence length of many journeys, improvements in walking infrastructure including pedestrian priority at junctions will be most useful in attracting people away from car.
- The size of the city works against bus use unless high frequencies and effective bus priority is provided. This suggests that future bus improvements should focus on a small number of key flagship routes supported by less frequent routes to cater for people with mobility impairments.
- Cycling numbers are low and attractive infrastructure should be provided to increase demand and modal switch, especially for medium length journeys.
- In order to support the switch from car to more sustainable transport such as walk, cycle and public transport, an integrated city centre parking and traffic management strategy will be required. The strategy should ensure that long-stay parking is

relatively expensive and is located on the edge of the city centre, minimising cross-city centre traffic and promoting “Park & Stride” on improved pedestrian infrastructure.

- The positive impacts of the integrated parking and traffic management strategy could be strengthened substantially by focussing employment growth in the city centre area. This would provide a growth in potential demand for bus services.
 - Inter-urban road schemes bring benefits in ensuring Derry is easily accessible from across the region.
 - A radial road scheme in Buncrana Road provides substantial direct relief on the corridor. However, care is needed in how the additional transport capacity is provided and used. For instance consideration of pedestrian priority at junctions is important as is the creation and retention of attractive cycling routes. Buncrana Road is also a key leg on the most frequent bus service in Derry and could be considered for any new flagship bus route.
23. The need for orbital road schemes has not been demonstrated at this stage. Further work could be undertaken when more detailed development locations and a more detailed transport model are available.

Conclusions

Future Transport Measures

24. By combining the results of the qualitative modelling of the DUA with the qualitative assessment of Strabane town and the rural area, the following measures were confirmed.
- **1: Improved inter-urban roads on KTC**
The A5 and A6 road schemes, as currently planned, are confirmed as important to the future of Derry as the economic hub of the North West. These schemes will reduce journey times and improve journey time reliability for all users including public transport and freight.
 - **2: Improved ‘limited-stop’ bus services to key hubs**
New ‘limited-stop’ bus services are expected to be identified and prioritised on the Key Transport Corridors and National road network in Donegal to and from Derry. These services will build upon the existing Goldline route network to be listed in the Regional Strategic Transport Network Transport Plan (RSTNTP) under preparation.
 - **3. Rail service improvements to and from Coleraine, Belfast and Dublin**
The current rail services to and from Derry should continue to be improved in line with passenger demands and the improved offer at the Integrated Transport Hub. Particular attention should be given to providing attractive service timings to facilitate commuters to Derry and Belfast and through connections to and from Dublin.

- **4. Park & Ride and Park & Share at strategic locations**

As an integral part of Derry's city centre parking strategy, Park & Ride sites will be needed at the edge of the urban area on strategic roads. Where possible bus priority should be in place to assist onward bus journey times into the city centre. Additional Park & Ride parking provision will also be needed in conjunction with inter-urban 'limited stop' buses operating from Donegal, Strabane, Limavady and from wider spread catchment towns. Park & Share should also be provided at strategic Park & Ride sites to reduce single car occupancy.

- **5: Integration of passenger transport services including innovative transport models such as 'ride-share'.**

The viability of this measure would be considered in the context of NI-wide policy issues for DfI and other transport providers and would be the subject of separate work.

- **6. Improvements to Foyle Metro with flagship high quality cross-city route**

In order to achieve modal shift from car there should be a further development of the Foyle Metro to outlying residential areas. A core cross city route would provide seamless access to destinations right across the city and, running at high frequency between Park & Ride termini could justify extensive priority over general traffic.

- **7: New urban road links and supporting sustainable transport infrastructure in Derry and Strabane to facilitate key development funded by developer**

The LDP Local Policies Plan stage will generate new zonings or developments that will require new infrastructure to enable their delivery. In some cases new urban road links will be needed simply to provide direct access however walking cycling and public transport infrastructure and services are also likely to be needed. That infrastructure will need to be funded by the developer and planned and delivered in conjunction with the transport authority.

- **8: Derry and Strabane Parking Strategies including integrated management of long and short-stay spaces**

Parking Strategies will be required in the urban centres of Derry and Strabane. The location of public parking and its designation as long or short-stay using payment controls will be identified in the strategy at the Plan Policies stage. The strategy will include the location and operation of edge of city Park & Ride and the promotion of Park & Stride near town and city centres. The strategies should remove extraneous traffic which dominates the town centres and improve the turnover of parking spaces and re-balance the modal choice towards the use of walking, cycling and public transport.

- **9: Provision of improved walking facilities in urban areas**

The provision of improved walking facilities in the urban areas of Derry and Strabane are recommended as a core measure of the Transport Plan. Improvements to the walking facilities may require retro-fitting work and may impact on traffic capacity.

- **10: Provision of a network of attractive radial cycling routes in Derry and Strabane with greenways between towns**

The provision of improved cycling facilities in Derry and Strabane will be a central measure of the Transport Plan. As far as practical, the completed cycle networks should serve all residential areas. The provision of a network of radial cycling routes may impact on traffic capacity. The designation and identification of a network of routes will allow its delivery in co-ordination with development proposals.

- **11: Traffic management schemes in urban areas to re-balance modal hierarchy with priority given to pedestrians, cyclists and public transport in Derry and Strabane centres**

Consideration will be given as to how road-space is designated and used by a range of modes (pedestrian, cyclist, bus, goods service vehicle and general traffic) in the urban areas of Derry and Strabane. Traffic management schemes can complement physical infrastructure schemes by amending regulations, signing and lining to achieve appropriate priority and provide safer and more coherent networks.

- **12: Transport infrastructure to be designed, provided and maintained to ‘best practice’ standards to maximise operational performance and safety at all times.**

The reliable operation of transport infrastructure is important for the Council area. Rural road safety is also related.

- **13: Ensure that user behaviour regarding safe use of the transport network is monitored and addressed.**

Road safety depends heavily on drivers, pedestrians and cyclists understanding how they should use the infrastructure and the risks of inattention and excessive speed etc. This is especially important for any new pedestrian and cycling facilities and for rural roads.

Integrated Land Use and Transport Planning

25. The transport study, concludes that land-use policy can make a substantial contribution to modifying the demand for transport and the move to more sustainable modes of transport. In the Derry Urban Area, drawing on the results of the strategic transport model, greater density of new development close to public transport hubs and along any flagship routes should also be encouraged. The focus of new employment into the Derry City Centre would be a major advantage in enabling an attractive and efficient urban transport system.

Transport measures to be confirmed

26. The results of the transport model have not been conclusive regarding the measures needed to facilitate the development of the Riverfront in Derry:
- Depending on the success of the parking management strategy and complementary bus and cycle improvements, there may be substantial reductions in traffic levels on the Foyle Expressway. It is recommended that more detailed traffic modelling is undertaken to explore the traffic capacity and potential knock-on impacts of a desirable place-making scheme in the vicinity of the Foyle Expressway / Harbour Square.

- It is not clear whether an A5 Prehen – new bridge – Coshquin A2 route would attract sufficient traffic to deliver relief to the existing Craigavon Bridge - Foyle Expressway - Queens Quay - Strand Road - Buncrana Road route, especially with an improved Buncrana Road scheme. It is recommended that this route is tested with a more detailed model at the Local Policies Plan stage.

DRAFT

1 Introduction

Note: This Study is in draft form and therefore it is subject to change. The Department has agreed that the Derry City and Strabane District Council may use this draft study as a technical supplement to their LDP Plan Strategy.

1.1 Purpose of Local Transport Study

- 1.1.1. The Department for Infrastructure (DfI) is working co-operatively with Councils across Northern Ireland to produce a new family of Local Transport Plans (LTP) to integrate with their Local Development Plans (LDP). These plans move through different stages, and increase in detail from an overall strategic direction, through to specific local policies and schemes.
- 1.1.2. This initial North West Transport Plan (NWTP) Local Transport Study (LTS) has been prepared by the DfI in collaboration with Derry City and Strabane District Council (the Council) to inform the Derry City and Strabane District LDP – Draft Plan Strategy stage.
- 1.1.3. The purpose of the LTS is to set out an objective evidence-based assessment of in relation to current and future transport issues in the context of Council growth ambitions and future indicative transport measures required to facilitate growth ambitions during the LDP period to 2032 in the Council area. It will also ensure that the transport network and transport needs of the area are taken into account when planning for its future development. Whilst the transport elements are quite distinct in terms of the services they offer and benefits they bring, the key linkages with land-use planning will collectively help deliver on shared regional and local ambitions and outcomes.
- 1.1.4. These transport measures are developed in the LTS in line with the draft Programme for Government of the former NI Executive (PfG), current government policies and with the direction of the Derry City and Strabane District Inclusive Strategic Growth Plan (the Community Plan), the Preferred Options Paper (POP) and the emerging Draft Plan Strategy.
- 1.1.5. The LTS presents the range of measures for walking, cycling, public transport and roads for the period up to 2032.
- 1.1.6. At this point, in line with the LDP Plan Strategy stage, the location of the transport measures are not described in detail. Rather, the detail and specific schemes will be added at the later LDP Local Policies Plan stage, when land use zonings are identified. However in this LTS, measures are described in terms of strategic locations.

1.2 The Study Area

- 1.2.1 Figure 1.1 presents the Study Area. The focus of the LTS is within the Council area. However, in view of the role of Derry as the regional economic centre of the wider North-West, the study also includes transport measures in Donegal and in neighbouring in Northern Ireland from

where substantial transport demands are attracted. The two urban areas considered within the LTS are Derry City and Strabane.



Figure 1.1- North West Transport Plan - Local Transport Study - Study Area

1.2.2 Figure 1.2 summarises the key demographic and transport-related characteristics of the Council area. These are expressed in terms of their percentage variation from the Northern Ireland (NI) average. The full details are provided in Table 1.1.

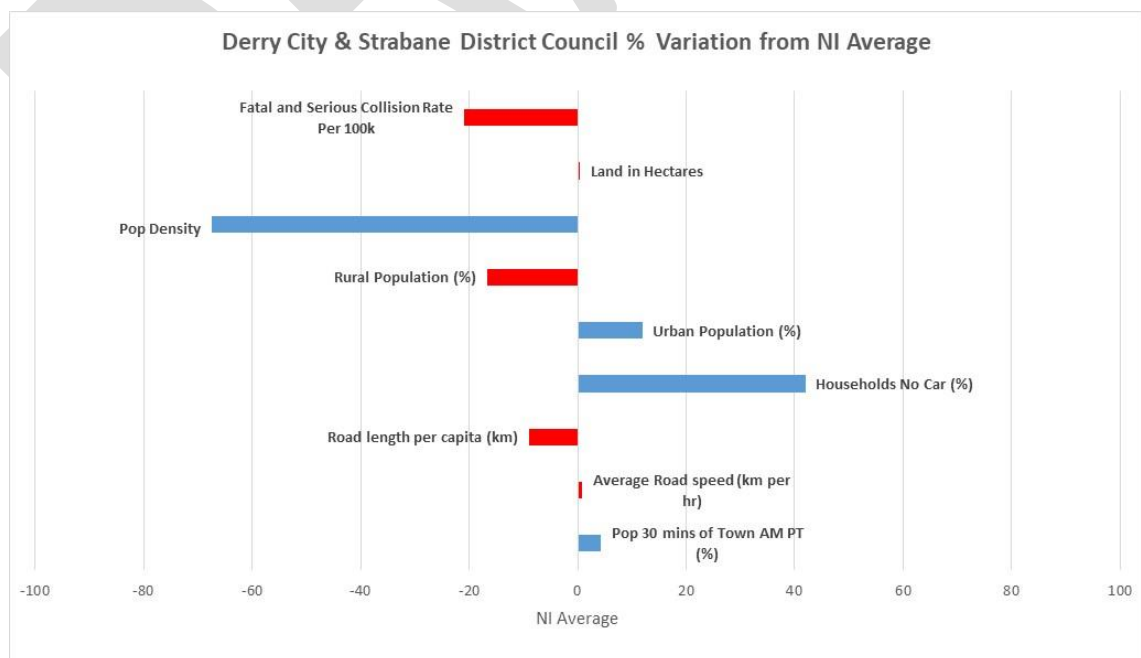


Figure 1.2 - Derry City and Strabane District Key Characteristics Compared to NI Average

Table 1.1- Derry City and Strabane District Key Characteristics Compared to NI Average

Derry City and Strabane District Council			
	Council	NI Average	% Variation from Average
Pop 30 mins of Town AM PT (%)	71%	68%	4
Average Road speed (km per hr)	62.33	61.79	1
Road length per capita (km)	0.016	0.017	-9
Households No Car (%)	29.13	20.51	42
Urban Population (%)	65	58	12
Rural Population (%)	35	42	-17
Pop Density	1.19	3.66	-68
Land in Hectares	123,745	123,294	0
Fatal and Serious Collision Rate Per 100k	35.4	44.8	-21

Pop 30 mins of Town using Public Transport AM Peak based on TRACC toolkit using public transport timetables and NISRA Census 2011 data
 Average road speed based on INRIX data (Oct13 - Oct15) © MapMechanics Ltd 2016. Copyright 2016 INRIX, Inc.
 Road length per capita based on Here road network ©1993-2016 HERE All rights reserved.
 Households with no car based on NISRA census data 2011, table CT0283NI.
 Land and Population Density based on NISRA census data, table QS102NI.
 Urban and Rural Population based on NISRA Settlement data - Usual Resident Population: KS101NI (Settlement 2015)

1.2.3 The area represents the average size of a NI council in spatial terms. Its population density is 1.19 usual residents per hectare compared with the NI average of 3.66. The percentage of the population who live in towns with a population of 5000 or more (65%) is higher than the NI average of 58%. The road length per capita is on par with the NI average. The mix of the city and rural areas provides a balance of urban and rural roads which leads to average road speeds close to the NI average (62.33kph compared to 61.79kph). With the majority of the population living in urban areas (65%), there is a low car dependency with 29.13% of households not owning cars and a marginally higher than average number of residents (71%) are able to access a main town within 30 minutes using public transport.

1.3 Study Approach and Document Structure

1.3.1 The methodology approach adopted by the Study is summarised in Figure 1.3 as a sequence of tasks. These tasks are documented in turn in this Study report.

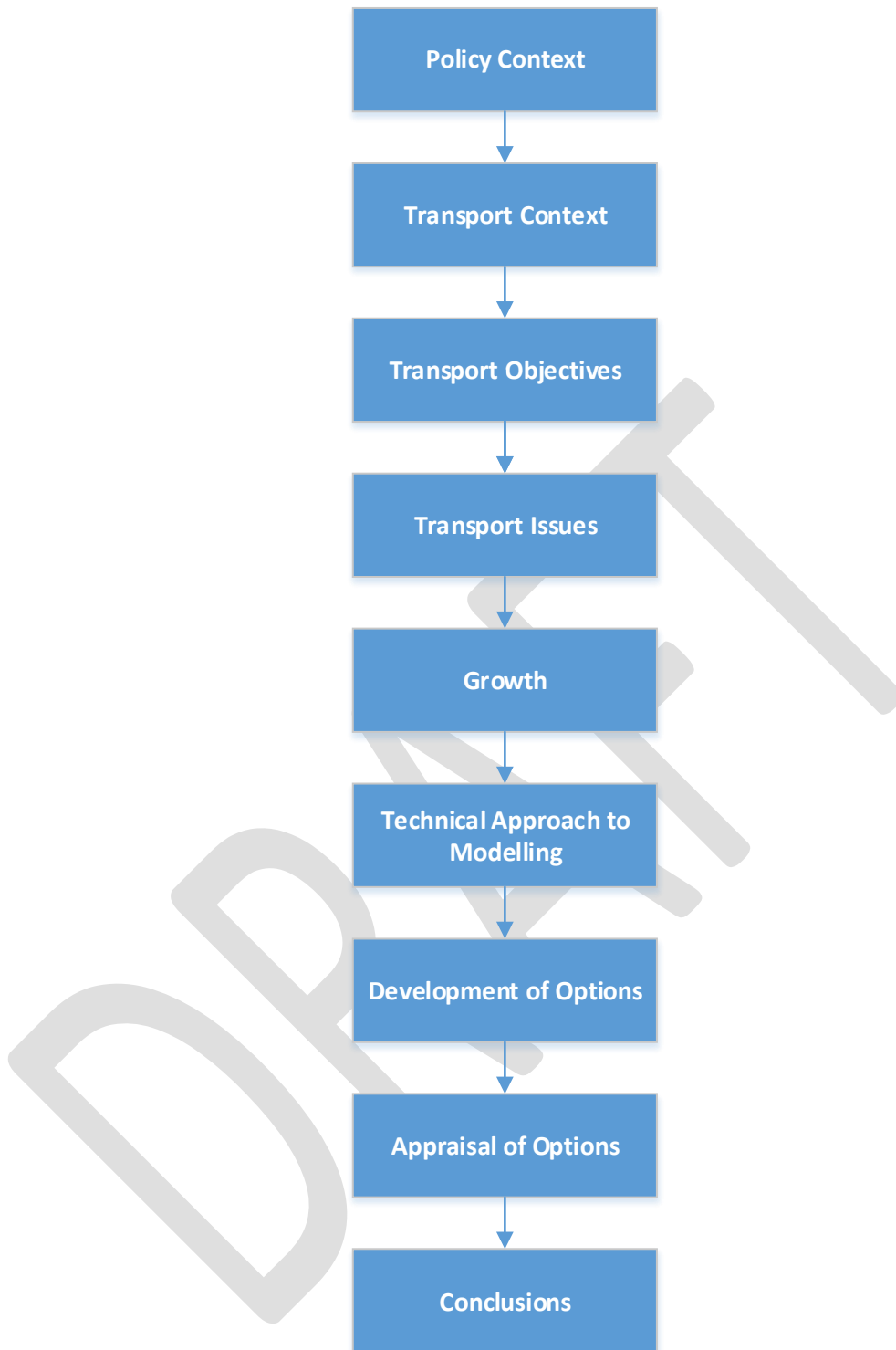


Figure 1.3 - Study Methodology

- 1.3.2 The document takes a different technical approach when dealing with the Derry Urban Area (DUA) than it uses for the outer area comprising of Strabane and the wider Council Area.
- 1.3.3 For the DUA, where modal choice and traffic routeing is a primary concern, a computerised transport model has been used to simulate potential future growth scenarios and estimate the quantitative impact of introducing a range of illustrative transport measure.

- 1.3.4 Outside the DUA, a transport evidence base has been produced with a focus on Strabane and the rural area of the Council. An objective review of the evidence provides a qualitative narrative on the potential transport options.

1.4 Supporting Technical Documents

- 1.4.1 For both the DUA and the outer area, the main body of the document is supported by independent Technical Documents.
- 1.4.2 For the DUA, a Modelling Report has been provided in Annex C. The modelling work was undertaken by Atkins LTD. Atkins have produced the report detailing the modelling methodology and results used to inform the DUA section of the LTS.
- 1.4.3 For the remaining Council area, a transport evidence base is provided in Annex D. The evidence base has been produced by the DfI Transport Planning and Modelling Unit (TPMU) and provides a baseline of the current provision.

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2 Policy Context

2.1 Introduction

- 2.1.1. The Derry City and Strabane LDP Strategy and accompanying Community Plan will set out a wide range of projects and outcomes which the Council and residents will agreed on through public consultation and expect to be achieved by 2032, for the benefit of the entire community.
- 2.1.2. Similarly, the PfG sets out the former Northern Ireland Executive’s wider ambitions to address the major social, economic and environmental issues affecting all sections of society.
- 2.1.3. In addition to the PfG, there are a number of strategic planning and transport policies developed by DfI which set the context for this LTS, namely:
- The Regional Development Strategy 2035 – Building a Better Future;
 - Ensuring a Sustainable Transport Future: A New Approach to Regional Transportation;
 - Northern Ireland Changing Gear – A Bicycle Strategy for Northern Ireland; and,
 - Exercise Explore Enjoy: A Strategic Plan for Greenways.
- 2.1.4. These strategic documents are NI-wide and all Council areas are required to take full cognisance of their content and to plan accordingly. In particular the urban areas of Derry City and Strabane, have a key role to play in helping to deliver any urban-related objectives.
- 2.1.5. This transport study has been developed to support the achievement of both the objectives set out in the above documents, and also the objectives of the Derry City and Strabane LDP Plan Strategy and the Community Plan – its Inclusive Growth Strategy.
- 2.1.6. An overview of the policy context including these key strategic documents is outlined below.

2.2 Planning Policy Context

Reform of local government & development planning

- 2.2.1 Reform to the Northern Ireland planning system came into operation on 1st April 2015. The unitary system where all planning powers rested with the Department of the Environment was replaced by a new two-tier systems model of delivery, with Local Government District Councils being made responsible for a number of planning functions including local plan-making, development management and planning enforcement.
- 2.2.2 Within this system central government (DfI) has responsibility for regional planning policy, the determination of regionally significant planning applications, called-in applications, and planning legislation. It also provides oversight, guidance for councils, audit, governance and performance management functions. In addition to this DfI continues to be the competent authority for transport.

Strategic Planning Policy Statement for Northern Ireland – Planning for Sustainable Development (SPPS)

- 2.2.3 The SPPS was published in September 2015 and is a statement of the government’s policy on important planning matters that should be addressed across Northern Ireland. It reflects expectations for delivery of the planning system.
- 2.2.4 The document consolidates the 20 separate Planning Policy Statements (PPSs) into one document, and sets out strategic subject planning policy for a wide range of planning matters. It sets out the core planning principles to underpin delivery of the two-tier planning system with the aim of furthering sustainable development.
- 2.2.5 The SPPS identifies a number of regional strategic objectives for transportation and land-use planning as follows:
- promote sustainable patterns of development which reduce the need for motorised transport, encourages active travel, and facilitate travel by public transport in preference to the private car;
 - ensure accessibility for all, with the needs of people with disabilities and others whose mobility is impaired given particular consideration;
 - promote the provision of adequate facilities for cyclists in new development;
 - promote parking policies that will assist in reducing reliance on the private car and help tackle growing congestion;
 - protect routes required for new transport schemes including disused transport routes with potential for future reuse;
 - restrict the number of new accesses and control the level of use of existing accesses onto Protected Routes; and
 - promote road safety, in particular for pedestrians, cyclists and other vulnerable road users.
- 2.2.6 Transport accessibility is considered to be a key strand throughout the SPPS. The SPPS must be taken into account in the preparation of LDPs and in the determination of planning applications. The SPPS also recommends that councils undertake local transport studies to identify transportation and land use planning issues to be addressed through the delivery of LDPs. This is to have consideration of transport infrastructure (as related to development proposals / land use zoning) such as new transport schemes, walking, cycling and car parking.
- 2.2.7 This approach is in accordance with the stated aim of the SPPS contained within the Regional Development Strategy 2035 (RDS 2035) with regard to transportation “to secure improved integration with land-use planning”. In addition, Section 3 of Part 2 of the Planning Act (Northern Ireland) 2011 (the Act) refers to the “survey of the district” and the requirement from councils to keep under review matters which may be expected to affect the development of its district or the planning of that development, including “the communications, transport system and traffic of the district” (Section 3 (2) (d)).

