Department for Infrastructure
An Roinn Bonneagair
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MID AND EAST ANTRIM BOROUGH COUNCIL LOCAL TRANSPORT STUDY

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Contents

List of Figures i

List of Tables ii

1 Introduction 1

1.1. Purpose of Local Transport Study 1

1.2. Study Approach and Document Structure 2

1.3. The Study Area 4

1.4. Report Structure 6

2 Policy Context 7

2.1. Introduction 7

2.2. Planning Policy Context 7

2.3. Draft Programme for Government 9

2.4. The Regional Development Strategy 2035 – Building a better Future (RDS 2035) 10

2.5. Ensuring a Sustainable Transport Future: A New Approach to Regional Transportation (New Approach) 11

2.6. Northern Ireland Changing Gear – A Bicycle Strategy for Northern Ireland 11

2.7. Belfast Metropolitan Area Plan 2015 12

2.8. Belfast Metropolitan Transport Plan 2015 13

2.9. Interim Belfast Metropolitan Transport Plan 13

2.10. Mid and east Antrim Borough Council Context 14

3 Transport Context 17

3.1. Transport Evidence Baseline 17

3.2. Integrated Land Use and Transport Planning 18

4 Growth and Development proposals 19

4.1. Growth in Population and Employment 19

4.2. Town Centre Developments 20

5 Transport Issues and Opportunities 21

5.1. Introduction 21

5.2. Regional connectivity 21

5.3. Accessibility to essential local services 22

5.4. Urban sustainable transport infrastructure in Ballymena, Carrickfergus, Greenisland and Larne 23

5.5. Modal choice for journeys to work and education 27

5.6. Road network speeds 28

5.7. Urban road collision history 29

5.8. Parking provision in Ballymena, Carrickfergus, Greenisland and Larne 30
5.9. Legacy Road Alignments 32
6 Transport Objectives 34
6.1. Introduction 34
6.2. Objectives 34
7 Assembly of the Transport Study 44
7.1. Introduction 44
7.2. General approach to assessment 44
7.3. Development of Options 44
7.4. Assessment of options and selection of recommended Transport Measures 47
7.5. Confirmation of Transport Measures Assessment against the Objectives 49
8 Conclusion – The Transport Study 63
A. Annex 1 – Transport Evidence Base for Mid and East Antrim Borough Council 65
Section 1 – Regional Connectivity by Road and Public Transport 67
Section 2 – Urban Walking and Cycling Infrastructure and Bus Service 78
Section 3 – Travel to Work Destinations 90
Section 4 – Modal Choice for Journeys to Work and Education across the Council Area 94
Section 5 – Road Network Speeds at Peak and Off-Peak Time Periods 99
Section 6 – Road Collision History 105
Section 7 – Parking Provision 110

List of Figures

Figure 1-1 - Study Methodology 3
Figure 1-2- Belfast Metropolitan Transport Plan - Local Transport Study - Study Area 4
Figure 1-4 – Mid and East Antrim Borough Council Key Characteristics Compared to NI Average 5
Figure 2-1 - Community Planning Themes and Outcomes (Source: Mid and East Antrim Borough Council – Community Plan) 15
Figure A-1 – OSNI Map of NI Road and Rail Transport Network 68
Figure A-2 – Map of Travel Time by Car from Ballymena at AM Peak Speed 69
Figure A-3 - Map of Travel Time by Car from Carrickfergus at AM Peak Speed 70
Figure A-4– Map of Travel Time by Car from Greenisland at AM Peak Speed 71
Figure A-5 – Map of Travel Time by Car from Larne at AM Peak Speed 72
Figure A-6 – Map of Travel Time by Public Transport from Ballymena from 7:00am 73
Figure A-7 – Map of Travel Time by ublic Transport from Carrickfergus from 7:00am 74
Figure A-8 – Map of Travel Time by Public Transport from Greenisland from 7:00am 75
Figure A-9 – Map of Travel Time by Public Transport from Larne from 7:00am 76
Figure A-10 – Map of Travel Time by Public Transport from Mid and East Antrim to Health Facilities during AM Peak 77
Figure A-11 – Map of Pedestrian Infrastructure in Ballymena – Key Radial Footway by Width and Crossing Type 79
Figure A-12 – Map of Pedestrian Infrastructure in Carrickfergus – Key Radial Footway by Width and Crossing Type 80
Figure A-13 – Map of Pedestrian Infrastructure in Greenisland – Key Radial Footway by Width and Crossing Type 81
Figure A-14 – Map of Pedestrian Infrastructure in Larne – Key Radial Footway by Width and Crossing Type 82
Figure A-15 – Map of Cycling Infrastructure in Ballymena 83
Figure A-16 – Map of Cycling Infrastructure in Carrickfergus 84
Figure A-17 – Map of Cycling Infrastructure in Greenisland 85
Figure A-18 – Map of Cycling Infrastructure in Larne 86
Figure A-19 – Map of Town Bus Services in Ballymena 87
Figure A-20 – Map of Town Bus Services in Carrickfergus 88
Figure A-21 – Map of Town Bus Services in Larne 89
Figure A-22 – Map of Percentage of Travel to Work Journeys from Ballymena to other LGDs (in 2011) 91
Figure A-23 – Map of Percentage of Travel to Work Journeys from Carrickfergus to other LGDs (in 2011) 92
Figure A-24 – Map of Percentage of Travel to Work Journeys from Larne to other LGDs (in 2011) 93
Figure A-25 – Chart of Modal Choice for Journey to Work in Mid and East Antrim 95
Figure A-26 – Graph of Modal Choice for Journey to Work by Distance in Mid and East Antrim 96
Figure A-27 – Chart of Modal Choice for Journey to Education in Mid and East Antrim 97
Figure A-28 – Graph of Modal Choice for Journey to Education by Distance in Mid and East Antrim 98
Figure A-29 – Map of Average Off Peak Speeds (mph) for Roads in Mid and East Antrim 100
Figure A-30 – Map of Average Peak Speeds (mph) for Roads in Ballymena 101
Figure A-31 – Map of Average Peak Speeds (mph) for Roads in Carrickfergu 102

Figure A-32 – Map of Average Peak Speeds (mph) for Roads in Greenisland 103
Figure A-33 – Map of Average Peak Speeds (mph) for Roads in Larne 104
Figure A-34 – Map of Parking Provision Locations in Ballymena 111
Figure A-35 – Map of Parking Provision Locations in Carrickfergus 114
Figure A-36 – Map of Parking Provision Locations in Greenisland 117
Figure A-37 – Map of Parking Provision Locations in Larne 119

List of Tables

Table 1-1- Mid and East Antrim Borough Council Settlements and 2011 Population 4
Table 1-2 – Mid and East Antrim Borough Council Key Characteristics Compared to NI Average 5
Table 5-1 - Alignment with wider strategy aims/ objectives and LDP POP objectives 42
Table 6-1 - Assessment of Transport Measures 51
Table A-1– Number of Road Traffic Casualties by Severity and Road User Type in Ballymena, 2007-2016 106
Table A-2– Number of Road Traffic Casualties by Severity and Road User Type in Carrickfergus, 2007-2016 107
Table A-3 – Number of Road Traffic Casualties by Severity and Road User Type in Greenisland, 2007-2016 108
Table A-4 – Number of Road Traffic Casualties by Severity and Road User Type in Larne, 2007-2016 109
Table A-5 – Off-Street Parking Provision by Spaces and Type in Ballymena 112
Table A-6 – On-Street Parking Provision in Ballymena 113
Table A-7 – Off-Street Parking Provision by Spaces and Type in Carrickfergus 115
Table A-8 – On-Street Parking Provision in Carrickfergus 116
Table A-9 – Off-Street Parking Provision by Spaces and Type in Greenisland 118
Table A-10 – On-Street Parking Provision in Greenisland 118
Table A-11 – Off-Street Parking Provision by Spaces and Type in Larne 120
Table A-12 – On-Street Parking Provision in Larne 121

1 Introduction

Note: This Study is part of the Belfast Metropolitan Transport Study (BMTS). The BMTS has yet to be completed and therefore this study is provided in draft form. It will remain as a draft until the BMTS is finalised and until then it is subject to change. The Department has agreed that the Mid and East Antrim Borough Council (MEA) may use the Draft MEA LTS as a technical supplement to the MEA 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. An initial Belfast Metropolitan Transport Plan (BMTP) Local Transport Study (LTS) has been prepared by the DfI in collaboration with the Councils that fall, at least in part within the Belfast Metropolitan Urban Area (BMUA) to inform their LDP – Draft Plan Strategy stage.

1.1.3. As Mid and East Antrim Borough Council falls within the BMTP area, the draft Mid and East Antrim Local Transport Study (LTS) has been prepared by the Department for Infrastructure (DfI) as part of the BMTS.

1.1.4. 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 Mid and East Antrim Borough Council Local Development Plan (LDP) – Draft Plan Strategy stage.

1.1.5. The purpose of the BMTS is to set out an objective evidence-based assessment in relation to current and future transport issues in the context of the strategic direction set for transport in the draft PfG, the Councils' growth ambitions and future indicative transport measures required to facilitate Council growth ambitions during the LDP period to 2035 in the BMTP 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.

1.1.6. The purpose of the MEA LTS is to provide clarity on the transport measures that DfI expect to deliver during the LDP period to 2030 in the Mid and East Antrim area and to ensure that the transport network and transport needs of the Mid and East Antrim area are taken into account in planning for its future development.

1.1.7. These transport measures are developed in the LTS in line with the draft Programme for Government, current government policies and with the direction of the Mid and East Antrim

Borough Council Community Plan, LDP Preferred Options Paper and emerging Draft Plan Strategy.

1.1.8. The LTS presents the range of measures for walking, cycling, public transport and roads for the period up to 2030.

1.1.9. 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, it should be noted that the **measures are illustrative only and do not represent a commitment to any particular scheme by the Department**. In general terms the measures have been selected in order to ascertain the likely strengths and weaknesses of the modes of transport.

1.2. Study Approach and Document Structure

Approach

1.2.1. The methodology approach adopted by the Study is summarised in Figure 1.1 as a sequence of tasks. These tasks are documented in turn in this Study report.

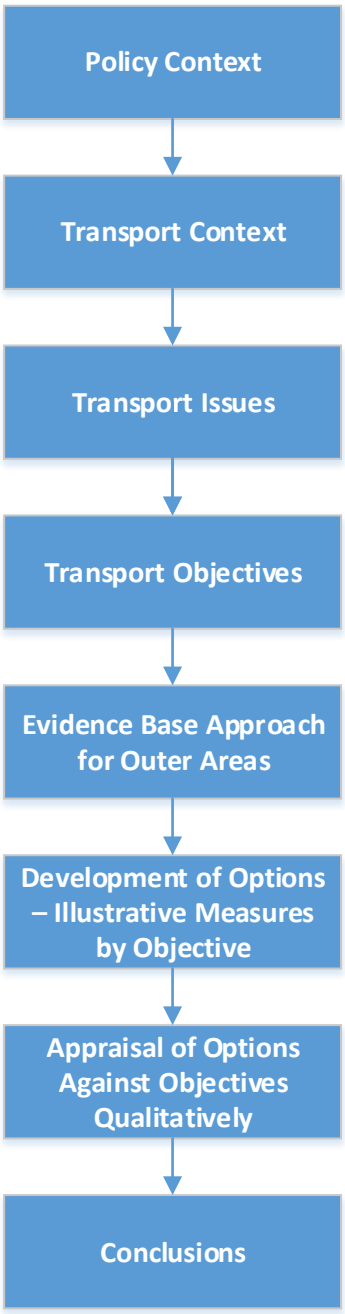


Figure 1-1 - Study Methodology

1.2.2. The approach has been to produce a transport evidence base with a focus on free standing towns and the rural area of the Council. An objective review of the evidence provides a qualitative narrative on the potential transport options.

Technical Annex

1.2.3. This document includes by a technical annex which includes detail relating to the towns within the Council area.

1.2.4. The remainder of this chapter considers the general characteristics of the council area before outlining the structure of the report.

1.3. The Study Area

1.3.1. The Mid and East Antrim Borough Council LTS is aligned to the Mid and East Antrim Borough Council area, as shown in Figure 1.2.

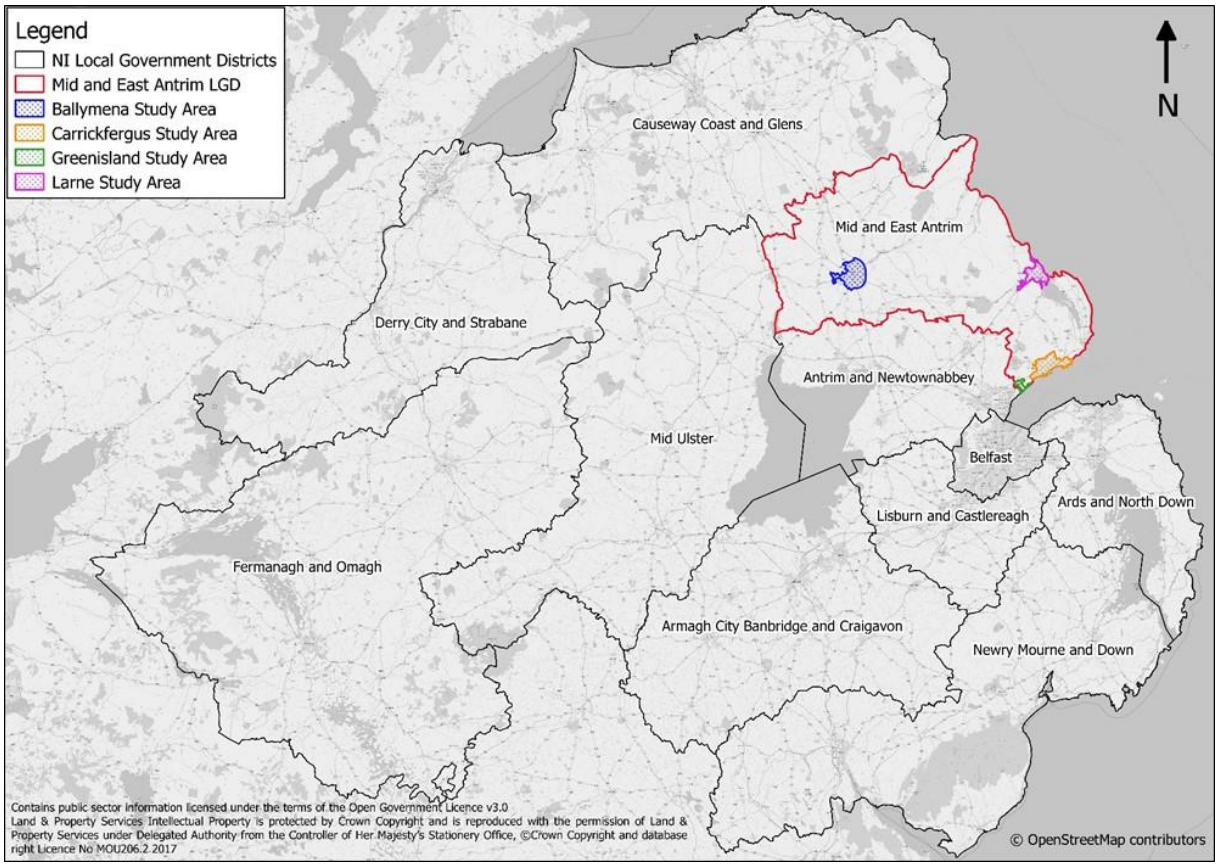


Figure 1-2- Belfast Metropolitan Transport Plan - Local Transport Study - Study Area

1.3.2. Mid and East Antrim Borough Council has three main towns, Ballymena, Carrickfergus and Larne, with the small town of Greenisland having the next largest population. Further detail on the main settlements within the council area are summarised in Table 1.1.

Table 1-1- Mid and East Antrim Borough Council Settlements and 2011 Population

SETTLEMENT	USUAL RESIDENTS 2011
Ballymena	29551
Carrickfergus	27998
Larne	18755
Greenisland	5486
Whitehead	3802
Ahoghill	3417
Broughshane	2879
Cullybackey	2593
Kells / Connor	2073
Carnlough	1512
Ballycarry	1375

Portglenone	1177
Ballystrudder	990
Ballygalley	821
Glynn	628
Cargan	588
Glenarm	568
Other	31125
Total Council Population	**135338**

1.3.3. The Council area consists mainly of a rural hinterland which is interspersed with smaller settlements and is ultimately supported by 3 main towns. Figure 1.3 summarises a number of the area's key demographic and transport- related characteristics and expresses these in terms of their percentage variation from a Northern Ireland (NI) average council area. The full details are provided in Table 1.2.

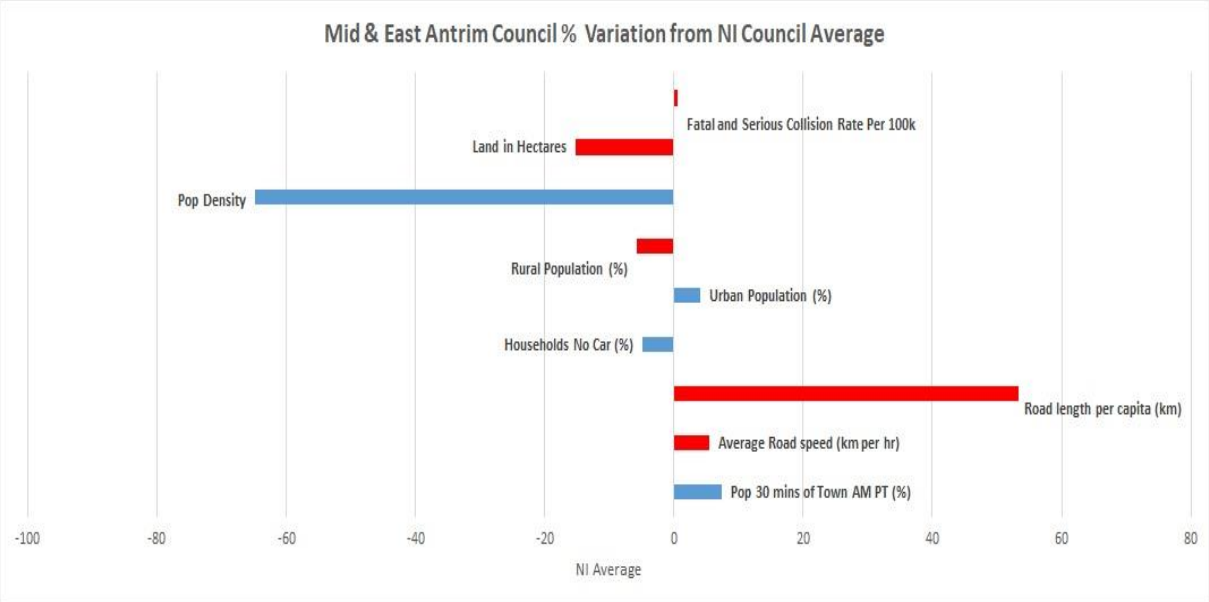


Figure 1-3 – Mid and East Antrim Borough Council Key Characteristics Compared to NI Average

Table 1-2 – Mid and East Antrim Borough Council Key Characteristics Compared to NI Average

Key Characteristic	Mid & East Antrim	NI Average (Council Area)	% Variation from NI Average
Pop 30 mins of a Town AM Peak PT	73%	68%	7
Average Road Speed (kmph)	65.13	61.79	5
Road Length per Capita (km)	0.02	0.02	53
Households with no car (%)	19.5%	20.5%	-5
Urban Population (%)	60.4%	58.01%	4
Rural Population (%)	39.6%	38%	-6
Pop Density	1.29	3.66	-65
Land in Hectares	104570	123294	-15
Fatal and Serious Collision Rate Per 100k	45	44.8	0

1.3.4. Mid and East Antrim Borough Council is a moderately sized council as measured by area and makes up 8% of the NI area, although the council area is under the NI average. Its population density is 1.29 compared to the NI council average of 3.66. 60% of the population live in towns of 5000 or more which is consistent when compared to the NI average of 58%. The moderately sized area translates to the moderate road length per capita which is consistent with the NI average. The predominantly rural nature of the roads leads to road speeds which are slightly above the NI average. The dispersed rural population results in a slightly higher than average car dependency with only 19.5% of households not owning cars. However, 73% of the population are able to access a main town within 30 minutes using public transport which is above the NI-wide value of 68%.

1.4. Report Structure

1.4.1. The structure of the LTS is as follows:

- Chapter 2 provides the Policy Context that outlines the principal policies and strategies that have informed the preparation of the LTS;
- Chapter 3 outlines the Transport Evidence Baseline in the form of regional connectivity, accessibility and transport networks;
- Chapter 4 outlines population growth and development proposals;
- Chapter 5 outlines a summary of the Transport issues and opportunities as developed from an interpretation of the Transport Evidence baseline;
- Chapter 6 presents the Transport Objectives which have been developed in light of the strategic policy context and local Mid and East Antrim Borough Council issues and direction as set by the Community Plan, the Preferred Option Paper and the emerging Draft Plan Strategy;
- Chapter 7 commences with a discussion of transport options and assesses their merits before presenting the recommended Transport Measures.
- Chapter 8 summarises the conclusions of the Transport Study and the recommended measures.

2 Policy Context

2.1. Introduction

2.1.1. The MEA Council's Community Plans set out the Council's ambitions and the LDP process aims to map out the delivery of these ambitions. The Council has published a Preferred Options Paper (POP), an initial plan preparation consultation paper designed to stimulate debate and encourage feedback on key issues of strategic significance which are likely to influence the direction of the LDP.

2.1.2. The LDP Plan Strategy (LDP PS) will set out a vision and strategic objectives of the council with the expectation of being achieved by 2030, for the benefit of the entire community. The LDP PS will go through Independent Examination by the Planning Appeals Commission (PAC).

2.1.3. 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.

2.1.4. 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; and
- Northern Ireland Changing Gear – A Bicycle Strategy for Northern Ireland.

2.1.5. These strategic documents are NI-wide and all Council areas are required to take full cognisance of their content and to plan accordingly.

2.1.6. This LTS has been developed to support the achievement of both the objectives set out in the above documents, and also the objectives of the Council's Community Plan.

2.2. Planning Policy Context

Reform of local government & development planning

2.2.1. Reform of 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 SPSS 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 Plans

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 BMTP councils have all completed this initial task by publishing their POPs. Each of the POPs include direct references to transport in the documents' objectives. The objective can be categorised as economic, social or environmental.

2.2.11. Common transport themes run through the five POPs including the promotion of sustainable transport including public transport and active travel as well as forms of management the city/town centre demand for private vehicles such as parking restraints. In addition, there is an acceptance within the documents that growth should be focused within the existing cities/towns where levels of sustainable transport provision is infrastructure is generally higher.

2.2.12. In terms of sustainability, the growth aspirations across the BMTP area have the potential to produce a greater number of trips and careful mitigation will be needed to reduce the number undertaken by private car. The complementary investment in green transport and Active Travel would be critical in ensuring sustainable long-term development.

2.3. Draft Programme for Government[1]

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.

[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.

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 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.

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. Belfast Metropolitan Area Plan 2015

2.7.1. The Belfast Metropolitan Area Plan 2015 (BMAP) remains unadopted. The Draft Belfast Metropolitan Area Plan is therefore referred to here as the most relevant land use plan. The Draft BMAP was prepared in parallel with the (non-statutory) Belfast Metropolitan Transport Plan (BMTP) to ensure that as far as possible the plans are mutually supportive. In this respect the land use locations in the Plan were closely linked with the priorities and proposed transport investment in BMTP, outlined separately below.

2.7.2. In developing BMTP attention was paid to improving accessibility to key strategic sites and regeneration areas identified by the RDS and progressed by the draft Plan. In addition the Plan

took into account the land use requirements of transportation infrastructure by identifying protection lines for planned transport schemes and abandoning protection for schemes which were no longer to be implemented

2.7.3. The Draft Plan includes two Transport Policies:

- TRAN 1 – Parking Standards within Areas of Parking Restraint. These standards were expected to be varied only in appropriate circumstances and on the basis of empirical evidence.
- TRAN 2 – Publicly Owned Off-street Surface Car Parks within City and Town Centres. This effectively required parking supply levels to be maintained following the re-use of existing central car parks.

2.8. Belfast Metropolitan Transport Plan 2015

2.8.1. The Belfast Metropolitan Transport Plan 2015 (BMTP 2015) is non statutory and was prepared by the then Department for Regional Development as a technical supplement for the Draft BMAP and unadopted BMAP 2015. The BMTP 2015 includes a phased and costed implementation programme of transport schemes to 2015. The implementation of these proposals was subject to detailed economic appraisal, funding availability and statutory processes.

2.8.2. BMTP included schemes arranged along four modal themes:

- Walking and Cycling – such as walking corridors and cycle routes;
- Public Transport – such as bus and rail schemes;
- Highway – such as road schemes; and
- Management measures – such as parking controls or traffic management used to control traffic and influence travel demands and patterns.

2.8.3. Whilst many of the core objectives of the BMTP 2015 remain relevant, the wider strategic framework has changed with the publication of the RDS 2035 and a new RTS and therefore BMTP 2015 is considered outdated. Therefore schemes and transportation initiatives included in the BMTP 2015 will require further consideration as part of the development of the new Belfast Metropolitan Transport Plan which will accompany the Local Policies Plan

2.9. Interim Belfast Metropolitan Transport Plan

2.9.1. The Interim Belfast Metropolitan Transport Plan set out a short term framework for the planning and delivery of transport infrastructure in and providing access to Belfast City Centre covering the period from 2017 to 2020. The framework was prepared by the Department in consultation with Belfast City Council with the aim of ensuring an integrated approach in the development of transport infrastructure and services supporting the regeneration of Belfast City Centre in line with wider strategic objectives as set out in the draft PfG and supported by the Belfast Agenda. In this context, the framework presented a 'refresh' of the policies and schemes set out in the BMTP.

2.9.2. The Framework aimed to ensure a joined-up approach between the Department as the transport authority and Belfast City Council as the planning authority in the development of Belfast City Centre. In particular it sought to ensure clarity as to both the major transport priorities and the strategic focus of transport policy and investment.

2.9.3. While the Interim BMTP was concerned with developments and transport infrastructure within Belfast City Centre, in order to influence travel choices to the city centre, the framework also commented on the balance of commuter priorities on the major radial corridors which deliver commuters to and from the City Centre.

2.10. Mid and east Antrim Borough Council Context

Preferred Options Paper

2.10.1. Mid and East Antrim Borough Council published their POP in June 2017. The vision of this document is "Mid and East Antrim will be shaped by high quality, sustainable and connected places for people to live, work, enjoy, invest and visit, so as to improve the quality of life for all".

2.10.2. Going forward Mid & East Antrim Borough Council are committed to delivering the core planning principles as set out in SPPS, which are:

- Improving Health and Well-being;
- Creating and Enhancing Shared Space;
- Supporting Sustainable Economic Growth;
- Supporting Good Design and Positive Place Making; and
- Preserving and Improving the Built and Natural Environment.

Community Plan

2.10.3. The Mid and East Antrim Borough Council 2030 Community Plan sets out the vision for "a strong, vibrant, safe and inclusive community, where people work together to improve the quality of life for all".

2.10.4. The shared values and principles which underpin this vision are presented in Figure 2.1 and summarised as follows:

- Sustainable Jobs and Tourism;
- Progress in Education;
- Good Health and Wellbeing;
- Community Safety and Cohesion; and
- Our Environment.

2.10.5. These themes are fundamental in guiding the emerging vision and strategic objectives of the Local Development Plan – Plan Strategy and the Local Transport Study.

Figure 2-1 - Community Planning Themes and Outcomes (Source: Mid and East Antrim Borough Council – Community Plan)

3 Transport Context

3.1. Transport Evidence Baseline

3.1.1. Figures 1.2 and 1.3 in Section 1 – Introduction, have provided a demographic and transport context for the Mid and East Antrim Borough Council area, noting in particular its predominantly rural nature and high car dependency. This section introduces a more detailed transport evidence baseline for the Mid and East Antrim Borough Council area as presented in Annex 1.

3.1.2. The evidence 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 undertaken by the Department and fieldwork surveys on behalf of the Department. The evidence baseline focuses on the performance of the transport networks and features accessibility and modal choice.

3.1.3. Annex 1 presents the following in turn.

- Regional connectivity from Ballymena, Carrickfergus, Greenisland and Larne by road and public transport – what time is required to travel to the economic centres and travel gateways of Northern Ireland?
- Accessibility to health services by public transport from across the Council area – to what degree do current rural bus services allow residents of the rural areas to reach essential health facilities?
- Urban walking and cycling infrastructure in Ballymena, Carrickfergus, Greenisland and Larne – how well developed are the current networks?
- Local urban bus services in Ballymena, Carrickfergus, Greenisland and Larne – to what degree do they provide coverage for urban residents?
- Travel to work journeys – where do residents of Mid and East Antrim Borough Council work?
- Modal choice for journeys to work and education across the Council area – how far do people travel to work and school / college and what mode of travel do they use?
- Road network speeds at peak and off-peak time periods – to what degree is the road network congested?
- Road collision history in Ballymena, Carrickfergus, Greenisland and Larne – how many people are injured or killed on roads and streets in the towns and which modes are most vulnerable?
- Parking provision in Ballymena, Carrickfergus, Greenisland and Larne – how many parking spaces are there in the town centres, where are they located and how are they designated for use?

3.1.4. Interpretation of the evidence and identification of transport issues and opportunities are described in the Section 5 – Transport Issues and Opportunities.

3.2. Integrated Land Use and Transport Planning

3.2.1. 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.

3.2.2. 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.

3.2.3. 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.

4 Growth and Development proposals

4.1. Growth in Population and Employment

4.1.1. The Mid and East Antrim Borough Council POP foresees a population increase of 3.6% with 6,231 new houses required over the period 2015 – 2030. The proposed allocation of housing would locate approximately 58.5% of the new houses in the main towns, with the remainder allocated between the smaller towns, villages, small settlements and the countryside. Additional population and new houses (acknowledging that existing housing commitments currently stand at 10,304 units) will lead to increases in the demand for travel. This gives rise to the following transport issues:

- Addressing additional congestion which would be created by an increase in private cars. The 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.

- Housing growth in the main towns is 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.

- Outside the main towns, most settlements are located on the public transport network. Those that have frequent and direct bus services to Ballymena, Carrickfergus, Greenisland and Larne offer the best locations for sustainable transport opportunities, offering people an alternative to the private car. From a transport perspective these should be the focus of most new housing (and taking into account the Housing Evaluation Framework, RDS)

- Houses in the countryside are unlikely to contribute to a meaningful shift towards alternative transport modes.

4.1.2. 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 25% by 2030 whilst average household size is expected to fall to 2.37 by 2030.

4.1.3. The Preferred Options Paper proposes that 8,000 new jobs may be required over the period 2015 – 2030. The POP outlines that there is approximately 162ha of undeveloped land zoned for economic development within the Borough. There is also the potential to add an additional

20ha of land zoned for employment in Ballymena, where there is currently a limited choice of zoned sites available. Development of these lands will require careful consideration from a transportation context.