Local Development Plan

- 2.2.8 Part 2 of the Act places a statutory requirement on each council to prepare an LDP for its district. An LDP consists of two separate development plan documents, covering the council district:
- a Plan Strategy (PS) which will set out the council's vision, objectives and growth strategy for the area along with strategic policies; and
 - a Local Policies Plan (LPP) which will set out the council's detailed policies in relation to the development and use of land in its district.
- 2.2.9 The PS is produced first with scrutiny at the independent examination stage. The LPP is prepared subsequently to be consistent with the PS. As an initial task, each council is also required to prepare and publish a Preferred Options Paper (POP) which sets out for consultation purposes:
- a series of options for dealing with the key issues in the plan;
 - evidence to appraise the different issues and options; and
 - the council's preferred options and its justification for selecting/recommending its preferred approach.
- 2.2.10 The Council completed this initial task by publishing their POP in May 2017. The POP includes direct references to transport in the following objectives:
- Economic Objectives – (i), (vi), (vii)
 - Social Objectives – (iv), (vi)
 - Environment Objectives – (iv), (vi), (vii), (ix)
- 2.2.11 In terms of the Council's preferred option for transport, it plans to maximise the opportunities for sustainable development arising from the A5 / A6 /A2 upgrades and other orbital / cross border links and promote Active Travel opportunities. The LDP would therefore integrate its land use proposals with the upgraded roads and rail network, and any active or public transport infrastructure.
- 2.2.12 In terms of sustainability, this preferred option is viewed as economically and socially strong and, with the potential to produce more vehicles / transport it would need careful mitigation. The complementary investment in green transport and Active Travel would be critical in ensuring sustainable long-term development.

Derry City & Strabane District's Inclusive Strategic Growth Plan 2017-2032 - Our Community Plan (The Community Plan)

- 2.2.13 The Council published its Community Plan entitled The Inclusive Strategic Growth Plan 2017-2032 in November 2017. The Community Plan sets out the vision for "a thriving, prosperous and sustainable City and District with equality of opportunity for all". Following on from the vision, the Community Plans mission statement is "To improve the social, economic and environmental wellbeing of the city and district and to do so in a sustainable way".
- 2.2.14 The shared values and principles which underpin this vision are grouped under the themes of 'Environmental Wellbeing', 'We connect people & opportunities through our infrastructure' and 'We live sustainably – protecting and enhancing the environment'. These themes are

fundamental in guiding the emerging vision and strategic objectives of the Plan Strategy and the LTS.

- 2.2.15 The Community Plan sets out the growth ambitions for 10,000 additional residents and 15,000 additional jobs.
- 2.2.16 The Community Plan developed a number of key actions for transport including;
- Delivery of strategic road infrastructure whilst also enhancing greenway provision or active travel opportunities; and,
 - Development and delivery of a sub-regional integrated transport strategy and implementation plan for the City and District.
- 2.2.17 The Community plan also notes that “a highly effective transport infrastructure is vital for the economy and for tourism but it is also about how we enable everyone to access essential services and, more than that, give everyone the capability to participate fully in the life of society.”

2.3 Draft Programme for Government¹

- 2.3.1 The Draft PfG framework of the former NI Executive focuses on improving wellbeing for all through tackling disadvantage and driving economic growth. The draft PfG is outcomes- based and is focused on impact at a whole population level, rather than a list of activities or inputs. The ambitions contained in the PfG will only be realised through sustained collaboration, across organisational and sectoral boundaries.
- 2.3.2 The PfG identifies 12 strategic outcomes of societal wellbeing, supported by 49 indicators. Outcomes Delivery Plans have been developed for each of these, setting out the key actions to support delivery of PfG outcomes.
- 2.3.3 In respect of transport infrastructure and connectivity the DfI’s main contribution to the PfG is through:
- Outcome 11: We connect people and opportunities through our infrastructure; and
 - Outcome 2: We live and work sustainably – protecting the environment.
- 2.3.4 The key focus of Outcome 11 is the importance of physical connectivity as a key enabler of economic growth and social cohesion. Outcome 2 has a focus on protecting the environment while supporting wider economic growth and social cohesion objectives. Under this framework DfI is directly responsible for delivery of two transport related PfG indicators: DfI’s key priorities and the focus of delivery plans under this outcome is improving journey time on key economic corridors and increasing use of public transport, walking and cycling.
- 2.3.5 In delivering progress towards this PfG outcome DfI seeks to ensure that investment in our transport infrastructure supports economic and social progress while seeking to minimise the harmful effects generated by motorised traffic through congestion and pollution on the environment and on health. Enhancing the flow of traffic on key routes between population centres is a key enabler of economic growth, reduces environmental hotspots as result of traffic

¹ Outgoing Ministers have given cover to proceed with the policy direction set by the last Executive in the draft PfG, consequently, Departments are continuing to deliver public services in line with the policy direction in the draft PfG.

congestion and benefits individual road users. In isolation, however, road improvements will also drive an increase in road traffic, generating further congestion and poorer air quality. Incentivising more sustainable and efficient ways of travelling such as walking, cycling and public transport will reduce traffic congestion and encourage healthier, more environmentally sustainable lifestyles which will be of wider benefit.

- 2.3.6 It is understood that variations in the rural / urban settlement balance across NI will provide variations in the challenges and opportunities for Councils in delivering progress towards PfG outcomes. Nevertheless, the ability of DfI to contribute to the successful delivery of PfG will be reliant on the concerted and collaborative efforts of delivery partners working in partnership with DfI.

2.4 The Regional Development Strategy 2035 – Building a better Future (RDS 2035)

- 2.4.1 The RDS 2035, published March 2012, is a long-term plan to deliver the spatial aspects of the PfG. The RDS 2035 recognises the need for balanced sub-regional growth and importance of key settlements as centres for growth and investment.

- 2.4.2 The RDS 2035 includes Regional Guidance (RG) to “deliver a balanced approach to transport infrastructure” and Regional Guidance 2 (RG2) which will allow the region to remain competitive in the global market in a sustainable manner. The focus of this guidance is on managing the use of road and rail space and how we can use our network in a better, smarter way.

- 2.4.3 In particular, the RDS 2035 recognises the need to maximise the potential of the Regional Strategic Transport Network (RSTN) to enhance accessibility to towns; to help build an integrated regional economy; facilitate tourist travel including improving connections to key tourism sites; and reduces where possible, unsuitable traffic into towns.

- 2.4.4 The RDS 2035 contains a Spatial Framework and Strategic Planning Guidelines based on focusing development in gateways (such as ports and airports), hubs and clusters (such as key towns and cities), and prioritising the improvement of the main transport corridors that form the regional transportation network. The RDS identifies Derry as the economic centre for the North West and Strabane as a main hub. It recognises their distance from Belfast and the principal air and sea gateways in the east.

2.5 Ensuring a Sustainable Transport Future: A New Approach to Regional Transportation (New Approach)

- 2.5.1 The New Approach, published April 2012, sets out proposals for regional transportation beyond 2015. It was developed to complement the RDS 2035.

- 2.5.2 The New Approach sets out three High Level Aims for transportation, each of which is supported by a number of Strategic Objectives – these are outlined below:

A. Support the Growth of the Economy

1: Improve connectivity within the region

2: Use road space and railways more efficiently

3: Better maintain transport infrastructure

4: Improve access in our towns and cities

5: Improve access in rural areas

6: Improve connections to key tourism sites

B. Enhance the quality of life for all

7: Improve Safety

8: Enhance Social Inclusion

9: Develop transport programmes focused on the user

C. Reduce the Environmental Impact of Transport

10: Reduce Greenhouse gas emissions from transport

11: Protect biodiversity

12: Reduce water, noise and air pollution

2.6 Northern Ireland Changing Gear – A Bicycle Strategy for Northern Ireland

2.6.1 The bicycle strategy, published August 2015, outlines the ambition to transform cycling in Northern Ireland over a 25 year period. The strategy’s vision for cycling in Northern Ireland is for;

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

2.6.2 The document identifies a number of objectives which have been set to guide the delivery of the bicycle strategy. These are:

- Making urban areas in Northern Ireland more accessible for people using the bicycle – improvements to cycling infrastructure will enable more people to access facilities in our urban centres by bicycle or by multi modal journeys.
- Improve opportunities for social interaction – 22% of households in Northern Ireland do not have access to a car/van. Improved cycling infrastructure enhances the travel opportunities for those who don’t have access to a car/van. Perhaps more importantly, cycling is a social form of transport. It allows people to interact and engage with their surroundings, their community and their neighbours. This can help build a sense of community and contribute to personal well-being and social inclusion.
- Improvements in public health – increased levels of bicycle use have both direct (personal fitness) and indirect (improvements to air quality) benefits for public health.
- Increase safety for people using the bicycle – this includes reducing the proportion involved in collisions and increasing the ‘feel safe’ factor for people riding a bicycle.

2.6.3 The bicycle strategy outlines how a comprehensive network of bicycle facilities should be developed, including a focus on urban networks where detailed proposals for infrastructure should be outlined and delivered alongside specific behaviour change initiatives and campaigns. In the urban areas, radial routes (primary routes) and quiet routes should be developed to form a comprehensive hierarchical network. The bicycle strategy also highlights the role that

greenways can play in a comprehensive network and this is developed in the greenway network that was published in ‘Exercise – Explore – Enjoy: a Strategic Plan for Greenways’ in November 2016.

- 2.6.4 The Bicycle Strategy outlines a 3 Pillar Approach, based around Build (infrastructure, design, cycle parking and safety), Support (education and training, safety and security, legibility and mapping), and Promote (respect and understanding, marketing and flagship events and schemes).

2.7 Exercise Explore Enjoy: A Strategic Plan for Greenways

- 2.7.1 In November 2016 DfI published its greenways strategy entitled “Exercise Explore Enjoy: A Strategic Plan for Greenways”. The document provides a vision for “A region where people have ready access to a safe traffic free environment for health, active travel and leisure”.

- 2.7.2 The strategy sets out the plans for a network of greenways, connecting towns and cities to the villages and countryside from east to west and north to south across all eleven councils.

- 2.7.3 The document identifies 3 classifications of greenway routes that should be explored;
- Primary Greenway Network – to provide long distance connectivity;
 - Secondary Greenway Network – to provide wider access to greenways; and,
 - Community Paths – to provide doorstep opportunities to connect local communities to their local green space and neighbouring communities.

2.8 Derry City and Strabane District Context

Settlement Studies

- 2.8.1 The evidence base for the LDP includes a series of Settlement Studies which include the City of Derry and the town of Strabane. It was informed by desktop research, site analysis and consultation. It also involved the development and application of a model of spatial accessibility. Whilst the model does not include transport flows, it uses land-use data as a proxy for local transport demand. In Derry City, the Settlement studies concluded a number of issues relating to transport;
- The riverfront has become dominated by road infrastructure that affects the place quality, and hence the need for a transport strategy that contributes to the regeneration of the city;
 - The removal or reduction of through traffic on sensitive links through new orbital roads and / or modal shift to public transport;
 - The provision of a network of Green and Blue infrastructure connecting local communities with open space;
 - Additional bridges across the River Foyle to improve physical and social connectivity; and,
 - Planning for increased development densities and re-use of brownfield sites to reduce the length of journeys and support sustainable modes of transport.

- 2.8.2 In Strabane the Settlement studies noted the need to create a well-connected town centre. This would ensure a more people-centred place with improved walking permeability and environment throughout the town centre and the potential for a new pedestrian / cycle bridge connecting with the bus station. A town centre parking strategy should relocate parking to the edge of town and hence reduce the dominance of traffic and parked vehicles in the town centre and create opportunities for high-quality public realm.

Heritage-led Regeneration

- 2.8.3 The evidence base for the LDP includes the report of the international heritage regeneration conference held in Derry in October 2018. The conference concluded that the river Foyle was an under-used asset in the city and that a more social space along the riverfront was needed. This would require the realignment and redesign of the road layout to reduce capacity and priority for vehicular traffic. It was also recommended, more generally, that public transport and active modes of travel should be encouraged to reduce traffic congestion and to boost the wellbeing of residents and visitors to the city.

City Deal for the Derry~Londonderry City Region

- 2.8.4 Infrastructure solutions to the transport issues identified in the settlement studies and heritage regeneration conference form part of the projects proposed in the City Deal for the Derry~Londonderry City Region. In Derry, an enabling element of the Central Riverfront Project is the comprehensive reconfiguration of the transport network to enable new development and to create an accessible and vibrant public realm. This would be complemented by new river crossings and would require detailed transport modelling to establish the practicality of designs.
- 2.8.5 Similarly, albeit on a smaller scale in Strabane, the Canal Basin Regeneration Project creates a new mixed use development whilst improving local connectivity by active modes and a new bridge to the bus station.

3 Transport Context

3.1 Integrated Land Use and Transport Planning

3.1.1 The integration of land-use and transport planning processes provides a unique opportunity to combine the shared regional and local ambitions which are set out in the PfG and also in the Community Plan and LDP.

2.1.7. The integration of land use and transport planning has the potential to reduce the need for travel, make better use of existing transport infrastructure and ensure that new transport infrastructure and services are effective, efficient and minimise their impacts on the environment.

3.1.2 Integration is especially important in urban areas where there are practical choices to be made in terms of the location and type of development that may have substantial knock-on impacts on local environments and hence travel behaviour. In general terms, stronger city centres and greater development densities along public transport corridors can increase the use of sustainable and active travel modes. Conversely, dispersed development and low densities, whilst generally not adding to city centre traffic congestion, tend to further increase car dependency.

3.2 Transport Networks

3.2.1 The layout of Derry City and its transport network is strongly influenced by the River Foyle. The regional road links comprise the A2 towards Limavady and Coleraine, the A6 towards Dungiven and Belfast, the A5 towards Strabane, Omagh and Dublin and the N13 in the Republic of Ireland towards Letterkenny and Donegal. The Foyle Bridge, Skeoge Link and Crescent Link provide an outer orbital route to the east which has already attracted substantial development and hence additional local traffic. The Craigavon Bridge is much more centrally located and links inner urban areas whilst feeding the riverside routes on both banks.

3.2.2 The city centre has a natural historic focus on the Walled City and Guildhall on the west bank. The commercial centre has been further developed along the riverside axis with the Foyle side and Quayside Shopping Centres complete with extensive car parks, counterbalanced to some degree by the central bus station on Foyle Street and the popular pedestrian and cycling bridge to Ebrington. The city is of adequate size to support an urban bus network, comprising 14 routes. However, unlike Belfast many of the routes are relatively low frequency and have no priority measures to ensure reliability advantages over car travel. Rail services operate eastwards from the station on the Cityside connecting to Coleraine and Belfast.

3.2.3 Similar to Derry City, Strabane's layout has been influenced by a river, in this case the Mourne River. The City centre is to the north of the river while the span of the Settlement Development Limit (SDL) reaches similar distances on each side of the river.

3.2.4 While the A5 crosses the Mourne River and skirts strategic traffic around the town, the crossing at Bridge Street provides for local traffic accessing the town centre. In addition, there is a pedestrian bridge linking the Ballycolman Estate south of the river to Meetinghouse Street just outside the town centre on the north side of the river.

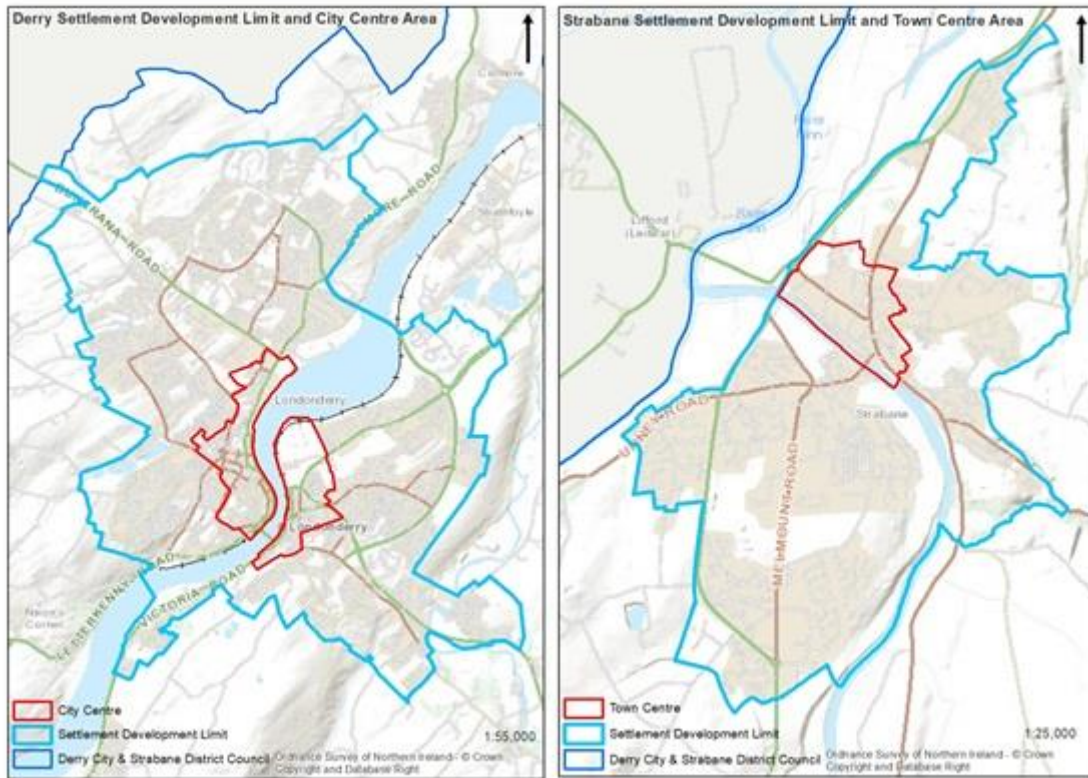


Figure 3.1 - Derry City and Strabane Settlement Development Limits

4 Transport Objectives

4.1 Development of Objectives

4.1.1 To inform the analysis of issues and indicative measures, a set of Objectives have been developed for the NWTP. They have been developed to support the achievement of the objectives set out in the key strategic documents detailed in Chapter 2 of this document. Further detailed on the objectives and how they link to the key strategic documents and the Council's LDP POP objectives can be found in Annex A – Transport Objectives.

4.1.2 The objectives are used in the Local Transport Study and are as follows:

Objective 1 - Improving external linkages: Enhance accessibility by road and public transport to the City of Derry from Letterkenny, Belfast, Dublin, Strabane and other gateways / hubs, to support greater levels of inward investment and tourism.

Objective 2 - Improving public transport accessibility: Ensure financially viable and sustainable public transport accessibility to essential services including health and education for people living in the Derry City and Strabane District.

Objective 3 - Improving active travel accessibility: Ensure there are attractive and safe active travel networks (walking and cycling) linking all residential, retail, leisure, culture, office and commercial uses within the urban areas of the Derry City & Strabane District.

Objective 4 - Providing high quality public realm: Deliver high quality public realm in Derry city centre (especially the central riverfront area) and Strabane town centre with reduced vehicle dominance and permeability / walkability, to make them attractive, shared spaces to live and work and improve safety for active modes.

Objective 5 - Improving town centre accessibility: Enhance transport accessibility and manage traffic congestion to Derry City and Strabane town centre to strengthen Derry's role as the principal city of the cross border North West City Region.

Objective 6 - Improving public safety including air quality: Enhance safety for all modes of travel, reduce the number and severity of casualties and improve air quality. Transportation should contribute to / not worsen the health and well-being of the people of the region.

Objective 7 - Promoting sustainability and resilience: Protect and enhance the built and natural environment by ensuring our transport systems operate sustainably and can integrate climate change adaptation requirements.

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5 Current Transport Issues

5.1 The Transport Evidence Base

5.1.1 Many of the following sections make use of the Transport Evidence Base (TEB) provided in Annex D – Derry City and Strabane Transport Evidence Base. The TEB focuses on the transport issues that have not been considered within the modelled area.

5.1.2 The TEB has been gathered from a range of standard published sources including the 2011 Census, Translink public transport timetables, and Police Service NI statistics, in addition to analytical analyses and fieldwork surveys undertaken by DfI TPMU.

5.1.3 The following are dealt with in turn:

- Regional Accessibility;
- Active Travel Infrastructure;
- Public Transport Services;
- Sustainable Transport Accessibility;
- Urban Traffic Congestion;
- Road Collision History;
- Modal Choice for Journeys to Work and Education;
- Parking Provision: and,
- Legacy Road Alignments.

5.2 Regional Accessibility

Derry City - Car

5.2.1 Derry is currently well connected by road to many parts of Northern Ireland. **Error! Reference source not found.** shows drive time accessibility isochrones from Derry City Centre in 30 minute time bands using AM peak speeds.

5.2.2 Derry benefits from the regional road network that is primarily a mix of strategic roads that make up part of the Regional Strategic Transport Network (RSTN) and a network of single carriageway standard local roads allowing movement around the city and to/from neighbouring settlements. The 60 minute travel time isochrones to Derry City Centre in the morning peak illustrates the substantial 60 minute catchment area that radiates out of the city, stretching almost 60km Toome to the east, 45km to Portrush to the northeast and 50km to the south reaching beyond Omagh.

5.2.3 Notable travel times include;

- Belfast City Airport – 90 – 120 minutes;
- Belfast International Airport – Approximately 90 minutes;
- A1/N1 Border Crossing – 120 – 150 minutes; and,
- Belfast City Centre – Approximately 90 minutes.

- 5.2.4 Travel times across Northern Ireland are relatively good on account of access to the strategic road network. In particular, the benefits of the dual carriageways can be seen to stretch accessibility out along their routes.

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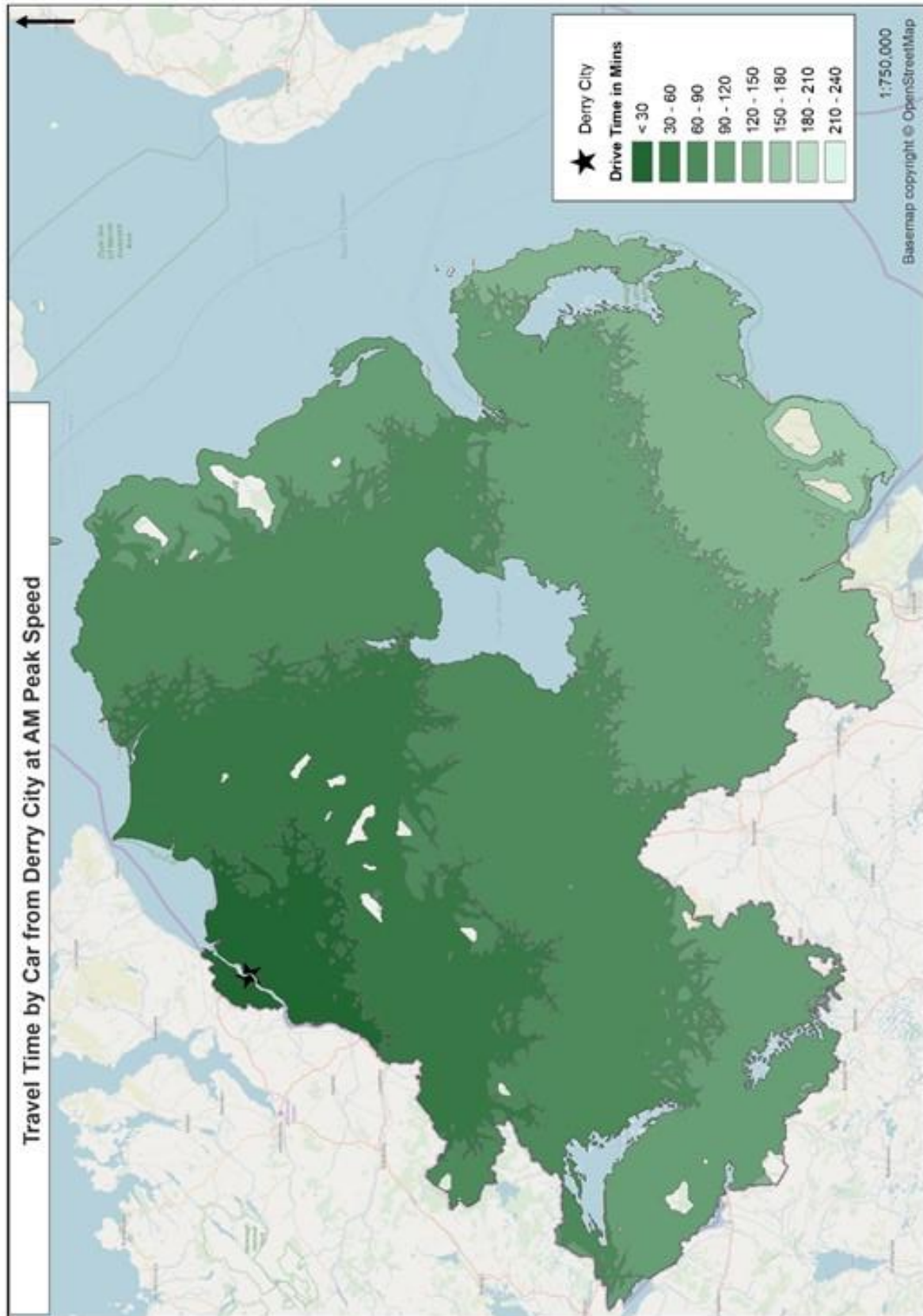


Figure 5.1 - Derry City Regional Accessibility by Car

Strabane – Car

- 5.2.5 While there are variations in accessibility by road from Strabane compared to Derry, the results are broadly similar. However as can be seen in Figure 5.2 and as you would expect, the accessibility to the south is better while accessibility to places in the east of the provision such as Belfast has reduced.
- 5.2.6 The Strabane 60 minute catchment reaches as far south as Aughnacloy and encompasses Omagh. It falls short of reaching Enniskillen. To the west the catchment area included Donegal town while to the northeast it almost spans to Limavady.

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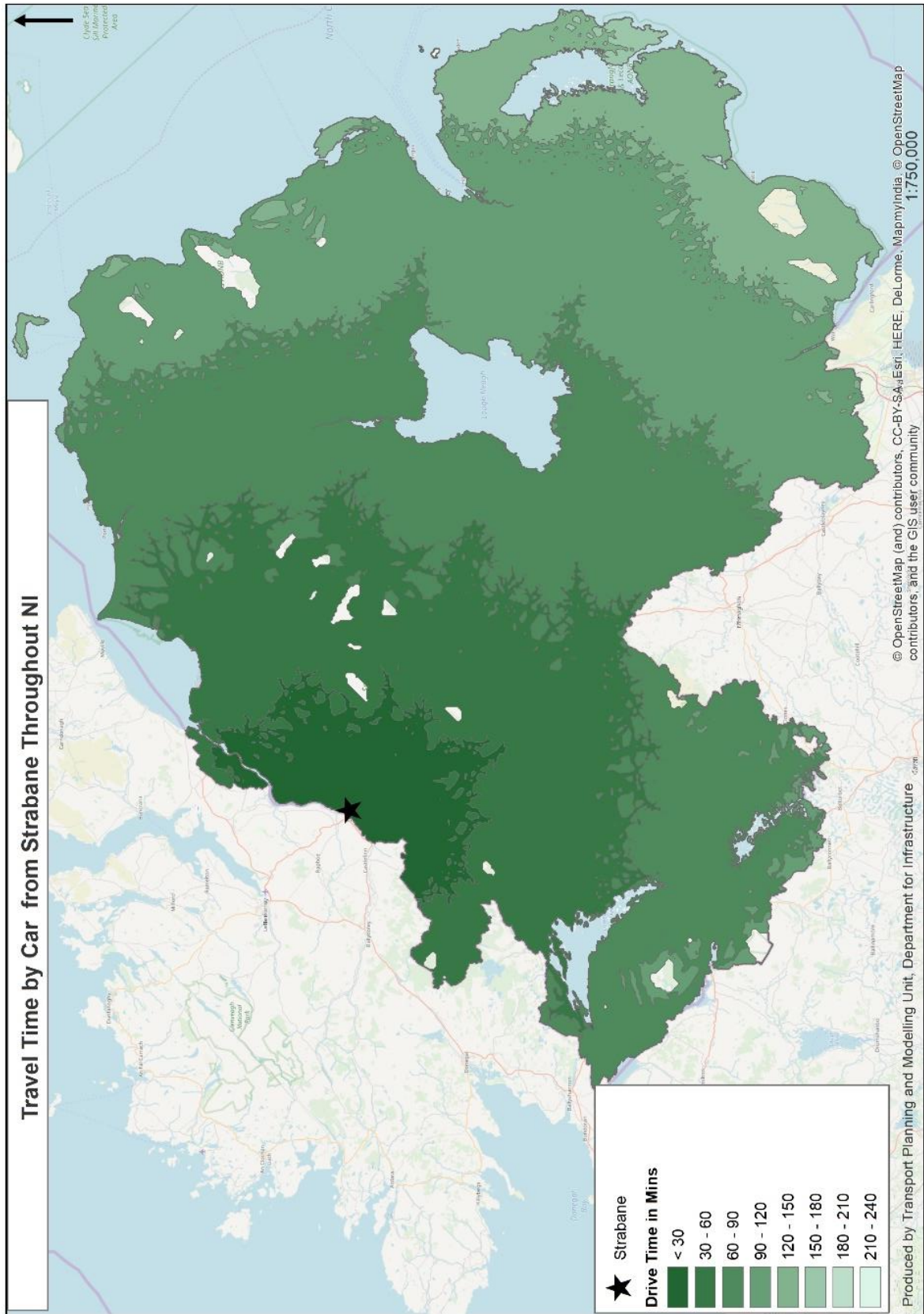


Figure 5.2 - Strabane Regional Accessibility by Car

Derry – Public Transport

- 5.2.7 Derry City public transport accessibility is presented in Figure 5.3 and shows the reach of the bus and train services in the morning peak providing travel times of under an hour and a half from Limavady and Omagh. The accessibility is limited to main routes and hence towns. The rural areas are not accessible by public transport.
- 5.2.8 Public transport travel times are dependent on the bus network coverage and timetable integration. As a consequence, unlike car travel times, the pattern of public transport travel times are very unevenly distributed as can be seen in Figure 5.3. This is in part due to the required interchanges needed to reach some destinations.
- 5.2.9 It can also be seen that there are many rural areas that are not accessible from Derry by public transport. This is likely to be because these areas do not have a public transport access within the allotted 800m (10 minute walk) allowed for in the analysis or there are no appropriate interchanges to make journey. The location of these areas are mostly sparsely populated spaces such as mountainous regions. However for rural residents key services focused in urban centres are generally inaccessible by public transport especially outside peak hours.
- 5.2.10 There is a reasonable reach of Goldline services in the morning peak providing travel times of under one hour from Newtownstewart, Maghera Park and Ride and Limavady. The rail services provide a travel time of less than one hour from Coleraine centre to the Guildhall.
- 5.2.11 As you would expect compared to the drive times, Derry City Centre public transport journey times are slower. For instance;
- Belfast City Airport – takes 150 – 180 minutes rather than 90 – 120 minutes
 - Belfast International Airport – takes 150 – 180 minutes rather than 90 – 120 minutes;
 - A1/N1 Border Crossing – takes 210 – 240 minutes rather than 120 – 150 minutes; and,
 - Belfast City Centre – takes 120-150 minutes rather than Approximately 90 minutes.

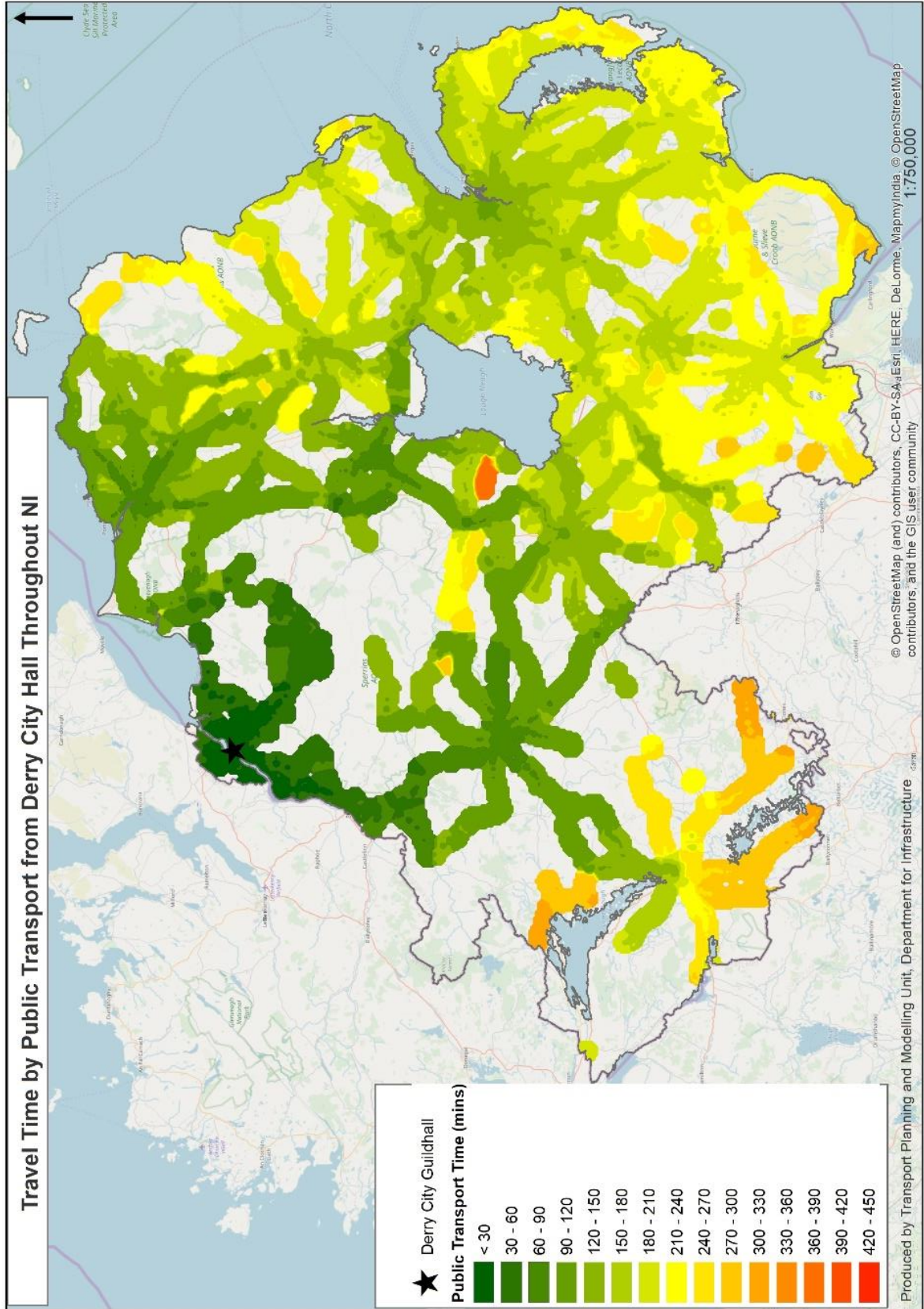


Figure 5.3 - Derry City Regional Accessibility by Public Transport

Strabane – Public Transport

- 5.2.12 Figure 5.4 presents the Public Transport accessibility from Strabane. As with the car accessibility the map shows variations in accessibility by Public Transport from Strabane compared to Derry. Again the accessibility to the south is better while accessibility to places in the east of the provision such as Belfast has reduced.
- 5.2.13 While Strabane has some direct services to places such as Omagh and Belfast, for others like Coleraine and Limavady the map reflects the need for longer journeys due to interchange in Derry City Centre. This increases the journey time to destinations other than those served directly. The Strabane accessibility map therefore has a 'skewed' appearance compared to the Derry map.

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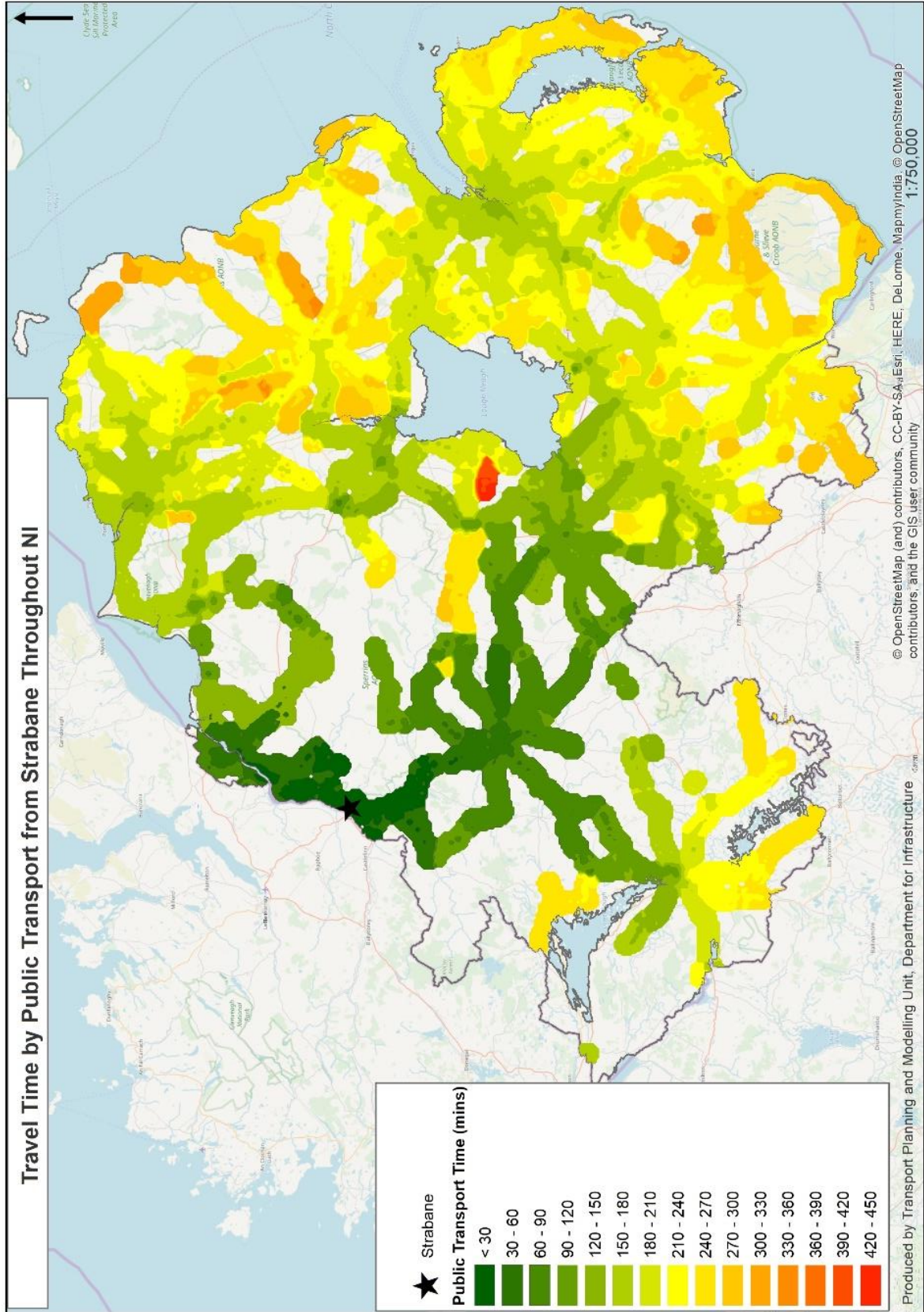


Figure 5.4 - Strabane Regional Accessibility by Public Transport

5.3 Urban Traffic Congestion

5.3.1 The urban road network in the DCSDC and Derry becomes congested at peak commuting times. This is shown in Figures 5.5 and 5.6. The principal pinch points are:

- the bridges and their junctions;
- the primary roads on the Waterside (Limavady Road and Dungiven Road) linking the A2 and A6 beyond Crescent Link (A514) to Craigavon Bridge;
- the radial routes on the Cityside (Buncrana Road, Strand Road, Branch Road and Creggan Road) linking the cross-border N13 and the residential areas to the City Centre.

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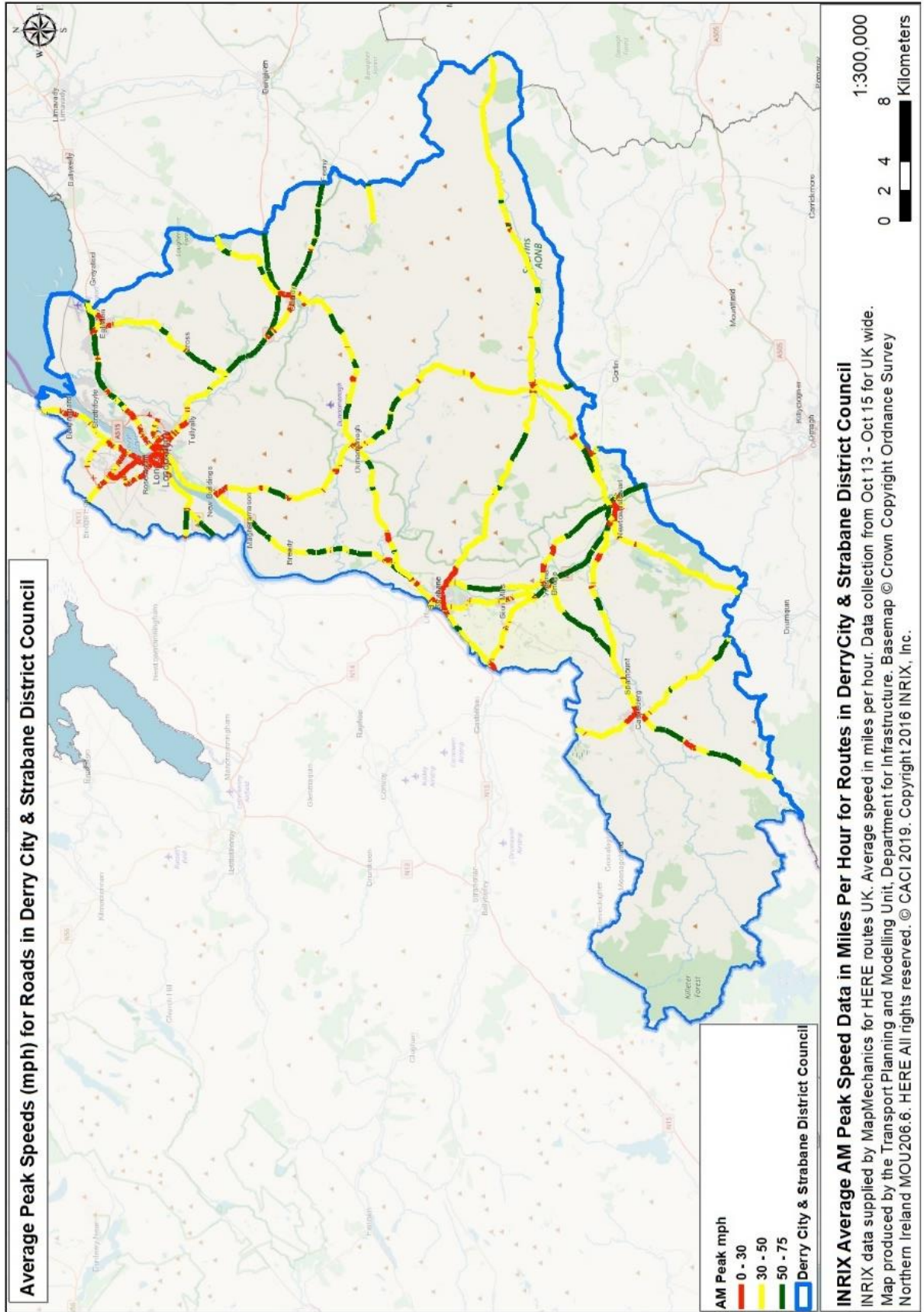


Figure 5.5 - AM Peak Road Speed Data for the Council Area

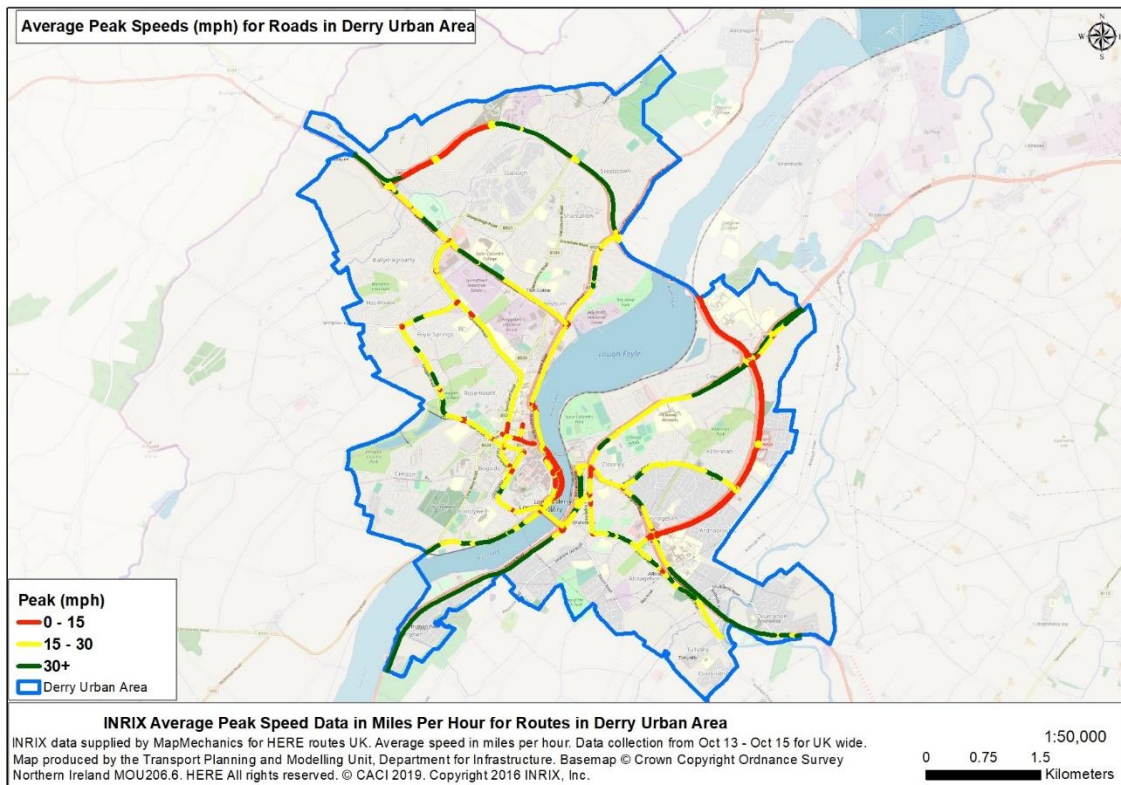


Figure 5.6 - AM Peak Road Speed Data for Derry City

- 5.3.2 In general terms, the single carriageway sections of the spine route between Dungiven Road in the east and Strand Road and Buncrana Road in the west remain at slow speeds throughout the day. Whilst these sections may not be carrying strategic through traffic, the spine route also functions as the commercial core of the city and attracts relatively high traffic flows at all times.
- 5.3.3 In Strabane the town is bypassed to the west by the A5 road. Traffic delays are focused in the town centre.