4.1.4. The transport impacts differ according to the type of employment and are generally as follows:

- Service industry, such as a business park, would generate a relatively high number of people movements and a primary concern should be its accessibility by public transport, walking and cycling.
- Manufacturing would require a balance concerning accessibility for employees and the traffic impacts of heavy goods vehicles carrying materials and finished goods to and from the site.

4.1.5. However, in both cases it should be noted that the location, and in particular its distance from residential areas will dictate whether accessibility by walking and cycling is practical and whether public transport becomes the primary consideration for employee accessibility. In all cases the consideration of safety for all road users will remain a primary concern.

4.2. Town Centre Developments

4.2.1. There is the potential for change in a number of town centres throughout the Council area. The POP has identified a number of potential changes such as:

- Consolidation of the Northern Regional College sites in Ballymena to the Farmlodge site;
- Redevelopment and relocation of the Seven Towers Leisure Centre and new Civic Offices in Ballymena.

4.2.2. The primary opportunity may be the release of a number of town centre sites which could be developed in a sustainable fashion. In general terms the locations offer:

- Town centre locations which may be accessible locally by walking and cycling and more widely by bus services to the town centre;
- Opportunities to plan and deliver attractive new walking and cycling linkages; and
- Opportunities to provide and manage car parking as part of an integrated parking strategy for the town.

5 Transport Issues and Opportunities

5.1. Introduction

5.1.1. This chapter provides an interpretation of the Evidence Baseline provided in Annex 1 and proposes issues and opportunities for transport measures to be considered for inclusion in the Draft Transport Study.

5.1.2. The following are dealt with in turn:

- Regional connectivity from Ballymena, Carrickfergus, Greenisland and Larne by road and public transport
- Accessibility to essential local services by public transport from across the Council area
- Urban walking and cycling infrastructure and bus services in Ballymena, Carrickfergus, Greenisland and Larne
- Modal choice for journeys to work and education across the Council area
- Road network speeds at peak and off-peak time periods
- Road collision history in Ballymena, Carrickfergus, Greenisland and Larne
- Parking provision in Ballymena, Carrickfergus, Greenisland and Larne

5.2. Regional connectivity

5.2.1. The towns of Ballymena, Carrickfergus, Greenisland and Larne are well connected by road to Belfast, Derry/ Londonderry and the transport gateways, including Larne Harbour, by the Key Transport Corridors. However, travel times are relatively short on account of the towns' locations, motorway access and the predominantly dual carriageway roads. Travel times to Belfast from Larne are, on average 10 minutes longer than from Carrickfergus due to the town's more north east location, see Figures A-2 – A-5.

5.2.2. The completion of the A6 road dual carriageway upgrades defined as "Randalstown to Castledawson" and "Dungiven to Drumahoe" will provide substantial improvements to road standards, journey times and safety from the Mid and East Antrim Borough Council area to the western region and onwards to Derry / Londonderry. Both schemes are scheduled to be complete and in operation by 2022.

5.2.3. The A6 upgrade schemes build upon the completion of the A8 Belfast to Larne Dualling as well as the A2 Shore Road at Greenisland widening. Both schemes, which were completed and opened in December 2015 have improved accessibility from the Council area to Belfast. Similarly, the A26 dualling Glarryford to Drones Road which opened in 2017 has reduced journey times and improved accessibility to the north, including Coleraine and Derry/Londonderry. In terms of further upgrades to the strategic road network, these will be considered as part of the Regional Strategic Transport Network Transport Plan which is currently being developed by DfI. However at this stage it is not anticipated that any further major strategic road improvements will be planned during the LDP period to 2030.

5.2.4. With respect to the local road network, DfI will continue to implement Minor Improvement Schemes as required which will typically consist of junction upgrades, collision remedial measures, traffic management schemes and enhancements to pedestrian measures.

5.2.5. Public transport travel times are dependent on the bus and rail network coverage and timetable integration. The Goldline 'limited-stop' bus network is important in providing attractive travel times but overall plays a limited role as its focus is primarily the A6/ M2 corridor and Belfast. There are additional services which use the A2, A8 and A26, but these are less frequent. There are two rail lines with services; Belfast to Ballymena and onwards to Coleraine and Londonderry and Belfast to Greenisland, and onwards to Carrickfergus and Larne. As a consequence, unlike car travel times, the pattern of public transport travel times are very unevenly distributed as they require interchanges and hence long journey times to reach locations to the north and south of the M2/ A6 corridor. From the towns of Ballymena, Carrickfergus, Greenisland and Larne, journeys of between 30mins to 1 hour are available to Belfast by using either Bus or Rail. With the exception of Ballymena to Coleraine, which has a journey time of up to 45 mins by either Bus and Rail, all other inter-urban services can take considerably longer.

5.2.6. To support the review of public transport coverage within the Mid and East Antrim Borough Council area, TRACC analysis was undertaken. Figures A-6 – A-9 shows that travel times to Belfast are under 1 hour, whereas journeys to Derry/Londonderry can be over 3 hours. Within the Mid and East Antrim Borough Council area, journey times between the main towns can range from 30 minutes to over 2 hours, due to limited provision and a lack of inter-urban services. While travel to the west typically results in lengthy travel times, the majority of key travel locations are within reasonable travel intervals.

5.2.7. The A6 dual carriageway improvements which are currently under construction should facilitate improvements to Goldline services to Derry / Londonderry. The towns of Carrickfergus, Greenisland and Larne benefit from direct inter-urban public transport connections. Ballymena however, only has a direct bus service to Larne and it would therefore appear to be a case for giving special attention to strengthening services from Ballymena to the other main towns, in particular Carrickfergus.

5.2.8. In Ballymena, Carrickfergus, Greenisland and Larne, and at strategic locations along the routes, park and ride facilities may have a role to play in encouraging use of Goldline services for longer journeys. These facilities may be especially important for residents of smaller towns and villages and outlying rural areas.

5.3. Accessibility to essential local services

5.3.1. Figure A-10 shows accessibility by public transport to health facilities. The maps show that there is fair accessibility to health services in the morning peak period.

5.3.2. At a glance, Figure A-10 shows that all health centres within the Mid and East Antrim Borough Council area are accessible by public transport. In general, it is possible to travel to a health facility within 20 minutes of each town centre.

5.3.3. 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. Bus services and their frequency from towns/villages to the main Hubs of Ballymena, Carrickfergus, Greenisland and Larne are limited. Therefore, residents outside of the main towns have limited travel options when visiting health facilities. Without improvements in services car dependency will likely continue.

5.3.4. 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.

5.3.5. 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 is the subject of separate current work. The findings and recommendations will be fed back to the Local Transport Plan and LDP processes.

5.4. Urban sustainable transport infrastructure in Ballymena, Carrickfergus, Greenisland and Larne

Ballymena

5.4.1. Figure A-11 shows details of the pedestrian infrastructure in Ballymena. The length of radial road within the development limit in Ballymena totals 48.5km. Only a length totalling 4.5km do not have footways. There is a consistent provision of footway breaks along the radial routes. The majority of these are dropped kerbs.

5.4.2. Within Ballymena town centre there are 74 crossing facilities for pedestrians and cyclists. The most common form of provision is Pedestrian Refuge Islands (32). There are also 16 signals with pedestrian crossings.

5.4.3. Figure A-15 shows details of the cycling infrastructure in Ballymena. There are 5.5 km of cycle network infrastructure in Ballymena as follows:

- 1.6 km shared cycleway / pedestrian footway
- 0.9km advisory cycle lane
- 0.8km cycle track with highway
- 2.25km off-road traffic free cycle route.

5.4.4. There is considered to be less than adequate provision of active travel infrastructure in Ballymena as whilst footways and formal crossing points are provided along key radials and in the town centre, the majority of footways are less than 2.5m in width. The cycling infrastructure is limited in coverage and predominantly serves the north eastern area along Broughshane Road and access to the Ecos Centre.

5.4.5. Figure A-19 shows details of the local bus network in Ballymena. Ballymena has 4 town centre bus services that operate circular routes at 1 hourly headways through the morning on weekdays and Saturday. The 4 routes serve the Braid Valley Hospital and the north east of the town (Ulsterbus service 324A) between 7am and 6pm, Ballykeel and the south sector (Ulsterbus service 324B) between 7am and 6pm, Galgorm and the west sector (Ulsterbus service 324C) between 9am and 6pm, and Carninny and the north sector (Ulsterbus service 324D) between 9am and 6pm. The services operate throughout the day including at peak and school periods. In particular the services provide accessibility to town centre for residents who may live up to 4km from the 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.

5.4.6. Ballymena Rail Station operates services to both Belfast and Derry/Londonderry and connections to a number of other key locations within NI. These services call at Ballymena Rail Station on an hourly basis, with half hourly services at peak hours. A regular hourly service also operates at weekends.

5.4.7. The Rail Station is located alongside the Bus Station, so providing the ability to interchange modes and potentially minimise the need for car travel. The car park at the rail station has 222 spaces and provides a park and ride facility.

5.4.8. The public transport services for Ballymena could be improved by:

- Extending the hours of operation for the town centre bus service, especially to support the town centre evening economy;
- Increasing peak hour rail service frequency and/ capacities;
- Reviewing the demand for Park and Ride at the rail station with a view to increasing capacity; and
- Consider the potential to redevelop the current Bus Station and Rail Station to provide a modern multi-modal transport hub.

Carrickfergus

5.4.9. Figure A-12 shows details of the pedestrian infrastructure in Carrickfergus. The length of radial road within the development limit in Carrickfergus totals 14.4 km. A length totalling 1.2 km do not have footways. There is a consistent provision of footway breaks along radial routes. The majority of these are dropped kerbs.

5.4.10. Within Carrickfergus town centre there are 51 crossing facilities for pedestrians and cyclists. The most common form of provision is Pedestrian Refuge Islands (25). There are also 11 signals with pedestrian crossings and 10 zebra crossings.

5.4.11. Figure A-16 shows details of the cycling infrastructure in Carrickfergus. There is 6.75 km of cycle network infrastructure in Carrickfergus as follows:

- 0.13km Advisory Cycle Lane;
- 4.9 km Shared Use Footway;
- 1.38km Cycle Track within the Highway;
- 250m of Traffic Free Cycle Route; and
- 6 Advance Cycle Stop Lines

5.4.12. There would appear to be a less than adequate provision of active travel infrastructure in Carrickfergus with 44% of footways less than 2.5m on key radial routes. The cycling network is not continuous and is limited to the coast and the east of the town centre boundary.

5.4.13. Figure A-20 shows details of the local bus network in Carrickfergus. Carrickfergus has 6 town centre bus services that operate local routes at a range of headways ranging from 6 times per day to Tesco Superstore and the surrounding residential areas (Ulsterbus service 365c) to only once per day to Joymount to Prospect Road (Ulsterbus service 365A). The 6 routes serve the majority of the residential areas, generally between 8.30am and 5.00pm on weekdays. Only one service operates on a Saturday (Ulsterbus service 365b). All of the services are looped in nature and hence may not be competitive with car travel. As was the case for Ballymena, the services will be most attractive to people without a car and for those who have free concessionary fares.

5.4.14. Carrickfergus Rail Station is located on the Larne to Belfast railway line and operates services approximately every 30 minutes on Weekdays and Saturday. A Sunday service also operates at hourly intervals. The Rail Station is supported by a Park and Ride facility with 294 spaces and connections to the town centre bus services, via service 365.

5.4.15. The public transport services in Carrickfergus could be improved by:

- Extending its town centre bus services hours of operation, especially at weekends and evenings;
- Increasing the number of town centre bus services to ensure full coverage of all residential areas in the town;
- Reviewing the demand for Park and Ride at the rail station with a view to increasing capacity;
- Consider the potential to redevelop the current Rail Station to provide a modern multi-modal transport hub;
- Increasing peak hour rail service frequency and/or capacities; and
- Improving walk access routes to the rail station from residential areas and the town centre.

Greenisland

5.4.16. Figure A-13 shows details of the pedestrian infrastructure in Greenisland. The length of radial road within the development limit in Greenisland totals 7.2km. Only a length totalling 0.6km

do not have footways. There is provision of footway breaks along the radial routes. The majority of these are dropped kerbs.

5.4.17. Within Greenisland town centre there are 22 crossing facilities for pedestrians and cyclists. The most common form of provision is Signals with Pedestrian Crossings (12). There are also 7 Pedestrian Refuge Islands.

5.4.18. Figure A-17 shows details of the cycling infrastructure in Greenisland. There are 1.2 km of cycle network infrastructure with all being a shared cycleway / pedestrian footway standard.

5.4.19. There would appear to be limited provision of active travel infrastructure in Greenisland. There is only one location with cycle parking (Sheffield Stand). While shared cycleway is available, this only represents 16% of the length of total radial routes in Greenisland.

5.4.20. There are no town centre bus services in operation in Greenisland.

5.4.21. Greenisland Rail Station is located on the Larne to Belfast railway line and operates services approximately every 30 minutes on Weekdays and Saturday. A Sunday service also operates at hourly intervals. A Park and Ride facility is in place to encourage the use of the rail services.

5.4.22. The public transport services in Greenisland could be improved by reviewing the demand for Park and Ride at the rail station with a view to increasing capacity. Walk and cycle access to the station should also be reviewed and improved as necessary to serve the residential areas.

Larne

5.4.23. Figure A-14 shows details of the pedestrian infrastructure in Larne. The length of radial road within the development limit in Larne totals 34.4 km. A length totalling 5.2 km do not have footways. There is a consistent provision of footway breaks along radial routes. The majority of these are dropped kerbs.

5.4.24. Within Larne town centre there are 34 crossing facilities for pedestrians and cyclists. The most common form of provision is Pedestrian Refuge Islands (18). There are also 11 signals with pedestrian crossings.

5.4.25. Figure A-18 shows details of the cycling infrastructure in Larne. There is 4.6 km of cycle network infrastructure in Larne which consists of 4.5km of Shared Use Footway and 0.1km of Cycle Track within the Highway.

5.4.26. There is clearly potential to improve the provision of active travel infrastructure in Larne with the majority of footways/cycleways along the radial routes less than 2.5m in width combined with one isolated shared use footway between Larne Leisure Centre and the Coast Road to the north.

5.4.27. Figure A-21 shows details of the local bus network in Larne. Larne has 6 town centre bus services that operate local routes at a range of headways ranging from 1-2 times per hour

from Larne Bus Station. The 6 routes serve the town centre (Ulsterbus service 162B) 3 times per day, Antiville and the north west sector (Ulsterbus service 359A) between 7am and 6pm, Seacourt and the north sector (Ulsterbus service 359B) between 7am and 6pm, Sallagh Park and the north east sector (Ulsterbus service 359C) between 10am and 6pm, Harbour and the east sector (Ulsterbus service 359D) between 9am and 5pm, and Millbrook and the south sector (Ulsterbus service 359E) 2 times per day . All of the services are looped in nature and hence may not be competitive with car travel. The services will be most attractive to people without a car and for those who have free concessionary fares.

5.4.28. Larne Rail Station is located on the Larne to Belfast railway line and operates services approximately every 30 minutes on Weekdays and Saturday. A Sunday service also operates at hourly intervals. A Park and Ride facility is also in place to encourage the use of the rail services.

5.4.29. The public transport services in Larne could be improved by:

- Extending its town centre bus services hours of operation, especially to at weekends and evenings;
- Increasing the number of town centre bus services to ensure full coverage of all residential areas in the town;
- Reviewing the demand for Park and Ride at the rail station with a view to increasing capacity.

5.5. Modal choice for journeys to work and education

Introduction

5.5.1. The 2011 census results for journey to work present a summary of movements between Council areas. As reported at 2011, it is possible to inspect the results for the old Ballymena Borough Council, Carrickfergus Borough Council and Larne Borough Council areas separately, as shown in Figures A-22, A-23 and A-24 respectively. These show that a high proportion of employed residents in Ballymena and Larne 2011 LGD Council Areas work within their own Council area; Ballymena (61.1%), and Larne (44.6%). However, there are some notable differences with a higher proportion of Carrickfergus LGD residents (36.3%) working in Belfast compared to Ballymena LGD (10.6%) and Larne LGD (19.8%) residents. The remainder of residents tend to travel to neighbouring Councils. 12.3% of Ballymena LGD residents travel to Antrim LGD, 17% of Carrickfergus LGD and 11.9% of Larne LGD residents travel to Newtownabbey.

5.5.2. The 2011 census results also allow contrasts to be drawn between Mid and East Antrim Borough Council and Northern Ireland (NI) in terms of travel behaviour, differentiating between working adults and school children and students.

Results

5.5.3. Figure A-25 shows that the use of sustainable modes in Mid and East Antrim is above the NI average for journeys to work with 13% walking, cycling or using public transport compared to

8% across NI. It is notable that for short journeys (less than 2km) a similar number, 35% use active modes (walking and cycling) compared to the NI average of 37%, as shown in Figure A-26.

5.5.4. The use of sustainable modes for journeys to education is higher than the NI average of 13%, with 17% of student journeys in Mid and East Antrim Borough Council made by active modes, as shown in Figure A-27. However, as for journeys to education, it is notable that for short journeys (less than 2km) 39% use active modes compared to the NI average of 45%. Whereas for the next shortest journeys (2km to less than 5km), 7% use active modes compared to 8% in NI, as shown in Figure A-28.

5.5.5. Comparing journeys to education and work in the Mid & East Antrim Council area presents a stark contrast in terms of use of public transport. Public transport accounts for 25% of journeys to education, but only 5% to work. It is notable that 6% of the shortest (less than 2km) education journeys are made by public transport whilst by far the greatest share is car passenger (51%).

Conclusions

5.5.6. A review of the 2011 census data concludes that Mid and East Antrim Borough Council has a good level of active travel modes compared to NI averages. This trend also applies when comparisons are limited to short journeys. In Mid and East Antrim, 45% of journeys to work under 2km are made by cars. It is considered appropriate that a number of these journeys could be made by alternative modes. Therefore, there appears to be considerable potential to increase the number of journeys made by walking, cycling and public transport. 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. Where possible, residential development should be located in proximity to existing centres of employment and schools and convenient to existing radial routes and existing walking and cycling infrastructure.

5.5.7. The 2011 census for Mid and East Antrim Borough Council also show that public transport is popular for children and student journeys to education, presumably where it is provided on a statutory and subsidised basis to a small number of largely centralised locations. However, public transport is almost unused for adult journeys to work which tend to be more widely distributed and where fares are generally not subsidised. Therefore, there appears to be considerable potential for additional use of buses for journeys to work to town centre locations provided fares can be made attractive. Land-use planning should therefore seek to encourage new employment development in town centres where practical.

5.6. Road network speeds

Introduction

5.6.1. 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 is available for peak (7 – 9am and 4-7pm) and off-peak (9am – 4pm) periods.

Results

5.6.2. The off-peak speeds have been inspected for the road network which extends over the Mid and East Antrim Borough Council area as this is considered most appropriate for most inter-urban journeys including commercial traffic. Figure A-29 shows that in general terms the A road network, consisting of the A42 Galgorm Road/Carnlough Road, A2 Coast Road and A43 Cushendall Road between the principal towns operates at speeds between 30 and 50mph except where it passes through villages. The section of motorway (M2) bypassing Ballymena operates at speeds in excess of 50mph. Within the town centres, speeds are predominantly under 30 mph.

5.6.3. Peak period speeds have been considered in the urban areas of Ballymena, Carrickfergus, Greenisland and Larne as this will highlight congestion on journeys to and from work. Speeds in all urban areas, in Figures A-30 – A-33, show a general pattern of decreasing speed toward the centre of the towns. Speeds on the outer lengths of the main radials generally exceed 31 mph. In general terms, speeds drop to 16 – 30mph on the inner lengths relating approximately to the 30mph speed restricted area and drop further to 15mph and less at the principal junctions in the town centres.

Conclusions

5.6.4. In general terms traffic speeds are consistent with the road class and level of development. On the principal inter-urban network roads are predominantly single-carriageways. However, a number of major roads pass through the area. The M2, M5, A26 & A2 all provide key access routes to Belfast and the wider network of hubs in the area. Recorded average speeds generally exceed 50mph except where they pass through villages. There is no practical method of increasing speeds other than an alternative new section providing a bypass of the village. Such bypasses may be provided as part of extensive upgrade schemes which would provide dual carriageway standards which would likely increase average speeds to 60mph and above.

5.6.5. In the urban areas, speeds reduce in line with the urban restrictions of 30mph. Traffic progression is controlled by the throughput of the principal junctions in the town centre which reduces peak speeds to less than 15mph. The M2 around Ballymena provides traffic relief to the town centre from strategic traffic movements; however no similar road network is available in Carrickfergus and Larne.

5.7. Urban road collision history

Introduction

5.7.1. An investigation of road collision history has been undertaken of the urban areas of Ballymena, Carrickfergus, Greenisland and Larne using PSNI records dated between 2007 and 2016, with

particular attention given to latest period 2012 - 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. The results are presented for each of the towns in Table A-1, A-2, A-3 and A-4.

Results

5.7.2. The collision records show that pedestrians and cyclists are over-represented in the seriously injured casualties and fatalities in the urban areas. In Ballymena between 2012 and 2016, there were a total of 38 people seriously injured of which 22 were pedestrians and 5 were cyclists. Of the 3 Ballymena fatalities, 2 were pedestrians and 1 was a cyclist. The pattern is similar in Carrickfergus, where a total of 34 people were seriously injured of which 11 were pedestrians and 2 were cyclists. Additionally, 10 people who were seriously injured were motorcyclists. Of the 3 Carrickfergus fatalities, 2 were pedestrians. In Greenisland, there were a total of 7 people seriously injured of which 1 was a pedestrian and 1 was a cyclist. Additionally, 2 people were motorcyclists. There were no fatalities in Greenisland between 2012 and 2016. In Larne, there were a total of 23 people seriously injured of which 7 were pedestrians, 1 was a cyclist and 4 were motorcyclists. There was 1 fatality in Larne, which was a pedestrian.

5.7.3. The locations of the collisions are distributed around the urban road networks in Ballymena, Carrickfergus, Greenisland and Larne. There is also a focus at the road junctions where conflicts between traffic flows and with crossing pedestrians and cyclists typically occur.

Conclusions

5.7.4. Whilst there are relatively small numbers of journeys made by walking and cycling in the urban areas of Ballymena, Carrickfergus, Greenisland and Larne, pedestrians, cyclists and motorcyclists are often seriously injured in road collisions. However, collisions in the urban areas involving vehicles also result in large numbers of slight and serious 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, cyclists and motorcyclists.

5.8. Parking provision in Ballymena, Carrickfergus, Greenisland and Larne

Introduction

5.8.1. 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 the town centres of Ballymena, Carrickfergus, Greenisland and Larne in 2017. At a later date surveys will be undertaken of occupancy.

Results

5.8.2. The results for Ballymena are presented in Figures A-4 and Table A-5 and A-6. The surveys show that the town centre of Ballymena provides a total of 4682 public parking spaces of which 4111 are off-street and 571 are on-street. Of the off-street spaces, 1049 are free and

3062 require payment. A number of the free carparks are privately operated, often by shopping centres/retail parks, Options for any change in future operation should be carefully considered. All of the on-street spaces are free, however 392 have day time restrictions (generally 1 hour no return in 2 hour) and 179 are unrestricted. 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. However, off-street parking is available within shopping centres, which would provide good access for retail purposes.

5.8.3. The results for Carrickfergus are presented in Figures A-35 and Table A-7 and A-8. The town centre of Carrickfergus has a total of 2696 public parking spaces of which 2308 are off-street and 388 are on-street. Of the off-street spaces, 2056 are free and 252 require payment. The future operation of the privately operated carparks would need to be considered. All of the on-street spaces are free, however 93 have day time restrictions (generally 1 hour no return in 1 hour) and 295 are unrestricted. As for Ballymena, the on-street spaces are generally the most conveniently located to town centre services, whilst the free off-street parking spaces are generally located to the edge of the centre.

5.8.4. The results for Greenisland are presented in Figures A-36 and Table A-9 and A-10. The surveys show that core of Greenisland provides a total of 190 public parking spaces of which 94 are off-street and 96 are on-street. Of the off-street spaces, all 94 are free. The main car park in Greenisland is associated with the Railway Park & Ride (70 spaces). All 96 of the on-street spaces are free and are unrestricted. 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.

5.8.5. The results for Larne are presented in Figures A-37 and Table A-11 and A-12. The town centre of Larne has a total of 1613 public parking spaces of which 1272 are off-street and 341 are on-street. Of the off-street spaces, 802 are free and 470 require payment. The future operation of the privately operated carparks would need to be considered. All of the on-street spaces are free, however 155 have day time restrictions (generally 1 hour no return in 1 hour) and 186 are unrestricted. As for Larne, the on-street spaces are generally the most conveniently located to town centre services, whilst the free off-street parking spaces are generally located to the edge of the centre. However, there are spaces at a number of retail locations, which will appeal to shoppers.

Conclusions

5.8.6. Recent upgrades to the urban realm in Ballymena, which are developed around the current one-way system, encourages traffic to circulate the town centre network searching for the most convenient free on-street spaces. There is also the potential for regeneration and redevelopment of privately owned car parking, which may change the balance of demand for parking. The town centre is relatively narrow and approximately 1.5km in length. Therefore, it is not unreasonable to expect drivers to walk from edge of town to their places of work or other 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.

5.8.7. Carrickfergus town centre is approximately 1.2km in length, therefore it is not unreasonable to expect drivers to walk from edge of town to their places of work or other long-stay purposes. Public parking arranged at the edge of town convenient to the key radial routes could reduce traffic congestion at the key junctions and encourage onward travel by walking. Enhancing connectivity and way-finding between car parks and key town centre aspects will be of most importance within the strategy. The majority of spaces in the town centre are off-street, which may be more suited to short-stay parking, particularly for retail and community purposes.

5.8.8. Greenisland is a small town and there is the potential to walk to all destinations within the urban core. A good level of parking is available within the town, both on-street and off-street. Car parking levels are relatively small; however, these are deemed appropriate for the size of the town.

5.8.9. Larne town centre is approximately 1.2km in length, therefore likewise it is not unreasonable to expect drivers to walk from edge of town to their places of work or other long-stay purposes. Public parking arranged at the edge of town convenient to the key radial routes could reduce traffic congestion at the key junctions and encourage onward travel by walking. The availability of free and charged car parking areas which are often geographically close, can lead to underutilisation of charged car parks. A large amount of parking is available around key retail locations, thus facilitating free short-term parking provision.

5.9. Legacy Road Alignments

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

5.9.2. 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.

5.9.3. The remaining Legacy Road Alignments included in the previous area plans are as follows;

- West Link
- South West Relief Road
- Woodtown Road

- Cullybackey Throughpass
- West Distributor Road
- Glynn Bypass
- Spine Road
- Sloefield Road
- Victoria Road

6 Transport Objectives

6.1. Introduction

6.1.1. This chapter sets out the transport objectives, which have been developed following careful consideration of the existing strategic policy context and the preferred options identified in the Mid and East Antrim Borough Council POP.

6.1.2. It is important that Ballymena, Carrickfergus, Greenisland and Larne are developed in a way which enables people to have options, other than driving, to access key services such as work, education, health or leisure. This will require a rebalancing of transport provision in conjunction with the new Local Development Plan to ensure that all modes of transport play their part.

6.1.3. This rebalancing must recognise the need for long-term stability and maintenance of the network and hence must play to the natural strengths of each mode of transport. For example, in general, public transport must focus on travel to and from urban centres where there is a 'critical mass' of key services and travel demand. Similarly walk and cycle must provide safe and attractive local connectivity to challenge the presumption of car travel for short journeys. Road standards should be in balance with the economic role of the traffic carried whilst care should be taken to ensure vehicles do not dominate town centres and hence reduce vital place-making opportunities.

6.2. Objectives

6.2.1. The development of the Transport Objectives has considered strategic policy documents (PfG, RDS, RTS and NI Changing Gear) whilst also reflecting Mid and East Antrim Borough Council's themes emerging from the POP and Community Plan such as "high quality design", "accessibility and connectivity", "health and wellbeing" and "a quality public realm" have all been incorporated into the LTS objectives.

Draft Transport Study Objectives

Objective 1
Enhance accessibility and connectivity by road and public transport from the centre of Ballymena, Carrickfergus, Greenisland and Larne to Belfast, Londonderry as well as gateways and hubs
Link to POP Objectives Economic objective f - "To protect strategically important transportation and public utilities infrastructure and where possible enhance connectivity within Mid and East Antrim and between the Borough and other centres" Social Objective a – "To develop the particular strengths of Ballymena, Larne and Carrickfergus, so as to enable them to realise their full potential as the main centre of populaiton, employment and services in Mid and East Antrim" Social Objective g – "To faciliatate confirmed needs for the development of new social, educationsl, recreational and community services at locations accessible to local communities through various modes of transportation and in accordance with the community plan" Environmental objective h – "To promote high quality designs standards in all development so as to reflect local distinctiveness and further positive place-making" Environmental objective I – "To facilitate networks of green and blue spaces for green/blue infrastructure so as to secure environmental and social benefits" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.2. One of the Programme for Government high level indicators for transport is to improve travel times on key inter-urban economic corridors. The outworking of this will be to provide highway capacity improvements and attractive limited-stop bus services focused on inter-urban journeys made on the key economic corridors linking the gateways and hubs identified in the Regional Development Strategy.

6.2.3. The enhancement and protection of strategically important transportation infrastructure will enable residents and visitors to able to travel both within their Council area and to the wider Northern Ireland area. Enhancing accessibility from each town centre, both by increasing public transport and road improvements, further progress will be made on connecting people with places.

Objective 2
Ensure viable public transport accessibility to essential services for people living and working in MEABC area to promote inclusive communities.
Link to POP Objectives Economic objective f - "To protect strategically important transportation and public utilities infrastructure and where possible enhance connectivity within Mid and East Antrim and between the Borough and other centres" Social Objective g – "To faciliatate confirmed needs for the development of new social, educational, recreational and community services at locations accessible to local communities through various modes of transportation and in accordance with the community plan" Environmental objective i – "To facilitate networks of green and blue spaces for green/blue infrastructure so as to secure environmental and social benefits" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.4. It is important that everyone can access essential services such as work, education, health or leisure. Whilst private car may be the preferred mode of travel for those people who own one, it should be possible to access these services without a private car. However, standard bus services are not financially viable where there is not a 'critical mass' of passengers. The Transport Study and subsequent Transport Plan will therefore seek to establish a viable public transport network for the Area that will be supported by statutory bodies, such as Translink, Department for Infrastructure and Mid and East Antrim Borough Council. This will take account of the location of current and future essential services.

6.2.5. By improving the provision and access to public transport services, connectivity for all residents to a wide range of community services will be enhanced. As a result, linkages with areas outside of the main town centres will be created which will promote a sense of community within these areas. Through integration of services, dependency of the private car can be achieved.