5.4 Walking and Cycling Accessibility

- 5.4.1 The extent of the DUA is not large but distances from the city centre to the edge of the developed area vary considerably. To the west, the edge of Creggan and Gobnascale residential areas is approximately only 2 km distant whereas to the north, in the Racecourse Road and Buncrana Road corridors, residential development can be more than 4 km distant. This attribute is highlighted by the accessibility analyses which identify catchments by travel time from the Guildhall by the different modes of transport, taking into account the physical route taken and a representative average speed.
- 5.4.2 The accessibility analyses presented in Figures 5.7-5.9 shows that a 30 minute walk encompasses the older residential development in the city on both sides of the river. However, to encompass the full developed area, a journey of 20 minutes by cycle or public transport (ie bus) is required. It must be borne in mind that the public transport accessibility analyses do not reflect the frequency of the bus service and hence the potential waiting time involved. Thus whilst a bus service from the Creggan might only require 15 minutes travel to the City Centre it

only operates once an hour in the middle of the day. The Analyses also show that the full developed urban area is accessible within 10 minutes by car.

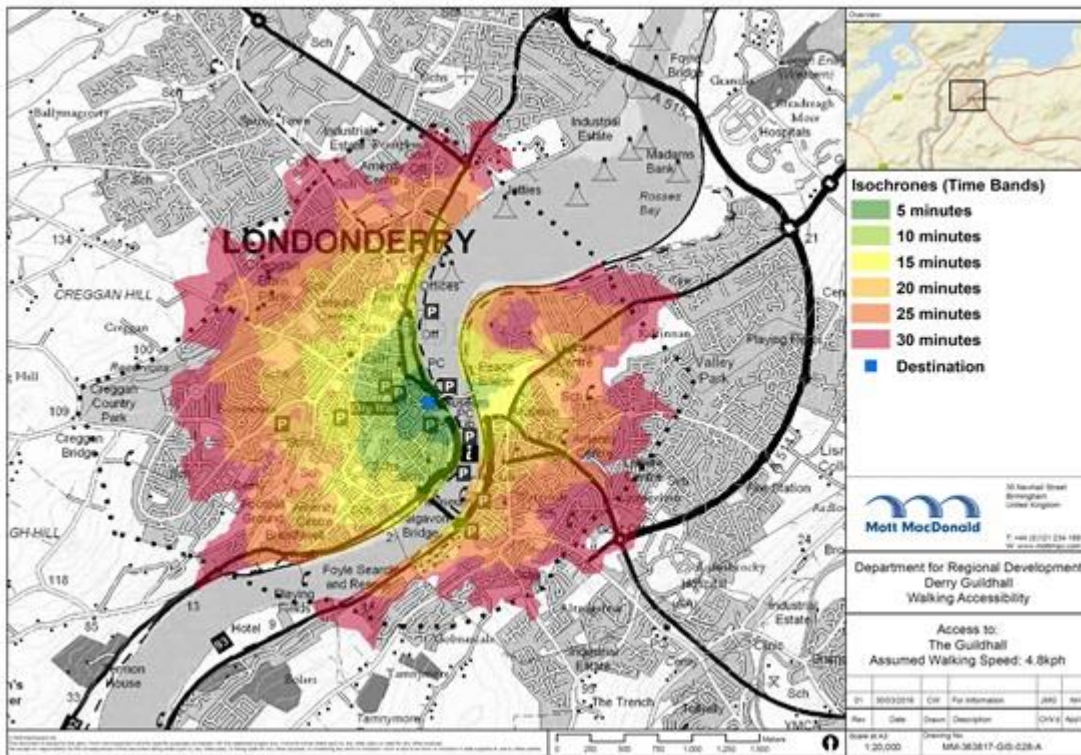


Figure 5.7 - Derry City (Guildhall) 30 Minute Walk

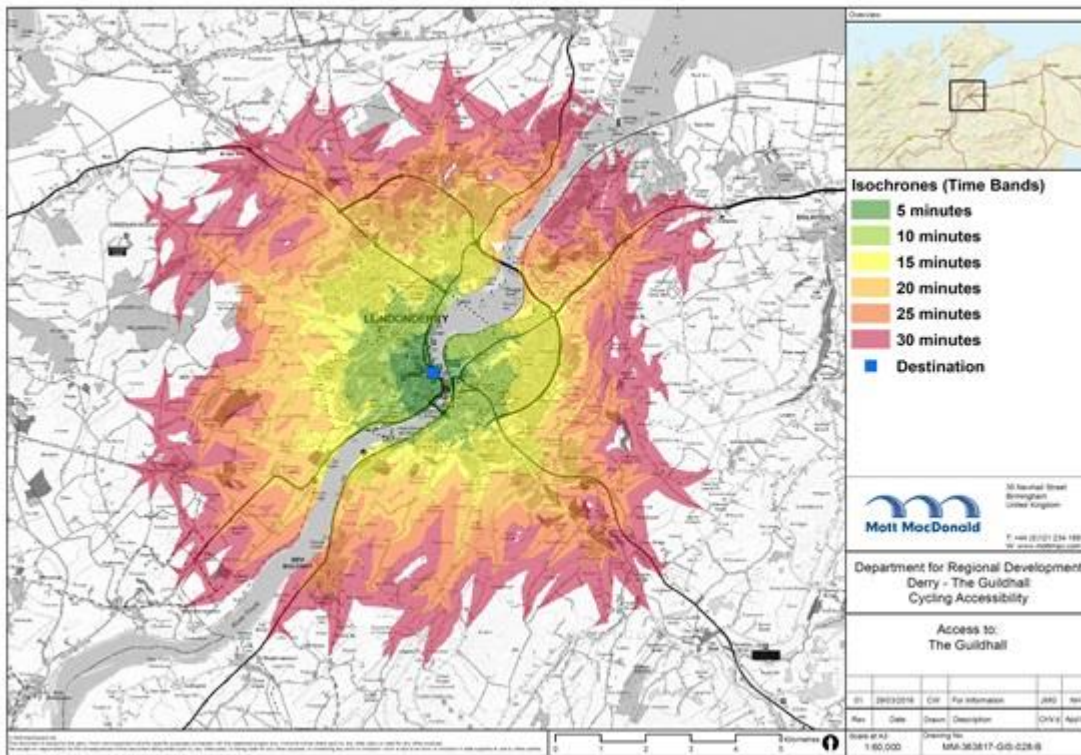


Figure 5.8 - Derry City (Guildhall) 30 Minute Cycle

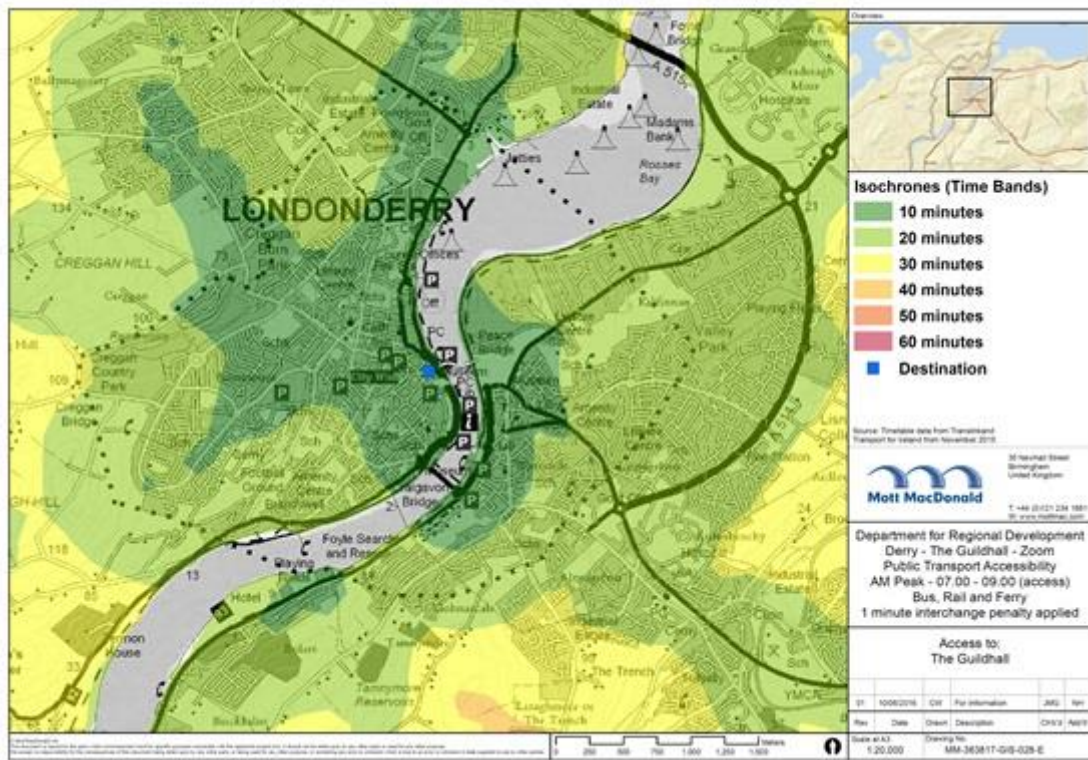


Figure 5.9 - Derry City Public Transport AM Peak Travel Time Isochrones (Zoomed)

- 5.4.3 It can be concluded that whilst Derry is historically a compact city, the more recent northern residential extensions are beyond accepted walking range of the city centre. Where attractive cycling and bus services are not provided this encourages car use and dependency.
- 5.4.4 The span of the Strabane SDL is approximately 2.1km to the north, 2.7 km to the south and 1.6km to the east of the town centre. The A5 runs along the western boundary of the town centre and marks the end of the SDL.
- 5.4.5 The Accessibility Analyses presented in Figures 5.10-5.12 shows that a 30 minute walk encompasses the entire SDL with the exception of the Dublin Road Industrial Estate and the Orchard, Ashbrooke and Laurel housing estates to the very south. One factor for the lesser walking accessibility from the south is the River Mourne which is a natural barrier that has two pedestrian crossing points.
- 5.4.6 A journey of 15 minutes by cycle encompasses the entire Strabane SDL while the vast majority of it can be reached by public transport within 20 minutes. It is however worth noting that the public transport Accessibility map allows for a 10 minute walk from the origin to the bus stop and a further 10 minute walk to the destination meaning that the a high portion of any internal public transport journey could be made on foot and it is unlikely to make up a significant proportion of internal trips. More importantly is the fact that the vast majority of the SDL can access public transport for onward journeys. Again it must be borne in mind that the public transport accessibility analyses do not reflect the frequency of the bus service and hence the potential waiting time involved. The Analyses also show that the full developed urban area is accessible within 10 minutes by car.

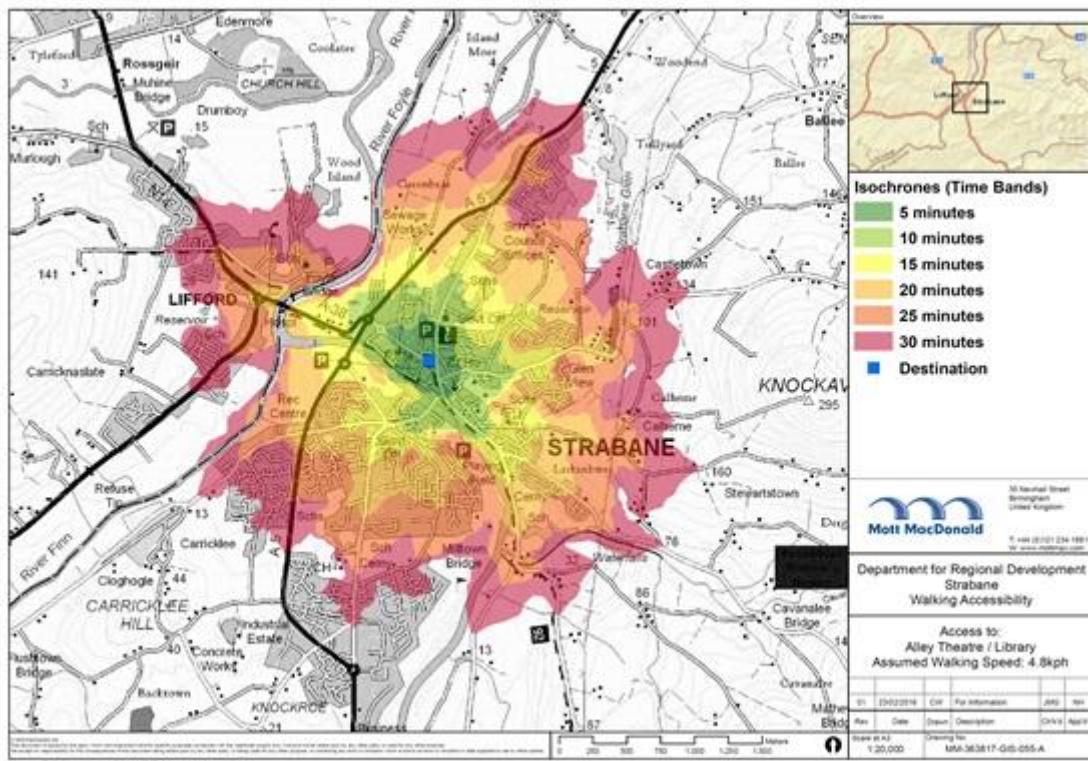


Figure 5.10 - Strabane 30 Minute Walk

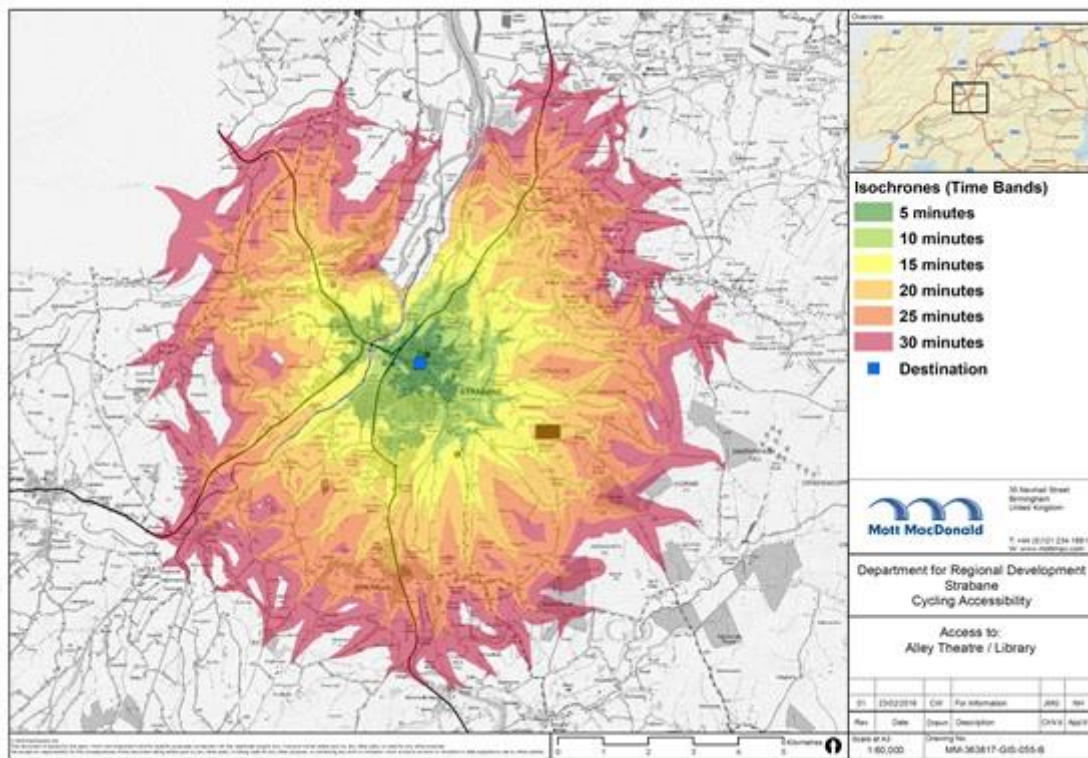


Figure 5.11 - Strabane 30 Minute Cycle

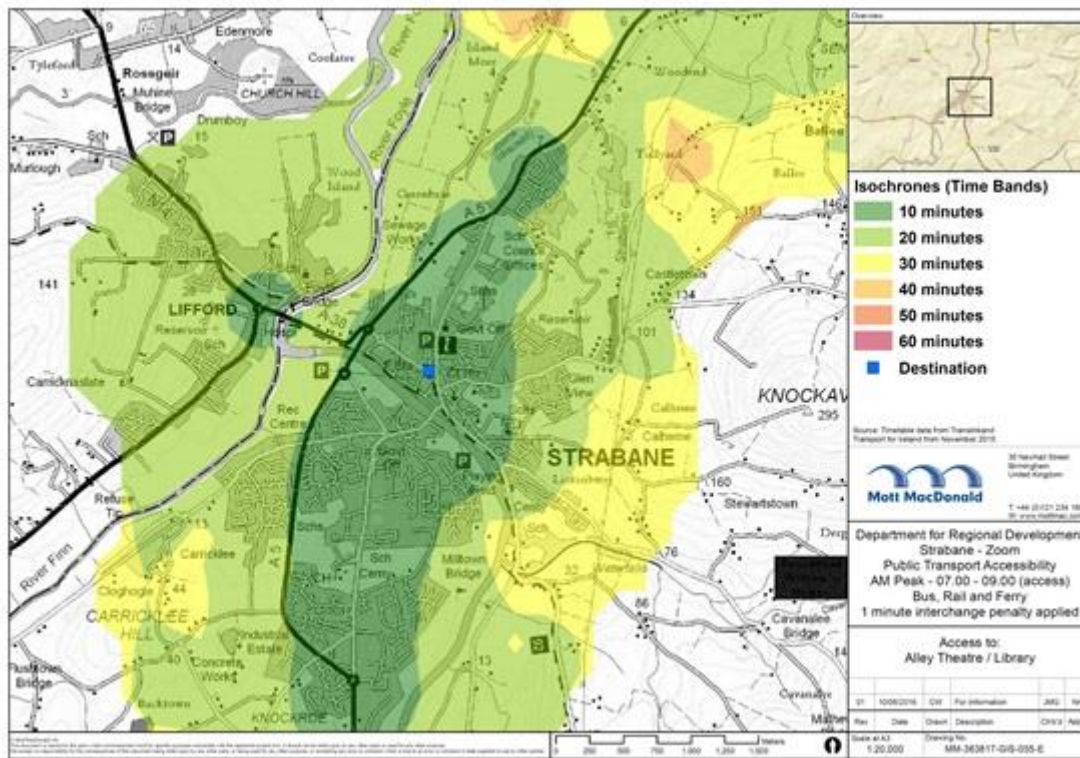


Figure 5.12 - Strabane Public Transport AM Peak Travel Time Isochrones (Zoomed)

5.5 Public Transport Services

- 5.5.1 Consideration of the Foyle Metro bus routes shows the extensive coverage provided by 13 radial routes starting and finishing at Foyle Street, adjacent to the Guildhall and a single route linking the outer northern areas via the Foyle Bridge. However, closer inspection of the frequencies, show none of the services with a headway of less than 10 minutes similar to the ‘turn up and go’ services in Belfast Metro. The most frequent service is the route 12 serving the southern end of Bunrana Road and the Glengalliagh housing area with a headway of 12 minutes throughout the day.
- 5.5.2 Buses serving the wider rural catchment including Donegal are focused in the morning and evening peak periods to suit travel to work and education. These operate to and from the bus station at Foyle Street. The most frequent service is the popular Goldline to and from Belfast which operates every 15 minutes at peak times with a journey time of approximately 120 minutes.
- 5.5.3 In Strabane there are bus services to Derry, Belfast, Omagh, Castlederg and Clady along with town services. Inspection of the frequencies shows that the town services operate approximately one per hour. While the other services operate at best, every half hour during peak times, off peak the frequencies range from one to three hours.
- 5.5.4 The rail services operate between the station on the east bank and Coleraine and Belfast every hour. Whilst journey times to Coleraine are competitive, there is only one train from Derry that arrives in Belfast before 9am and only 1 train that arrives in Derry before 9am.

5.6 Accessibility to essential local services

5.6.1 Figure 5.13 shows accessibility by public transport to health facilities. The maps show that there is fair accessibility to health services in the morning peak period.

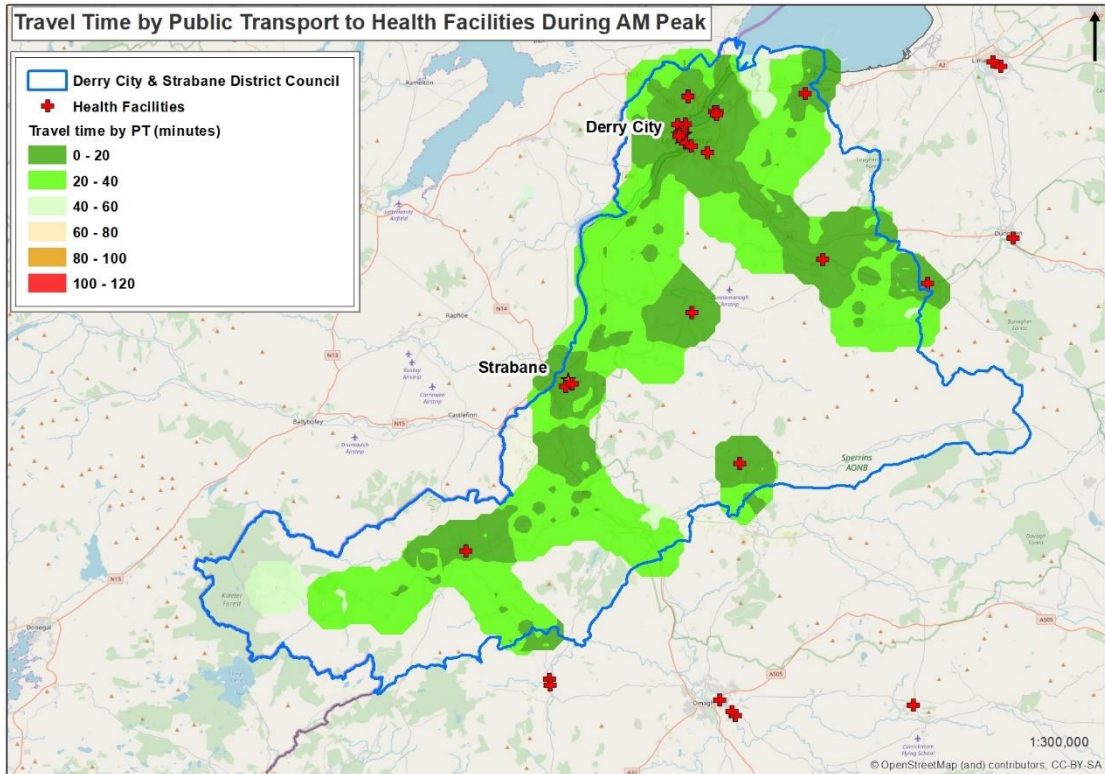


Figure 5.13 - Travel Time by Public Transport to Health Facilities during AM Peak

5.6.2 At a glance, Figure 5.13 shows that all health centres within the Council area are accessible for those who are within close proximity of public transport services. However, it is evident that those who are not living on public transport routes do not benefit from the same level of accessibility. Health facilities are accessible from the town centres within a 20 minute travel time for the majority of people. Those who reside in rural areas may experience travel times of up to 60 minutes or in a number of cases, have no accessibility at all.

5.6.3 In general, however, these services do not operate return trips other than mid-afternoon or the end of the working day and so time windows for this access may not be convenient. In addition, the catchment areas are effectively limited to the radial bus routes and large outlying tracts of the Council area have limited access by public transport. Therefore, residents outside the main bus routes have limited travel options with visiting health facilities. Without improvements in services car dependency will likely continue.

5.6.4 Any rationalisation of health facilities could result in substantial increases in journey time which may effectively put these services out of reach for residents outside the main towns, without access to private car. Also, any reductions in rural bus services could have a direct detrimental impact on these residents. Any additional residential development in rural areas not currently on a bus route will add directly to the number of people who have no access to essential local services except by private car.

5.6.5 It is important to note that the viability of rural bus networks is an NI wide policy issue for DfI and other statutory transport providers and isn't within the scope of this study.

5.7 Urban sustainable transport infrastructure in Strabane

5.7.1 Figure 5.14 shows details of the pedestrian infrastructure in Strabane. There is consistent provision of footway breaks along the radial routes with the majority of these being dropped kerbs.

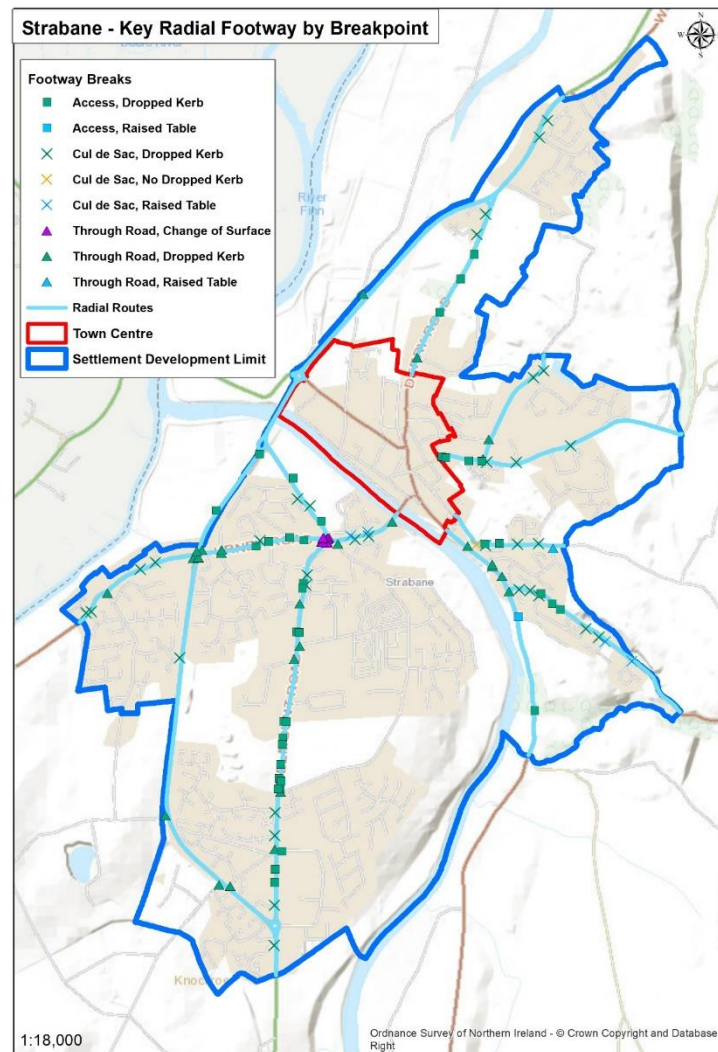


Figure 5.14 - Strabane Pedestrian Infrastructure – Footway Breaks

5.7.2 Within Strabane there are 71 crossing facilities for pedestrians and cyclists as shown in Figure 5.15. The most common form of provision is Pedestrian Refuge Islands (32). Strabane has good provision of wide footways along the A5 Great Northern Link; Bradley Way connecting the Bus station; and along the Melmourt Road to the south of Strabane. Provision of footways on radial routes to the east of Strabane centre are largely limited to less than 2.5 metres wide.

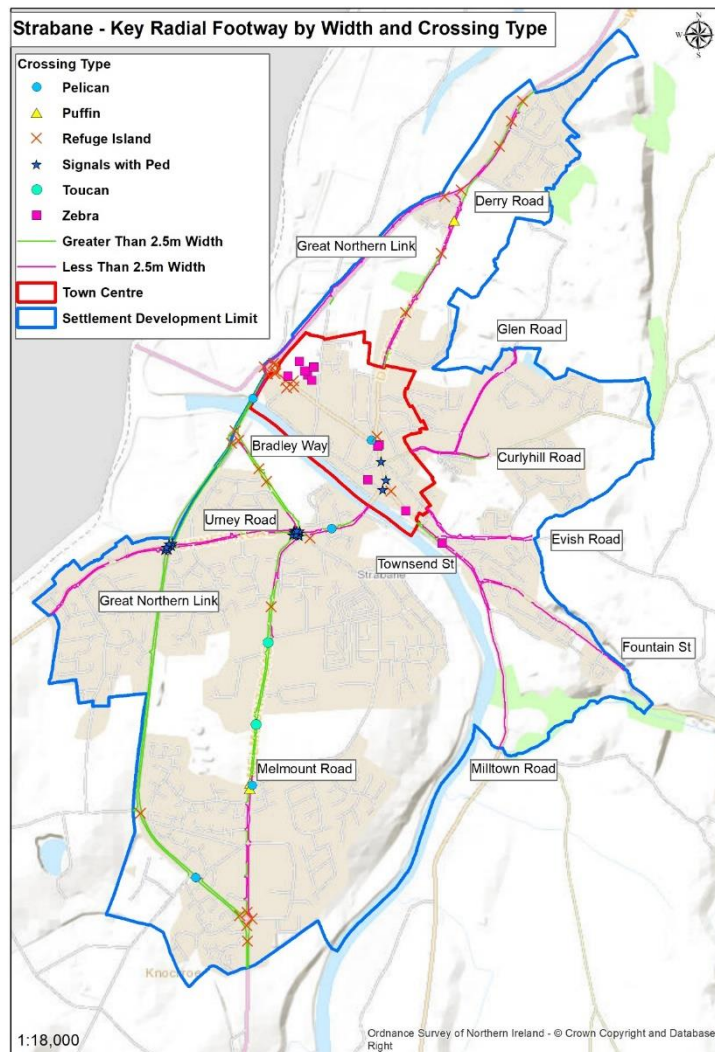


Figure 5.15 - Strabane Pedestrian Infrastructure – Footway Widths and Crossings

5.7.3 Figure 5.16 shows details of the cycling infrastructure in Strabane.

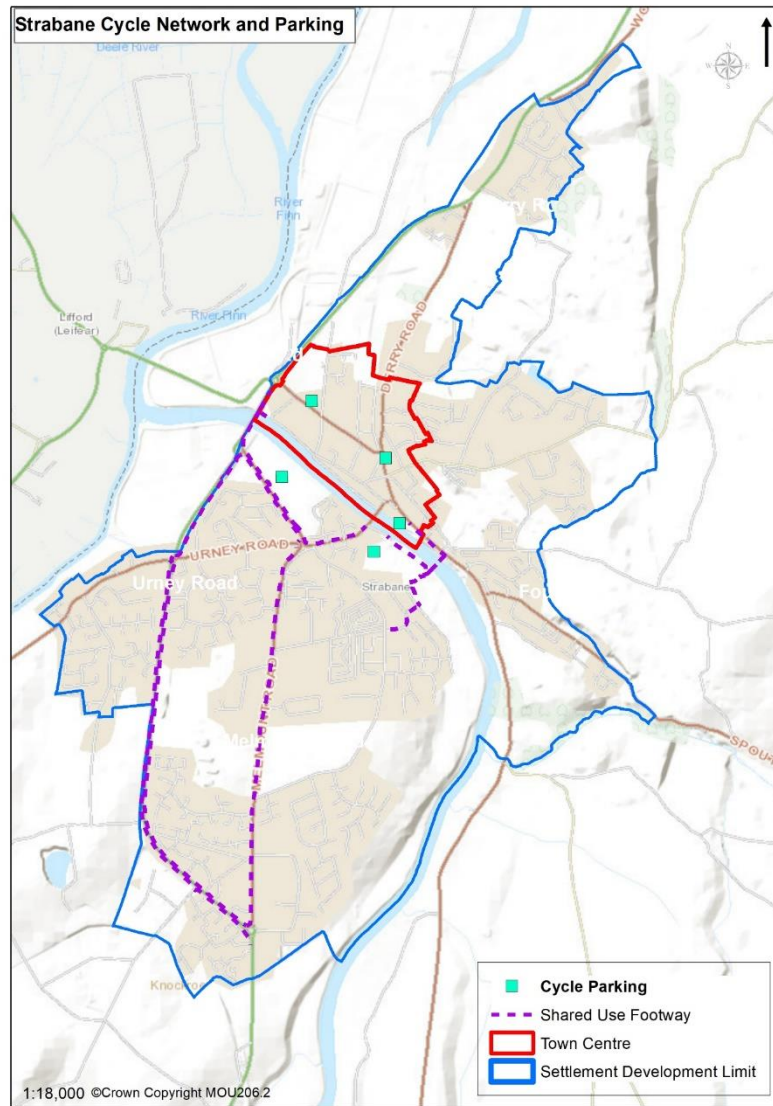


Figure 5.16 - Strabane Cycling Infrastructure

- 5.7.4 It can be seen that there is good cycle provision to the south of the River Mourne but there is a lack of infrastructure to the north of the river, including in the town centre.
- 5.7.5 There would appear to be reasonable provision of active travel infrastructure in Strabane including cycle networks, footways and crossing points but the area would benefit from more attractive active travel infrastructure, particularly in the town centre.
- 5.7.6 Figure 5.17 shows the local bus network in Strabane. Strabane has 3 town centre bus services that operate at best with an hourly headway off peak on weekdays and Saturday. The 3 routes serve the Altiskane area to the northeast, Drumrallagh to the east and a series of residential estates to the south reaching as far as Carlton Drive. The services provide accessibility to the town centre for residents who may live up to 2km from the town centre and find walking or cycling impractical. It is likely that the services will be most attractive to people without a car and for those who have free concessionary fares. In addition, children may find the Saturday services attractive.

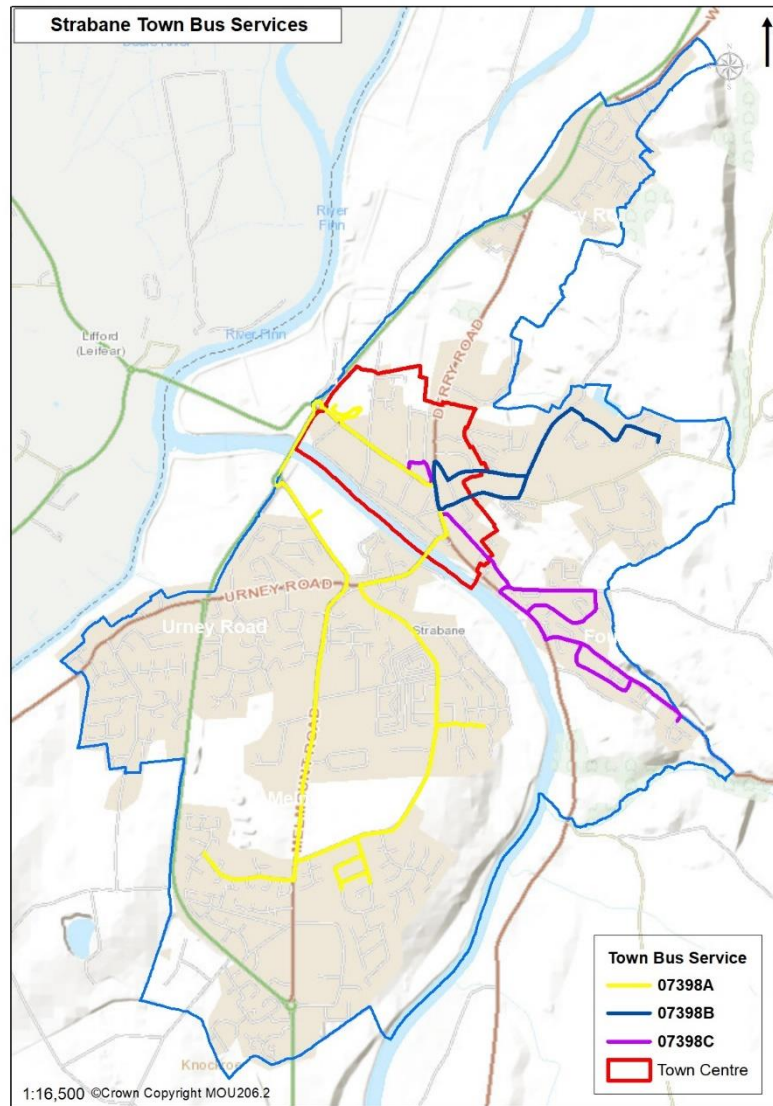


Figure 5.17 - Strabane Town Bus Services

5.8 Modal choice for journeys to work and education

5.8.1 The 2011 Census provides detailed statistics of the mode of transport used by NI residents in travelling to work. For Derry these show that almost 73% use a car, whilst only 10% walk or cycle and less than 5% use public transport. Even for journeys of less than 2km, car use is approximately 66% and only 31% walk or cycle. It is also notable that for journeys between 2km and 5km which might relate to the outer northern extensions of the city, car use is approximately 87% and public transport is only 7%.

5.8.2 By comparison, Belfast statistics show over 50% of journeys less than 2km are made by walk or cycle and over 20% of journeys between 2 and 5km are made by public transport. It is estimated that if Belfast modal choices over these distances could be achieved in Derry then walking cycling and public transport use would be doubled approximately and car use fall from 12 percentage points to 61%. This might reduce the number of cars in the city in the peak period by approximately 3,500.

5.8.3 As reported at 2011, it is possible to inspect the results for the old Strabane Borough Council independently as shown in Figure 5.18. It can be seen that a high proportion of employed residents in Strabane (55%) work within their own Council area. Similarly, a high percentage of residents travel to Derry for work (19%). There are relatively few residents travelling to neighbouring Councils, with the exception of Omagh (17%).

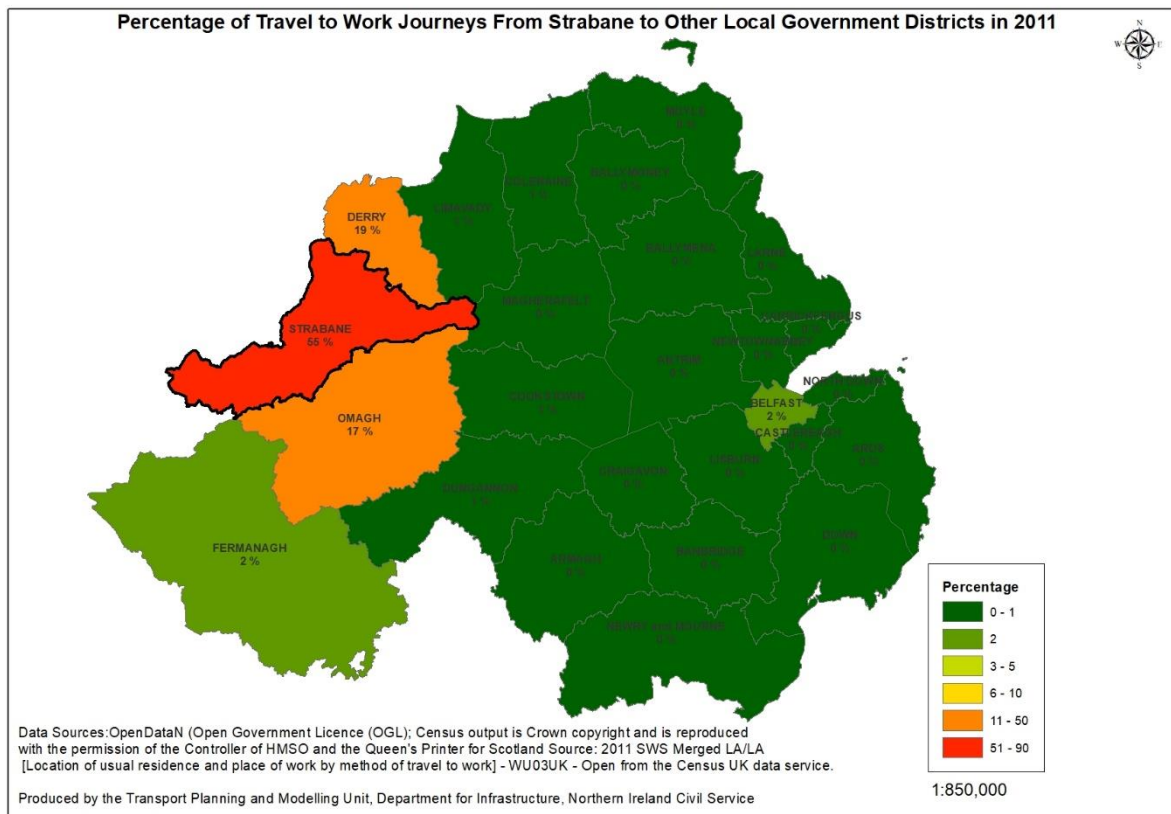


Figure 5.18 - Map of Percentage of Travel to Work Journeys from Strabane to other LGDs (in 2011)

5.8.4 As reported in 2011, it is also possible to inspect the percentage of Journey to Work flows to other Government Districts for Derry as shown in Figure 5.19. It can be seen that a vast proportion of employed residents in Derry (87%) work within their own Council area. A small percentage travel to Limavady (3%) and Belfast (2%).

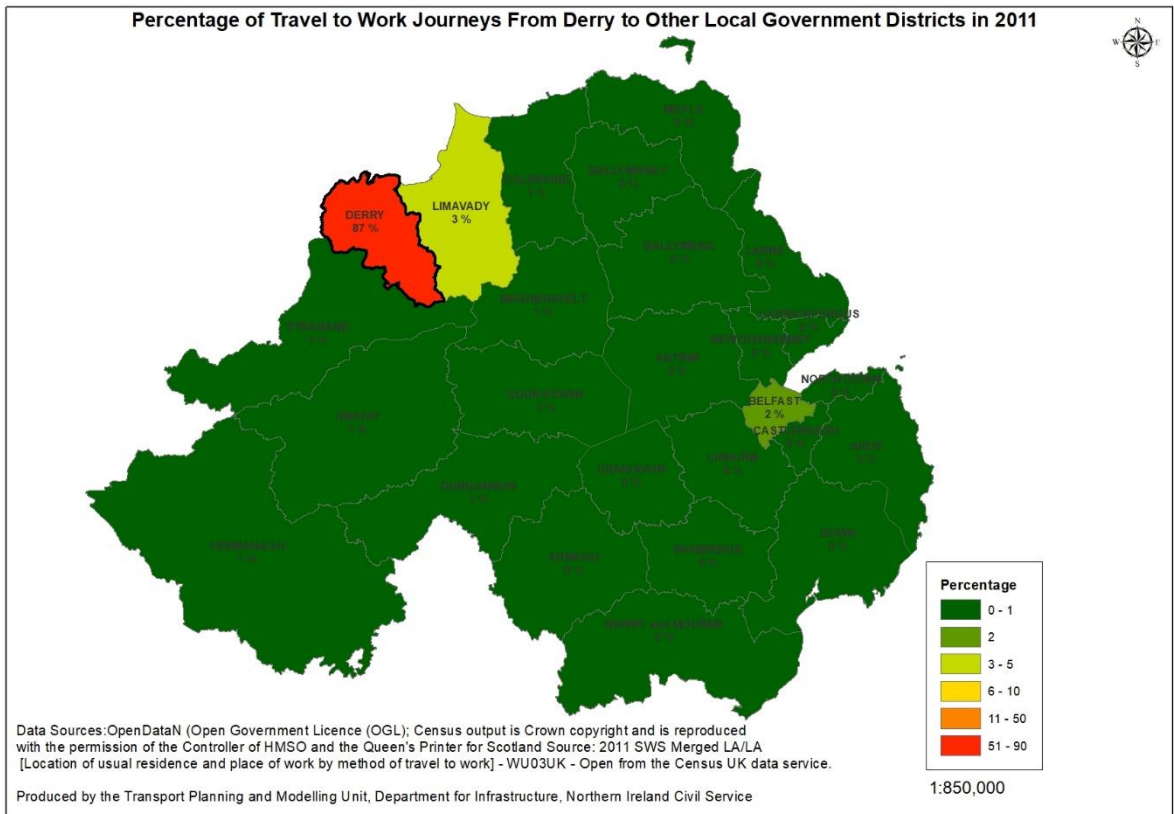
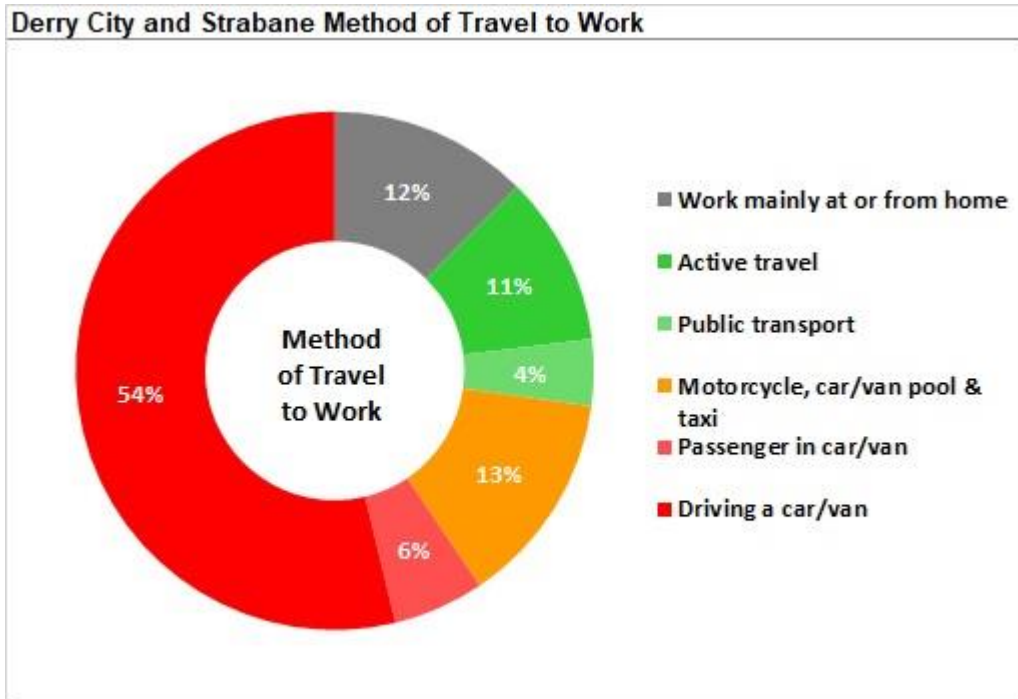