Objective 3
Promote community health and wellbeing through the delivery of high quality, safe active travel networks (walking and cycling) linking all residential, employment, retail and leisure uses in the urban areas of Ballymena, Carrickfergus, Greenisland and Larne.
Link to POP Objectives Social Objective g – "To faciliatate confirmed needs for the development of new social, educational, recreational and community services at locations accessible to local communities through various modes of transportation and in accordance with the community plan" Social Objective j – "to promote active travel and increased opportunities for walking and cycling" Environmental objective h – "To promote high quality designs standards in all development so as to reflect local distinctiveness and further positive place-making" Environmental objective i – "To facilitate networks of green and blue spaces for green/blue infrastructure so as to secure environmental and social benefits" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.6. Creating higher density, mixed use places will require transport investment to be fully aligned with the Spatial Growth Strategy set out by Mid and East Antrim Borough Council.

6.2.7. Although the LDP Plan Strategy is still in the development stages, by working closely with the Council it is intended that growth will focus on the large urban centres of Ballymena, Carrickfergus, and Larne. This will effectively maximise the capacity of the existing urban bus and active travel networks and will facilitate the improvement of these networks.

6.2.8. It is considered that development should be located in areas which have good accessibility. This will enable residents to access facilities which are within walking and cycling distances and have the option to use bus services for longer journeys. In general, the scale of Ballymena, Carrickfergus, Greenisland and Larne are such that the full development area is within a convenient cycling distances (approximately 3 miles or 20 minutes). Similarly, almost all residential areas within the development limits are within walking range of the centre of the town (approximately 1 mile or 20 minutes).

6.2.9. By improving the active travel networks, particularly within the Borough's town centres and on key radials, opportunities will be created for individuals to consider walking and cycling as viable modes of travel. This will foster a wide range of social and environmental benefits such as enhancing the health and wellbeing of individuals. Connecting people with community

services via a greater range of modes can also assist with reducing the need to travel by private car.

Objective 4
Ensure legibility and a quality public realm, with reduced vehicle dominance, in the centres of Ballymena, Carrickfergus, Greenisland and Larne
Link to POP Objectives Economic objective e - "To support and sustain vibrant town centres in Ballymena, Larne and Carrickfergus" Social Objective a – "To develop the particular strengths of Ballymena, Larne and Carrickfergus, so as to enable them to realise their full potential as the main centre of populaiton, employment and services in Mid and East Antrim" Social objective b – "To support the role of small towns, villages and small settlements as local service centres and commensurate with their place in the settlement hierarchy" Social Objective g – "To faciliatate confirmed needs for the development of new social, educationsl, recreational and community services at locations accessible to local communities through various modes of transportation and in accordance with the community plan" Social Objective k – "To provide for quality public places and shared spaces that are accessible to and valued by everyone"

6.2.10. Indicator 25 of the Programme for Government focuses on increasing the proportion of journeys made by walking, cycling and public transport. This will a require a change in modal demands in urban areas by reducing private car travel whilst providing safer infrastructure which will encourage and support an increase in walking, cycling and public transport use. Journeys to and within the town centre, where there is critical mass of demand, offer the greatest potential for walking and cycling and public transport and can be influenced by parking strategy. The transport infrastructure in town centres also merit special priority in terms of place-making.

6.2.11. Improvements made to the public realm of Mid and East Antrim Borough Council's towns will promote usage of the town centres and thus help to facilitate and sustain the vitality and vibrancy of these areas. The enhancement of the town centre public realm, will assist in reinforcing the role of Ballymena, Carrickfergus and Larne as the main centres of population, employment and services in the Mid and East Antrim Borough Council area.

Objective 5
Enhance accessibility by all modes of transport to the centres of Ballymena, Carrickfergus, Greenisland and Larne to connect people and opportunities and to safeguard town centre viability
Link to POP Objectives Economic objective e - "To support and sustain vibrant town centres in Ballymena, Larne and Carrickfergus" Economic objective f – "To protect strategically important transportation and public utilities infrastructure and where possible enhance connectivity within Mid and East Antrim and between the Borough and other centres" Social Objective a – "To develop the particular strengths of Ballymena, Larne and Carrickfergus, so as to enable them to realise their full potential as the main centre of populaiton, employment and services in Mid and East Antrim" Social Objective g – "To faciliatate confirmed needs for the development of new social, educational, recreational and community services at locations accessible to local communities through various modes of transportation and in accordance with the community plan" Social Objective j– "To promote active travel and increased opportunities for walking and cycling" Environmental objective h – "To promote high quality designs standards in all development so as to reflect local distinctiveness and further positive place-making" Environmental onjective i – "To facilitate networks of green and blue spaces for green/blue infrastructure so as to secure environmental and social benefits" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.12. Ballymena, Carrickfergus and Larne town centres offer a broad range of services, whilst Greenisland offers services to meet day to day convenience shopping, which meet the needs of residents of the Ballymena, Carrickfergus, Greenisland and Larne and the wider Mid and East Antrim Borough Council area. By improving transport infrastructure and hence accessibility between and within our towns it is considered that the role of these town centres will be strengthened, supporting their development and vitality. Development in close proximity to town centres should be focussed on walking and cycling networks and public transport, reducing the need for car use and contributing to the place making responsibilities placed on the council.

6.2.13. Making it easier for people to travel by all modes to the main towns in the Mid and East Antrim Borough Council area, will improve accessibility to key community infrastructure, and as such improve the demand for local services, thus helping to protect their status. It will also be necessary to ensure the principles of integrated land use planning are considered at all stages of new development to ensure that the towns continue to grow in a sustainable manner.

Objective 6
Enhance safety for all modes of travel, reduce the number and severity of casualties and improve air quality.
Link to POP Objectives Economic objective f – "To protect strategically important transportation and public utilities infrastructure and where possible enhance connectivity within Mid and East Antrim and between the Borough and other centres" Social Objective f – "To improve community safety and cohesion through the layout and design of new housing and other development" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.14. To ensure that all residents of and visitors to Mid and East Antrim Borough Council Area are afforded the highest level of safety on the transport networks, improvements in transport infrastructure will be sought. Development of new and existing transport infrastructure will take into consideration the safety of all transport users, with particular attention to vulnerable road users such as pedestrians and cyclists. In making safety a priority, the Department for Infrastructure will work alongside relevant bodies, including Mid and East Antrim Borough Council to endeavour to reduce the number and severity of casualties throughout the Borough.

6.2.15. Safety will be a significant focus point to ensure the safety of all Mid and East Antrim's residents. Through the design and maintenance of transportation infrastructure, community safety will be taken into consideration at an early stage. This will be considered within both strategic transportation systems, public utilities and housing developments. Integration of these with existing infrastructure will be implemented to ensure that a continuous provision of safe infrastructure is available.

Objective 7
Protect and enhance the built and natural environment by ensuring our transport systems are resilient to Climate Change and are well maintained
Link to POP Objectives Economic objective f – "To protect strategically important transportation and public utilities infrastructure and where possible enhance connectivity within Mid and East Antrim and between the Borough and other centres" Social objective j – "To promote active travel and increased opportunities for walking and cycling" Environmental objective g – "TO support development that furthers local adaption to climate change for example through reduced carbon emissions and the efficient and sustainable use of water, energy, waste and mineral resources" Environmental objective h – "To promote high quality designs standards in all development so as to reflect local distinctiveness and further positive place-making" Environmental objective i – "To facilitate networks of green and blue spaces for green/blue infrastructure so as to secure environmental and social benefits" Environmental objectives j – "To promote integration between transportation and new development so as to reduce the need for travel and to reduce dependency upon travel by private car generally"

6.2.16. To ensure that the transport system in Mid and East Antrim Borough Council remains resilient to climate change, the design and subsequent construction of infrastructure should be undertaken in accordance with best practice and should follow the principles of the Construction (and Design Management) Regulations.

6.2.17. The provision of sustainable transport infrastructure will assist the Council to maintain and protect the built and natural environment. In particular, new developments will need to ensure that they provide realistic sustainable travel choices. By investing in sustainable transport systems, the local population will benefit from healthier lifestyles (directly) as well as improvements in air quality (indirectly). This objective is supported by Objectives 1, 2, 4 and 5.

6.2.18. The implementation of transportation systems which are resilient and well maintained, will be necessary to protect town centres and the wider transportation network. The importance of high quality design standards in all developments should be promoted with particular consideration of the need for sufficient green spaces. Additionally, the provision of adequate public transport and active travel networks will facilitate the need to reduce the dominance and reliance on the private car within the Mid and East Antrim Borough Council area.

Table 6-1 - Alignment with wider strategy aims/ objectives and LDP POP objectives

LTS Objective	PfG	RDS	New Approach	NI Changing Gear	LDP POP Objectives
Objective 1: Enhance accessibility and connectivity by road and public transport from the centre of Ballymena, Carrickfergus, Greenisland and Larne to Belfast, Londonderry as well as gateways and hubs	Outcome 1 Outcome 2 Outcome 13	Aim 1 Aim 2 Aim 5 Aim 8	Objective 1 Objective 2 Objective 4 Objective 8	n/a	Social (a & g) Economic (f) Environmental (h, i & j)
Objective 2: Ensure viable public transport accessibility to essential services for people living and working in MEABC area to promote inclusive communities.	Outcome 2 Outcome 13	Aim 3 Aim 4 Aim 5 Aim 8 Aim 10	Objective 2 Objective 4 Objective 5 Objective 8 Objective 10	n/a	Social (g) Economic (f) Environmental (i & j)
Objective 3: Promote community health and wellbeing through the delivery of high quality, safe active travel networks (walking and cycling) linking all residential, employment, retail and leisure uses in the urban areas of Ballymena, Carrickfergus, Greenisland and Larne.	Outcome 2 Outcome 13	Aim 3 Aim 4 Aim 5 Aim 6 Aim 7	Objective 2 Objective 4 Objective 7 Objective 8 Objective 9	Objective 1 Objective 2 Objective 3 Objective 4	Social (g & j) Environmental (h, i & j)
Objective 4: Ensure legibility and a quality public realm, with reduced vehicle dominance, in the centres of Ballymena, Carrickfergus, Greenisland and Larne.	Outcome 2 Outcome 13	Aim 3 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	Social (a, b, g & k) Economic (e) Environmental (h, i & j)

LTS Objective	PfG	RDS	New Approach	NI Changing Gear	LDP POP Objectives
Objective 5: Enhance accessibility by all modes of transport to the centres of Ballymena, Carrickfergus, Greenisland and Larne to connect people and opportunities and to safeguard town centre viability	Outcome 2 Outcome 13	Aim 1 Aim 3 Aim 4 Aim 5	Objective 4 Objective 9	Objective 1 Objective 2 Objective 3 Objective 4	Social (a, g & j) Economic (e & f) Environmental (h, i & j)
Objective 6: Enhance safety for all modes of travel and reduce the number and severity of casualties.	Outcome 4	Aim 4	Objective 7	Objective 4	Social (f) Economic (f & g) Environmental (j)
Objective 7: Protect and enhance the built and natural environment by ensuring our transport systems are resilient to Climate Change and are well maintained	Outcome 2	Aim 6 Aim 7	Objective 3 Objective 12	Objective 1 Objective 2 Objective 3 Objective 4	Social (j) Economic (f) Environmental (g, h, i & j)

7 Assembly of the Transport Study

7.1. Introduction

7.1.1. This section assembles and presents the Draft Transport Study for Mid and East Antrim Borough Council. The Study consists of a number of different Transport Measures prepared using a standard objectives-based approach. Alternative transport options are assessed against the objectives identified earlier in order to identify a recommended set of Transport Measures. The following sequence of processes are described in turn:

- General approach to assessment
- Development of options
- Assessment of options and selection of recommended Transport Measures
- Confirmation of Transport Measures Assessment against the objectives

7.2. General approach to assessment

7.2.1. The previous sections have provided a vision and a set of objectives for local transport development in Mid and East Antrim Borough Council consistent with the Community Planning and LDP processes. These objectives are used to assess alternative options and recommend a set of Transport Measures.

7.2.2. 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.

7.3. Development of Options

7.3.1. The development of options is initiated by the consideration of the objectives:

- **Objective 1:** Enhance accessibility and connectivity by road and public transport from the centre of Ballymena, Carrickfergus, Greenisland and Larne to Belfast, Londonderry, gateways and hubs
- **Objective 2:** Ensure viable public transport accessibility to essential services for people living and working in MEA Council area to promote inclusive communities.
- **Objective 3:** Promote community health and wellbeing through the delivery of high quality, safe active travel networks (walking and cycling) linking all residential, employment, retail and leisure uses in the urban areas of Ballymena, Carrickfergus, Greenisland and Larne.
- **Objective 4:** Ensure legibility and a quality public realm, with reduced vehicle dominance, in the centres of Ballymena, Carrickfergus, Greenisland and Larne.

- **Objective 5:** Enhance accessibility by all modes of transport to the centres of Ballymena, Carrickfergus, Greenisland and Larne to connect people and opportunities and to safeguard town centre viability
- **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 are resilient to Climate Change and are well maintained

7.3.2. **Objective 1 summarised as External Accessibility**, is specific in requiring improvements in both road and public transport and in identifying the precise locations which focus improvements on Key Transport Corridors (KTC), the Link Corridors and Trunk Roads. The potential options appear to be:

- Improved inter-urban roads on KTC, Link Corridors and Trunk Roads
- Improved 'limited-stop' bus services to key hubs
- Park and Ride and Park and Share also have complementary roles in improving local access or increasing vehicle occupancy respectively
- Improving and maintaining rail provision, particularly to key hubs and gateways

7.3.3. **Objective 2 summarised as Public Transport Accessibility,** essentially focuses on local bus services and connections to essential services such as, for example, doctors, shops and banks. The potential options appear to be:

- Maintained or improved town bus services
- Maintained or improved Ulsterbus rural services
- Alternative Ulsterbus rural operations including integration with 'limited-stop' services
- Integrated public transport service delivery including Ulsterbus, Education, Health and Community Transport services
- Land-use policy changes which focus residential development in towns
- New or improved public transport serving new developments funded by the developer
- Alternative models of delivery of essential services including, mobile services and use of the internet
- Provision of integrated multi-model transport hubs at Ballymena and Carrickfergus
- Application of modern technology to provide passengers with increased service standards; real time information, integrated ticketing systems, integrated timetable information
- Improving and maintaining rail provision, particularly to key hubs and gateways.

7.3.4. **Objective 3 summarised as Active Travel Networks,** essentially focuses on the provision of connections to essential services such as, for example, doctors, shops and banks as well as greenways which cater for longer journeys including leisure. The potential options appear to be:

- Provision of improved walking facilities in towns
- Provision of a network of attractive cycling routes in towns
    - Focus on radial routes

- Local improvements which together provide longer routes

7.3.5. 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

7.3.6. **Objective 4 summarised as High Quality Public Realm in town centres**, generates a number of largely complementary transport options:

- New throughpasses/bypasses within town/village centres to reduce vehicle flows through the town centre and maintain the quality of public realm
- Town Centre Parking Strategies that reduce circulating traffic searching for parking spaces
- Traffic management schemes that remove traffic routes through the town centre which may include reallocation of existing road space to facilitate active modes of travel
- Priority to be given to pedestrians in moving to and around town centre streets
- Pedestrianisation of town centres

7.3.7. **Objective 5 summarised as Accessibility to Town Centres,** generates a number of quite different transport options:

- New throughpasses/bypasses within town/village centres to reduce vehicle flows through the town centre and maintain the quality of public realm
- New urban roads and traffic management to reduce travel times to town centres by all road-based modes
- Public Transport improvements options as 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

7.3.8. **Objective 6 summarised as Safety.** The only potential options appear to be:

- Continue to implement Collision Remedial Schemes
- Ensure new transport infrastructure is designed and provided to current 'best practice' standards
- In urban areas, review the potential to introduce traffic calming measures

7.3.9. **Objective 7 summarised as Resilience.** The only potential options appear to be:

- Ensure transport infrastructure is designed and provided to current 'best practice' standards regarding extreme weather events
- Ensure transport infrastructure is maintained to 'best practice' standards to maximise performance at all times and that whole life costs are minimised.

7.4. Assessment of options and selection of recommended Transport Measures

Objective 1: External Accessibility

7.4.1. The following options are progressed as feasible within the LTS time frame of 2030 and consistent with the objectives.

- Improved Park and Ride and Park Share on KTC
- Improved 'limited-stop' bus services to key hubs with complementary Park and Ride
- Improving and maintaining rail provision, particularly to key hubs and gateways

7.4.2. Improving and maintaining rail provision, particularly to key hubs and appear to have the potential to offer substantial improvement. However, the rail network serving Ballymena and Carrickfergus / Larne has a number of constraints which arise from a combination of infrastructure and operational issues. Consideration of this issue will therefore be undertaken in the wider Belfast Metropolitan Transport Plan.

7.4.3. The reasons for not progressing the other options are outlined below:

- Improved inter-urban roads on A2 and A8 – it is considered that further improvements within these areas will not produce additional benefits to public transport and access to key hubs.

Objective 2: Public Transport Accessibility

7.4.4. The following options **are progressed** as feasible within the LTS time frame of 2030 and consistent with the objectives.

- Maintained or improved town bus services
- Provision of integrated multi-modal transport hubs at Ballymena and Carrickfergus
- Application of modern technology to provide passengers with increased service standards; real time information, integrated ticketing systems, integrated timetable information

7.4.5. It is proposed that **none of the remaining options are progressed** explicitly at this time as these are, in fact, NI-wide policy issues for DfI and other statutory transport providers and are the subject of separate current work. It is the intention that the findings and recommendations will be fed back to the Local Transport Plan and LDP processes as soon as they are published. It is recommended however that the options for land-use policy to focus residential development in towns.

Objective 3: Active Travel Networks

7.4.6. It is proposed that in general all of the options **are progressed** as feasible within the LTS time frame of 2030 as follows:

- Provision of improved walking facilities in towns
- Provision of a network of attractive radial cycling routes in towns and greenways between towns
- 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

7.4.7. It is recommended that there is a focus on radial routes in towns 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 individual development sites.

Objective 4 High Quality Public Realm in town centres

7.4.8. It is proposed that the following options are progressed as feasible within the LTS time frame of 2030 as follows:

- Town Centre Parking Strategies that reduce circulating traffic searching for parking spaces
- Traffic management schemes that remove traffic routes through the town centre which may include reallocation of existing road space to facilitate active modes of travel
- Priority to be given to pedestrians in moving to and around town centre streets

7.4.9. The options which are **not progressed** are outlined below with reasons:

- New throughpasses/bypasses within town/village centres are no longer considered to be of strategic importance. Instead focus will be put on schemes which reduce town centre traffic volumes and release capacity for active and sustainable travel options. However, these schemes will be retained as potential developer led schemes.
- Pedestrianisation of town centres – this measure is considered out-moded and likely to fail by removing key servicing access and after hours operation. The other options seek to deliver the positive points of pedestrianisation relating to reducing vehicle dominance.

Objective 5 Accessibility to Town Centres

7.4.10. It is proposed that, with two exceptions, all of the options **are progressed** as feasible within the LTS time frame of 2030 as follows:

- Public Transport 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 pedestrian, cycling and public transport movements to the town centre

7.4.11. The exceptions which are not progressed are outlined below with reasons:

- New throughpasses/bypasses within town/village centres are no longer considered to be of strategic importance. Instead focus will be put on schemes which reduce town centre traffic volumes and release capacity for active and sustainable travel options. However, these schemes will be retained as potential developer led schemes.

- New urban roads and traffic management to reduce travel times to town centres by all road-based modes – this would act directly against the Objective 4 High Quality Public Realm in town centres by promoting car use in town centres and against the schemes to give priority to pedestrian and cycling movements to the town centre.

7.4.12. However, 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 can be provided by the developer, although this requires careful planning. Therefore, the following option is progressed:

- New urban road links (and supporting sustainable transport infrastructure) to facilitate key development funded by developer.

Objective 6 Safety

7.4.13. It is proposed that in general all of the options **are progressed** as feasible within the LTS time frame of 2030 as follows:

- Continue to implement Collision Remedial Schemes
- Ensure new transport infrastructure is designed and provided to current 'best practice' standards
- In urban areas, review the potential to introduce traffic calming measures

Objective 7 Resilience.

7.4.14. Both options **are progressed** as feasible within the LTS time frame of 2030 and consistent with the objectives. It is proposed that the options can be combined as follows:

- Ensure new transport infrastructure is designed and provided to current 'best practice' standards.

7.5. Confirmation of Transport Measures Assessment against the Objectives

7.5.1. The Transport Study for Mid and East Antrim Borough Council is primarily focused on the principal urban centres of Ballymena, Carrickfergus, Greenisland and Larne where there are opportunities to deliver the most significant impact on the greatest number of residents and employees in conjunction with the Local Development Plan. The Transport Study is purposely composed of measures rather than schemes as this provides flexibility in the definition and design of schemes in order to integrate with land-use opportunities that arise in the Local Policies Plan stage of the Local Development Plan.

7.5.2. The Transport Study is proposed as comprising the following 10 measures:

1. Improved Park and Ride and Park and Share on KTCs
2. Consider new orbital capacity around key town centres in conjunction with public realm enhancements or improvements to active travel modes. Capacity schemes to be developer led.
3. Improved 'limited-stop' bus services to key hubs
4. Improving and maintaining rail provision, particularly to key hubs and gateways

5. Maintained or improved local bus services with integration between modes to simplify travel for passengers and inclusion of multi-modal hubs at Carrickfergus and Ballymena
6. Provision of a network of attractive walking and cycling routes in towns and greenways between towns
7. For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer
8. Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion and circulating for parking spaces
9. Traffic management schemes which enhance safety and give priority to pedestrian, cycling and public transport movements to the town centre
10. Ensure new transport infrastructure is designed and provided to current 'best practice' standards

7.5.3. Each of the measures are confirmed against the transport objectives below. The table summarises how each of the 10 measures support the 7 Transport Objectives. A double tick (√√) designates strong or direct support for the objective whilst a single tick (√) designates lesser or indirect support. Each measure is subsequently described separately below.

Table 7-1 - Assessment of Transport Measures

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in town	5: Accessibility to Town Centres	6: Safety	7: Resilience
1. Improved Park and Ride and Park and Share on KTCs	√	√√			√√		
2. Consider new orbital capacity around key town centres in conjunction with public realm enhancements or improvements to active travel modes. Capacity schemes to be developer led.	√√	√		√	√√		
3. Improved 'limited-stop' bus services to key hubs	√√	√√			√		
4. Improving and maintaining rail provision, particularly to key hubs and gateways	√√	√√				√	√
5. Maintained or improved local bus services with integration between modes to simplify travel for passengers and inclusion of multi-modal hubs at Carrickfergus and Ballymena		√√	√		√√		
6. Provision of a network of attractive walking and cycling routes in towns and greenways between towns		√	√√	√	√√		
7. For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer			√√	√	√√		
8. Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion				√	√√		
9. Traffic management schemes which enhance safety and give priority to pedestrian, cycling and public transport movements to the town centre		√√	√√	√	√√	√√	√
10. Ensure new transport infrastructure is designed and provided to current 'best practice' standards						√√	√√

1: Improved Park and Ride and Park and Share on KTCs

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Improved Park and Ride and Park and Share on KTCs	√	√√			√√		

7.5.4. Improved and additional Park and Ride and Park and Shares sites will be considered, with those in close proximity to KTCs offering the greatest ability to influence a mode shift to this form of travel.

7.5.5. The provision of improved Park & Ride and Park & Share sites has the potential to provide environmental benefits by further reducing the proportion of single occupancy journeys utilising private car.

2: Consider new orbital capacity around key town centres in conjunction with public realm enhancements or improvements to active travel modes. Capacity schemes to be developer led.

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Consider new throughpasses/bypassesorbital capacity around key town centres which will facilitate in conjunction with public realm enhancements or improvements to active travel modes. Capacity schemes to be developer led.	√√	√		√	√√		

7.5.6. It is acknowledged that there is currently no specific need to introduce a throughpass or bypass within any of the main towns within the Mid and East Antrim area.

7.5.7. However, should a need arise through the development of the Local Transport Plan, the precise route and its design will be confirmed as part of the Transport Plan and the Local Policies Plan stage of the Local Development Plan.

7.5.8. A number of schemes have been designated within extant Area Plans covering the Mid and East Antrim Borough Council area, including:

- B62 Cullybackey Bypass (Cullybackey Throughpass);
- Ballymena South West Distributor Road; and
- Carrickfergus Spine Road and Sloefield Road

7.5.9. These schemes if ever implemented may provide benefits to each of the town centres, including facilitating access to development lands and removal of traffic from town centres, so providing high quality public realm.

7.5.10. However, these routes are considered to be most applicable as developer led schemes to support potential land zonings.

3. Improved 'limited-stop' bus services to key hubs

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in town centres	5: Accessibility to Town Centres	6. Safety	7: Resilience
Improved 'limited-stop' bus services to key hubs	√√	√√			√		

7.5.11. New 'limited-stop' bus services are expected to be identified and prioritised on the Key Transport Corridors to improve external accessibility from the Mid and East Antrim Council area. These services will build upon the existing Goldline route network to be listed in the Regional Strategic Transport Network Transport Plan (RSTNTP) to be prepared. The bus services will capitalise on continued road improvements.

7.5.12. These 'limited-stop' bus services will improve external accessibility by reducing journey times by public transport and increasing service frequency between the key hubs.

7.5.13. These services will also directly improve accessibility to the town centres by reducing journey times from the catchment areas, potentially in combination with park and ride sites.

4. Improving and maintaining rail provision, particularly to key hubs and gateways

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Improving and maintaining rail provision, particularly to key hubs and gateways	√√	√√				√	√

7.5.14. Improvements to the rail provision to Ballymena, Larne, Carrickfergus and Greenisland is expected to improve both public transport and external accessibility to these towns. These improvements would build upon the existing rail services rather than developing new services through larger capacity trains and an increase in frequency. It is however accepted that there are various significant constraints in the delivery of improved rail services and because of these and the links to the wider rail network it is considered that rail provision is best dealt with as part of the BMTP.

7.5.15. Providing higher capacity trains at increased frequency would make the rail services more attractive particularly to commuters.

7.5.16. As trains are a safer mode of travel than cars, increasing the percentage of trips made by train will have a positive effect of safety.

7.5.17. As trains operate on own right of way they are unaffected by congestion and are considered to be a more resilient mode of transport.

5. Maintained or improved local bus services with integration between modes to simplify travel for passengers and inclusion of multi-modal hubs at Carrickfergus and Ballymena

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Maintained or improved local bus services with integration between modes to simplify travel for passengers and inclusion of multi-modal hubs at Carrickfergus and Ballymena		√√	√		√√		

7.5.18. Integration between transport modes is an efficient way to connect people with places through a network of transport systems as well as providing a realistic travel choice alternative to the private car.

7.5.19. Providing well connected, accessible interchange points increases the attractiveness and provides the ability to easily interchange between modes.

7.5.20. Improving the ability to interchange both in terms of location and payment methods (potentially through linked ticketing) will encourage the use of more sustainable travel options for all or part of a journey.

7.5.21. For example, this may include utilising a local town service to Ballymena bus station where it would be possible to connect onto the train to access a wider range of key locations. In some locations, it may be possible to combine public transport into one location to form a “multi-modal transport hub”. Ballymena may be a viable option to implement this as the bus and rail station are currently within close proximity.

6. Provision of a network of attractive walking and cycling routes in towns and greenways between towns

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Provision of a network of attractive walking and cycling routes in towns and greenways between towns		√	√√	√	√√		

7.5.22. The provision of improved walking facilities in Ballymena, Carrickfergus, Greenisland and Larne will be a central measure of the Transport Study. Evidence has shown that the pedestrian networks are incomplete and that whilst local levels of walking and cycling are above the NI averages, in real terms they are low. Whilst improvements to the walking facilities may require retro-fitting work and may impact on traffic capacity it is clear that the measure has a role in delivering greater walking activity and hence a number of objectives. In addition, attractive local and town-centre routes must be an integral part of any development LDP Plan Strategy or subsequent LDP Policies Plan.

7.5.23. Improved walking facilities will have a direct impact on urban active travel networks. In particular in designing off-road walking routes consideration will be given to their potential as shared cycle facilities.

7.5.24. Improved walking facilities will have a direct impact on accessibility to the town centres. By making it easier to cross roads and generally making walking routes to the town centre more attractive, it will be more convenient for people without cars to travel to the town centre. Walking routes can provide convenient access to the town centre from residential areas within a range of up to 1 mile (assuming a travel time of 20 minutes); this represents all residential areas within the development area of both towns with few exceptions. In addition, should parking strategies displace long stay parking to the edge of town, the accessibility of the town centre for car users would be largely unaffected as the consequent longer walk access would be improved in quality.

7.5.25. Improved walking facilities will have an indirect impact on public transport accessibility as local town centre walk access is often the final component of a public transport journey.

7.5.26. Improved walking facilities will have an indirect impact on high quality public realm as they are often designed together in an integrated fashion.

7.5.27. The provision of improved cycling facilities in Ballymena, Carrickfergus, Greenisland and Larne will be a central measure of the Transport Study. Evidence has shown that the cycle networks are far from complete and serve only a small proportion of the residential areas. It is clear that the measure has a role in delivering sustainable accessibility across the urban areas. The designation and identification of a network of routes must be an integral part of any development plan strategy and subsequent plan policy such that the network can be delivered in co-ordination with development proposals.

7.5.28. Attractive cycle routes will have a direct impact on urban active travel networks. In particular in designing off-road cycle routes consideration will be given to their potential as shared walking facilities. Cycle routes can provide convenient access to places of employment and education within a range of up to 3 miles (assuming a travel time of 20 minutes) which would encompass the entire development area of the towns.

7.5.29. Improved cycle routes will have a direct impact on accessibility to the town centres. By making these attractive, it will be more convenient for people without cars (including children), to travel (independently) to the town centre.

7.5.30. Improved cycle routes will have an indirect impact on high quality public realm as they are often designed together in an integrated fashion as part of local routes or longer greenways. Care will be needed to ensure that the cycle route function and use does not discourage use by pedestrians, elderly people or other people with particular impairments.

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

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in town centres	5: Accessibility to Town Centres	6. Safety	7: Resilience
For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer			√√	√	√√		

7.5.31. The provision of active travel options for all new developments proposals shall be considered with an onus on the developer for provision of such facilities. Developers will be required to ensure that both the internal layout and connections to the external active transport network are provided to promote and encourage travel by these modes.

7.5.32. New developments should be identified in sustainable locations that are well served by public transport, accessible by walking and cycling, have adequate infrastructure and where development can be properly integrated, in terms of land use and design, with the wider Council area.

8. Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion				√	√√		

7.5.33. Town Centre Parking Strategies will be required in Town Centres, such as Ballymena, Carrickfergus and Larne, as stipulated in the SPPS. At this stage it is clear that the parking strategies have a key role to play in improving how the urban transport networks operate as public parking locations represent the ultimate destination for many car journeys. The location of public parking and its designation as long or short-stay using payment controls will be identified in the strategy at the Local Policies Plan stage.

7.5.34. In Ballymena, Carrickfergus and Larne Parking strategies will have a direct impact on the potential to provide high quality public realm. By removing extraneous traffic which often dominates the town centres it will be possible to design and deliver public realm geared to increase social interaction and animation.

7.5.35. The parking strategies will have a direct impact on accessibility to the town centres. It will be important that the strategies improve turnover of parking spaces, and by reducing traffic searching for spaces, to improve travel times and safety by public transport and walking and cycling.

7.5.36. The parking strategies will have an indirect impact on public transport accessibility as it is envisaged that the charges needed to increase the turnover of spaces may lead to public transport becoming a more attractive and financially viable option.

9. Traffic management schemes that give priority to pedestrian, cycling and public transport movements to the town centre and reallocation of existing road space to facilitate active modes of travel

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Traffic management schemes which enhance safety and give priority to pedestrian, cycling and public transport movements to the town centre		√√	√√	√	√√		

7.5.37. It is inevitable that the imposition of sustainable transport measures, as proposed in the Transport Study, will involve an impact on traffic capacity and on traffic flows. Consequently there will be a requirement for the transport authority to consider how road-space is designated and used by a range of modes (pedestrian, cyclist, bus, goods service vehicle and general traffic) and exactly what priority is given to each. Traffic management schemes can complement physical infrastructure schemes by amending regulations, signing and road markings to achieve that priority and provide safer and more coherent networks.

7.5.38. Traffic management schemes will impact directly on the objective to improve and create continuous high quality urban active travel networks where traffic capacity has to be re-assigned using amended road markings, junction layouts or phasing of signal settings.

7.5.39. Traffic management schemes will be required to ensure that accessibility to the town centre is improved. Consideration will be given to re-balancing priority to pedestrians and public transport in town centre shopping streets whilst private car routes to designated parking locations as identified in the parking strategy should not be unduly inconvenienced.

7.5.40. Traffic management will also indirectly impact on public transport accessibility from the wider catchment as town centre bus priority could make a significant difference in the viability of routes at off-peak periods.

7.5.41. Traffic management will also indirectly impact on public realm as traffic engineers will likely need to engage in the co-design of schemes that require changes in local traffic designations or regulations to ensure their success.

10. Ensure new transport infrastructure is designed and provided to current 'best practice' standards

Measure	Objectives						
	1: External Accessibility	2: Public Transport Accessibility	3: Active Travel Networks	4: High Quality Public Realm in	5: Accessibility to Town Centres	6. Safety	7: Resilience
Ensure new transport infrastructure is designed and provided to current 'best practice' standards						√√	√√

7.5.42. The provision of transport infrastructure designed, provided and maintained to 'best practice' standards to maximise performance at all times relates directly to the objective to be resilient to climate change and be well maintained.

7.5.43. This measure is effectively cross-cutting and has no direct impact on any of the other objectives.

7.5.44. It may be worth noting however, that despite 'best practice' in extreme conditions such as road collisions or traffic signals failures or flooding, road infrastructure, especially urban, can reach capacity leading to grid-lock. Even though extreme conditions could impact on active travel networks, similar grid-lock would never occur. Resilience to system failures, such as traffic signal failures, can be increased by providing 'back-up' systems whilst overall urban travel resilience can be increased by ensuring that realistic active travel options are provided.

8 Conclusion – The Transport Study

8.1. The Transport Study for Mid and East Antrim Borough Council is confirmed as the following 9 measures:

- **1: Improved Park and Ride and Park and Share on KTCs**
  New locations for park and ride and park and share facilities will be identified and prioritised on the Key Transport Corridors. These facilities will be strategically placed, considering the travel patterns of usual residents and the areas which would benefit from improvements in public transport use. These facilities will also benefit more rural residents and increase accessibility and connectivity from the Borough to the wider Northern Ireland area.

- **2: Consider new orbital capacity around key town centres in conjunction with public realm enhancements or improvements to active travel modes. Capacity schemes to be developer led.**
  While there are no current requirements to implement a bypass within the town centres of Ballymena, Carrickfergus, Greenisland and Larne, this option will be retained for potential consideration in the future. Should a need arise for this type of infrastructure, this measure will be reviewed. A number of potential non-strategic developer-led schemes will be considered and their benefits to the town centres reviewed.

- **3: 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 to and from **Ballymena, Carrickfergus, Greenisland and Larne**. These services will build upon the existing network of bus services. The bus services will capitalise on continued road improvements and seek to identify where the greatest benefit can be derived.

- **4: Improving and maintaining rail provision, particularly to key hubs and gateways**
  There is an expectation that the capacity and frequency of rail services to **Ballymena, Carrickfergus, Greenisland and Larne** will increase, subject to the various constraints associated with rail provision. These enhancements are likely to target peak times and favour commuters. Due to the constraints and the links to the wider rail network, it is considered that rail provision is best dealt with as part of the BMTP.

- **5: Maintained or improved local bus services with integration between modes to simplify travel for passengers and inclusion of multi-modal hubs at Carrickfergus and Ballymena**
  To promote and encourage the use of public transport, it will be important to consider the linkages between modes and the ease with which this can occur.

- **6: Provision of a network of attractive walking and cycling routes in towns and greenways between towns**

The provision of improved walking facilities in Ballymena, Carrickfergus, Greenisland and Larne will be a central measure of the Transport Study. The current pedestrian networks are below standard in some areas. Levels of walking and cycling are low, particularly as a method of travel to work. Improvements to the walking facilities and the addition of cycling infrastructure may help to encourage the use of active travel modes.

- **7: For new developments, walk and cycle infrastructure both within the development and linking to existing or planned networks are provided by the developer**
  When planning for new developments, it is essential that walking and cycling infrastructure is considered as part of the development proposals, walking and cycling linkages from the development should be linked to existing infrastructure, ensuring a continuous provision is made. It is also necessary to consider how active travel infrastructure is incorporated into the development itself.

- **8: Town Centre Parking Strategies that provide for demand for long and short-stay spaces at locations which reduce town centre congestion**
  Town Centre Parking Strategies will be required in Ballymena, Carrickfergus, Greenisland and Larne. The location of public parking and it's designation as long or short stay will be considered within the Parking Strategies. The strategies should remove extraneous traffic which dominates the town centres and improves the turnover of parking spaces.

- **9: Traffic management schemes which enhance safety and give priority to pedestrian, cycling and public transport movements to the town centre**
  It is necessary that road space is used by a range of modes. Consideration should be given to re-balancing priority to pedestrians, cyclists and public transport within the town centre. This is particularly important in shopping streets, however locations where parking is designated should not be unduly inconvenienced.

- **10: Ensure new transport infrastructure is designed and provided to current 'best practice' standards**
  When designing transport infrastructure, this should be completed to 'best practice'. This will strive towards maximising performance and ensuring resilience. Resilience to system failures, such as traffic signal failures or flooding, can be increased by providing 'back-up' systems. Overall urban travel resilience can be increased by ensuring that realistic active travel options are provided.

Annex 1 – Transport Evidence Base for Mid and East Antrim Borough Council

Including Ballymena, Carrickfergus, Greenisland and Larne

Contents:

Regional Connectivity by Road and Public Transport

- Figure A.1 – OSNI Map of NI Road and Rail Transport Network
- Figure A.2 – Map of Travel Time by Car from Ballymena at AM Peak Speed
- Figure A.3 – Map of Travel Time by Car from Carrickfergus at AM Peak Speed
- Figure A.4 – Map of Travel Time by Car from Greenisland at AM Peak Speed
- Figure A.5– Map of Travel Time by Car from Larne at AM Peak Speed
- Figure A.6 – Map of Travel Time by Public Transport from Ballymena from 7:00am
- Figure A.7 – Map of Travel Time by Public Transport from Carrickfergus from 7:00am
- Figure A.8 – Map of Travel Time by Public Transport from Greenisland from 7:00am
- Figure A.9 – Map of Travel Time by Public Transport from Larne from 7:00am
- Figure A.10 – Map of Travel Time by Public Transport from Mid and East Antrim to Health Facilities during AM Peak

Urban Walking and Cycling Infrastructure and Bus Services

- Figure A.11 – Map of Pedestrian Infrastructure in Ballymena – Key Radial Footway by Width and Crossing Type
- Figure A.12 – Map of Pedestrian Infrastructure in Carrickfergus – Key Radial Footway by Width and Crossing Type
- Figure A.13 – Map of Pedestrian Infrastructure in Greenisland – Key Radial Footway by Width and Crossing Type
- Figure A.14 – Map of Pedestrian Infrastructure in Larne – Key Radial Footway by Width and Crossing Type
- Figure A.15 – Map of Cycling Infrastructure in Ballymena
- Figure A.16 – Map of Cycling Infrastructure in Carrickfergus
- Figure A.17 – Map of Cycling Infrastructure in Greenisland
- Figure A.18 – Map of Cycling Infrastructure in Larne
- Figure A.19 – Map of Town Bus Services in Ballymena
- Figure A.20 – Map of Town Bus Services in Carrickfergus
- Figure A.21 – Map of Town Bus Services in Larne

Note: No Town Centre Bus Services are available in Greenisland

Travel to Work Destinations

- Figure A.22 – Map of Percentage of Travel to Work Journeys from Ballymena to other LGDs (in 2011)
- Figure A.23 – Map of Percentage of Travel to Work Journeys from Carrickfergus to other LGDs (in 2011)
- Figure A.24 – Map of Percentage of Travel to Work Journeys from Larne to other LGDs (in 2011)

Modal Choice for Journeys to Work and Education across the Council Area

- Figure A.25 – Chart of Modal Choice for Journey to Work in Mid and East Antrim
- Figure A.26 – Graph of Modal Choice for Journey to Work by Distance in Mid and East Antrim

- Figure A.27 – Chart of Modal Choice for Journey to Education in Mid and East Antrim
- Figure A.28 – Graph of Modal Choice for Journey to Education by Distance in Mid and East Antrim

Road Network Speeds at Peak and Off-Peak Time Periods

- Figure A.29 – Map of Average Off Peak Speeds (mph) for Roads in Mid and East Antrim
- Figure A.30 – Map of Average Peak Speeds (mph) for Roads in Ballymena
- Figure A.31 – Map of Average Peak Speeds (mph) for Roads in Carrickfergus
- Figure A.32 – Map of Average Peak Speeds (mph) for Roads in Greenisland
- Figure A.33 – Map of Average Peak Speeds (mph) for Roads in Larne

Road Collision History

- Table A.1 – Number of Road Traffic Casualties by Severity and Road User Type in Ballymena, 2007-2016
- Table A.2 – Number of Road Traffic Casualties by Severity and Road User Type in Carrickfergus, 2007-2016
- Table A. 3 – Number of Road Traffic Casualties by Severity and Road User Type in Greenisland, 2007-2016
- Table A.4 – Number of Road Traffic Casualties by Severity and Road User Type in Larne, 20072016

Parking Provision

- Figure A.34 – Map of Parking Provision Locations in Ballymena
- Table A.5 – Off-Street Parking Provision by Spaces and Type in Ballymena
- Table A.6 – On-Street Parking Provision in Ballymena
- Figure A.35 – Map of Parking Provision Locations in Carrickfergus
- Table A.7 – Off-Street Parking Provision by Spaces and Type in Carrickfergus
- Table A.8 – On-Street Parking Provision in Carrickfergus
- Figure A.36 – Map of Parking Provision Locations in Greenisland
- Table A.9 – Off-Street Parking Provision by Spaces and Type in Greenisland
- Table A.10 – On-Street Parking Provision in Greenisland
- Figure A.37 – Map of Parking Provision Locations in Larne
- Table A.11 – Off-Street Parking Provision by Spaces and Type in Larne
- Table A.12 – On-Street Parking Provision in Larne

Section 1 – Regional Connectivity by Road and Public Transport

Figure A-1 – OSNI Map of NI Road and Rail Transport Network

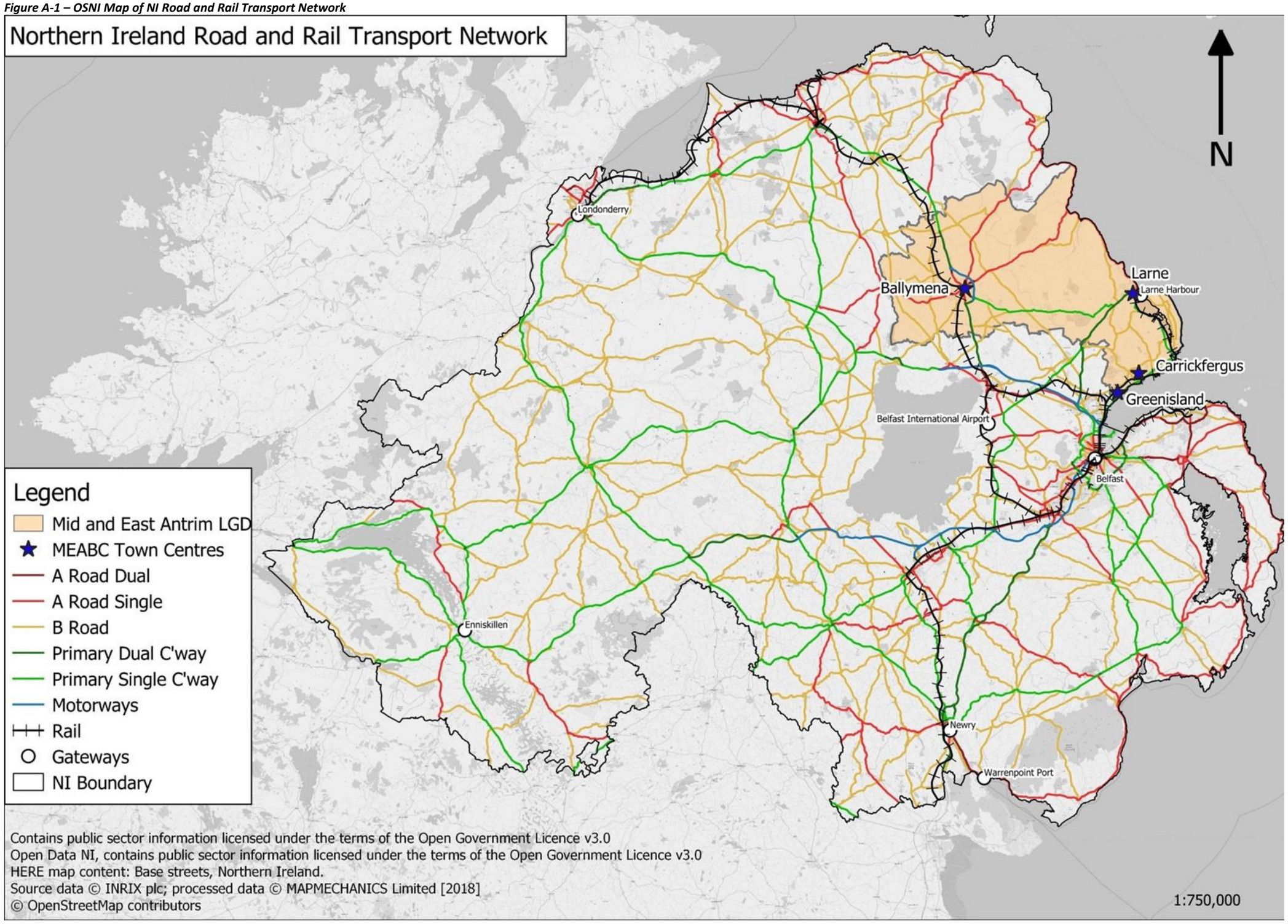


Figure A-2 – Map of Travel Time by Car from Ballymena at AM Peak Speed

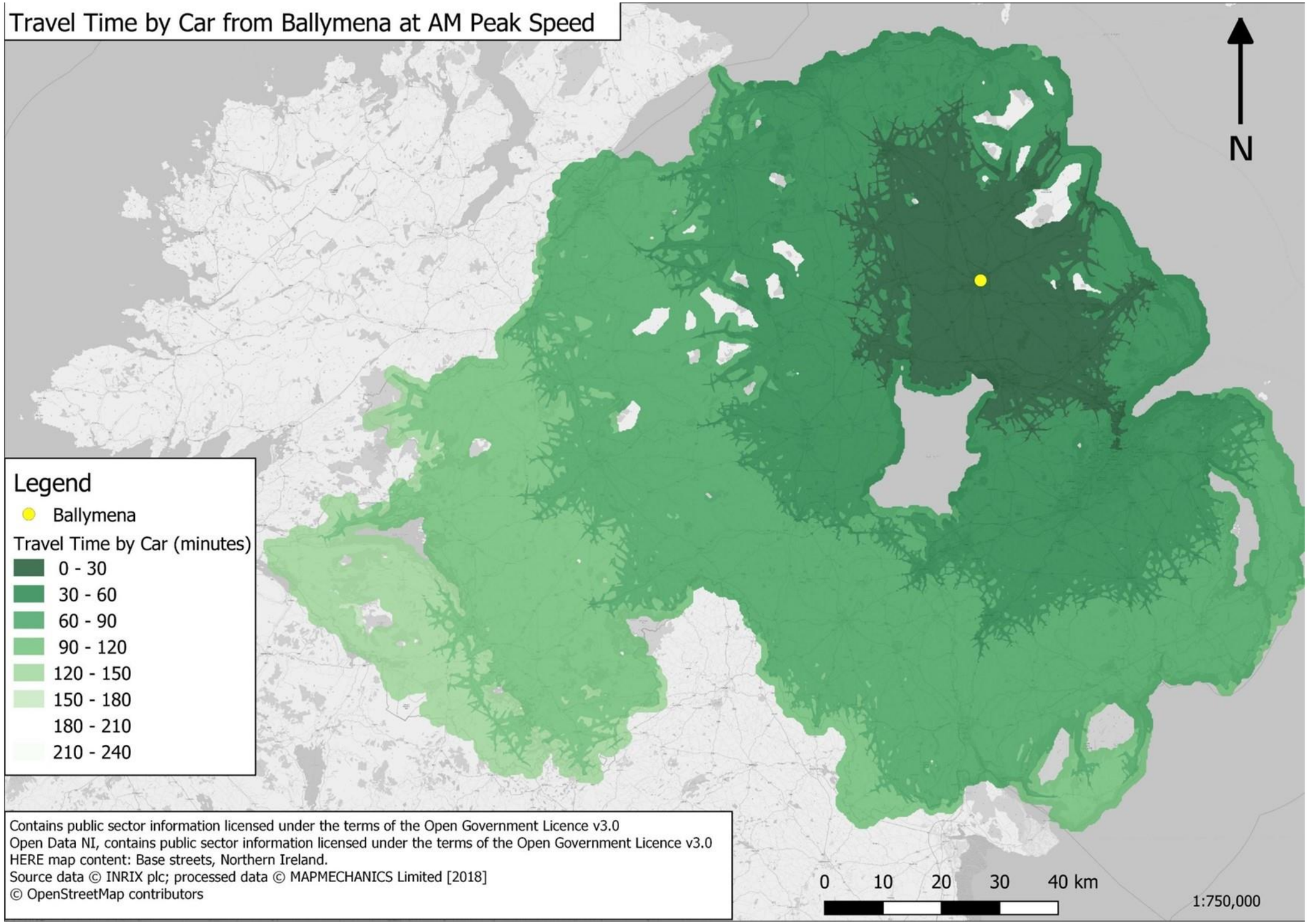


Figure A-3 - Map of Travel Time by Car from Carrickfergus at AM Peak Speed

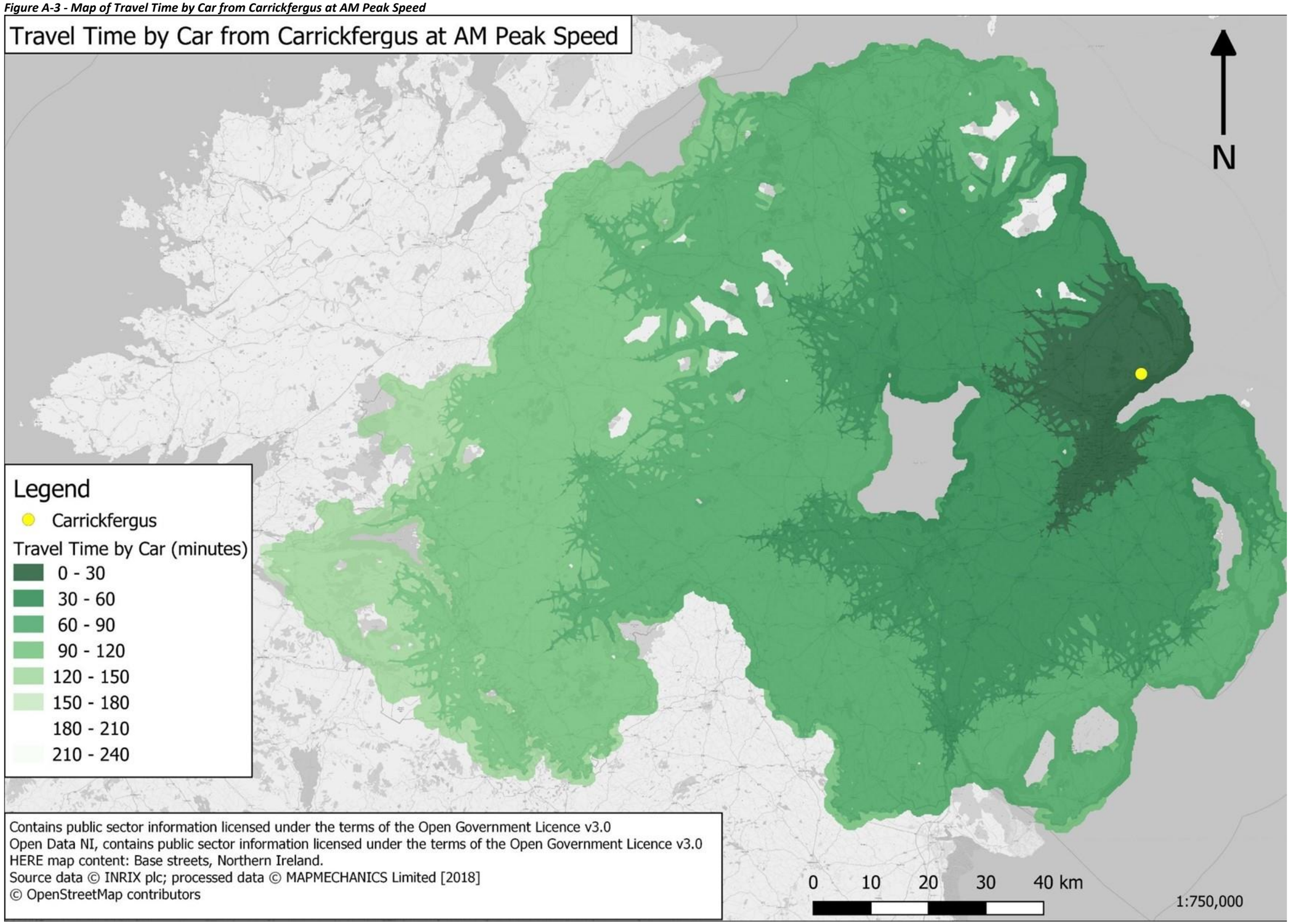


Figure A-4– Map of Travel Time by Car from Greenisland at AM Peak Speed

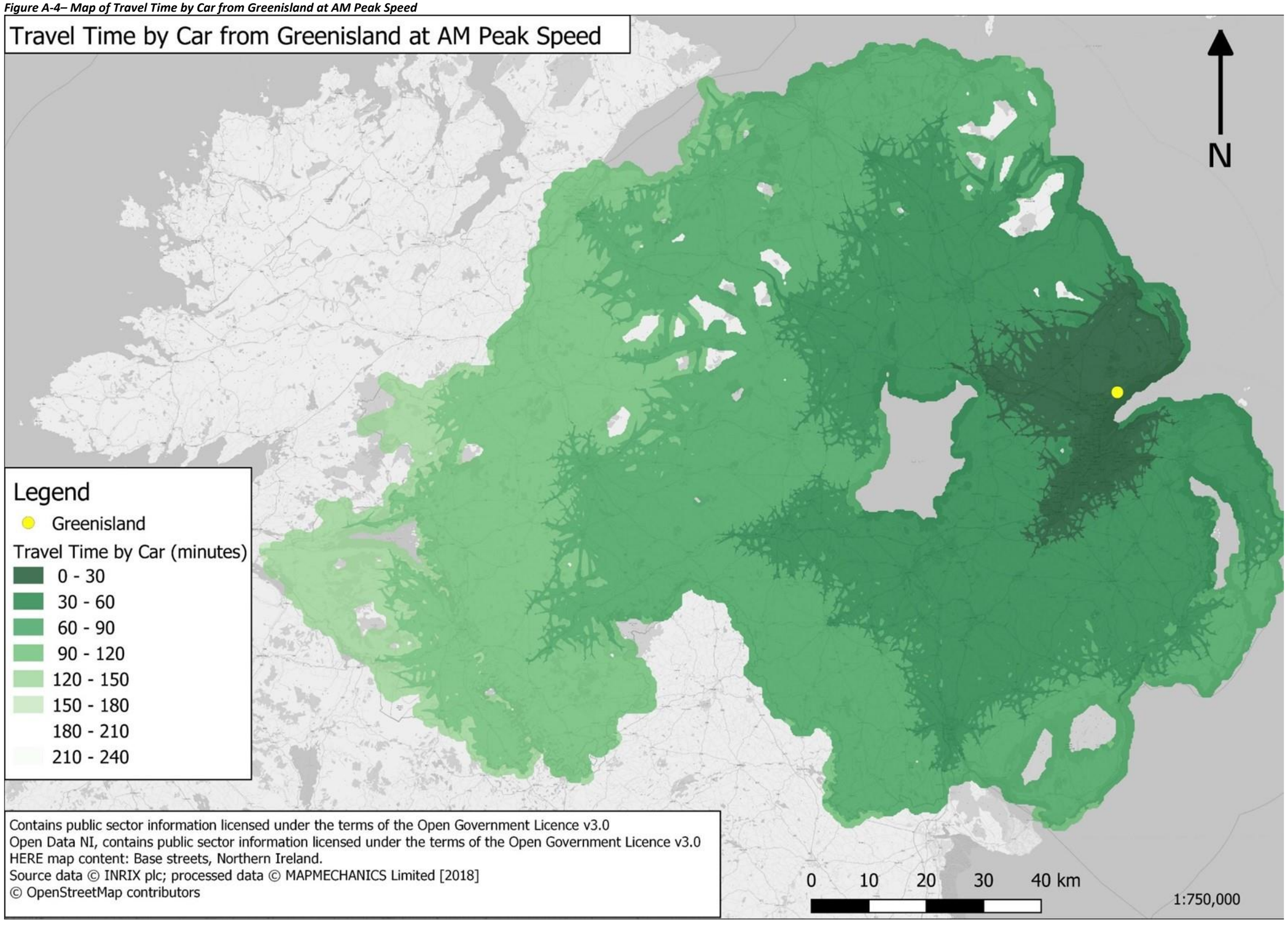


Figure A-5 – Map of Travel Time by Car from Larne at AM Peak Speed

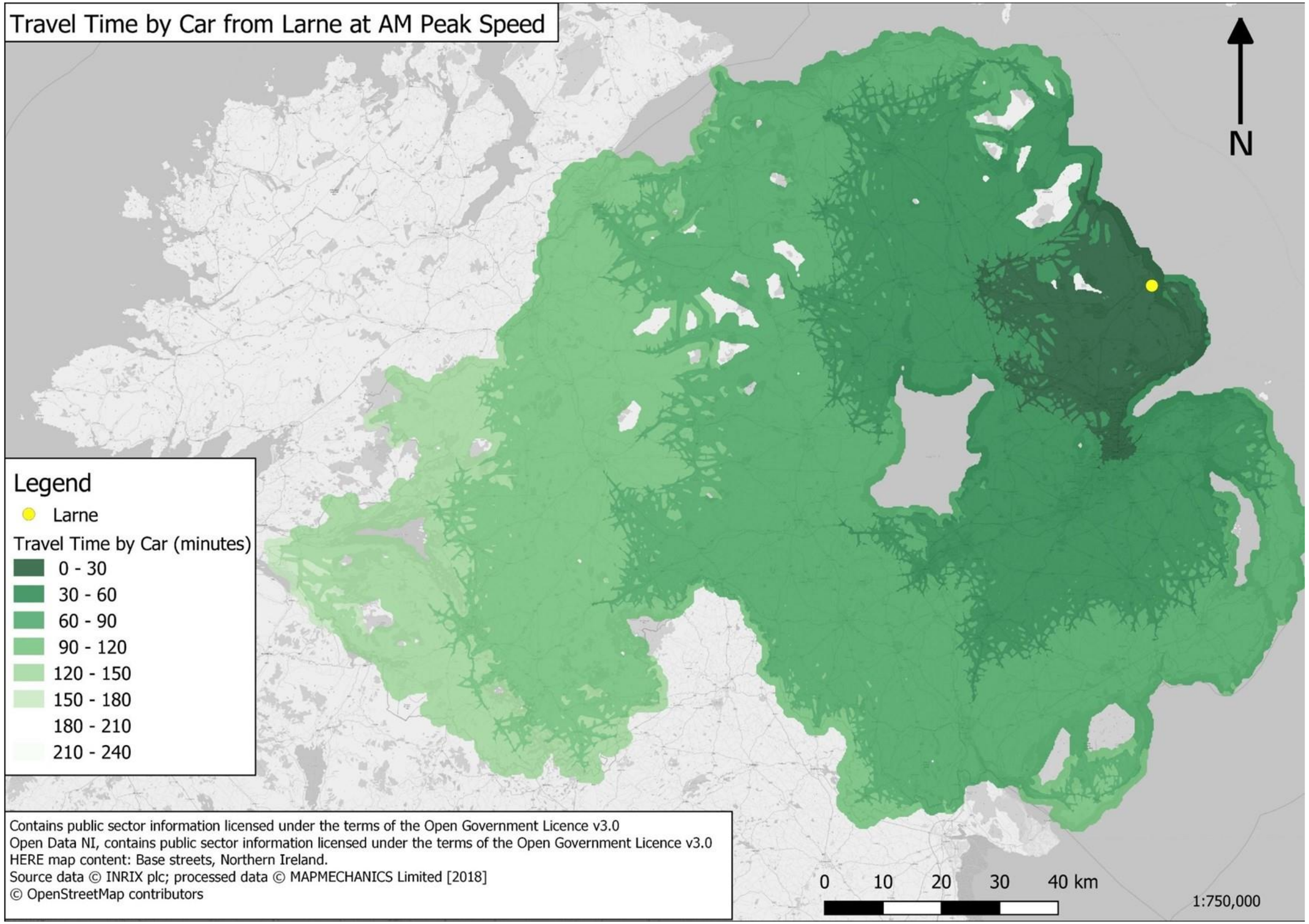


Figure A-6 – Map of Travel Time by Public Transport from Ballymena from 7:00am

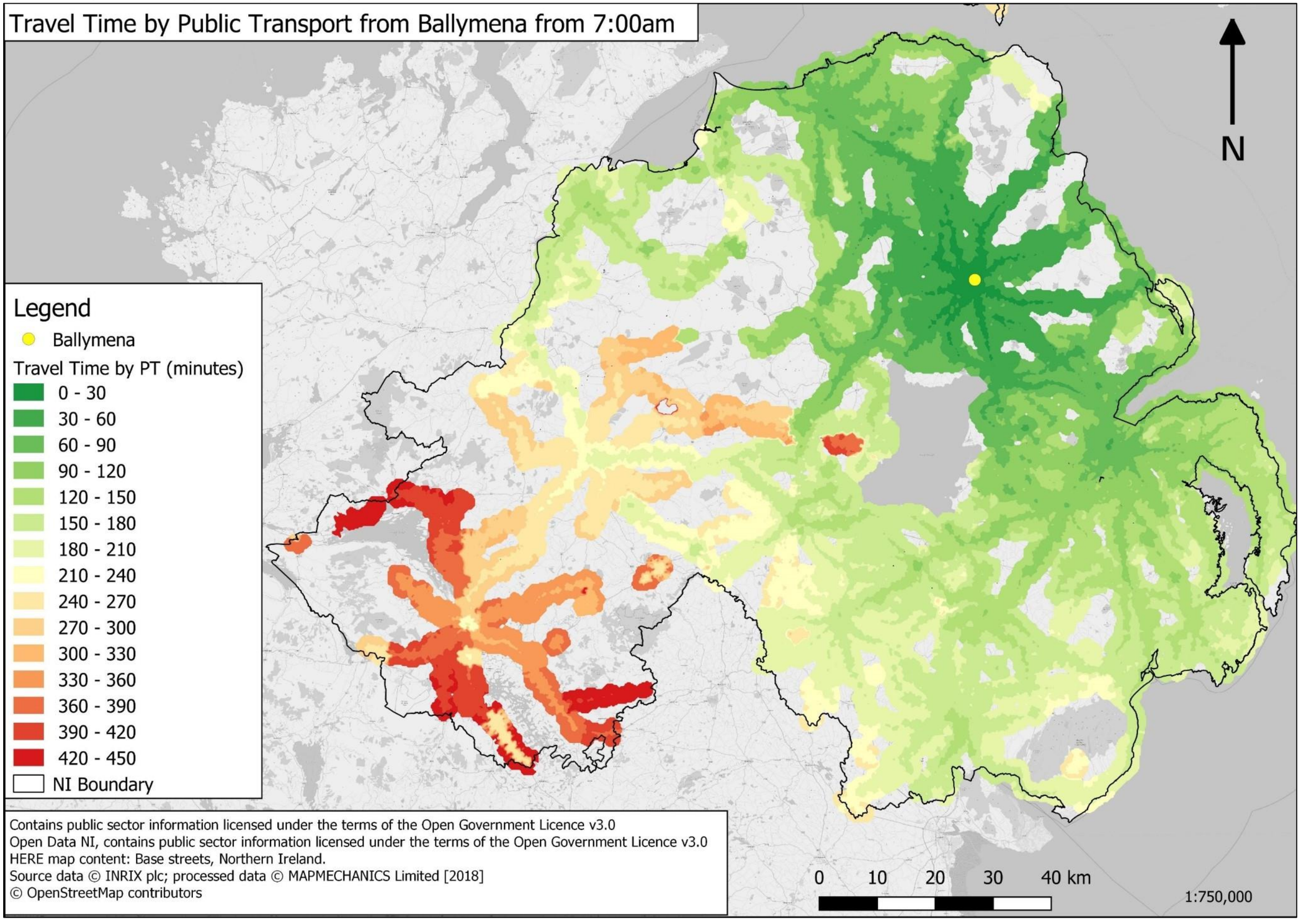


Figure A-7 – Map of Travel Time by ublic Transport from Carrickfergus from 7:00am