Figure 5.19 - Map of Percentage of Travel to Work Journeys from Derry to other LGDs (in 2011)

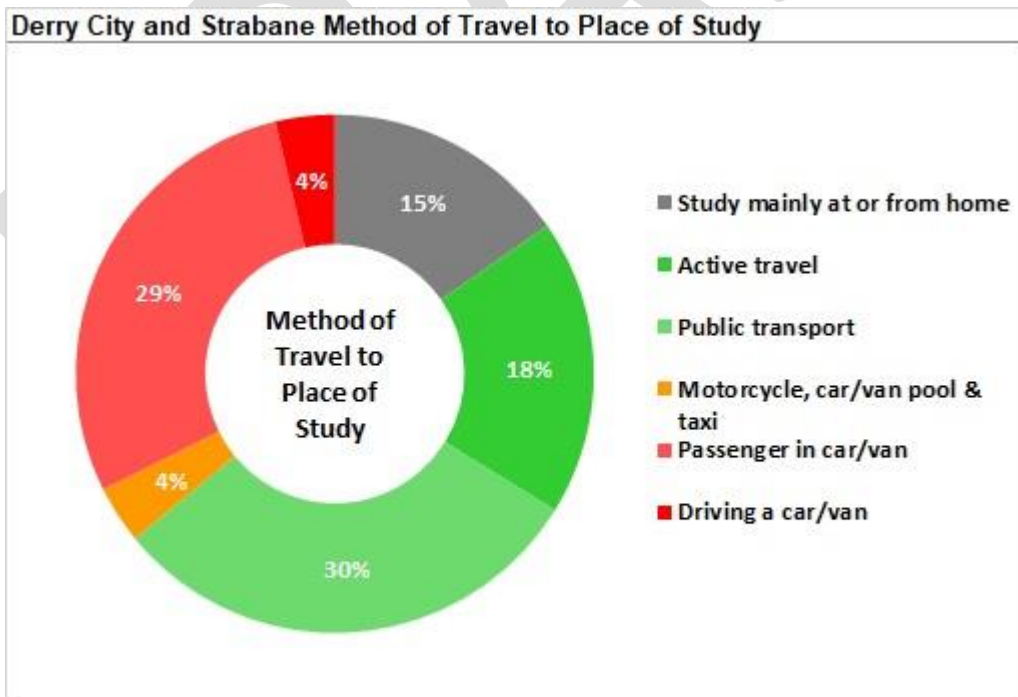
5.8.5 Figure 5.20 shows that 11% of journeys to work within Derry & Strabane district make use of active travel modes compared to 9% across NI. While 4% are on public transport, a third lower than the NI average of 6%. It is notable that for short journeys (less than 2km), only 31% use active modes (walking and cycling) compared to the NI average of 37% and 66% of these short journeys are made by private vehicle compared to the NI average of 61%.



* 'Other method' of travel has not been presented in the chart.

Figure 5.20 - Derry City and Strabane Method of Travel to Work

5.8.6 The use of sustainable modes for journeys to education is higher than the NI average of 13%, with 15% of student journeys in the district made by active modes, as shown in Figure 5.21.



* 'Other method' of travel has not been presented in the chart.

Figure 5.21 - Derry City and Strabane Method of Travel to Place of Study

5.8.7 Comparing journeys to education and work presents a stark contrast in terms of use of public transport. Public transport accounts for 30% of journeys to education, but only 4% to work. It

is notable that 8% of the shortest (less than 2km) education journeys are made by public transport whilst by far the greatest share is car passenger (44%).

- 5.8.8 A review of the 2011 census data concludes that the Council has a reasonable level of active travel compared to NI averages. However, fewer of the short journeys (under 2km) undertaken for commuting purposes make use of active travel with a heavier than average reliance on private vehicles. Therefore, there appears to be considerable potential to increase the number of short journeys made by walking and cycling. This may require new improved infrastructure, picking up on the conclusions of the previous section and a continued emphasis on road safety for vulnerable road users. Land-use planning should therefore seek to encourage residential development within the existing urban area to reduce travel distances. Ideally residential development should be located in proximity to existing centres of employment and schools as well as in location convenient to existing radial routes and existing walking and cycling infrastructure.
- 5.8.9 The 2011 census for the district shows that while journeys to work made by public transport are on par with the NI average, it is used slightly (2%) below the NI Average for children and student journeys to education. While the Council achieves the NI average of 3% for journeys to work made by public transport, considering the gravitational pull of Derry City, there is potential for additional use of buses for journeys to work. Land-use planning should therefore seek to encourage employment development in the Derry City and Strabane town centre where practical.

5.9 Road network speeds

- 5.9.1 An investigation of road network efficiency has been undertaken by inspection of estimates of actual vehicular speeds calculated from global positioning system data sourced by commercial telematics sources (INRIX). The data was collected between October 2013 and 2015 and is available for peak (7 – 9am and 4-7pm) and off-peak (9am – 4pm) periods.
- 5.9.2 The off-peak speeds have been inspected for the road network which extends over the Council area as this is considered most appropriate for most inter-urban journeys including commercial traffic. Figure 5.22 shows that in general terms the A and B road network, between the principal towns operates at speeds exceeding 30mph except where it passes through villages. Within Derry City and the town centres, speeds are predominantly under 30mph.

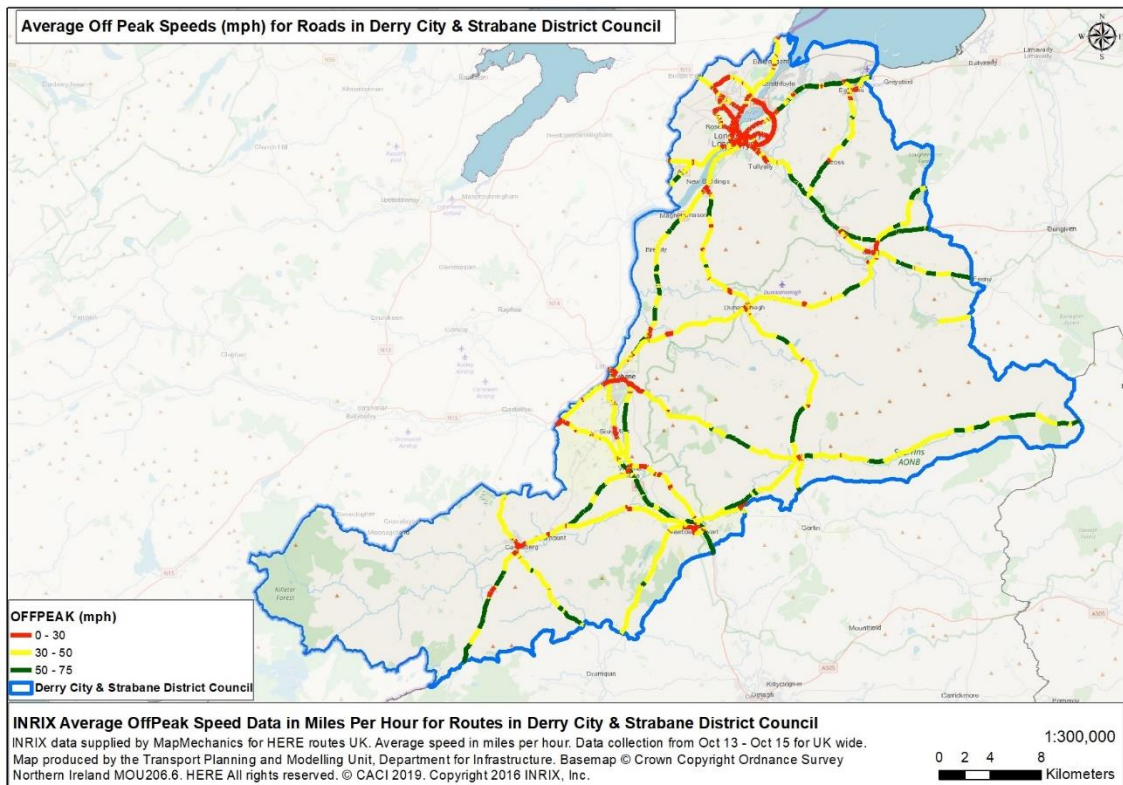


Figure 5.22 – Map of Average Off Peak Speeds (mph) for Roads in Derry City and Strabane District Council

5.9.3 Speeds in all urban areas show a general pattern of decreasing speed toward the centre of the town. Speeds on the outer lengths of the main radials generally exceed 31 mph. In general terms, speeds drop below 30mph on the inner lengths relating approximately to the 30mph speed restricted area.

5.10 Urban road collision history

5.10.1 An investigation of road collision history has been undertaken for Strabane using PSNI records dated between 2007 and 2016. Consideration has been given to the type of road user, the severity of the casualties and the location of the collision in seeking to draw general conclusions.

Table 5.1 – Derry City and Strabane Road Traffic Casualties 2007 -2016**Number of Road Traffic Casualties by Severity and Road User Type in Urban Settlements, 2007-2016**

Settlement	Road User Type	2007-2016			
		All casualties	Fatalities	Serious injuries	Slight injuries
DERRY CITY	All Road Users	3,685	13	229	3,443
	Pedestrians	513	10	101	402
	Motor Vehicle Users (inc passengers)	2,973	2	84	2,887
	Motorcyclists (inc pillion passengers)	104	1	26	77
	Pedal Cyclists	91	0	17	74
	Other Road Users	4	0	1	3
STRABANE	All Road Users	420	0	43	377
	Pedestrians	66	0	16	50
	Motor Vehicle Users (inc passengers)	325	0	19	306
	Motorcyclists (inc pillion passengers)	4	0	4	0
	Pedal Cyclists	21	0	3	18
	Other Road Users	4	0	1	3

5.10.2 The collision records presented in Table 5.1 show that pedestrians and cyclists are over-represented considering the proportion of trips made on foot and by bicycle, particularly in the seriously injured casualties and fatalities in the urban areas. In the district between 2007 and 2016, there were a total of 272 people seriously injured of which 117 were pedestrians and 20 were cyclists. In the same period were 13 fatalities, 10 of which were pedestrians.

5.10.3 Whilst there are relatively small numbers of journeys made by walking and cycling in the urban areas of Derry City and Strabane town, pedestrians and cyclists are often seriously injured in road collisions. By contrast, collisions in the urban areas involving vehicles tend to result in larger numbers of slight casualties to driver or passengers. The application of engineering, enforcement and education methods all have a role in minimising urban road casualties. In particular the message that there needs to be mutual respect between all road users is particularly important for the safety of pedestrians and cyclists.

5.11 Parking provision in Strabane

5.11.1 An investigation of existing public car parking provision has been undertaken by surveying and recording the location of all on and off-street spaces in Strabane in May 2019.

5.11.2 The results are presented in Figure 5.23. The surveys show that the town centre provides a total of 1909 public parking spaces of which 1443 are off-street and are 466 on-street. Of the off-street spaces, the majority of the central Council operated car parks require payment while all of the privately own car parking are free. All of the on-street spaces are free, however 169 have day time restrictions (generally 1 hour no return in 2 hour). The on-street spaces are generally the most conveniently located for shopping and personal business purposes in the principal business streets, whilst the free off-street parking spaces are generally located to the edge of the centre.

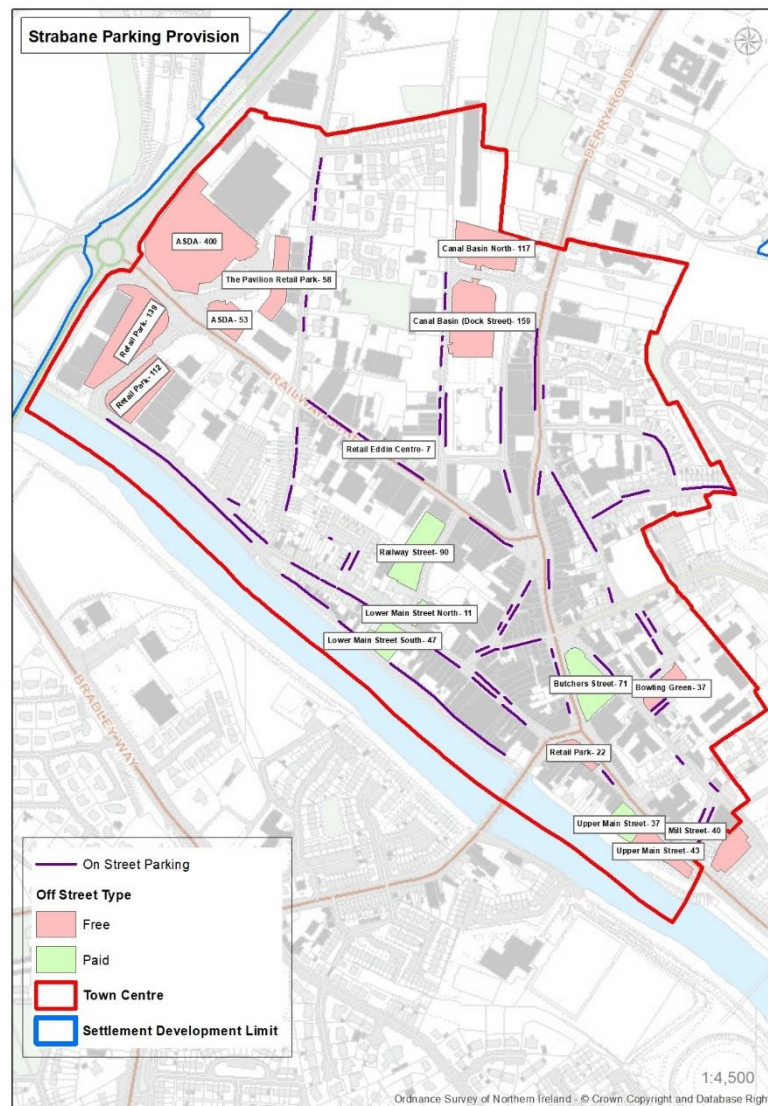


Figure 5.23 – Map of Parking Provision Locations in Strabane

5.11.3 Strabane town centre covers an area which is less than 1 km wide and just over 0.5km in length. Therefore, it is not unreasonable to expect drivers to walk from edge of town to their places of work or for long-stay purposes. Public parking arranged at the edge of town and convenient to the key radial routes could reduce traffic congestion at the key junctions and encourage onward travel by walking.

5.12 Legacy Road Alignments and Other Protected Land

5.12.1 Legacy Road Alignments and other transport related schemes with associated protected lands exist in the extant Local Development Plans within the study area. They are regarded as undeveloped alignments/areas identified in previous Local Development Plans that have been protected from development. While not all alignments/schemes will be retained in the future, they should remain protected until more detailed consideration is given to each alignment at the LDP Local Policy Plan/Local Transport Plan stage when zoning and scheme level detail will be provided.

- 5.12.2 In some cases these alignments may first appear out of line with current policy and some schemes will not progress in the form previously planned or not at all. However, these alignments will be retained until the Local Policies Plan when they will be reviewed in conjunction with individual zoning considerations and consequently dropped or retained as they could have potential alternative uses such as for active travel routes.
- 5.12.3 A list of legacy road alignments within the DCSDC area that are protected under the relevant extant area plans can be found in Annex E – Legacy Road Alignments.

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6 Growth

6.1 Growth in Population and Employment

- 6.1.1 The NI Statistical Research Agency (NISRA) has predicted trend forecasts of population throughout NI broken down by Council area; this represents a 'Business as usual' scenario. Under this NISRA scenario, from 2012 – 2022 population in the Derry City and Strabane would grow relatively slowly at 1.2% compared to the NI average of 5.2%. However, the Council LDP POP foresees a population increase from 149.5k and 160k (7%) which would require an additional 7-12k homes. It also foresees an increase of 8-15k jobs to 2032 on top of the existing 53.6k employment figure.
- 6.1.2 Additional population, new houses and households will lead to increases in the demand for travel. This would give rise to transport issues as additional congestion would be created by an increase in private cars. Our urban road network is already congested at peak times whilst relatively few people choose to walk, cycle or use public transport. Additional demand for travel needs to be minimised through land-use planning and sustainable infrastructure provided to reduce growth in road traffic. In all cases the consideration of safety for all road users will be a primary concern.
- 6.1.3 Focused housing growth in Derry City would be the most integrated land-use and transport planning solution. It offers the greatest opportunity to minimise congestion, social exclusion, air quality problems and increase walking and cycling. However, it is recognised that where there are committed housing sites which have planning permission or where development is ongoing, the ability to provide alternative modes of travel as part of any current development control process may be more difficult to achieve.
- 6.1.4 Outside Derry City, Strabane, which is located on the public transport network offers the best locations for sustainable transport opportunities, offering people an alternative to the private car and therefore should be the focus of most new housing (in line with the Housing Evaluation Framework from the RDS 2035)
- 6.1.5 Houses in the countryside are unlikely to contribute to a meaningful shift towards alternative transport modes. However, where houses can be located within easy walking distance of existing bus routes, this may help minimise the potential for social exclusion.
- 6.1.6 The potential for increasing social inclusion is magnified by the predicted differential ageing effect and the growth in people living alone. The proportion of over 65's is expected to increase to 21.88% by 2030 whilst the average household size is expected to fall to 2.41 persons by 2030.

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7 Technical Approach

7.1 Introduction

- 7.1.1 Given the levels of growth presented in the DCSDC POP and their focus on the urban areas there is the potential for worsened traffic congestion becoming a constraint in the Derry urban area. In addition, urban bus services public transport and sustainable modes may offer popular practical solutions there. Modal choice will also be important in terms of economic, environmental and social objectives. As a consequence, and given the complex issues faced in the area, a computerised transport model was used to explore the changes in transport demand and network performance in the Derry Urban Area arising under alternative development growth scenarios and transport infrastructure proposals to estimate strategic impacts.
- 7.1.2 Beyond the Derry Urban Area, appraisal in the town of Strabane and the surrounding rural area was undertaken qualitatively drawing upon the transport evidence base specifically commissioned for this study. Standard datasets are also used to consider the Council area as a whole.
- 7.1.3 Transport measures beyond the Council area are limited to those required to serve principal transport demands to and from the Derry urban area.

7.2 Modelling Approach

Use of the Strategic Transport Model

- 7.2.1 The technical approach for the DUA uses a strategic transport model to explore the performance of the transport networks under current and future growth scenarios. The model uses a computerised process to estimate how people will make use of the networks in view of the level of traffic congestion and the attractiveness of the alternatives (walk, cycle and public transport).
- 7.2.2 The strategic model is considered particularly appropriate for the DUA as the high level of growth estimated by the Council, combined with the existing urban traffic congestion and the potential of the urban bus network suggests that traffic routeings and modal choice may be key to the networks' performance.

Model Inputs and Outputs

- 7.2.3 The model can assess alternative transport networks or measures in addition to alternative growth scenarios. In this way it is possible to test the impact of new road schemes, parking management, upgraded bus service and improved pedestrian or cycling facilities. Importantly the impact is assessed by comparing performance across a network with the measure against the base network without the measure.

- 7.2.4 As the model is strategic in nature and not detailed, the results are considered indicative rather than definitive. For example it is not possible to conclude with confidence that traffic levels will fall by a precise number of vehicles on, say Strand Road or Buncrana Road. However the model can be used estimate whether the number of vehicles on Strand Road or Buncrana Road would increase, decrease or effectively be unchanged, and to what degree any changes would be significant in terms of congestion.
- 7.2.5 The strength of the model is that it has been fitted to the situation in Derry using a computerised representation of the road and public transport networks. It has been built with Census journey to work data and hence the patterns of transport demand recreate local patterns by length of journey and mode of transport fitted to the existing scale and location of population and employment. When forward planning, growth scenarios use existing relationships but scale these to the future inputs.
- 7.2.6 The primary outputs of the model are the changes in:
- levels of transport demand (ie the number of trips);
 - the modes of transport used (ie car, bus, walk or cycle);
 - traffic levels on key links on the road network (eg the bridges and AQMA areas); and,
 - the congestion on the road network (ie journey times).
- 7.2.7 More detailed information on the use of the model and the modelling results can be found in Annex C – North West Transport Study Modelling Report which has been produced by Atkins Ltd and commissioned by DfI.

7.3 Forecasts of Demand, Modal Split and Network Loads

Urban Growth Scenarios

- 7.3.1 The future as to how Northern Ireland and the North West area will develop is clearly uncertain. Therefore, alternative scenarios have been proposed for year 2030. For the DUA, these scenarios will be tested for likely knock-on impacts on the transport networks. This will provide important estimates as to the performance of the transport networks and the likely achievement of wider objectives related to economics, environment and social well-being. Each of the future scenarios includes an estimate of the level of growth in population, employment and an estimate of how this growth will be distributed.
- 7.3.2 The first growth scenario, Planning Development Scenario 1 (PDS1) is the 'Business as Usual' scenario based upon the Housing Growth Indicator (HGI) generated by the DfI and NI Statistical Research Agency (NISRA) assuming continuation of existing birth, death and migration rates. The distribution of growth is assumed to be in proportion to current patterns. This scenario results in a 1.5% growth in population in the district. HGI growth is used for other Councils across NI whilst the growth forecast in the National Planning Framework is used for Donegal. The employment scenario is taken from forecasts prepared by Oxford Economics for DfI as part of the A5 road scheme statutory assessment, distributed as per current patterns. The employment estimates result in a 3.4% growth in the Council area.