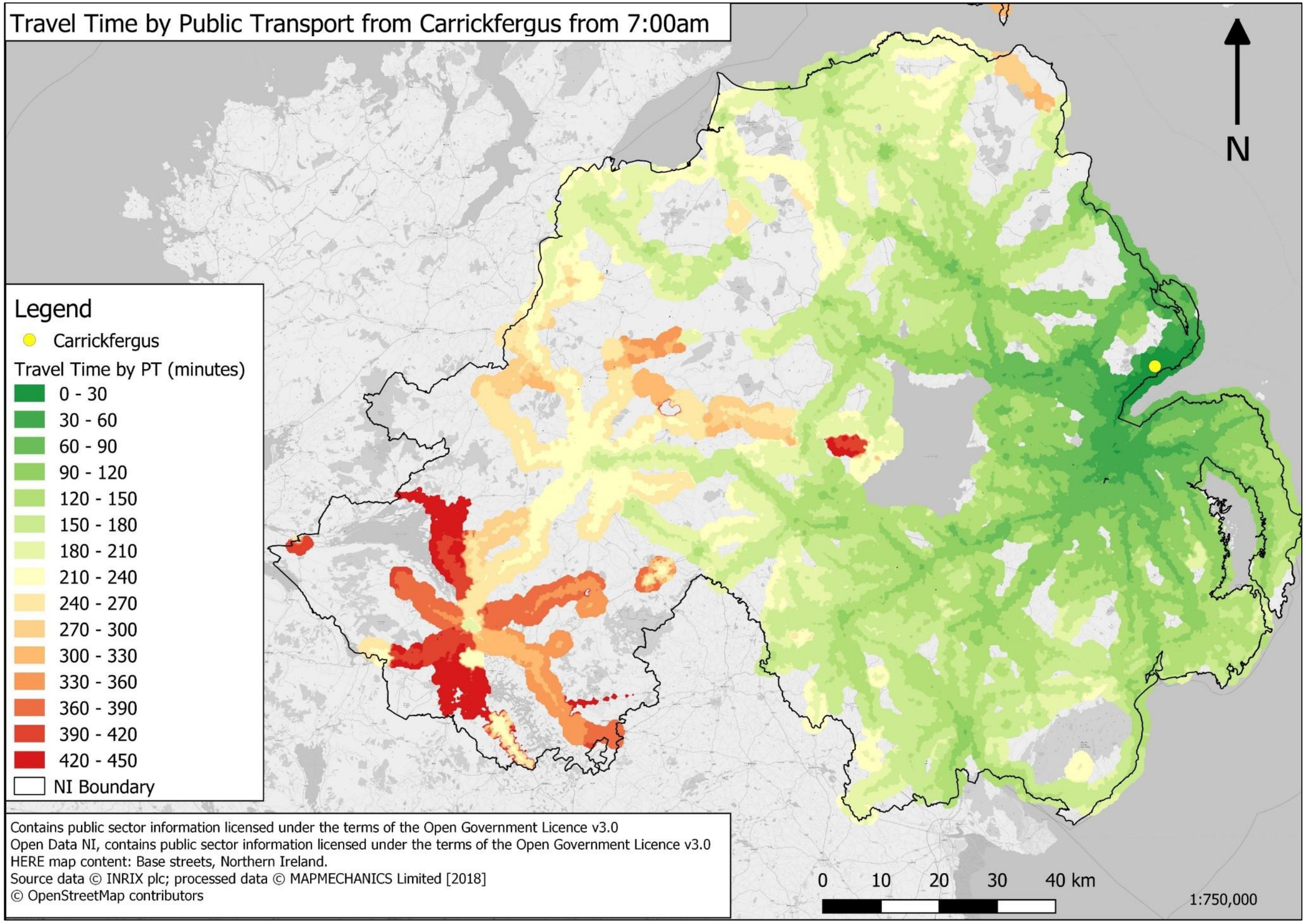


Figure A-8 – Map of Travel Time by Public Transport from Greenisland from 7:00am

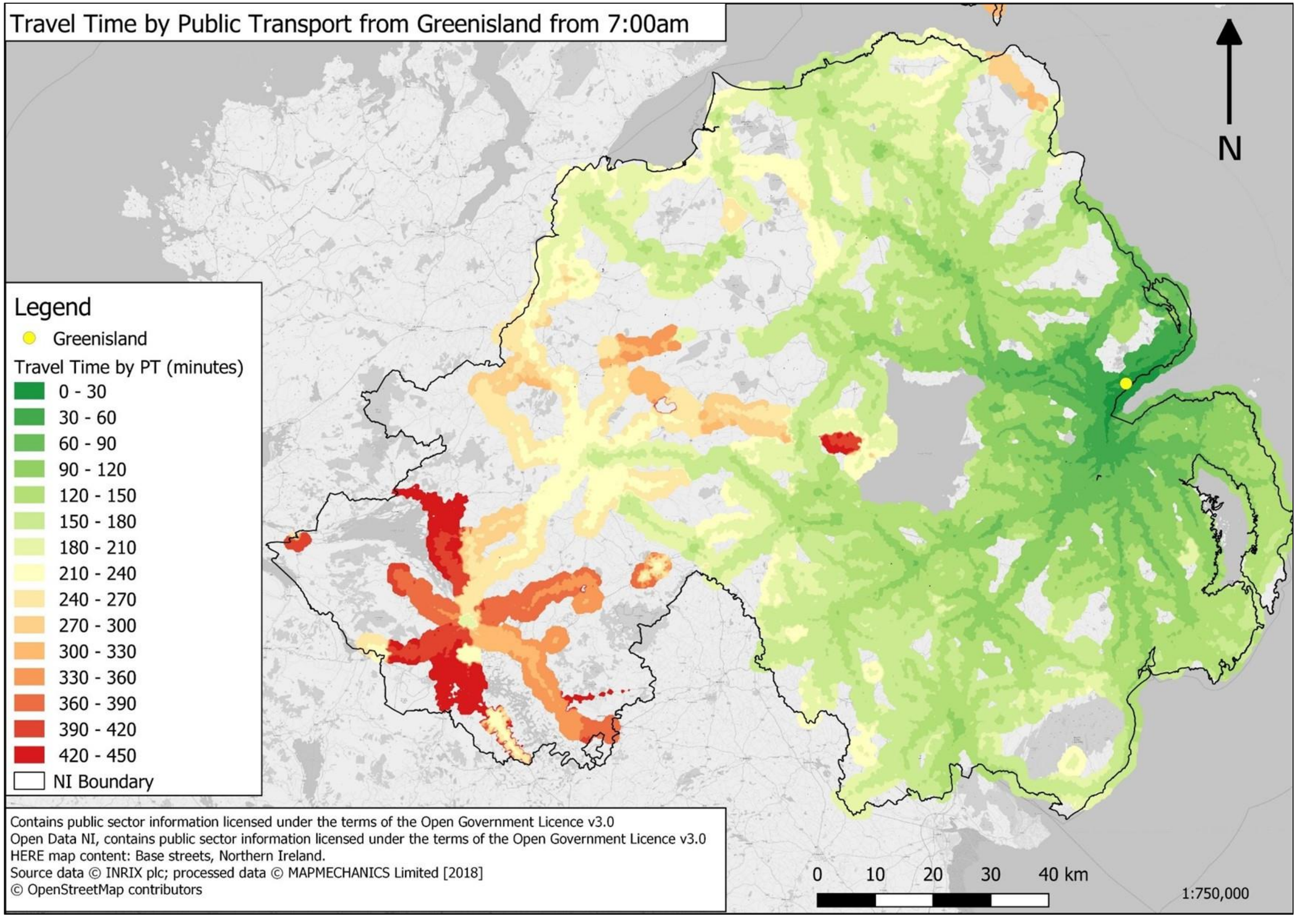


Figure A-9 – Map of Travel Time by Public Transport from Larne from 7:00am

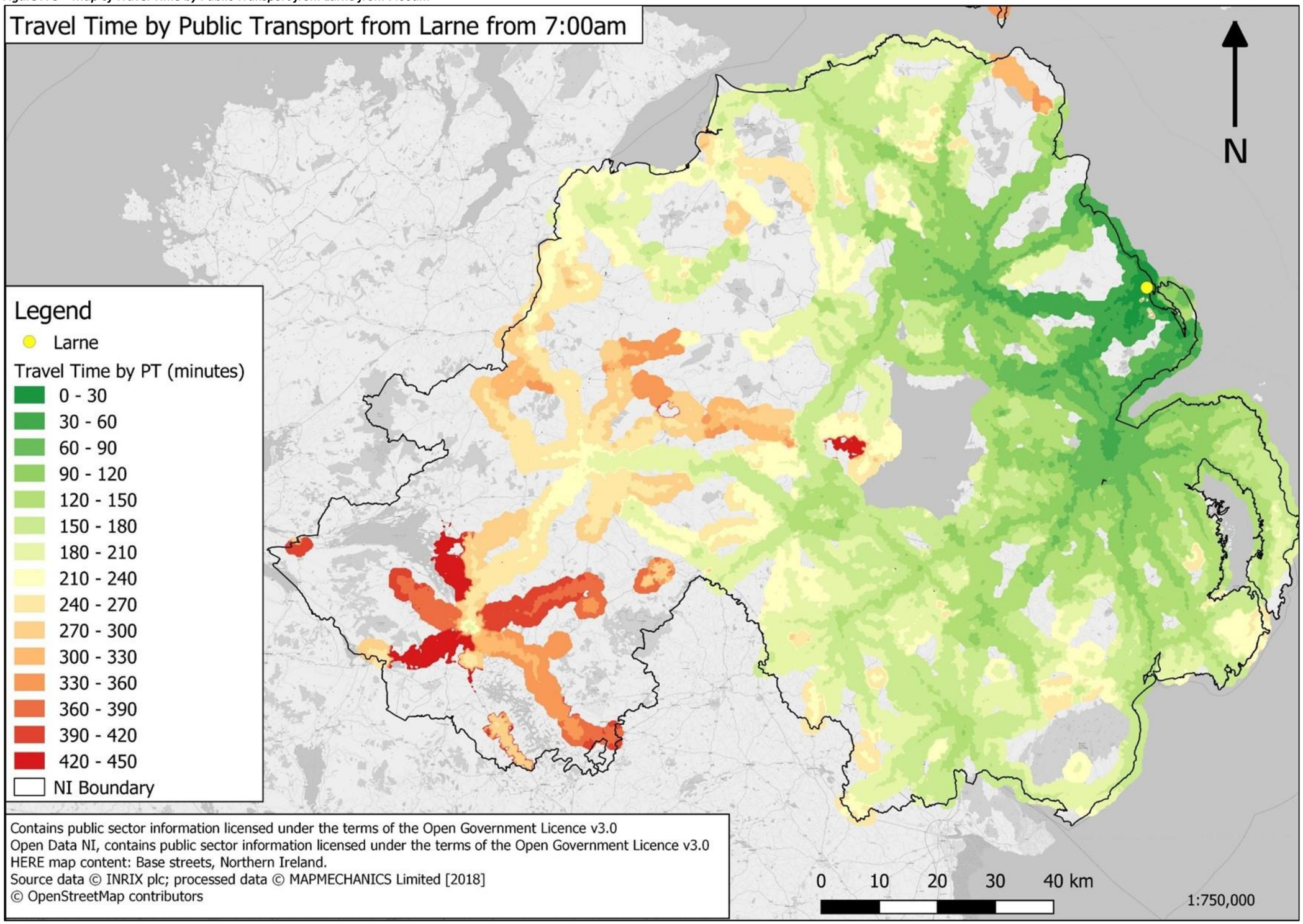
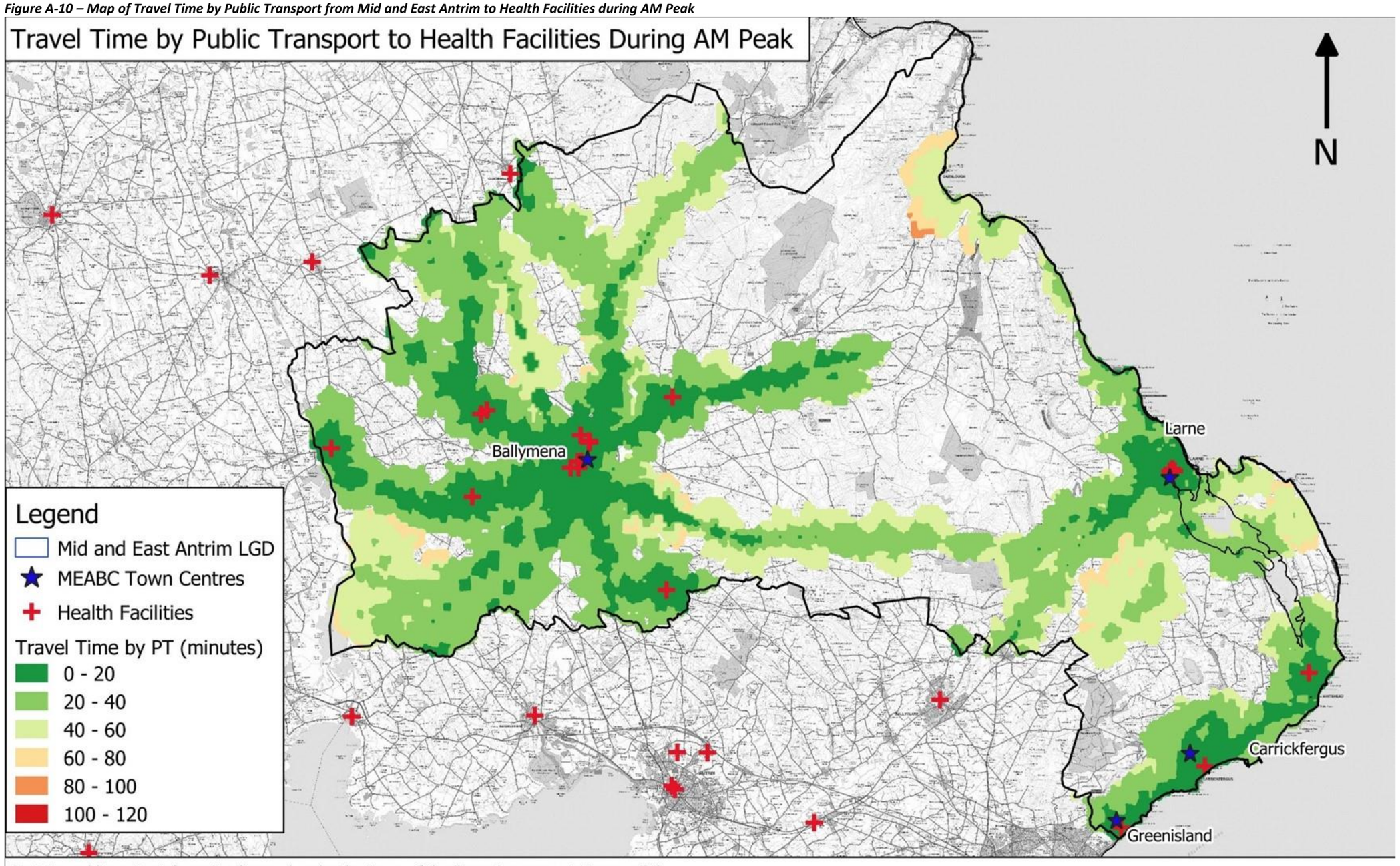


Figure A-10 – Map of Travel Time by Public Transport from Mid and East Antrim to Health Facilities during AM Peak



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Section 2 – Urban Walking and Cycling Infrastructure and Bus Service

Figure A-11 – Map of Pedestrian Infrastructure in Ballymena – Key Radial Footway by Width and Crossing Type

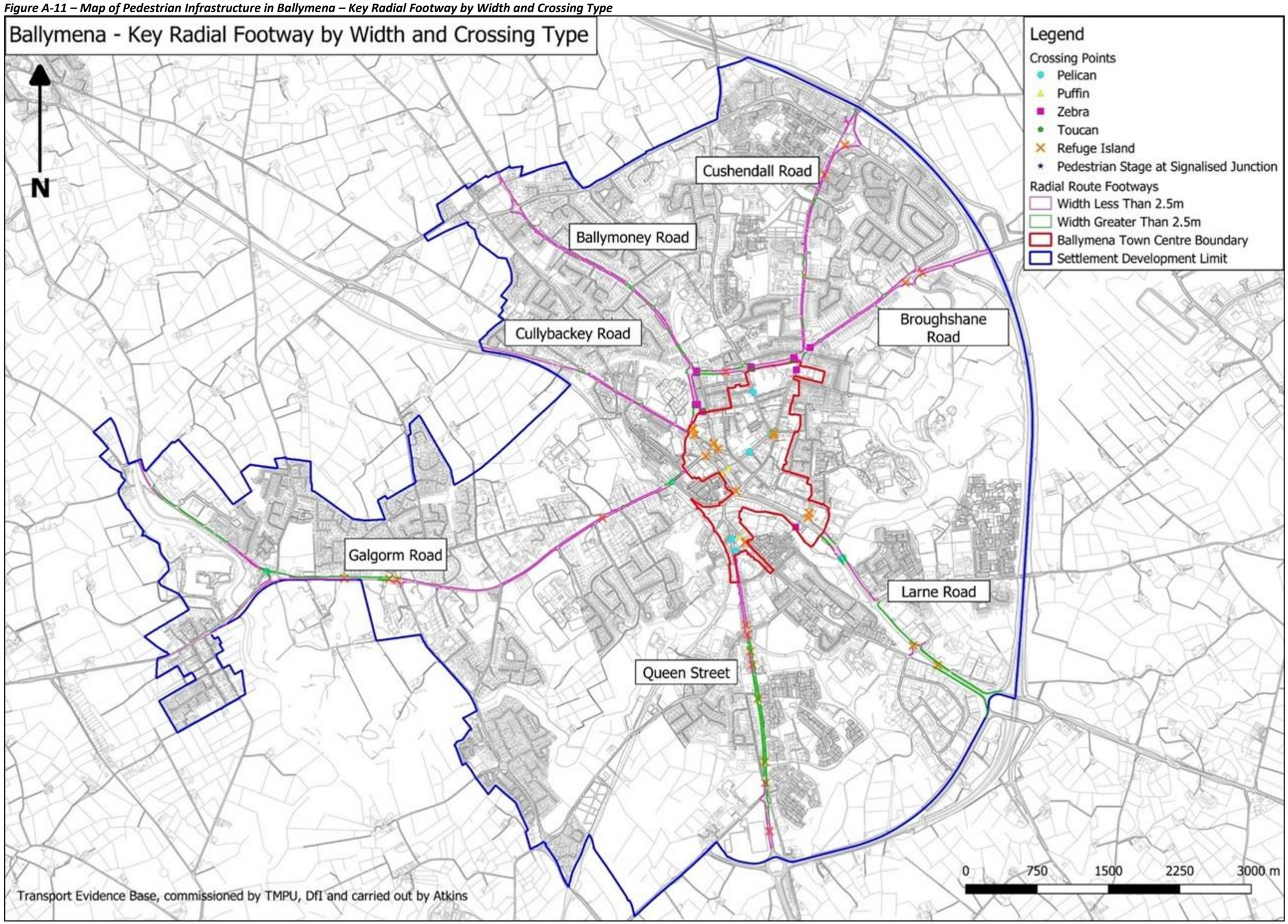

Figure A-12 – Map of Pedestrian Infrastructure in Carrickfergus – Key Radial Footway by Width and Crossing Type

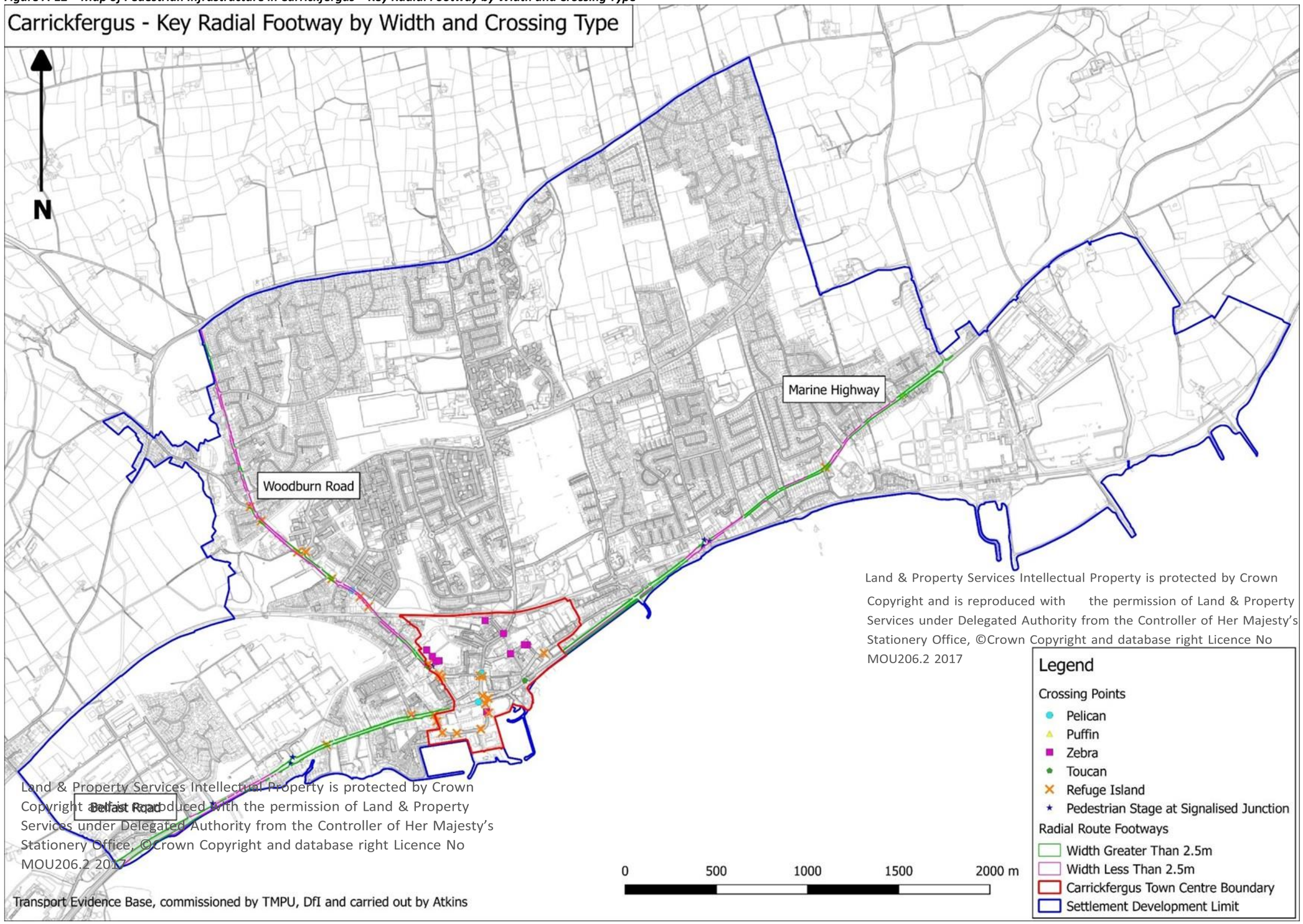

Figure A-13 – Map of Pedestrian Infrastructure in Greenisland – Key Radial Footway by Width and Crossing Type

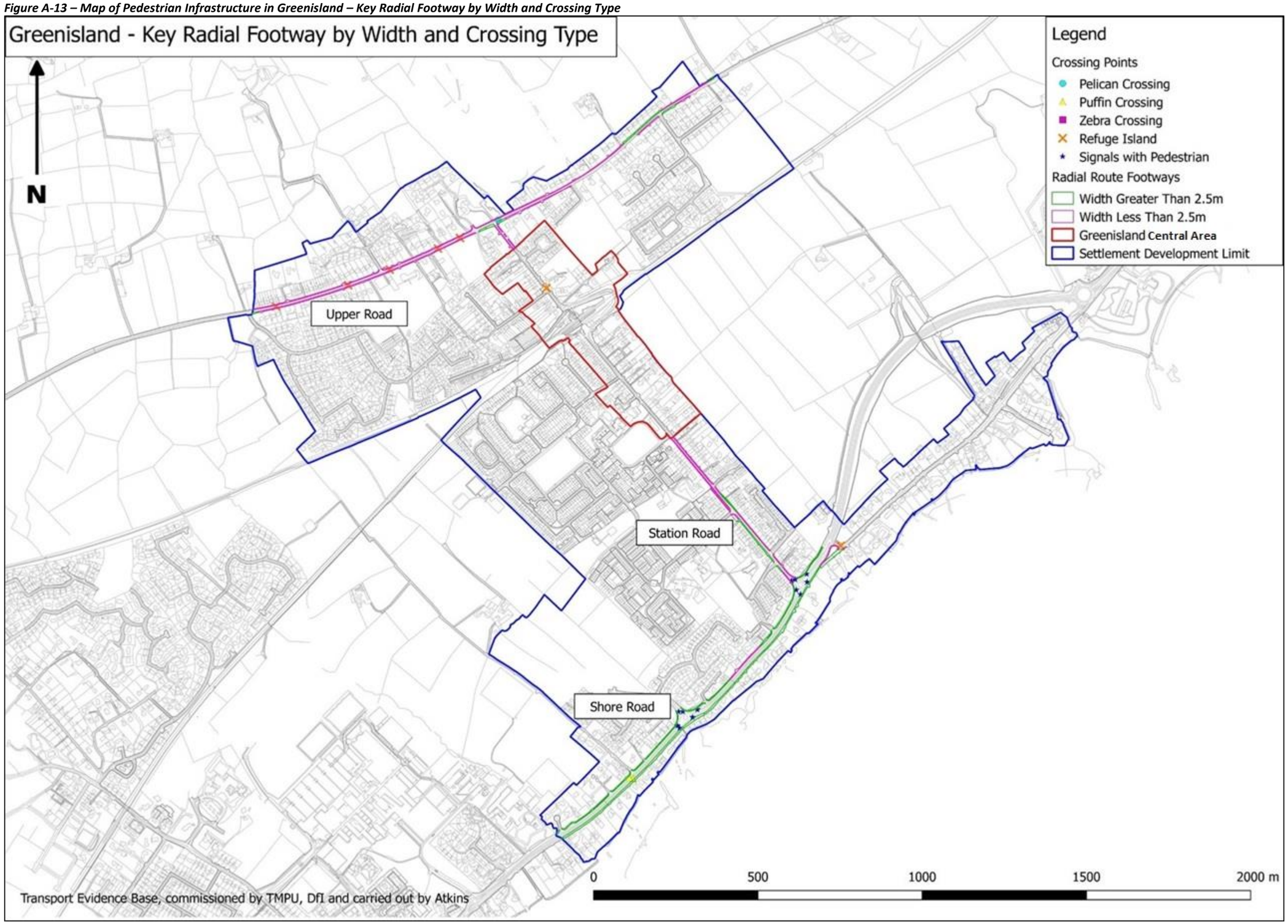

Figure A-14 – Map of Pedestrian Infrastructure in Larne – Key Radial Footway by Width and Crossing Type

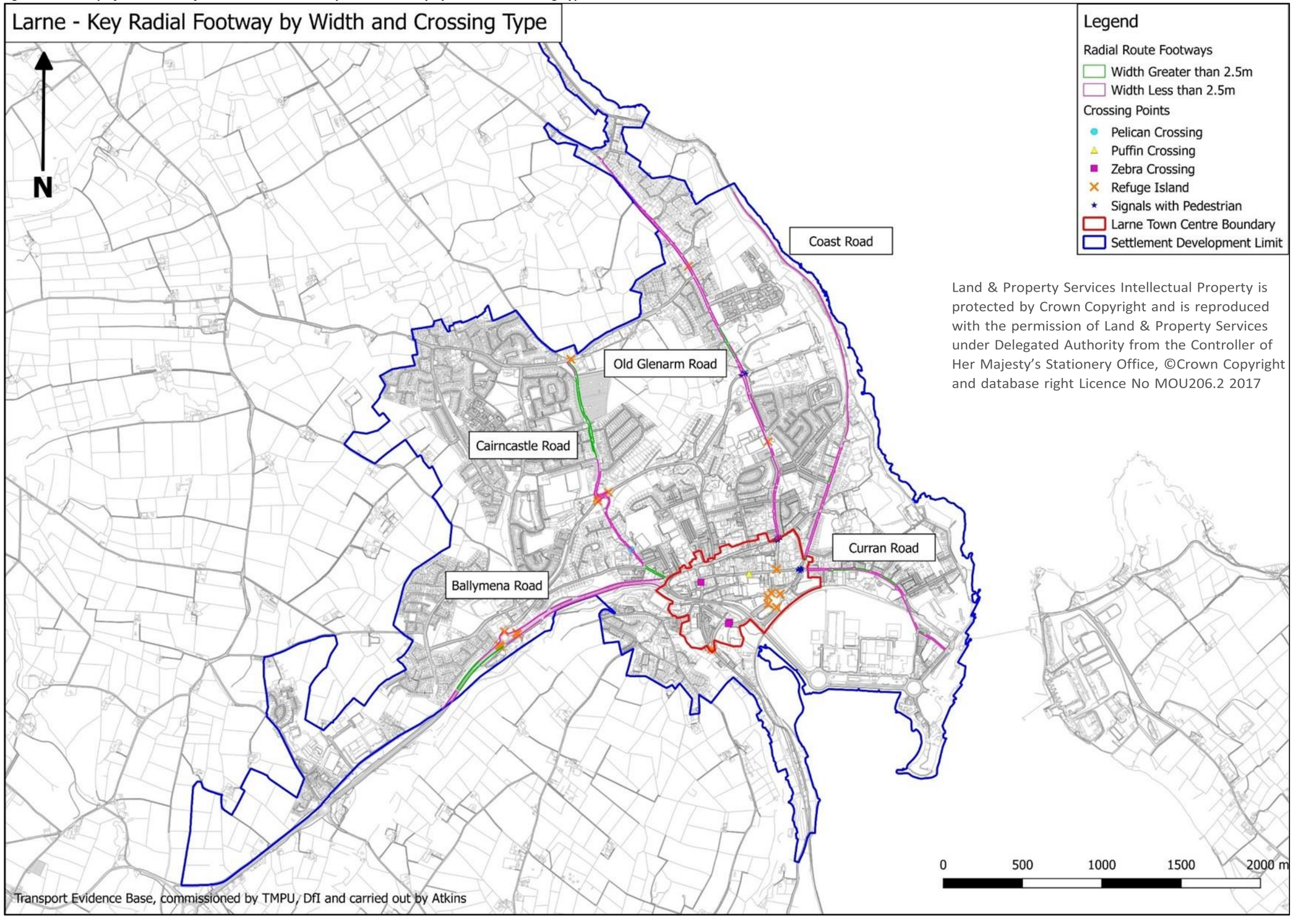

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Figure A-15 – Map of Cycling Infrastructure in Ballymena

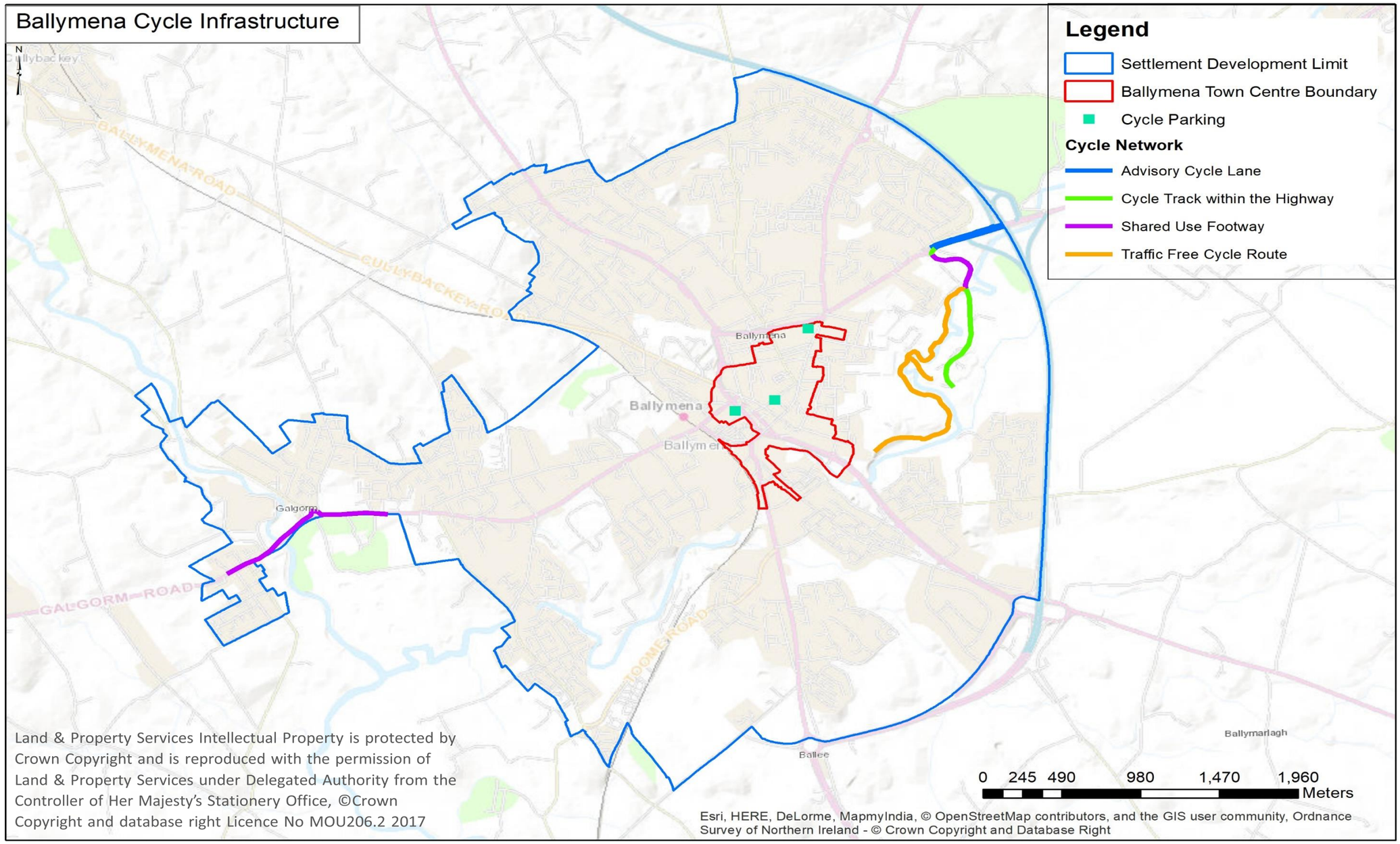


Figure A-16 – Map of Cycling Infrastructure in Carrickfergus

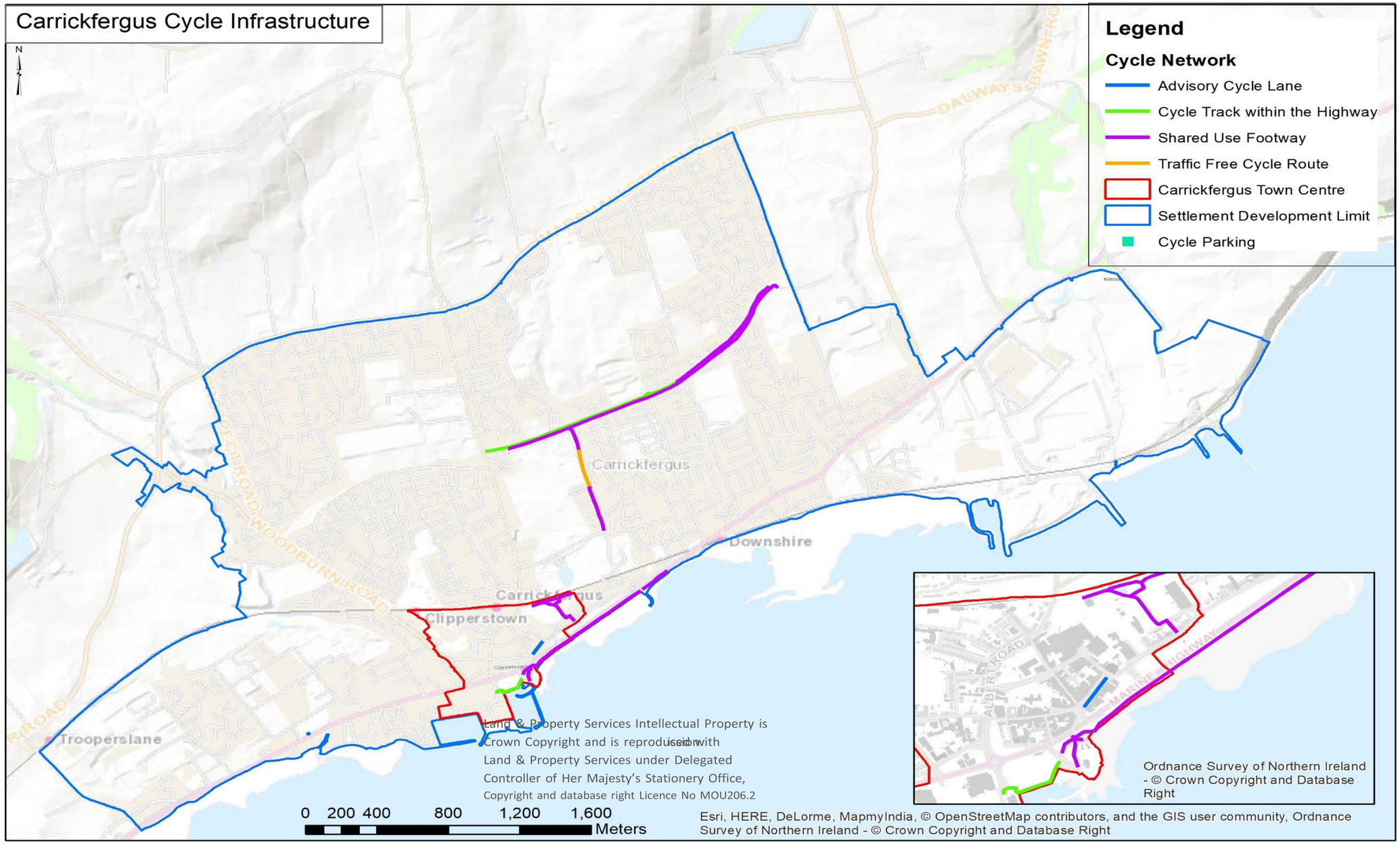


Figure A-17 – Map of Cycling Infrastructure in Greenisland

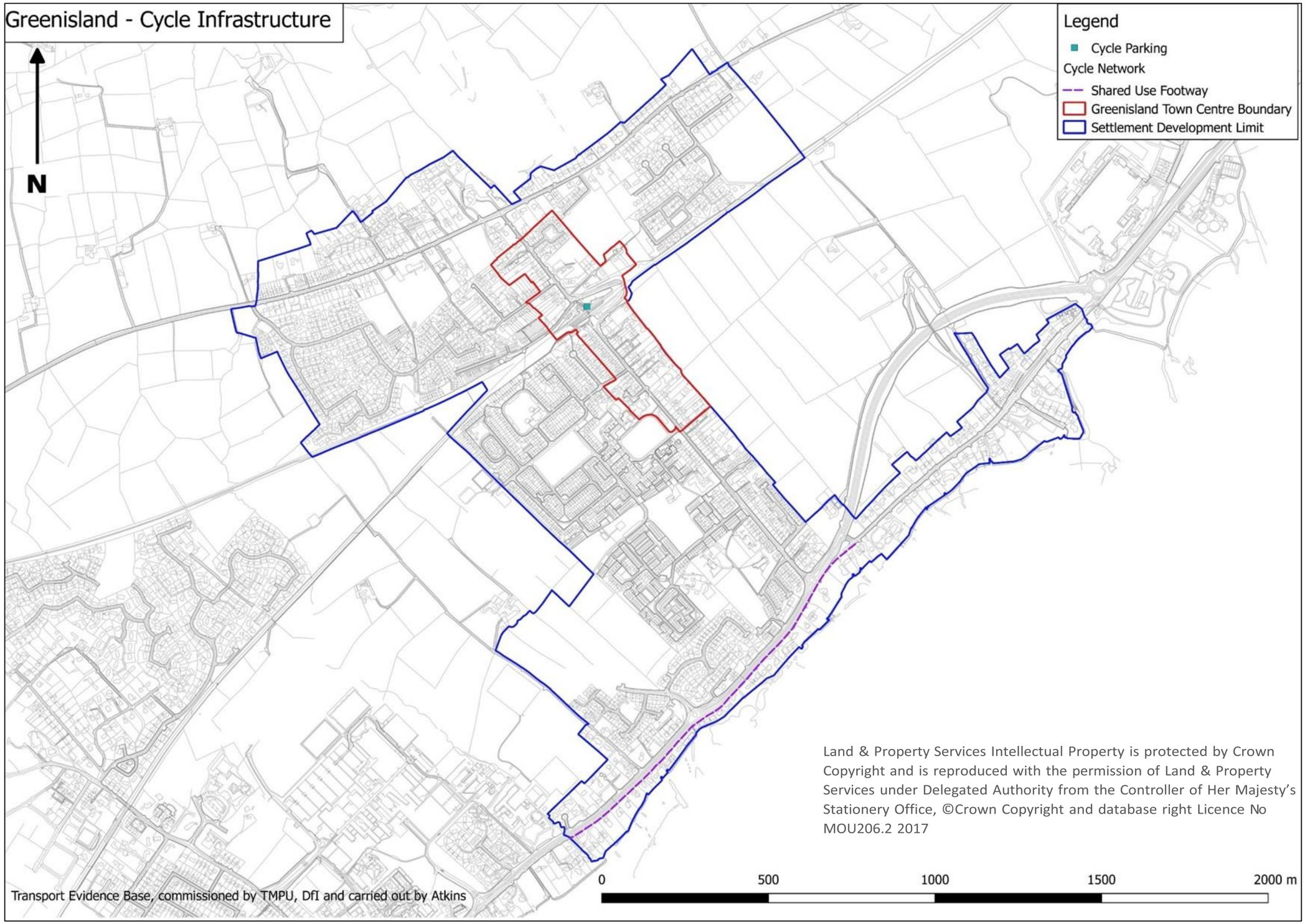


Figure A-18 – Map of Cycling Infrastructure in Larne

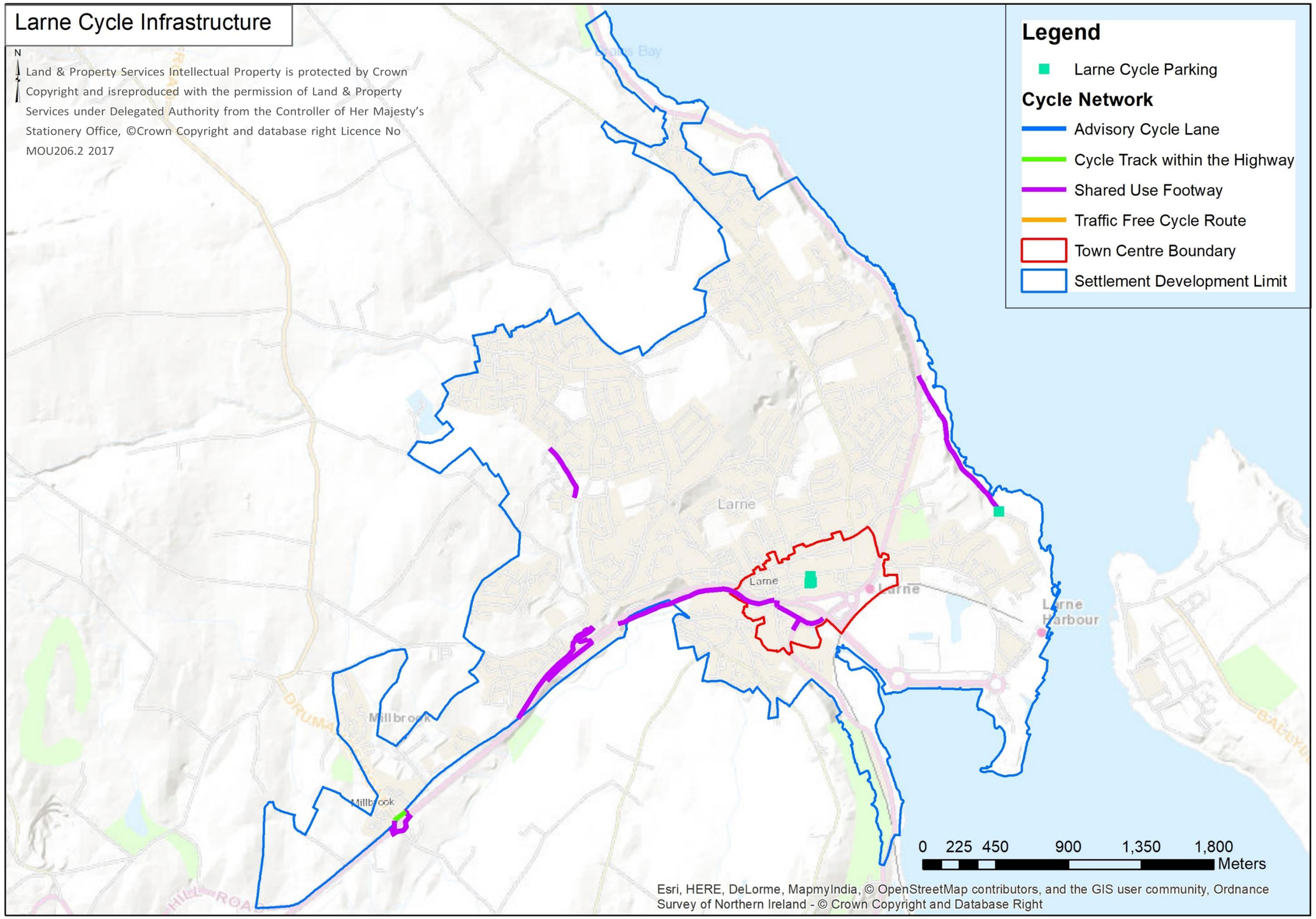


Figure A-19 – Map of Town Bus Services in Ballymena

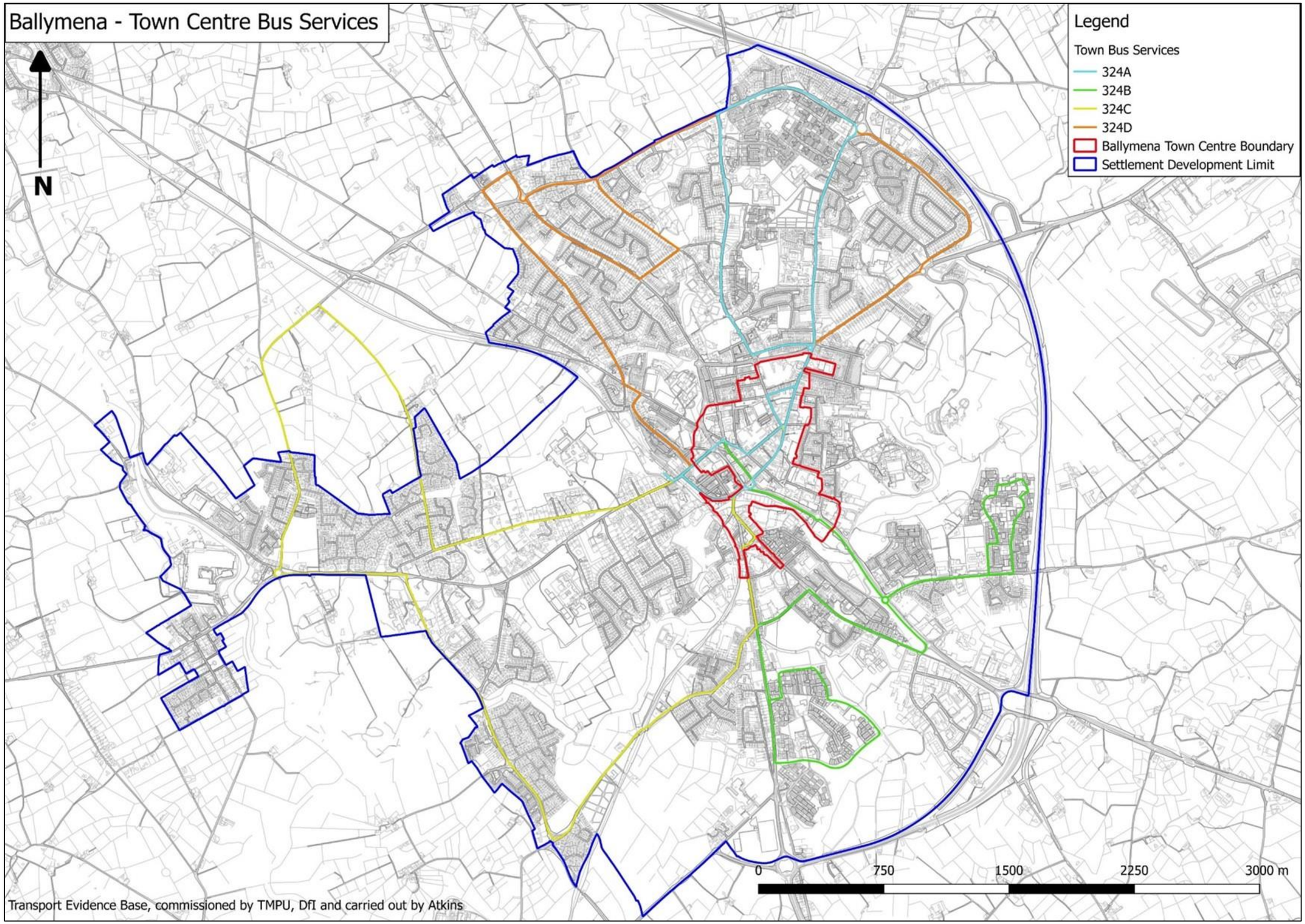


Figure A-20 – Map of Town Bus Services in Carrickfergus

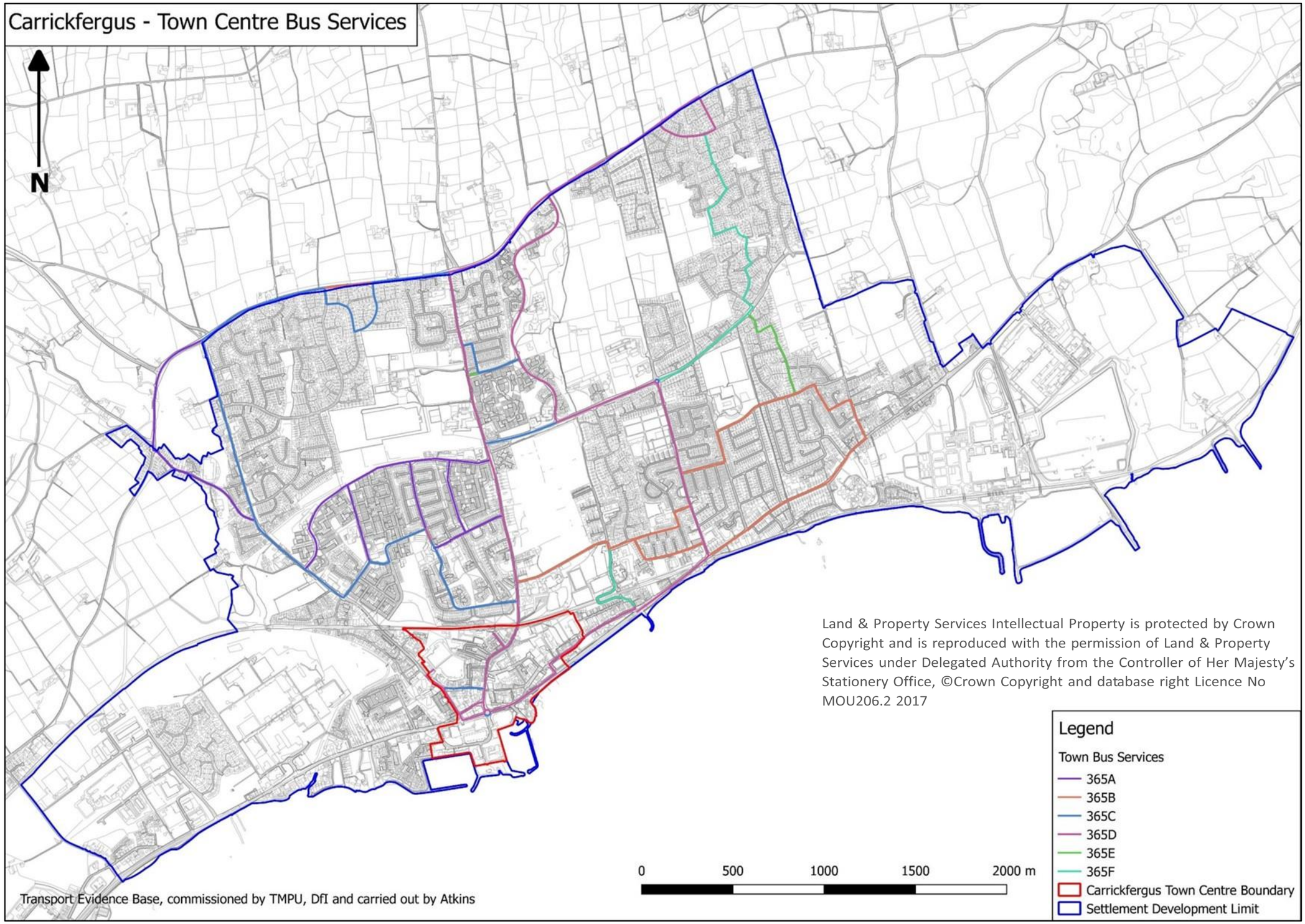
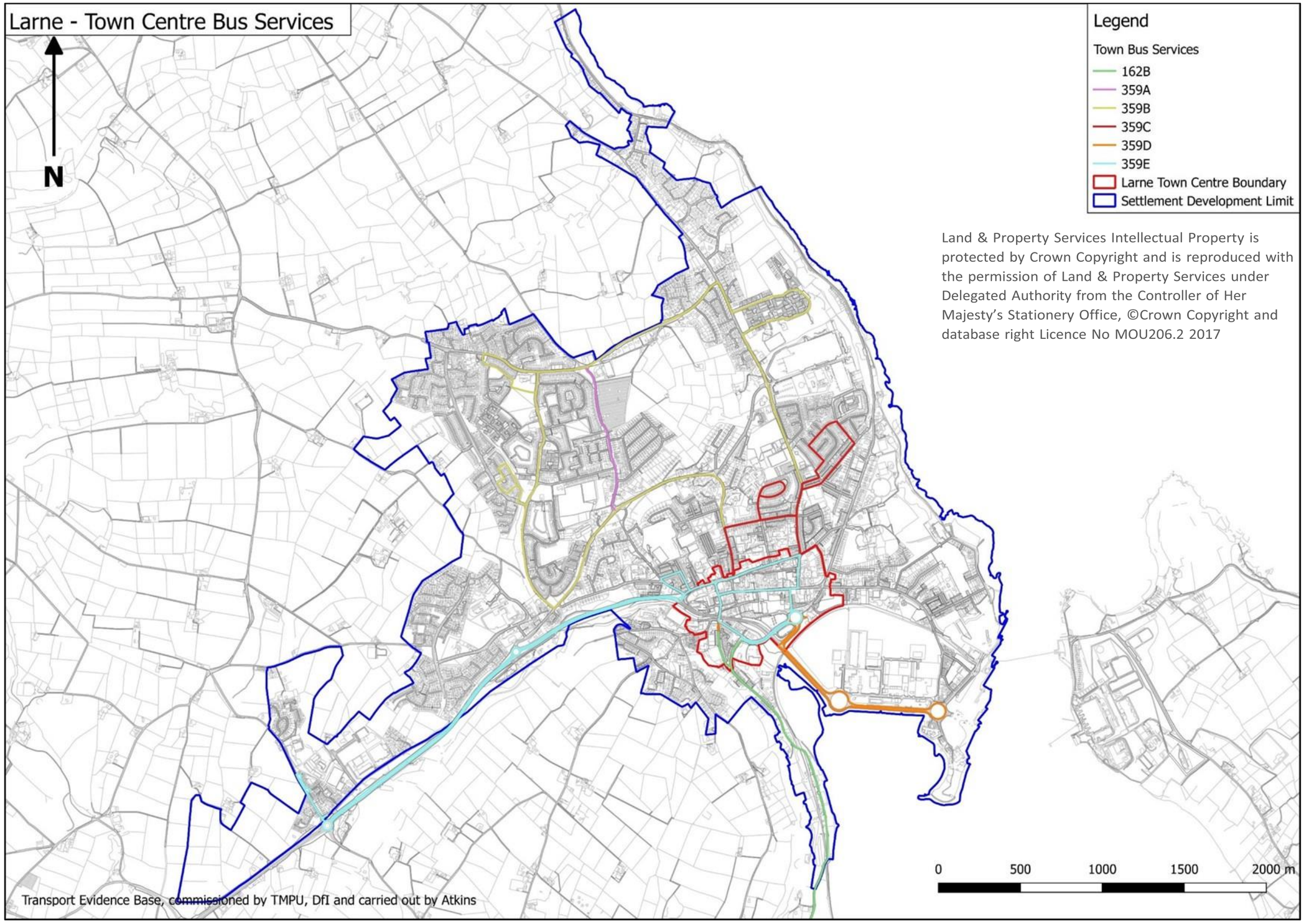