- 7.3.3 The second growth scenario, Planning Development Scenario 2 (PDS2) uses the growth in population and employment indicated in the POPs prepared by the 11 Councils across NI. For DCSDC this calculates as 6.7% for population and 25.5% for employment. The distribution of the population growth also follows the POP assumptions with a focus on the urban centres of Derry and Strabane. Employment growth was distributed as per current patterns.
- 7.3.4 The third growth scenario, Planning Development Scenario 3 (PDS3) is a derivative of the second. It is identical in terms of levels of growth and the distribution of population growth. The only change is that the growth in employment is focused in the vicinity of the Derry City Centre. This strategic option is used to explore the impact of strengthening the city centre and focusing additional transport demand to a location well-served by current bus services.

Overall Transport Demand

- 7.3.5 Between the base year of 2013 and a forecast year of 2030 the growth set out by HGI for the Council results in a 2,189 increase in population and an increase of 1,992 in employment.
- 7.3.6 The growth proposed by the council is much greater; an increase of 10,000 in population and of 15,000 in employment between 2017 and 2032.
- 7.3.7 Between 2013 and 2030, using PDS1, the Transport Model estimates that, across NI transport demand will increase by 5%. However growth in private car is 7.5% due to continued increases in car ownership. There is more limited growth in transport demand forecast in the Council area, with only 1.5% growth in population, however traffic continues to grow due to increases in car ownership.
- 7.3.8 When the Council's planned growth is used in PDS2, the transport model forecasts substantial growth of over 32,000 additional trips per day in the Council area broken down by an additional 22k car journeys, 2k by public transport, 8k walking and over 200 by cycle per day.
- 7.3.9 When PDS3 is modelled to reflect employment growth focused in the city centre then, the same 32,000 additional trips are forecast for the Council area but there are almost 5k less car journeys and these effectively transfer to public transport (3k) and walk (2k).

Urban Traffic

- 7.3.10 The overall effect of the growth is to increase traffic flows and likely congestion levels in the DUA. Without additional transport infrastructure, the AM peak hour traffic levels in 2030 are forecast to increase by approximately 300 vehicles on Craigavon Bridge (130 EB and 170 WB), 500 vehicles on the Foyle Bridge (250 EB and 250 WB) and 200 vehicles on the Foyle Expressway (50 SB and 150 NB) for the HGI base PDS1.
- 7.3.11 The corresponding traffic growth figures for Council's planned growth are substantially higher in the urban area with approximately 450 vehicles on Craigavon Bridge (200 EB and 250 WB),

1000 on the Foyle Bridge (300 EB and 700 WB) and 300 on the Foyle Expressway (50 SB and 250 NB).

- 7.3.12 PDS3, the focused employment scenario leads to still further traffic increases over the standard Councils growth with approximately 200 further vehicles on Craigavon Bridge (-150 EB and 350 WB), 800 on the Foyle Bridge (800 WB) and 350 on the Foyle Expressway (-100 SB and 450 NB).

Conclusions

- 7.3.13 The transport model is unable to identify definitively whether the Councils growth scenario exceeds the capacity of the transport network. (In practice that is unlikely to occur as people will change their behaviour accordingly, especially peak spreading and mode choice.) However, the model does show substantial increases on the bridges and on the Foyle Expressway. These increases can only further exacerbate already congested conditions.
- 7.3.14 The focused employment scenario reflects the Councils aspirations with respect to commercial growth in the City Centre Riverside area and will provide the most stretching test of the Riverside road network whilst simultaneously offering greater opportunity for an attractive public transport network.

7.4 Illustrative Transport Measures

- 7.4.1 In order to provide an indication of how different potential transport intervention would impact on the future transport network a series of Illustrative Measures (IM) have been modelled. They are as follows;

Strategic Inter Urban Roads (IM01) – Dualling the A5 carriageway between Aughnacloy and Newbuildings and the A6 carriageway between Drumahoe and Dungiven;

Orbital Urban Roads (IM02) – Outer links from A5 to A2 Buncrana Road via new bridge and from A5 to A6;

Arterial Urban Roads (IM03) – Buncrana Road dualling between Pennyburn roundabout and the Border;

Intelligent Transport Systems (IM04) – Upgraded Urban Traffic Control System within the Derry City Centre;

Foyle Metro (IM06) – Doubling the frequency of all Foyle Metro Services;

Foyle Metro Alternative (IM06b) – Doubling the frequency and increasing the speed of all Foyle Metro Services;

Cycling (IM07) – Cycling Masterplan;

Walking (IM08) – Walking Masterplan; and,

Demand Management (IM09) – An additional £5 parking charge along the Central Riverfront area.

7.4.2 While the IMs are strategic and lack scheme level detail, the indicative results of the modelling testing provide an indication of direction and magnitude of the likely impact of introducing such schemes.

7.5 Appraisal of Options

Appraisal Framework

7.5.1 An Appraisal Framework has been produced in order to assess the impact of the IMs in line with the NWTP Objectives. The Appraisal Framework uses outputs from the transport model as indicators of the change from the do minimum option. The indicators used for each objective are shown in Figure 7.1.

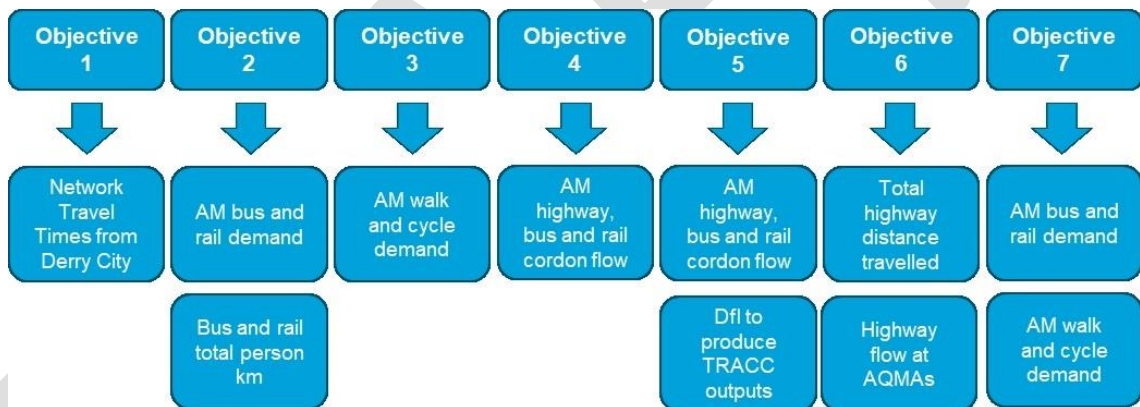


Figure 7.1 - Appraisal Framework Indicators

7.5.2 The Appraisal Framework was initially used to test the individual impact of the 9 IMs but was subsequently used to compare the combined impact of 4 Alternative Networks.

7.6 IM Results

7.6.1 To ensure consistency, each of the IMs has been tested against PDS2 and the results used to populate the Appraisal Framework. The Appraisal Framework indicates if the IM has a Positive, Neutral and Negative impact on each of the Objectives.

7.6.2 Table 7.1 shows the overview results of the Appraisal Framework for each IM using the PDS2 growth scenario.

Table 7.1 - IM PDS2 Appraisal Framework Overview

Illustrative Measure	Objective 1: Improving external linkages	Objective 2: Improving public transport accessibility	Objective 3: Improving active travel accessibility	Objective 4: Providing high quality public realm	Objective 5: Improving town centre accessibility	Objective 6: Improving public safety including air quality	Objective 7: Promoting sustainability and resilience
IM01 – Strategic Inter Urban Roads	✓	-	-	×	-	×	✓
IM02 – Orbital Urban Roads	-	-	-	✓	-	✓	-
IM03 – Arterial Urban Roads	✓	-	-	-	-	✓	-
IM04 – ITS	-	-	✓	×	-	×	-
IM06 – Foyle Metro	-	✓	×	✓	✓	✓	-
IM06b – Foyle Metro	-	✓	×	✓	✓	✓	-
IM07 – Cycle	-	-	-	-	-	-	-
IM08 – Walk	-	-	✓	-	-	✓	✓
IM09 – Demand Management	-	-	✓	✓	✓	-	✓

Summary Table Colour	Outcome Type
✓	Positive Contribution
-	Neutral Contribution
×	Negative Contribution



- 7.6.3 **Strategic Inter Urban Roads (IM01)** – Inter-urban road schemes provide significant journey time reductions for users (and unmodelled safety, journey time reliability and bus speed improvements). They do not appear to generate substantial additional traffic or modal switch and have a negative impact on the quality of the public realm and public safety, including air quality.
- 7.6.4 **Orbital Urban Roads (IM02)** – Outer Orbital road schemes provide substantial journey time reductions for through traffic users (and unmodelled safety, journey time reliability improvements), but limited relief and journey time reductions for local traffic on existing radial routes. They do not appear to generate substantial additional traffic or modal switch.
- 7.6.5 **Arterial Urban Roads (IM03)** – The Buncrana Road scheme provides substantial journey time reductions for users at peak times (and unmodelled safety, journey time reliability improvements). It does not appear to generate substantial additional traffic or modal switch.
- 7.6.6 **Intelligent Transport Systems (IM04)** – An upgraded urban traffic control system would reduce traffic delays across the road network. However, on its own it would also attract additional users from bus to car, reducing its effectiveness and subsequently it would have a negative impact on the quality of the public realm and public safety, including air quality.
- 7.6.7 **Foyle Metro (IM06) & Foyle Metro Alternative (IM06b)** – Faster and more frequent bus services would result in a modal switch from private car and from walk and cycle. However, bus patronage is very low in Derry and substantial increases would be needed to justify bus priority measures which would remove road capacity.
- 7.6.8 **Cycling (IM07)** – Improvements in cycling infrastructure would bring substantial growth in cycle use arising from modal switch from private car, bus and from walk. However the scale of the switch from private car would not in itself produce a significant reduction in traffic congestion. The low proportion of the mode share means that while there are many benefit to the individuals, overall there is little impact on the objectives.
- 7.6.9 **Walking (IM08)** – Improvements in pedestrian infrastructure across the urban area would result in a substantial increase in walking with the largest modal switch from private car. The estimated scale of the switch suggests there may be significant reductions in traffic congestion.
- 7.6.10 **Demand Management (IM09)** – Additional City Centre parking charges of £5 per day, on their own, are estimated to have limited impact in switching car users to public transport or walking. It may be that the charges would need to be higher or combined with improvements in other modes.

7.7 Alternative Networks

- 7.7.1 On the basis of the results of the IMs, Alternative Network configurations have been produced in order to explore cumulative effects and complementarity. Four Alternative Networks were tested. They are;

- **Test A –**
 - PDS2 with;
 - Strategic Inter Urban Roads (IM01)
 - Arterial Urban Roads (IM03)
 - Foyle Metro Alternative (IM06b)
 - Cycling (IM07)
 - Walking (IM08)
 - Demand Management (IM09)

- **Test B –**
 - PDS3 with;
 - As Test A

- **Test C –**
 - PDS2 with;
 - As Test A and
 - Orbital Urban Roads (IM02)

- **Test D –**
 - PDS3 with;
 - As Test A and
 - Orbital Urban Roads (IM02)

7.7.2 Test A was chosen to show the impact of a combined network with employment development spread proportionally across the Council.

7.7.3 When set against to Test A, Test B allows for a comparison between employment development spread proportionally across the Council and employment development focused within Derry City Centre.

7.7.4 Test C can be compared to Test A to provide an indication of impact of the orbital route on Derry City Centre within a combined network.

7.7.5 When compared with Test B, Test D provides an indication of the impact of the orbital route on Derry City Centre when employment is focused on the city centre and congestion would be higher during peak times due to the increased number of commuters.

7.7.6 Table 7.2 shows the overview results of the Appraisal Framework for each Alternative Network test.

Table 7.2 - Alternative Networks Tests Appraisal Framework Overview



Illustrative Measure	Objective 1: Improving external linkages	Objective 2: Improving public transport accessibility	Objective 3: Improving active travel accessibility	Objective 4: Providing high quality public realm	Objective 5: Improving town centre accessibility	Objective 6: Improving public safety including air quality	Objective 7: Promoting sustainability and resilience
Test A	✓	✓	✓	-	-	-	✓
Test B	✓	✓	✓	✓	✓	-	✓
Test C	✓	✓	✓	✓	✓	-	✓
Test D	✓	✓	✓	✓	✓	-	✓

Summary Table Colour	Outcome Type
✓	Positive Contribution
-	Neutral Contribution
✘	Negative Contribution

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Orbital Roads

- 7.7.7 The principal effects of the Orbital Roads appears to be slight reduction in vehicular travel time across the network and journey time savings on the Buncrana Road – Victoria Road cross-city route.

Focusing Employment Growth in the City Centre

- 7.7.8 The effects of focusing employment in the city centre appear to be:
- doubling of modal switch from car to sustainable modes;
 - a significant increase in vehicular travel time across the network; and,
 - lessening of the impact of the orbital roads.

7.8 Conclusions

- 7.8.1 The following conclusions regarding the results of the model testing are as follows;

- Due to the size of the city and hence length of many journeys, improvements in walking infrastructure including pedestrian priority at junctions will be most useful in attracting people away from car.
- The size of the city works against bus use unless high frequencies and effective bus priority is provided. This suggests that future bus improvements should focus on a small number of key flagship routes supported by less frequent routes to cater for people with mobility impairments.
- Cycling numbers are low and attractive infrastructure should be provided to increase demand and modal switch, especially for medium length journeys.
- In order to support the switch from car to more sustainable transport such as walk, cycle and public transport, an integrated city centre parking and traffic management strategy will be required. The strategy should ensure that long-stay parking is relatively expensive and is located on the edge of the city centre, minimising cross-city centre traffic and promoting “Park & Stride” on improved pedestrian infrastructure.
- The positive impacts of the integrated parking and traffic management strategy could be strengthened substantially by focussing employment growth in the city centre area. This would provide a growth in potential demand for bus services.
- Inter-urban road schemes bring benefits in ensuring Derry is easily accessible from across the region.
- A radial road scheme in Buncrana Road provides substantial direct relief on the corridor. However, care is needed in how the additional transport capacity is provided and used. For instance consideration of pedestrian priority at junctions is important as is the creation and retention of attractive cycling routes. Buncrana Road is also a key leg on

the most frequent bus service in Derry and could be considered for any new flagship bus route.

- The need for orbital road schemes has not been demonstrated at this stage. Further work could be undertaken when more detailed development locations and a more detailed transport model are available.

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8 Development of Options

8.1 Range of Possible Options

8.1.1 The range of options was developed by considering each of the transport objectives in turn and proposing possible illustrative transport measures spanning all modes of transport. The options by objective are listed below.

8.1.2 **Objective 1 - Improving external linkages:**

- Improved inter-urban roads on KTC
- Improved 'limited-stop' bus services to key hubs
- Rail service improvements to and from Coleraine, Belfast and Dublin
- Park and Ride and Park and Share also have complementary roles in improving local access or increasing vehicle occupancy respectively.

8.1.3 **Objective 2 - Improving public transport accessibility:**

- Maintained or improved Ulsterbus rural services
- Alternative Ulsterbus rural operations including integration with 'limited-stop' services
- Integrated rural public transport services including innovative transport models such as 'ride-share'
- Alternative models of delivery of essential services in rural areas including mobile services and use of the internet
- Land-use policy changes which focus residential development in towns where the essential services are located
- In the urban area a balance has to be struck by the Foyle Metro services in providing services which result in modal shift from private car and services which provide access to essential services for people without cars
- In the urban area, improved public transport serving new developments funded by the developer
- In the urban area, promotion of development close to public transport hubs and along high quality public transport routes

8.1.4 **Objective 3 - Improving active travel accessibility:**

- Provision of improved walking facilities in the urban areas
- Provision of a network of attractive cycling routes in urban areas
 - Focus on radial routes
 - Local improvements which together provide longer routes
- Identification and implementation of measures to address road user behaviour related to walking and cycling

8.1.5 There are other options which relate to how this infrastructure is provided and at additional locations such as:

- For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer

- The provision of greenways between towns and cities

8.1.6 Objective 4 - Providing high quality public realm:

- New orbital roads in Derry to reduce vehicle flows through the town centre
- Town Centre Parking Strategies that reduce the number of commuter vehicles in the city centre at peak times by encouraging Park & Stride and modal shift
- Traffic management schemes that remove traffic routes through the town centre
- Priority to be given to pedestrians in moving to and around town centre streets
- Pedestrianisation of town centres

8.1.7 Objective 5 - Improving town centre accessibility:

- New orbital roads in Derry to reduce travel times to town centres by all road-based modes
- New urban roads and traffic management to reduce travel times to town centres by all road-based modes
- Foyle Metro and Strabane town bus service improvements options and identified against Objective 2
- Improved walking and cycling options identified against Objective 3
- Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion
- Traffic management schemes that give priority to movements to the town centre
- In the urban area, promotion of development close to public transport hubs and along high quality public transport routes

8.1.8 Objective 6 - Improving public safety including air quality:

- Ensure transport infrastructure is designed and provided to current 'best practice' standards regarding safety
- Ensure that user behaviour regarding safe use of the transport network is monitored and addressed
- Town Centre Parking Strategies that reduce the number of commuter vehicles on the city centre network at peak times and hence improve air quality

8.1.9 Objective 7 - Promoting sustainability and resilience:

- Provision of improved walking facilities in the urban areas to encourage modal shift from private car
- Provision of a network of attractive cycling routes in urban areas to encourage modal shift from private car
- Ensure transport infrastructure is designed, provided and maintained to current 'best practice' standards regarding extreme weather events

9 Appraisal of Options

9.1 Appraisal Approach

9.1.1 For options in the urban area of Derry, where modal choice and traffic routeing is a primary concern, the strategic transport model has been used to estimate the impact quantitatively. Alternative growth scenarios including development close to public transport hubs – ie the city centre have also been tested using the model.

9.1.2 The model has therefore been used to test a number of options in turn:

- Illustrative transport measures, including:
 - Inter-urban Roads
 - Orbital Urban Roads
 - Arterial Urban Roads
 - Intelligent Transport Systems
 - Foyle Metro Buses
 - Cycle Infrastructure Improvements
 - Walking Infrastructure Improvements
 - City Centre Parking Charges.

9.1.3 Additionally, there was a need to explore the cumulative effects and complementarity of implementing a number of measures, as would be the case in practice. The model has therefore been used to test a number of alternative network configurations comprising a combination of measures.

9.1.4 The results and conclusions drawn from the model testing were supplemented by qualitative assessment to take account of impacts beyond the Derry Urban Area.

9.2 Results of Appraisal

9.2.1 The results of the appraisal are summarised below in order of objective and dealing with each of the options listed in the previous chapter. More detail on the appraisal of the transport measures can be found in Annex B – Appraisal of Transport Measures.

- 9.2.2 **Objective 1 - Improving external linkages**, is specific in requiring improvements in both road and public transport and in identifying the precise locations which focus improvements on the Key Transport Corridors (KTC).
- 9.2.3 All of the options are progressed as feasible within the LDP time frame of 2032 and consistent with the objectives:
- Improved inter-urban roads on KTC
 - Improved 'limited-stop' bus services to key hubs
 - Rail service improvements to and from Coleraine, Belfast and Dublin
 - Park and Ride and Park and Share also have complementary roles in improving local access or increasing vehicle occupancy respectively.
- 9.2.4 **Objective 2 - Improving public transport accessibility**, essentially focuses on rural bus services and connections to essential services such as, for example, health, food shops and banks. There are also issues concerning the quality of the bus service offered in the DUA.
- 9.2.5 It is proposed that the rural transport options are considered in the context of NI-wide policy issues for DfI and other statutory transport providers and would be the subject of separate work. It is the intention that the findings and recommendations will be fed back to the Local Transport Plan and LDP processes as and when the next steps for the wider public transport network are identified and agreed. In outline, the proposal is to develop innovative integrated public transport services, using for example transport models such as 'ride-share'
- 9.2.6 It is also recommended however that the options for land-use policy to focus residential development in Derry and Strabane and to consider alternative models of delivery of essential services including mobile services and use of the internet are taken account of in the Plan Strategy and during the subsequent Plan Policies stage.
- 9.2.7 In the urban area, the modelling conclusions point to the further development of the Foyle Metro services which operate between the outlying residential areas through the City Centre with a clear focus on capturing modal shift from car. Cross city routes should also be trialled to remove the need for interchange and linked to park & ride at the end of the route. In order to justify bus priority, high frequencies will be needed and use of priority measures by rural or inter-urban 'limited stop' buses would also be welcomed. It will be prudent to focus on one cross-city route at a time and the Coshquin, Buncrana Road, Strand Road, City Centre, Foyle Expressway, Craigavon Bridge, Glendermott Road, Altnagelvin route suggests potential.
- 9.2.8 Additionally in the urban area, improved bus services including feeder buses to any high frequency flagship route, to serve new developments should be funded by the developer. Greater density of new development close to public transport hubs and along any flagship routes should also be encouraged.
- 9.2.9 Whilst only a small number of high frequency routes may be sustainable it will be necessary to maintain low frequency services at key times of the day from all parts of the urban area to ensure access to essential retail and health facilities for people with mobility difficulties.

- 9.2.10 **Objective 3 - Improving active travel accessibility**, focuses on improved walking and cycling linkages within Derry and Strabane urban areas. It is proposed that in general all of the options are progressed as feasible within the LTS time frame of 2032 as follows:
- Provision of improved walking facilities in towns
 - Provision of a network of attractive radial cycling routes in Derry and Strabane and greenways between the urban areas and to outlying settlements
 - For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer
- 9.2.11 It is recommended that there is a focus on radial routes in Derry and Strabane in order that it is clear that the expectation is for direct high quality cycle routes which can provide a realistic option for journeys to and through the town centre. The designation of routes also facilitates the proposal to seek developer contributions for infrastructure over and beyond the development site.
- 9.2.12 **Objective 4 - Providing high quality public realm**, generates a number of largely complementary transport options. The following options have been confirmed by the transport model:
- Town Centre Parking Strategies that reduce the number of commuter vehicles in the city centre at peak times by encouraging Park & Stride and modal shift. This can be achieved through the re-location of long-stay parking at the edge of the city centre and ensuring that long-stay pricing exceeds likely bus travel costs.
 - Priority to be given to pedestrians in moving to and around town centre streets to ensure that Park & Stride and public transport are attractive and popular modes and reducing vehicular dominance.
- 9.2.13 The results of the transport model have not been conclusive regarding the following measures:
- New orbital roads in Derry to reduce vehicle flows through the town centre. It is not clear whether an A5 Prehen – new bridge – Coshquin A2 route would attract sufficient traffic to deliver relief to the existing Craigavon Bridge - Foyle Expressway - Queens Quay - Strand Road - Buncrana Road route, especially with an improved Buncrana Road scheme. It is recommended that this scheme tested with a more detailed model at the Local Policies Plan stage.
 - Traffic management schemes that remove traffic routes through the town centre, including a removal of traffic capacity on the Foyle Expressway to the riverside of the Guildhall. Depending on the success of the parking management strategy and complementary bus and cycle improvements, there may be substantial reductions in traffic levels on the Foyle Expressway. It is recommended that more detailed traffic modelling is undertaken to explore the traffic capacity and potential knock-on impacts of a desirable place-making scheme.
- 9.2.14 The further pedestrianisation of the Walled City and/or Strabane town centres is considered outmoded and likely to fail by removing key servicing access and after hours animation. The

recommended options seek to deliver the positive points of pedestrianisation without the attendant negatives.

- 9.2.15 **Objective 5 - Improving town centre accessibility**, generates a number of transport options common with earlier objectives. The following have been recommended under earlier objectives and are re-confirmed as being appropriate under Objective 5:
- Public Transport improvements recommended against Objective 2
 - Improved walking and cycling options recommended against Objective 3
 - Town Centre Parking Strategies recommended against Objective 4 and that provide guaranteed availability of short-stay spaces but at a premium price
 - Traffic management schemes that give priority to pedestrian, cycling and public transport movements to the town centre – to ensure that sustainable modes are the preferred mode of access to the town and city centre without penalising essential goods vehicle servicing.
- 9.2.16 The following options are not recommended at this stage but should be tested further with more detailed models at Local Policies Plan stage:
- New orbital roads in Derry to reduce vehicle flows through the town centre as noted against Objective 4.
 - Removal of traffic capacity on the Foyle Expressway to the riverside of the Guildhall against Objective 4.
- 9.2.17 In addition, it is noted that there are likely to be instances when key development will require essential new urban road infrastructure simply to access and service the development and to facilitate active travel modes. In such instances the urban road infrastructure will be provided by the developer. Therefore the following option is progressed:
- New urban road links (and supporting sustainable transport infrastructure) to facilitate key development funded by developer.
- 9.2.18 **Objective 6 - Improving public safety including air quality**. All options are progressed as feasible within the LTS time frame of 2032 and consistent with the objectives.
- Ensure that user behaviour regarding safe use of the transport network is monitored and addressed
 - Town Centre Parking Strategies that reduce the number of commuter vehicles on the city centre network at peak times and hence improve air quality
- 9.2.19 It is also noted that the 'latest' standards option referring to safety could also include climate change adaptation and therefore the final option can be shared across Objective 6 and 7 as:
- Transport infrastructure to be designed, provided and maintained to 'latest' standards including safety and climate change adaptation.
- 9.2.20 **Objective 7 - Promoting sustainability and resilience**. All options are progressed as feasible within the LTS time frame of 2032 and consistent with the objectives.
- Provision of improved walking facilities in the urban areas to encourage modal shift from private car

- Provision of a network of attractive cycling routes in urban areas to encourage modal shift from private car

9.2.21 It is also noted that the 'latest' standards option referring to climate change adaptation could also include safety and therefore the final option can be shared across Objective 6 and 7 as:

- Transport infrastructure to be designed, provided and maintained to 'latest' standards including safety and climate change adaptation

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10 Indicative Transport Measures

10.1 Introduction

10.1.1 This section presents the range of proposed indicative Transport Measures recommended in the previous section for delivery up to 2032 to guide the development Derry City and Strabane District Council LDP. The measures have been identified using a standard objectives-based approach and have been assessed against the objectives identified earlier in order to identify the most appropriate set of Transport Measures.

10.2 Transport Measures

10.2.1 The transport measures that the study concludes should be considered in further detail are as follows;

- **1: Improved inter-urban roads on KTC**
 The A5 and A6 road schemes, as currently planned, are confirmed as important to the future of Derry as the economic hub of the North West. These schemes will reduce journey times and improve journey time reliability for all users including public transport and freight.
- **2: Improved ‘limited-stop’ bus services to key hubs**
 New ‘limited-stop’ bus services are expected to be identified and prioritised on the Key Transport Corridors and National road network in Donegal to and from Derry. These services will build upon the existing Goldline route network to be listed in the Regional Strategic Transport Network Transport Plan (RSTNTP) under preparation.
- **3. Rail service improvements to and from Coleraine, Belfast and Dublin**
 The current rail services to and from Derry should continue to be improved in line with passenger demands and the improved offer at the Integrated Transport Hub. Particular attention should be given to providing attractive service timings to facilitate commuters to Derry and Belfast and through connections to and from Dublin.
- **4. Park & Ride and Park & Share at strategic locations**
 As an integral part of Derry’s city centre parking strategy, Park & Ride sites will be needed at the edge of the urban area on strategic roads. As an integral part of Derry’s city centre parking strategy, Park & Ride sites will be needed at the edge of the urban area on strategic roads. Where possible bus priority should be in place to assist onward bus journey times into the city centre. Additional Park & Ride parking provision will also be needed in conjunction with inter-urban ‘limited stop’ buses operating from Donegal, Strabane, Limavady and from wider spread catchment towns. Park & Share should also be provided at strategic Park & Ride sites to reduce single car occupancy.

- **5: Integration of passenger transport services including innovative transport models such as 'ride-share'.**

The viability of this measure would be considered in the context of NI-wide policy issues for DfI and other transport providers and would be the subject of separate work.

- **6. Improvements to Foyle Metro with flagship high quality cross-city route**

In order to achieve modal shift from car there should be a further development of the Foyle Metro to outlying residential areas. A core cross city route would provide seamless access to destinations right across the city and, running at high frequency between Park & Ride termini could justify extensive priority over general traffic.

- **7: New urban road links and supporting sustainable transport infrastructure to facilitate key development funded by developer**

The LDP Local Policies Plan stage will generate new zonings or developments that will require new infrastructure to enable their delivery. In some cases new urban road links will be needed simply to provide direct access however walking cycling and public transport infrastructure and services are also likely to be needed. That infrastructure will need to be funded by developers and planned and delivered in conjunction with the transport authority.

- **8: Derry and Strabane Parking Strategies including integrated management of long and short-stay spaces**

Parking Strategies will be required in the urban centres of Derry and Strabane. The location of public parking and its designation as long or short-stay using payment controls will be identified in the strategy at the Plan Policies stage. The strategy will include the location and operation of edge of city Park & Ride and the promotion of Park & Stride near town and city centres. The strategies should remove extraneous traffic which dominates the town centres and improve the turnover of parking spaces and re-balance the modal choice towards the use of walking, cycling and public transport.

- **9: Provision of improved walking facilities in urban areas**

The provision of improved walking facilities in the urban areas of Derry and Strabane are recommended as a core measure of the Transport Plan. Improvements to the walking facilities may require retro-fitting work and may impact on traffic capacity.

- **10: Provision of a network of attractive radial cycling routes in Derry and Strabane with greenways between towns**

The provision of improved cycling facilities in Derry and Strabane will be a central measure of the Transport Plan. As far as practical, the completed cycle networks should serve all residential areas. The provision of a network of radial cycling routes may impact on traffic capacity. The designation and identification of a network of routes will allow its delivery in co-ordination with development proposals.

- **11: Traffic management schemes in urban areas to re-balance modal hierarchy with priority given to pedestrians, cyclists and public transport in Derry and Strabane centres**

Consideration will be given as to how road-space is designated and used by a range of modes (pedestrian, cyclist, bus, goods service vehicle and general traffic) in the urban areas of Derry and Strabane. Traffic management schemes can complement physical infrastructure schemes by amending regulations, signing and lining to achieve appropriate priority and provide safer and more coherent networks. The Councils has aspirations for regeneration of the Queens Quay area which would present an opportunity to re-balance the modal hierarchy within a key part of Derry City Centre.

- **12: Transport infrastructure to be designed, provided and maintained to ‘best practice’ standards to maximise operational performance and safety at all times.**

The reliable operation of transport infrastructure is important for the Council. Rural road safety is also related.

- **13: Ensure that user behaviour regarding safe use of the transport network is monitored and addressed.**

Road safety depends heavily on drivers, pedestrians and cyclists understanding how they should use the infrastructure and the risks of inattention and excessive speed etc. This is especially important for any new pedestrian and cycling facilities and for rural roads.

10.3 Land-Use

10.3.1 Based on the modelling results, the LTS concludes that land-use policy can make a substantial contribution to modifying the demand for transport and the move to more sustainable modes of transport.

10.3.2 At a strategic level, residential development and key services should be focused in Derry City and Strabane centres which are the natural focus of sustainable networks. Additionally in rural areas, alternative models of delivery for essential services should be taken into account, including mobile services and use of the internet.

10.3.3 In the DUA, drawing on the results of the strategic transport model, greater density of new development close to public transport hubs and along any flagship routes should also be encouraged. The focus of new employment into the Derry city centre would be a major advantage in enabling an attractive and efficient urban transport system.

10.4 Transport measures to be confirmed

10.4.1 The results of the transport model have not been conclusive regarding the need for new orbital roads and the removal of traffic capacity on the Foyle Expressway.

10.4.2 It is not clear whether an A5 Prehen – new bridge – Coshquin A2 route would attract sufficient traffic to deliver relief to the existing Craigavon Bridge - Foyle Expressway - Queens Quay - Strand Road - Bunrana Road route, especially with an improved Bunrana Road scheme. It is

recommended that this scheme is tested with a more detailed model at the Local Policies Plan stage.

- 10.4.3 Depending on the success of a parking strategy and complementary bus and cycle improvements suggested to be undertaken in section 8.2, there may be substantial reductions in traffic levels on the Foyle Expressway. It is recommended that more detailed traffic modelling is undertaken to explore the traffic capacity and potential knock-on impacts of a desirable place-making scheme in the vicinity of the Foyle Expressway / Harbour Square.

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ANNEX A – Development of Transport Objectives

1.0 Approach

- 1.1. The North West Transport Plan (NWTP) is being developed to support the achievement of the objectives set out in Draft Programme for Government (PfG)/ Outcomes Delivery Plan, the Regional Development Strategy 2035 – Building a Better Future, Ensuring a Sustainable Transport Future: A New Approach to Regional Transportation and Northern Ireland Changing Gear – A Bicycle Strategy for Northern Ireland and also the objectives of the Council's Development Plan Documents and Community Plans.
- 1.2. The NWTP transport objectives have been developed following careful consideration of the existing strategic policy context and the draft local policies contained in the Derry City and Strabane District Council's (DCSDC) development Plan Preferred Options Paper.
- 1.3. The following approach has been adopted:
 - Develop a number of transport objectives and check their alignment against the Region-wide policies and strategies. The result are displayed in Table 8.1.
 - Confirm alignment of the transport objectives against the objectives in the DCSDC LDP Plan Preferred Options Paper – Table 2

Table A.0.1 – NWTP Objectives alignment with Region-wide Policies and Strategies

NWTP Objective	Draft Programme for Government (PfG)	Outcomes Delivery Plan 2018-19 (ODP)	Regional Development Strategy 2035 (RDS)	New Approach to Regional Transportation (RTS)	NI Changing Gear (Bicycle)
Objective 1: Enhance accessibility by road and public transport from the centre of the City of Derry to Letterkenny, Belfast, gateways and hubs to support greater levels of inward investment and tourism	Outcome 1 (economic focus) Outcome 2 Outcome 13	Outcome 1 Outcome 2 Outcome 11	Aim 1 Aim 2 Aim 5 Aim 8	Objective 1 Objective 2 Objective 4 Objective 8	n/a
Objective 2: Ensure financially viable and sustainable public transport accessibility to essential services including health and education for people living in Derry City and Strabane Council Area	Outcome 2 Outcome 13	Outcome 2 Outcome 11	Aim 2 Aim 4 Aim 5 Aim 7	Objective 2 Objective 4 Objective 5 Objective 8 Objective 10	n/a
Objective 3: Ensure there are attractive and safe active travel networks (walking and cycling) linking all residential, retail, leisure, culture, office and commercial uses within the urban areas of the Derry & Strabane District Council Area	Outcome 2 Outcome 13	Outcome 2 Outcome 11	Aim 1 Aim 2 Aim 4 Aim 5 Aim 6 Aim 7	Objective 2 Objective 4 Objective 7 Objective 8 Objective 9 Objective 10 Objective 12	Objective 1 Objective 2 Objective 3 Objective 4
Objective 4: Deliver high quality public realm in Derry City Centre and Strabane town centre with reduced vehicle dominance, to make them attractive, shared spaces to live and work and improve safety for active modes.	Outcome 2 Outcome 13	Outcome 2 Outcome 11	Aim 1 Aim 2 Aim 4 Aim 6 Aim 7	Objective 4 Objective 7 Objective 8 Objective 9 Objective 10 Objective 12	Objective 1 Objective 2 Objective 3 Objective 4
Objective 5: Enhance transport accessibility and manage traffic congestion to Derry City Centre and Strabane town centre to strengthen Derry’s role as the principal city of the NorthWest	Outcome 2 Outcome 13	Outcome 2 Outcome 11	Aim 1 Aim 2 Aim 4 Aim 5	Objective 4 Objective 9	Objective 1 Objective 2 Objective 3 Objective 4
Objective 6: Enhance safety for all modes of travel, reduce the number and severity of casualties and improve air quality.	Outcome 4	Outcome 4	Aim 4	Objective 7	Objective 4
Objective 7: Protect and enhance the built and natural environment by ensuring our transport systems operate sustainably and can integrate climate change adaptation requirements	Outcome 2	Outcome 2	Aim 6 Aim 7	Objective 3 Objective 11 Objective 12	Objective 1 Objective 2 Objective 3 Objective 4

Table A.0.2 – NWTP Objectives alignment with DCSDC LDP Plan POP Objectives

	LDP Plan POP Objective		NWTP Objective						
			1	2	3	4	5	6	7
Economic Objectives – (a) Creating Jobs and Promoting Prosperity	(i)	To facilitate the creation of approximately 15,000 new jobs, based upon projected population increase, reduced unemployment rates and investment-driven growth, at all skill levels by 2032, at a variety of locations where they are accessible to all members of the community, including those without a private car.	✓	✓	✓		✓		
	(ii)	To accommodate particularly those sectors identified by the Council as targets for step-change growth, as well as those existing sectors identified for incremental growth and significant further job creation							
	(iii)	To recognise and accommodate entrepreneurship and innovation for large, medium and small firms by attracting new firms, facilitating new business start-ups and accommodating expanding businesses, in urban areas and also in rural areas where appropriate location, type and scale	✓				✓		
	(iv)	The need to recognise the importance of self-employment and home working, particularly in rural locations.							
	(v)	To recognise the North West’s significant renewable energy resource and encourage the use of sustainable energy both as a means of generating money for the local economy, attracting investment in enterprise and providing sustainable and affordable lighting and heating for the population.							
	(vi)	To facilitate the City to capitalise on its role as a key cross border and international gateway providing access by road, rail, and sea, while similarly maximising the economic corridor potential for Strabane and the rest of the Council of the cross border and A5 and A6 improvement schemes to the North West.	✓				✓		
	(vii)	Continue the high levels of co-operation between Letterkenny, Derry and Strabane as pursued by the Northwest Regional Development Group, to unlock the potential of the North West and consider opportunities to improve transport / accessibility and public services in sectors such as health and education.	✓	✓			✓		

	(viii)	Continue the regeneration of the City and its promotion as a major tourist destination while respecting its heritage assets, exceptional landscape setting and unique walled core through sensitive development.	✓		✓	✓	✓		✓
Social Development Objectives – (b) Accommodating People and Facilitating Communities	(i)	To further develop Derry as the core settlement and regional gateway city for the North West and Strabane as the main hub. A regenerated city should be the focus for administration, shopping, health, education, commerce, specialised services, cultural amenities and tourism within the North West. Strabane has the potential to benefit from its close proximity to Lifford, an administrative centre for Donegal County Council; strengthen its service provision to local communities and expand its tourism offer by working with our cross border neighbours.	✓	✓	✓	✓	✓		
	(ii)	To protect and consolidate the role of local towns and villages so that they act as local centres for shops and community services meeting the daily needs of their rural hinterlands.		✓	✓	✓			
	(iii)	To provide for vital and vibrant rural communities elsewhere, including in our small settlements, whilst protecting the countryside in which they live by accommodating sustainable growth within the countryside which reflects the extent of existing rural communities.		✓					✓
	(iv)	To provide for approximately 12,000 new homes by 2032 in a variety of formats designed to meet the needs of families, including single parent families, small households, the elderly and disabled and single people, at sustainable locations accessible to community services, leisure and recreational facilities, for those people with and without a car. Housing schemes in Derry city and Strabane particularly will require imaginative and innovative design, including mixed use schemes, and possibly mixed tenure, to ensure that they link into the existing urban fabric.		✓	✓	✓			
	(v)	To recognise the needs of both growing families and carers of the elderly and disabled by accommodating development which allows people to remain within their own communities while not adversely impacting on neighbours or the environment.							

	(vi)	To facilitate the development of new community facilities at locations accessible to the communities they serve, through a variety of modes of efficient public transportation in accordance with the community plan.		✓	✓				
	(vii)	To accommodate cultural differences between communities of all religious backgrounds, whilst promoting “shared spaces” to bring people together with equality of opportunity.				✓			
	(viii)	To close the gap in quality of life for those living in deprived areas.	✓	✓	✓				
Environment Objectives – (c) Enhancing the Environment, Creating Places and Improving Infrastructure	(i)	To protect and enhance the natural and built environment to achieve biodiversity, quality design, enhanced leisure and economic opportunity and promote health and well-being.		✓	✓	✓		✓	✓
	(ii)	To build upon the existing urban assets / built heritage value, but also improving connectivity to existing and new urban soft and hard spaces, so as to achieve enhanced place-making.		✓	✓	✓			
	(iii)	To accommodate investment in power, water and sewerage infrastructure, and waste management, particularly in the interests of public health.							
	(iv)	To improve connectivity between and within settlements and their rural hinterland through accommodating investment in transportation to improve travel times, alleviate congestion and improve safety for both commercial and private vehicles as well as more sustainable modes of transport including buses, walking and cycling.	✓	✓	✓	✓	✓	✓	
	(v)	To improve connectivity though telecommunication which both meets the needs of business and private households whilst reducing the need to travel.							
	(vi)	To enhance transport linkages across the North West particularly between Londonderry, Strabane and Donegal, to and from the air and sea ports and the distribution of traffic from and between transport corridors.	✓						
	(vii)	To improve the public transport service and consider the more efficient integration of land use and transportation. The siting of new developments in locations well served by public transport will provide a sustainable choice of transport.		✓	✓		✓		✓
	(viii)	Protect areas of high scenic value, undeveloped coastline and wetlands from inappropriate development. The attractive natural and historic setting of the City reinforces its uniqueness and brings benefits to the economy and society				✓			✓

	(ix)	Protect and enhance the network of open spaces in the North West. Opportunities should be taken for connections to an enhanced network of pedestrian paths, cycleways and ecological corridors			✓				✓
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2.0 Confirmed Transport Objectives

2.1. The Transport Objectives are confirmed as:

Objective 1: Enhance accessibility by road and public transport from the centre of the City of Derry to Letterkenny, Belfast, gateways and hubs to support greater levels of inward investment and tourism

Objective 2: Ensure financially viable and sustainable public transport accessibility to essential services including health and education for people living in Derry City and Strabane Council Area

Objective 3: Ensure there are attractive and safe active travel networks (walking and cycling) linking all residential, retail, leisure, culture, office and commercial uses within the urban areas of the Derry & Strabane District Council Area

Objective 4: Deliver high quality public realm in Derry City Centre and Strabane town centre with reduced vehicle dominance, to make them attractive, shared spaces to live and work and improve safety for active modes.

Objective 5: Enhance transport accessibility and manage traffic congestion to Derry City Centre and Strabane town centre to strengthen Derry's role as the principal city of the North West

Objective 6: Enhance safety for all modes of travel, reduce the number and severity of casualties and improve air quality.

Objective 7: Protect and enhance the built and natural environment by ensuring our transport systems operate sustainably and can integrate climate change adaptation requirements

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Annex B – Appraisal of Transport Measures

1. General approach to assessment

- 1.1 Transport objectives have been developed consistent with the Community Planning and LDP processes. These objectives are now used to assess alternative options and ultimately recommend a set of Transport Measures.
- 1.2 This objectives-based approach is considered consistent with the “New Approach to Regional Transportation” and suited to the outcome-based approach being applied across policy making in NI, particularly as the objectives have been formulated to take account of the draft PfG Outcomes. The approach is also preferred to a “problems- based” approach that might tend to simply replicate past strategies and measures and make the achievement of new objectives and outcomes particularly difficult.
- 1.3 Table A.3 presents the transport measures recommended for progression to the Transport Plan and confirms their performance against the objectives. The use of √ denotes a direct correlation and/or substantial positive effect whereas √ denotes an indirect and/or significant positive effect.

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Urban Active Travel Networks	4: High Quality Public Realm in town centres	5: Accessibility to Town Centres	6: Improving public safety including air quality	7: Promoting sustainability and resilience
1: Improved inter-urban roads on KTC	√√				√√		
2: Improved 'limited-stop' bus services to key hubs	√√	√			√√		√
3: Rail service improvements to and from Coleraine, Belfast and Dublin	√√	√			√√		
4: Park & Ride and Park & Share at strategic locations		√√			√√		√
5: Integration of rural passenger transport services including innovative transport models such as 'ride-share'	√	√√			√		√
6: Improvements to Foyle Metro with flagship high quality cross-city route		√√	√	√	√√		√
7: New urban road links and supporting sustainable transport infrastructure to facilitate key development funded by developer		√	√√		√√		√
8: Derry and Strabane Parking Strategies including integrated management of long and short-stay spaces		√		√√	√√		√
Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Urban Active Travel Networks	4: High Quality Public Realm in town centres	5: Accessibility to Town Centres	6: Improving public safety including air quality	7: Promoting sustainability and resilience
9: Provision of improved walking facilities in urban areas		√	√√	√	√√	√	√√

10: Provision of a network of attractive radial cycling routes in Derry and Strabane with greenways between towns			√√	√	√√	√	√√
11: Traffic management schemes in urban areas to re-balance modal hierarchy with priority given to pedestrians, cyclists and public transport in Derry and Strabane centres		√	√√	√	√√	√	
12: Transport infrastructure to be designed, provided and maintained to 'best practice' standards to maximise operational performance and safety at all times.			√	√		√√	√√
13: Ensure that user behaviour regarding safe use of the transport network is monitored and addressed.			√	√		√√	

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Annex C – North West Transport Study Modelling

Provided as a separate document.

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Annex D – Derry City and Strabane District Council Transport Evidence Base

Provided as a separate document.

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Annex E – Legacy Road Alignments

Below is a list of Legacy Road Alignments within the DCSDC area that are protected under the relevant extant area plans.

Location	Scheme Name
Derry	Queens Quay widening, Derry
	A2 Buncrana Road widening
	New Buildings to Magheramason widening *
Culmore	New Road Proposal
Castleberg	Between Main Street and Ferguson Crescent **
*A5WTC will supersede proposal	
** Partly constructed at present from Main Street – to be provided in conjunction with the development of adjoining land (known as Parkview Road).	