Figure A-21 – Map of Town Bus Services in Larne



Section 3 – Travel to Work Destinations

Figure A-22 – Map of Percentage of Travel to Work Journeys from Ballymena to other LGDs (in 2011)

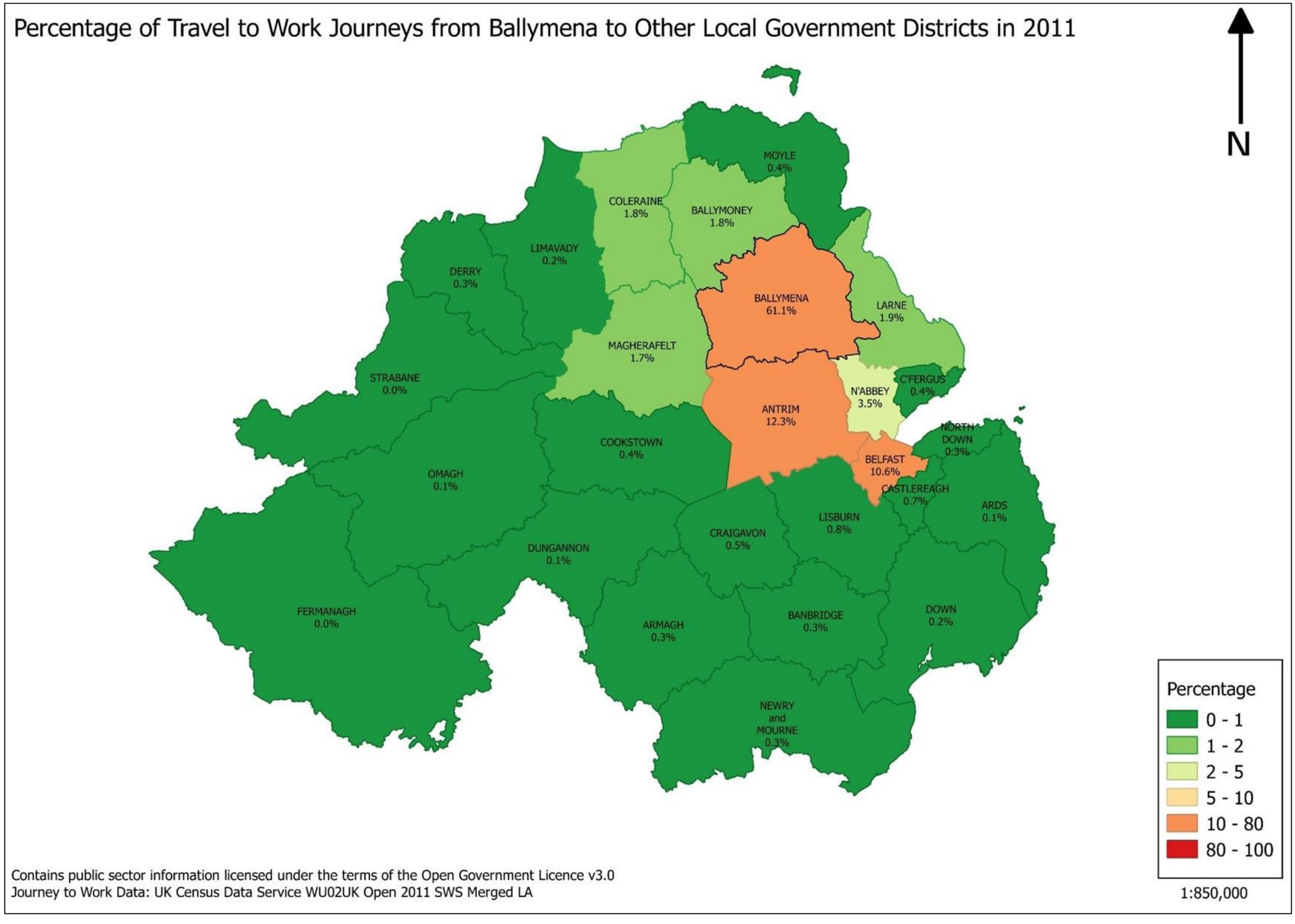


Figure A-23 – Map of Percentage of Travel to Work Journeys from Carrickfergus to other LGDs (in 2011)

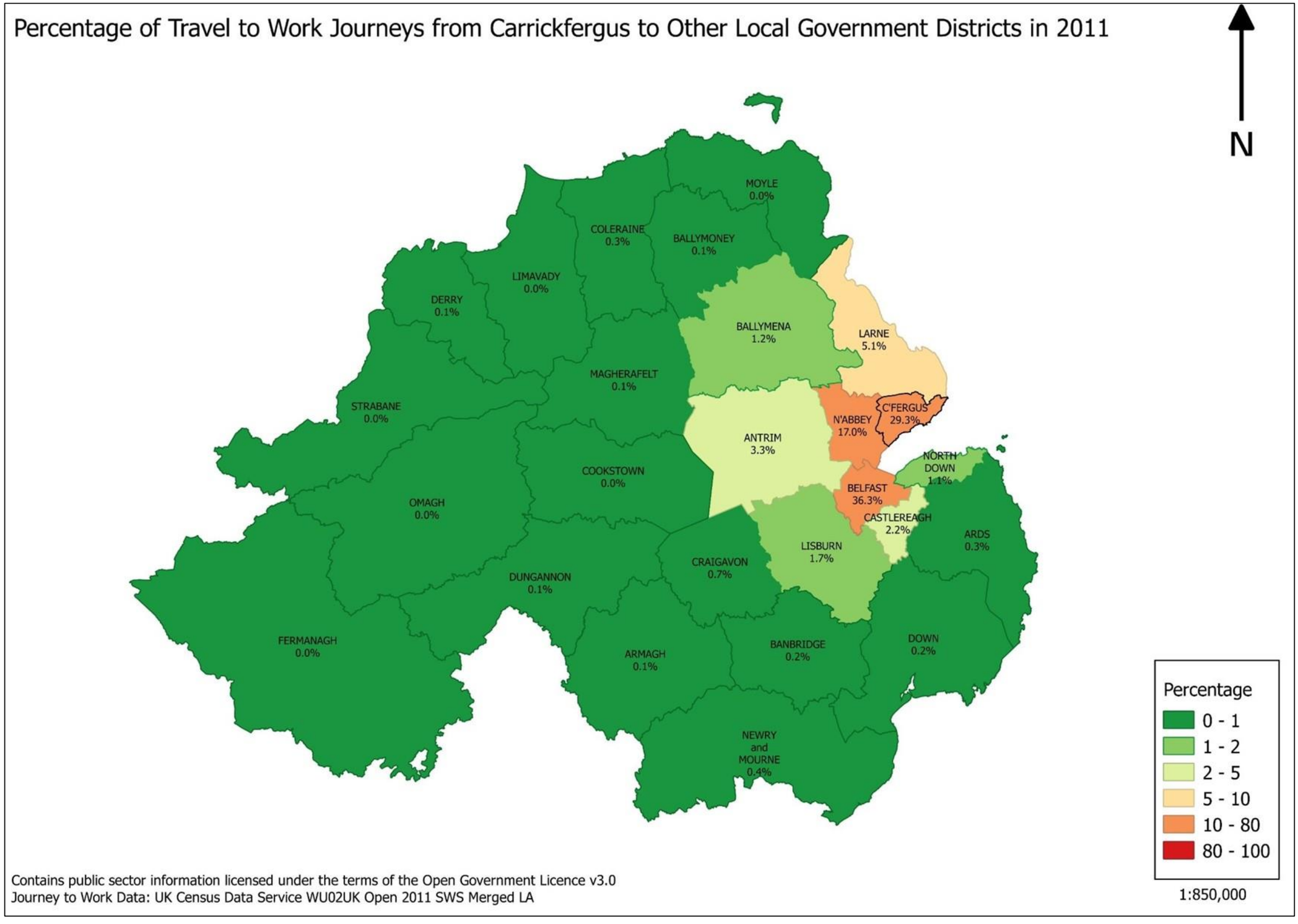
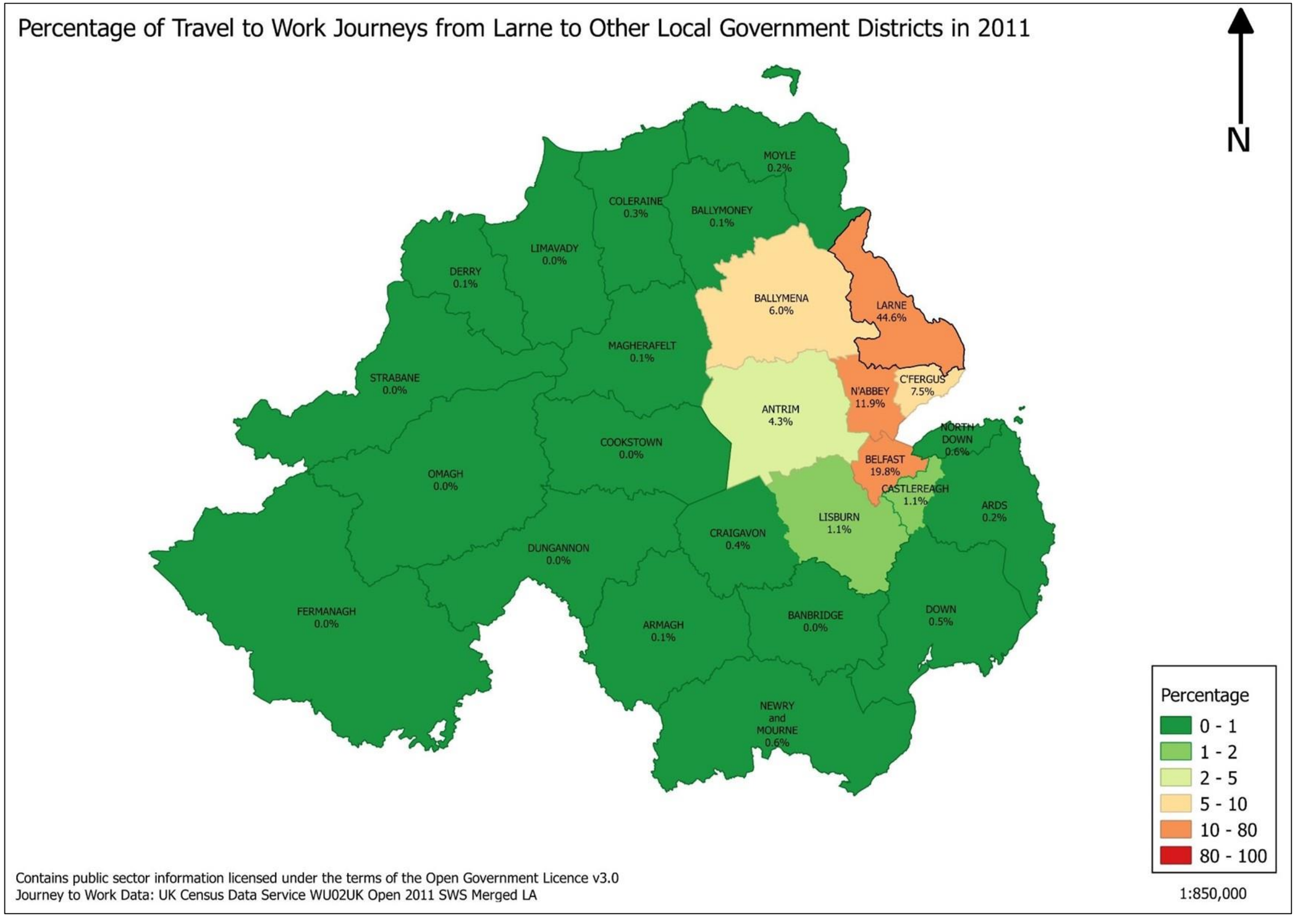
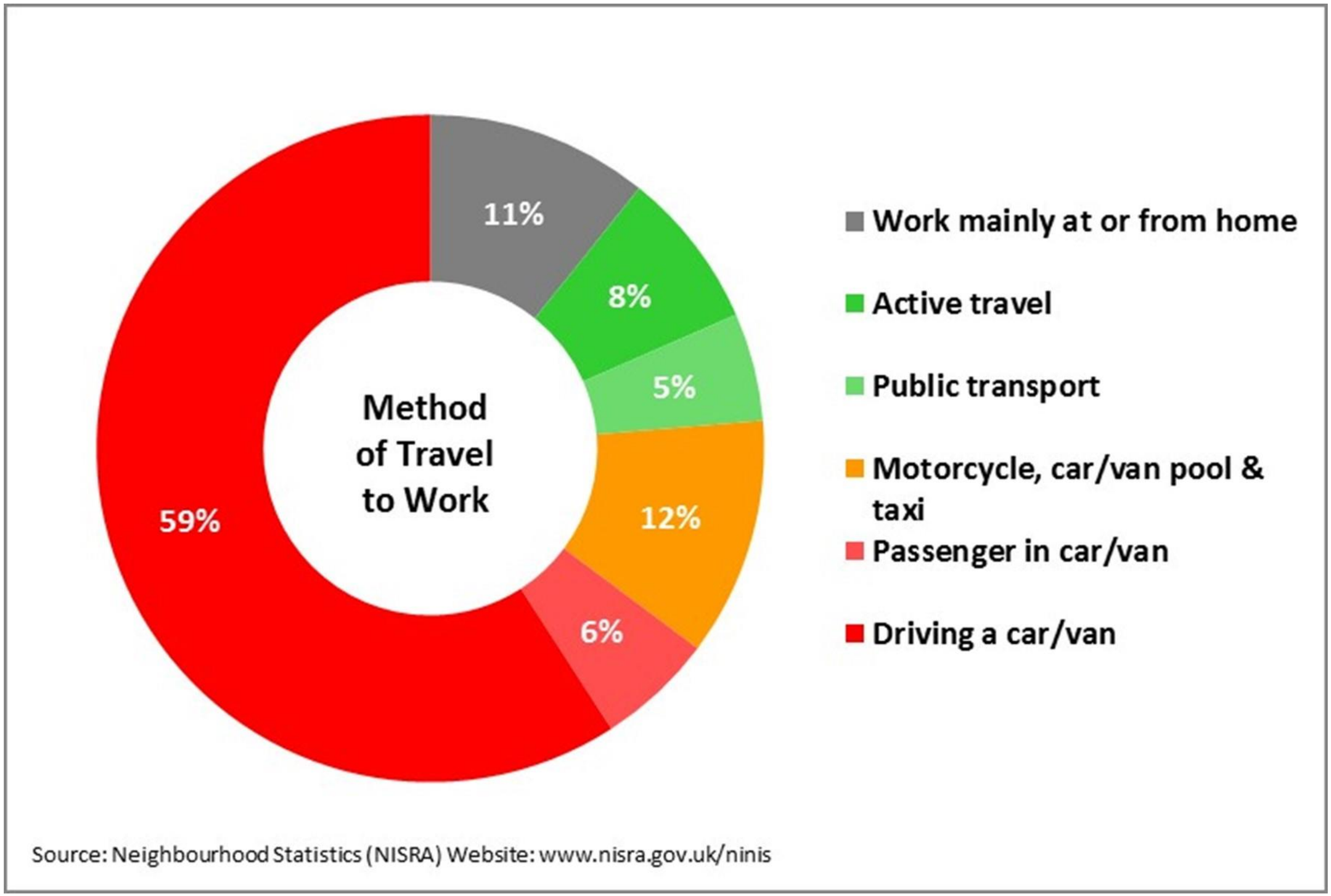


Figure A-24 – Map of Percentage of Travel to Work Journeys from Larne to other LGDs (in 2011)



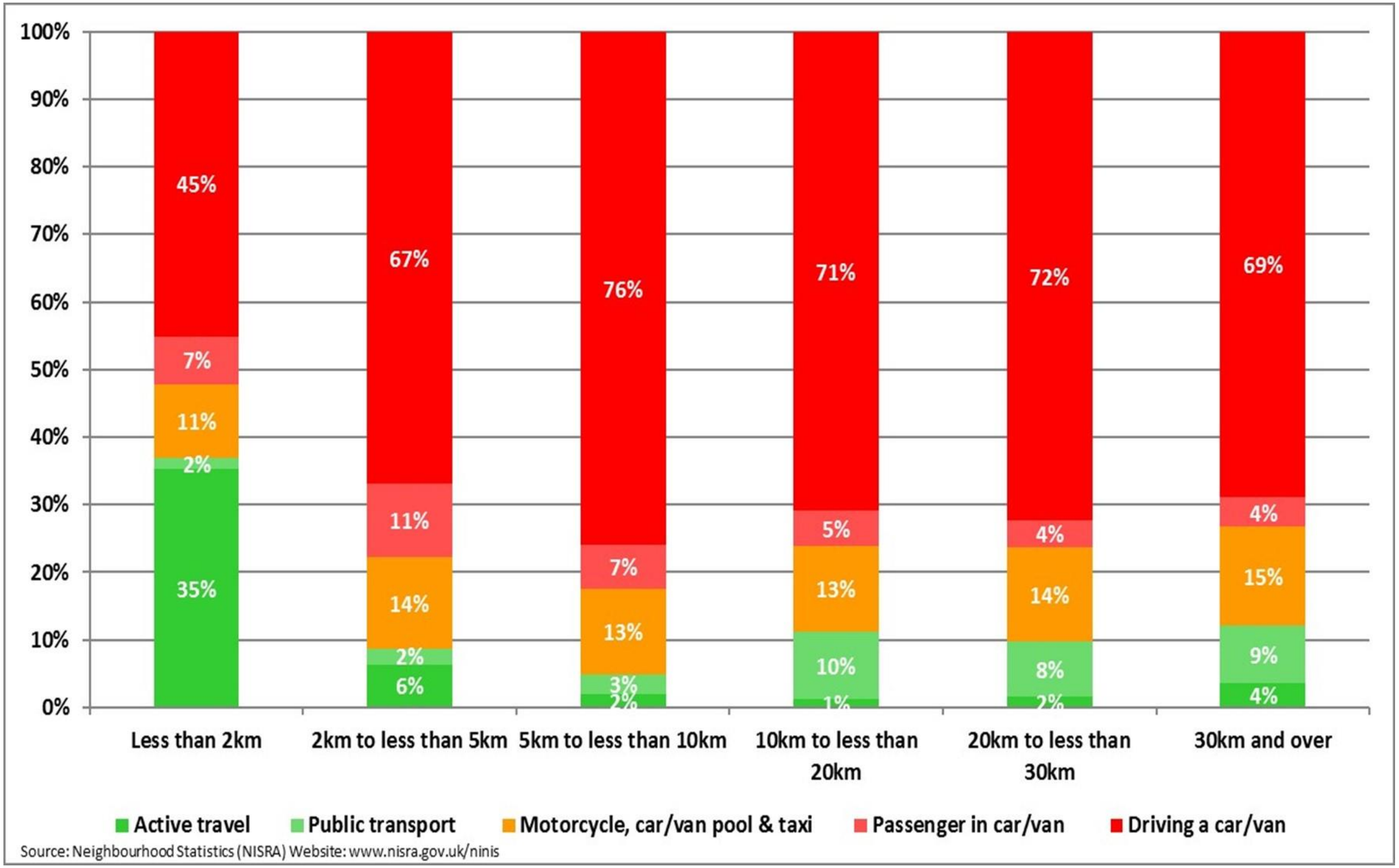
Section 4 – Modal Choice for Journeys to Work and Education across the Council Area

Figure A-25 – Chart of Modal Choice for Journey to Work in Mid and East Antrim



Source: Neighbourhood Statistics (NISRA) Website: www.nisra.gov.uk/ninis

Figure A-26 – Graph of Modal Choice for Journey to Work by Distance in Mid and East Antrim



Source: Neighbourhood Statistics (NISRA) Website: www.nisra.gov.uk/ninis

Figure A-27 – Chart of Modal Choice for Journey to Education in Mid and East Antrim

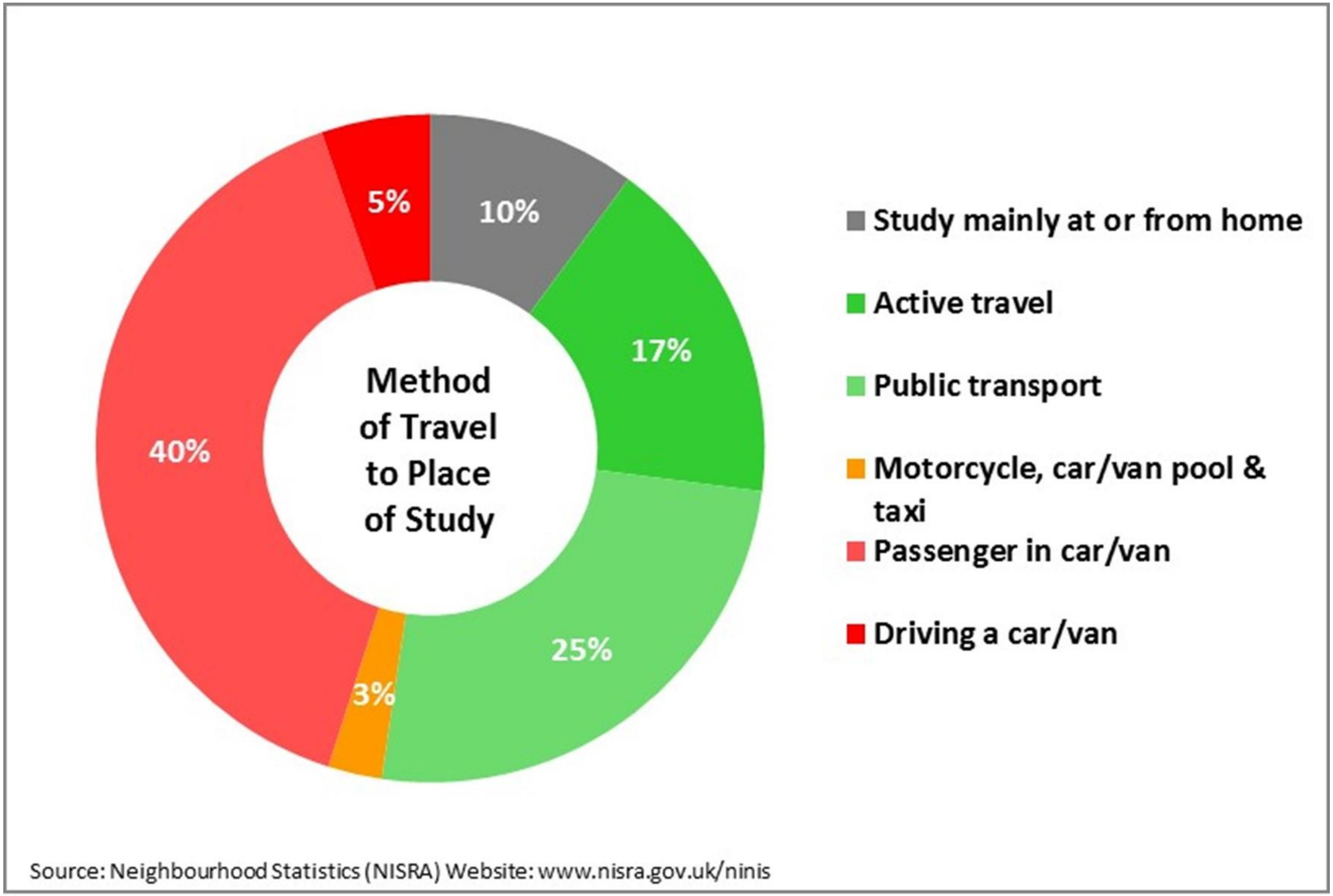
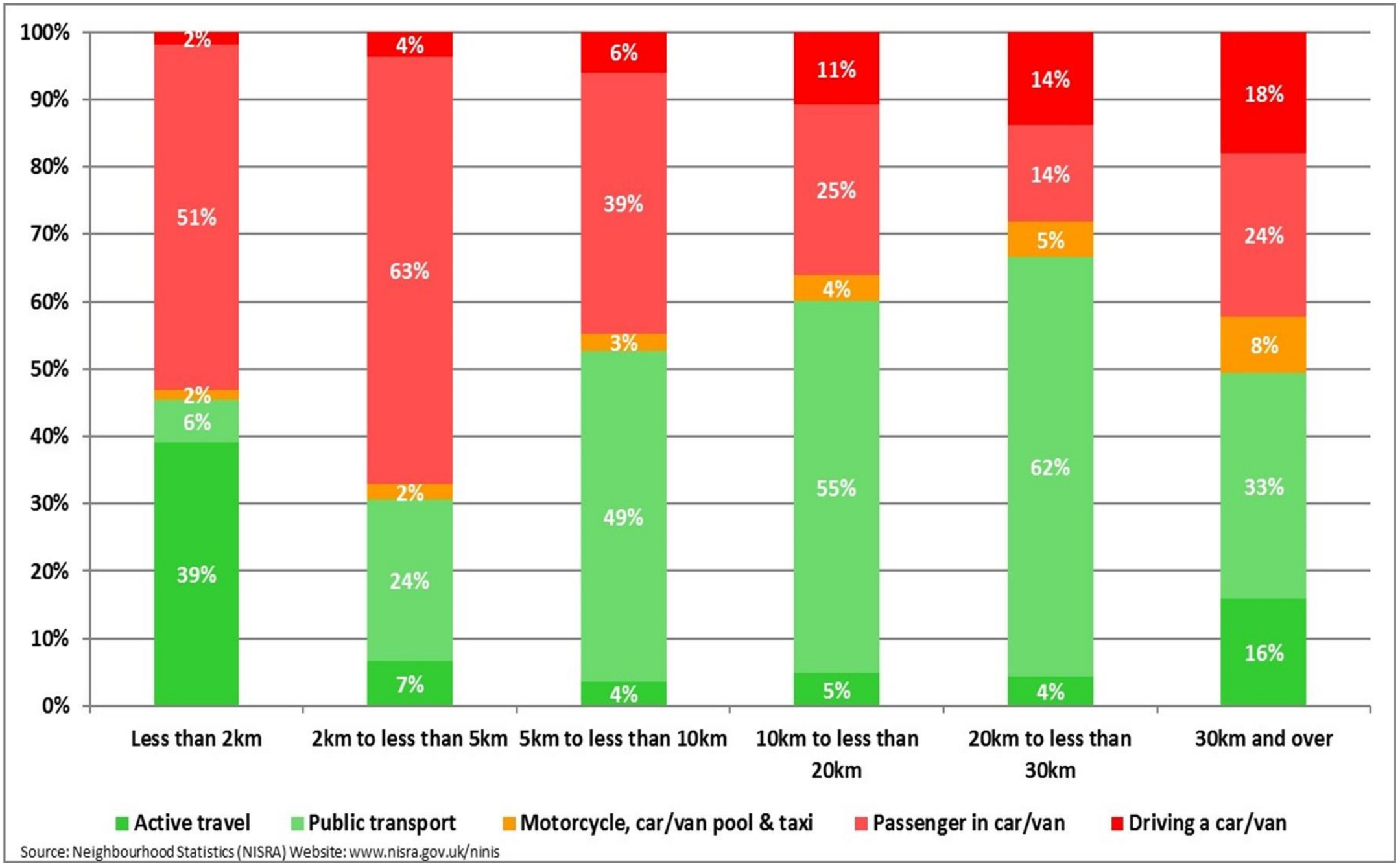


Figure A-28 – Graph of Modal Choice for Journey to Education by Distance in Mid and East Antrim



Section 5 – Road Network Speeds at Peak and Off-Peak Time Periods

Figure A-29 – Map of Average Off Peak Speeds (mph) for Roads in Mid and East Antrim

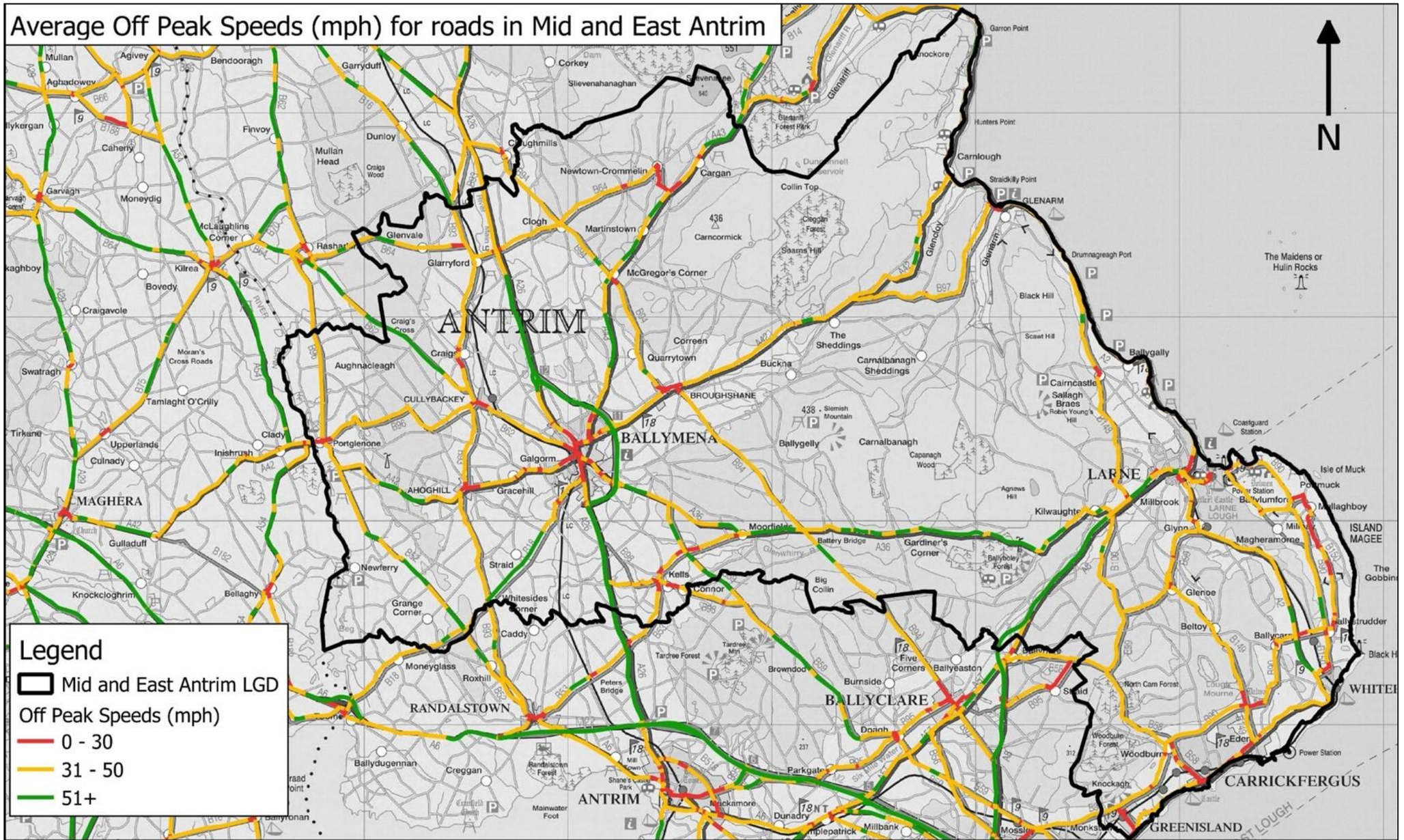

Average Off Peak Speeds (mph) for roads in Mid and East Antrim
N
Legend
Mid and East Antrim LGD
Off Peak Speeds (mph)
0 - 30
31 - 50
51+
ANTRIM
BALLYMENA
LARNE
CARRICKFERGUS
MAGHERA
RANDALSTOWN
BALLYCLARE
GREENISLAND
GLENARM
Garron Point
Carnlough
Straidkilly Point
Drumnagreagh Port
The Maidens or Hulin Rocks
Black Hill
Ballygally
Cairncastle
Sallagh Braes
Coastguard Station
Isle of Muck
Portmuck
Millbrook
Glynn
Magheramorne
ISLAND MAGEE
Glenoe
Beltoy
Woodburn
Eden
Power Station
Knockagh
Kilwaughter
Carnalbanagh
Ballygelly
Slemish Mountain
Capanagh Wood
Agnews Hill
Scawt Hill
The Sheddings
Carnalbanagh Sheddings
Buckna
Correen
Quarrytown
BROUGHSHANE
CULLYBACKEY
Tamlaght O'Crilly
Moran's Cross Roads
Craigavole
Bovedy
Kilrea
Garvagh
Moneydig
Caheny
Mullan
Agivey
Aghadowey
Finvoy
Dunloy
Mullan Head
Craigs Wood
Garryduff
Bendooragh
Corkey
Slievenahanaghan
Glenariff
Glenariff Forest Park
Cushendall Reservoir
Collin Top
Cleggan Forest
Saarns Hill
Carncormick
Cargan
Newtown-Crommelin
Cloughmills
Clogh
Martinstown
McGregor's Corner
Glenvale
Glarryford
Rashar
McLaughlins Corner
Craig's Cross
Aughnacleagh
Craigs
Portglenone
Clady
Inishrush
Upperlands
Culnady
Tirkane
Swatragh
Kaghboy
Galgorm
Gracehill
AHOGHILL
Straid
Newferry
Gulladuff
Knockcloghrim
Bellaghy
Grange Corner
Whitesides Corner
Caddy
Moneyglass
Roxhill
Peters Bridge
Tardree Forest
Tardree Mtn
Browndod
Five Corners
Ballyeaston
Burnside
Straid
North Cam Forest
Woodburn Forest
Parkgate
Dooagh
Ballydugennan
Creggan
Randalstown Forest
Shane's Castle Park
Mill Town
Mainwater Foot
Antrim
Brickamore
Dunadry
Templepatrick
Millbank
Mossley
Monkstown
Moorfields
Battery Bridge
Gardiner's Corner
Big Collin
Kells
Connor
Ballyboley Forest
Hunters Point
Glenariff
Glenaan
Glenaan
Glenaan

Figure A-30 – Map of Average Peak Speeds (mph) for Roads in Ballymena

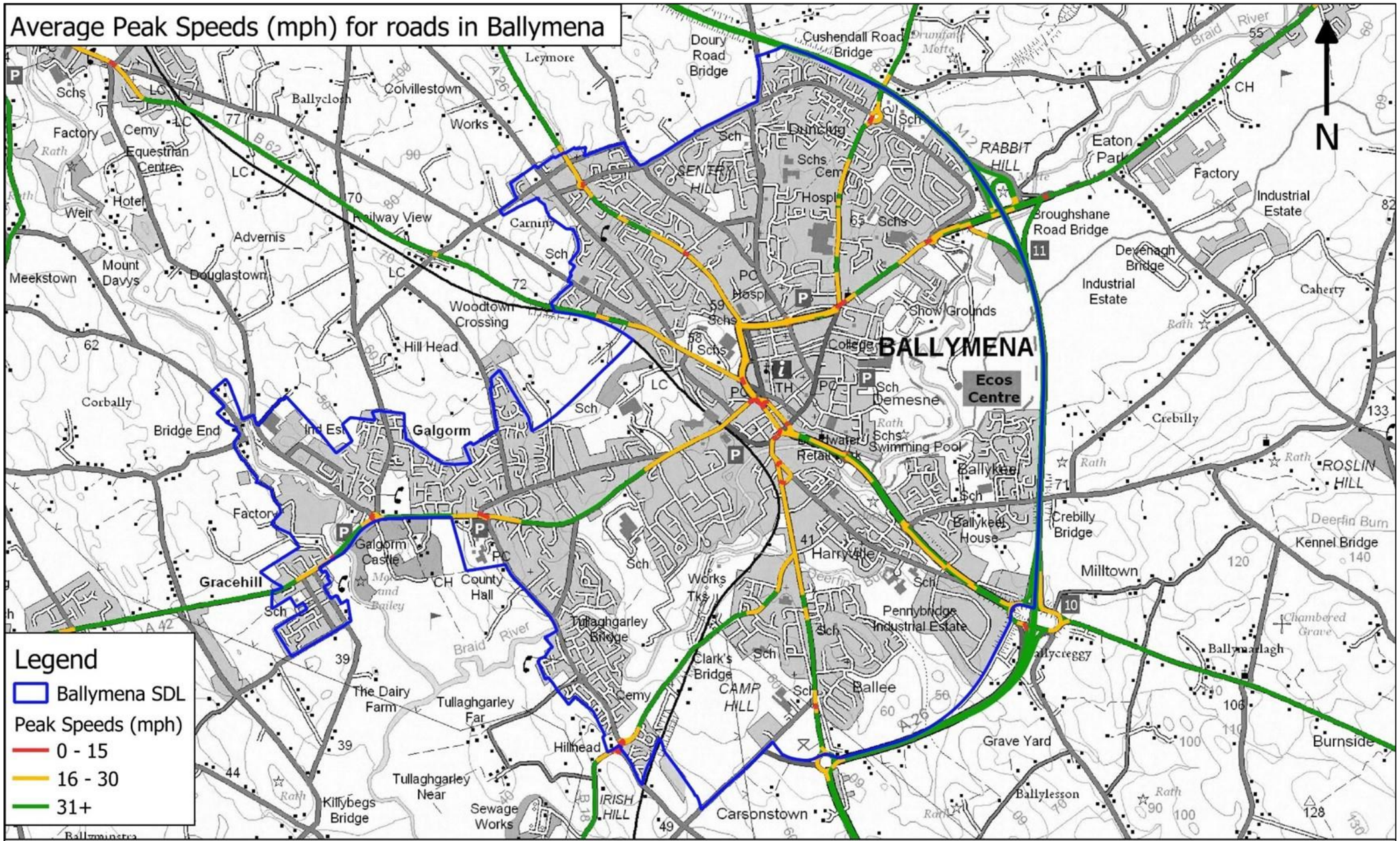


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Figure A-31 – Map of Average Peak Speeds (mph) for Roads in Carrickfergu

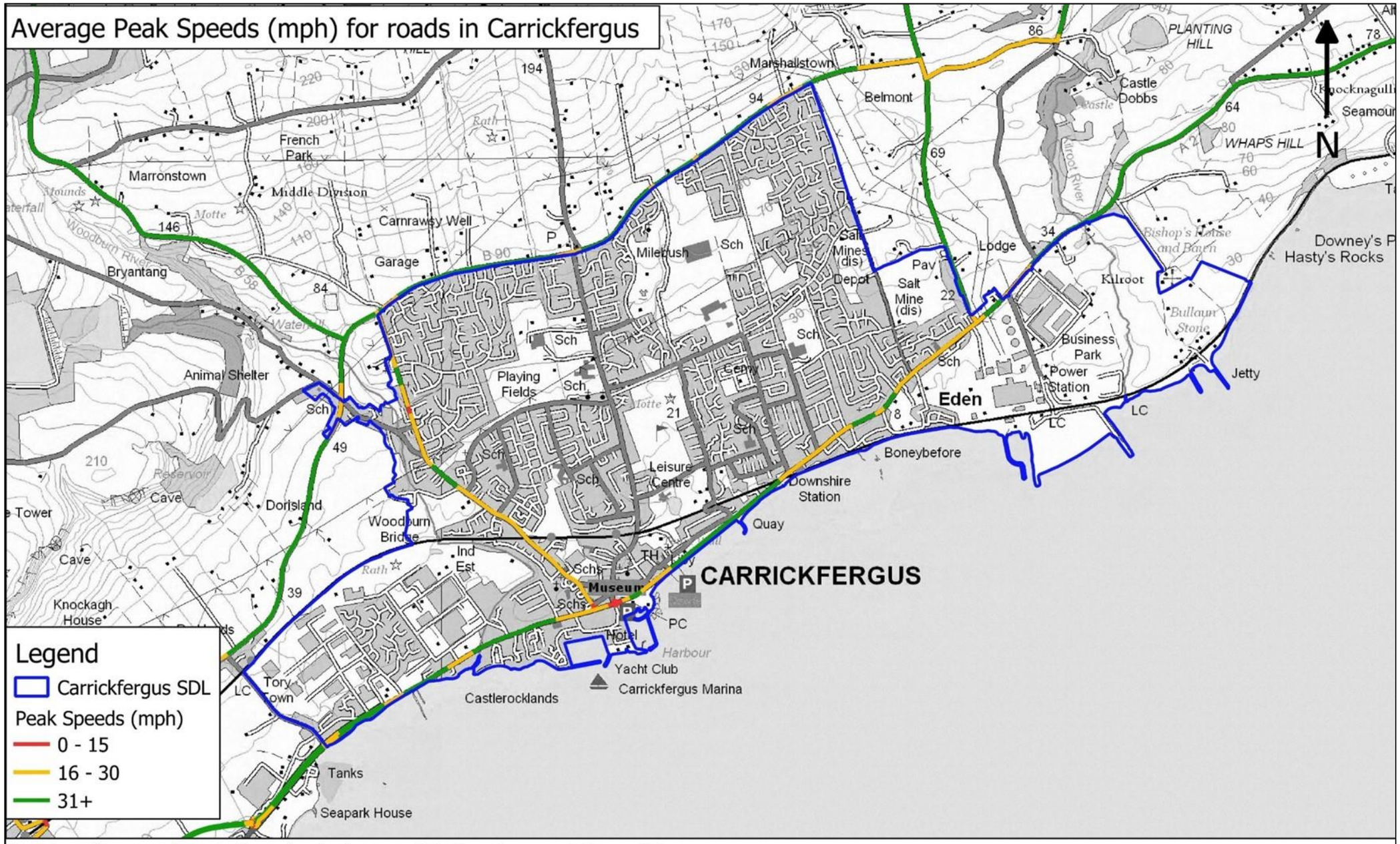

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Figure A-32 – Map of Average Peak Speeds (mph) for Roads in Greenisland

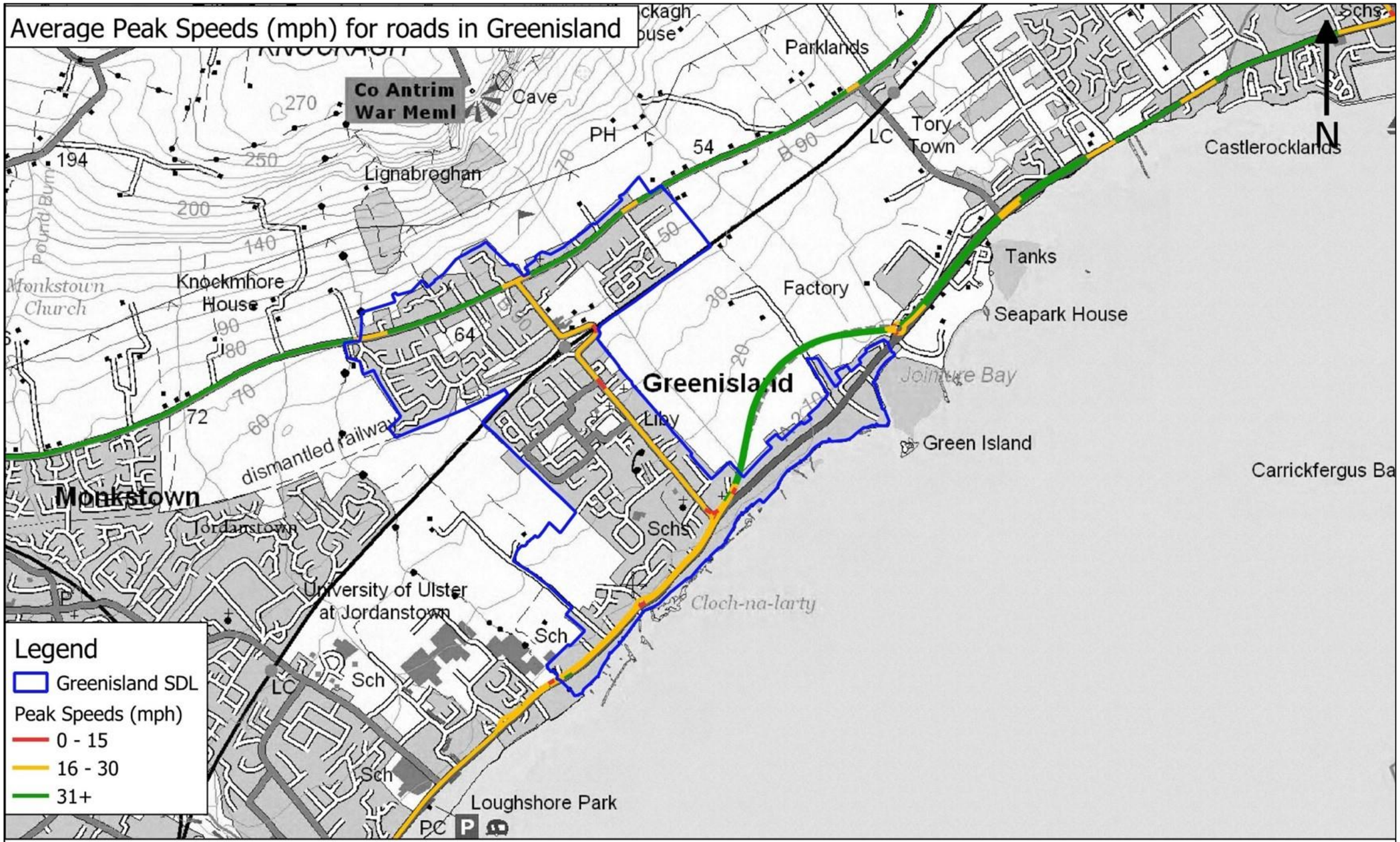

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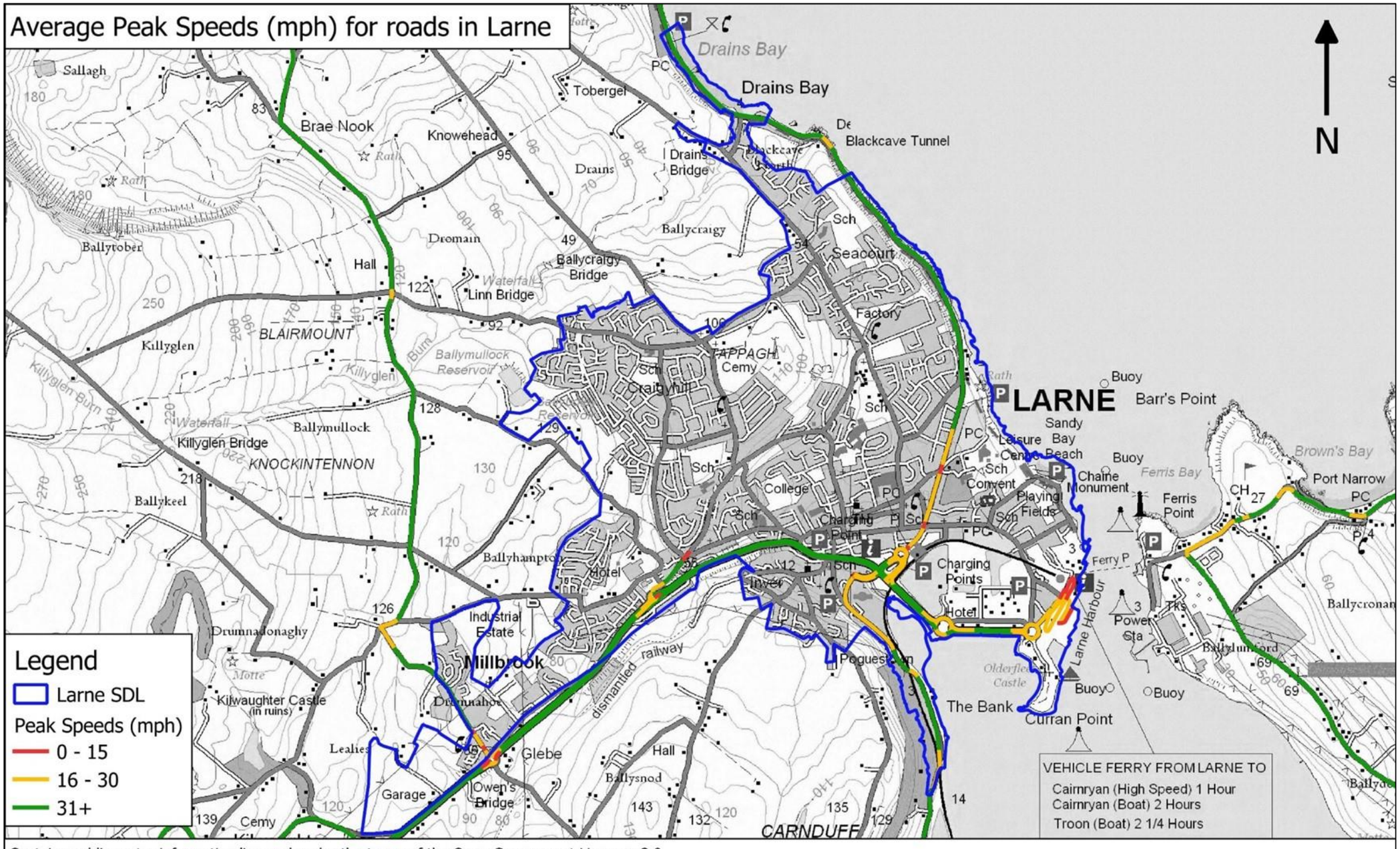
Figure A-33 – Map of Average Peak Speeds (mph) for Roads in Larne



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Section 6 – Road Collision History

Table A-1– Number of Road Traffic Casualties by Severity and Road User Type in Ballymena, 2007-2016

Road User Type	2007-2011			
	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	492	2	48	442
Pedestrians	89	1	21	67
Car Users (inc Passengers)	355	0	15	340
Motorcyclists (inc Pillion Passengers)	29	1	7	21
Pedal Cyclists	18	0	4	14
Other Road Users	1	0	1	0

2012-2016			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
568	3	38	527
85	2	22	61
437	0	5	432
24	0	6	18
21	1	5	15
1	0	0	1

2007-2016 (Combined)			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
1,060	5	86	969
174	3	43	128
792	0	20	772
53	1	13	39
39	1	9	29
2	0	1	1

Casualties in Ballymena 2012-2016 - Modal Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	568	3	38	527
Pedestrians (%)	15.0%	66.7%	57.9%	11.6%
Car Users (inc Passengers) (%)	76.9%	0%	13.2%	82.0%
Motorcyclists (inc Pillion Passengers) (%)	4.2%	0%	15.8%	3.4%
Pedal Cyclists (%)	3.7%	33.3%	13.2%	2.8%
Other Road Users (%)	0%	0%	0%	0%

Casualties in Ballymena 2012-2016 - Severity Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	568	0.5%	6.7%	92.8%
Pedestrians	85	2.4%	25.9%	71.8%
Car Users (inc Passengers)	437	0%	1.1%	98.9%
Motorcyclists (inc Pillion Passengers)	24	0%	25.0%	75.0%
Pedal Cyclists	21	4.8%	23.8%	71.4%
Other Road Users	1	0%	0%	100%

Source: Department for Infrastructure (DfI)

Table A-2– Number of Road Traffic Casualties by Severity and Road User Type in Carrickfergus, 2007-2016

Road User Type	2007-2011			
	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	340	1	37	302
Pedestrians	52	0	12	40
Car Users (inc Passengers)	247	0	10	237
Motorcyclists (inc Pillion Passengers)	24	1	10	13
Pedal Cyclists	15	0	4	11
Other Road Users	2	0	1	1

2012-2016			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
392	3	34	355
53	2	11	40
306	1	11	294
22	0	10	12
10	0	2	8
1	0	0	1

2007-2016 (Combined)			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
732	4	71	657
105	2	23	80
553	1	21	531
46	1	20	25
25	0	6	19
3	0	1	2

Casualties in Carrickfergus 2012-2016 - Modal Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	392	3	34	355
Pedestrians (%)	13.5%	66.7%	32.4%	11.3%
Car Users (inc Passengers) (%)	78.1%	33.3%	32.4%	82.8%
Motorcyclists (inc Pillion Passengers) (%)	5.6%	0%	29.4%	3.4%
Pedal Cyclists (%)	2.6%	0%	5.9%	2.3%
Other Road Users (%)	0%	0%	0%	0%

Casualties in Carrickfergus 2012-2016 - Severity Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	392	0.8%	8.7%	90.6%
Pedestrians	53	3.8%	20.8%	75.5%
Car Users (inc Passengers)	306	0%	3.6%	96.1%
Motorcyclists (inc Pillion Passengers)	22	0%	45.5%	54.5%
Pedal Cyclists	10	0%	20.0%	80.0%
Other Road Users	1	0%	0%	100%

Source: Department for Infrastructure (DfI)

Table A-3 – Number of Road Traffic Casualties by Severity and Road User Type in Greenisland, 2007-2016

Road User Type	2007-2011			
	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	72	1	6	65
Pedestrians	2	0	1	1
Car Users (inc Passengers)	59	1	0	58
Motorcyclists (inc Pillion Passengers)	10	0	5	5
Pedal Cyclists	1	0	0	1
Other Road Users	0	0	0	0

2012-2016			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
66	0	7	59
5	0	1	4
49	0	3	46
5	0	2	3
5	0	1	4
2	0	0	2

2007-2016 (Combined)			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
138	1	13	124
7	0	2	5
108	1	3	104
15	0	7	8
6	0	1	5
2	0	0	2

Casualties in Greenisland 2012-2016 - Modal Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	66	0	7	59
Pedestrians (%)	7.6%	0%	14.3%	6.8%
Car Users (inc Passengers) (%)	74.2%	0%	42.9%	78.0%
Motorcyclists (inc Pillion Passengers) (%)	7.6%	0%	28.6%	5.1%
Pedal Cyclists (%)	7.6%	0%	14.3%	6.8%
Other Road Users (%)	3%	0%	0%	3.4%

Casualties in Greenisland 2012-2016 - Severity Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	66	0%	10.6%	89.4%
Pedestrians	5	0%	20.0%	80.0%
Car Users (inc Passengers)	49	0%	6.1%	93.9%
Motorcyclists (inc Pillion Passengers)	5	0%	40.0%	60.0%
Pedal Cyclists	5	0%	20.0%	80.0%
Other Road Users	2	0%	0%	100%

Source: Department for Infrastructure (DfI)

Table A-4 – Number of Road Traffic Casualties by Severity and Road User Type in Larne, 2007-2016

Road User Type	2007-2011			
	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	254	2	25	227
Pedestrians	34	1	11	22
Car Users (inc Passengers)	197	1	10	186
Motorcyclists (inc Pillion Passengers)	18	0	4	14
Pedal Cyclists	5	0	0	5
Other Road Users	0	0	0	0

2012-2016			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
272	1	23	248
32	1	7	24
222	0	11	211
9	0	4	5
9	0	1	8
0	0	0	0

2007-2016 (Combined)			
All Casualties	Fatalities	Serious Injuries	Slight Injuries
526	3	48	475
66	2	18	46
419	1	21	397
27	0	8	19
14	0	1	13
0	0	0	0

Casualties in Larne 2012-2016 - Modal Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	272	1	23	248
Pedestrians (%)	11.8%	100%	30.4%	9.7%
Car Users (inc Passengers) (%)	81.6%	0%	47.8%	85.1%
Motorcyclists (inc Pillion Passengers) (%)	3.3%	0%	17.4%	2.0%
Pedal Cyclists (%)	3.3%	0%	4.3%	3.2%
Other Road Users (%)	0%	0%	0%	0%

Casualties in Larne 2012-2016 - Severity Split (%)				
Road User Type	All Casualties	Fatalities	Serious Injuries	Slight Injuries
All Road Users	272	0.4%	8.5%	91.2%
Pedestrians	32	3.1%	21.9%	75.0%
Car Users (inc Passengers)	222	0%	5.0%	95.0%
Motorcyclists (inc Pillion Passengers)	9	0%	44.4%	55.6%
Pedal Cyclists	9	0%	11.1%	88.9%
Other Road Users	0	0%	0%	0%

Source: Department for Infrastructure (DfI)

Section 7 – Parking Provision

Figure A-34 – Map of Parking Provision Locations in Ballymena

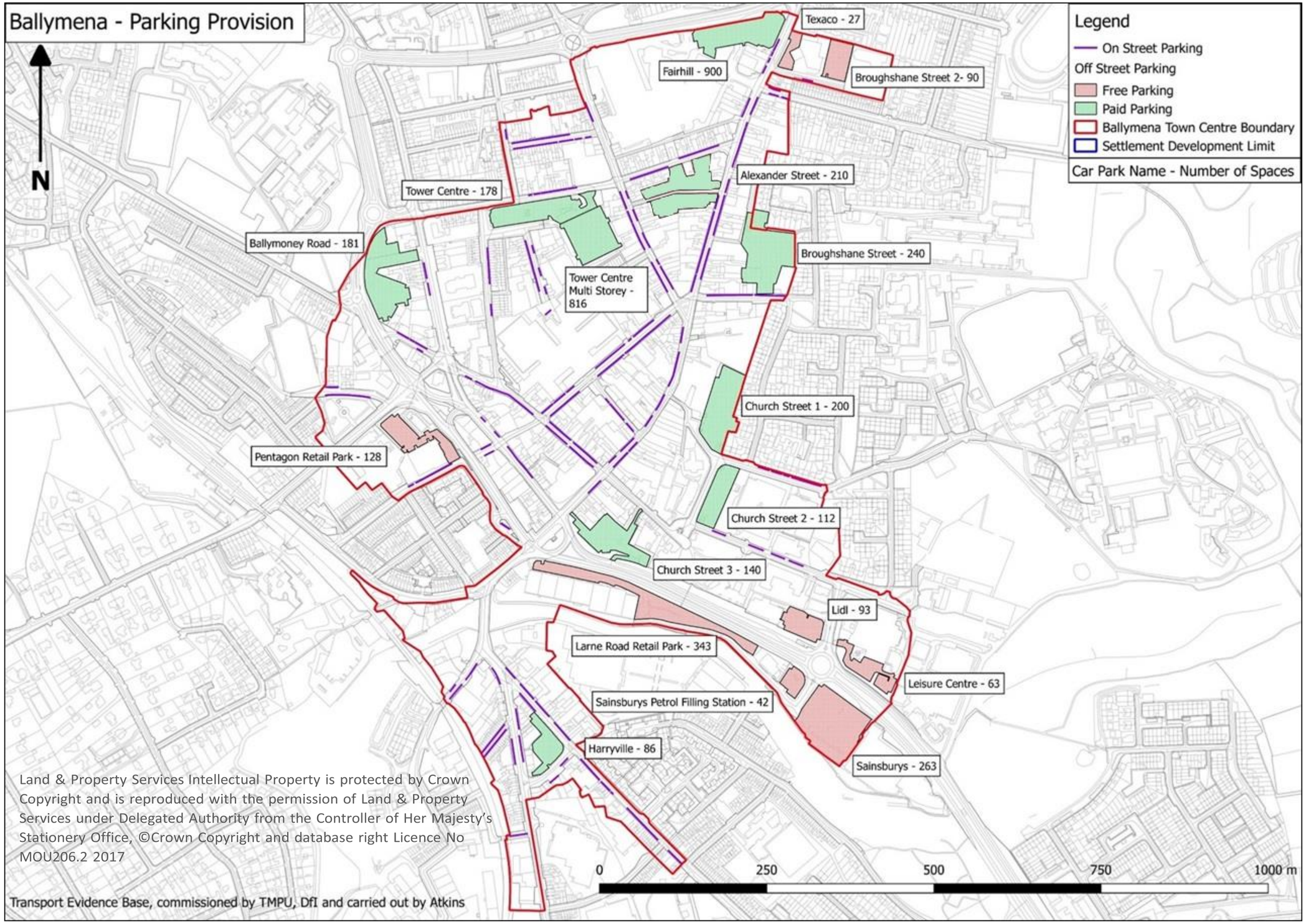

Table A-5 – Off-Street Parking Provision by Spaces and Type in Ballymena

Site Name	Free/Paid	Ownership	Total Number of Spaces	Includes Number of Disabled Spaces
Texaco	Free Parking	Private	27	2
Broughshane Street 2	Free Parking	Council	90	0
Leisure Centre	Free Parking	Private	63	0
Larne Road Retail Park	Free Parking	Private	343	7
Sainsburys	Free Parking	Private	263	18
Tower Centre Multi Storey	Paid Parking	Council	816	27
Fairhill shopping Centre	Paid Parking	Private	900	47
Tower Centre	Paid Parking	Council	178	6
Harryville	Paid Parking	Council	86	4
Church Street 3	Paid Parking	Council	139	4
Church Street 2	Paid Parking	Council	112	6
Church Street 1	Paid Parking	Council	200	8
Broughshane Street	Paid Parking	Council	240	10
Ballymoney Road	Paid Parking	Council	181	7
Sainsburys Petrol Filling Station	Free Parking	Private	42	0
Alexander Street	Paid Parking	Private	210	0
Pentagon Retail Park	Free Parking	Private	128	8
Lidl	Free Parking	Private	93	3
		TOTAL	**4111**	**157**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Table A-6 – On-Street Parking Provision in Ballymena

Parking Length Description	Number of Parking Spaces	Percentage of Total Spaces
Disabled Persons Parking - Limited Waiting 9am-5pm MondaySaturday 30 minutes no return within 2 hours	1	0.2%
Disabled Persons Parking - Unrestricted Kerb	39	6.8%
Limited Waiting 8:30am-6:30pm Monday-Saturday 1 hour no return within 2 hours	38	6.7%
Limited Waiting 9am-5pm Monday-Saturday 1 hour no return within 2 hours	87	15.2%
Limited Waiting 9am-5pm Monday-Saturday 30 minutes no return within 2 hours	211	37.0%
Limited Waiting Coach Parking 9am-5pm Monday-Saturday	3	0.5%
Loading Only 9am-5pm Monday-Friday	52	9.1%
Unrestricted Kerb	140	24.5%
Total	**571**	**100%**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Figure A-35 – Map of Parking Provision Locations in Carrickfergus

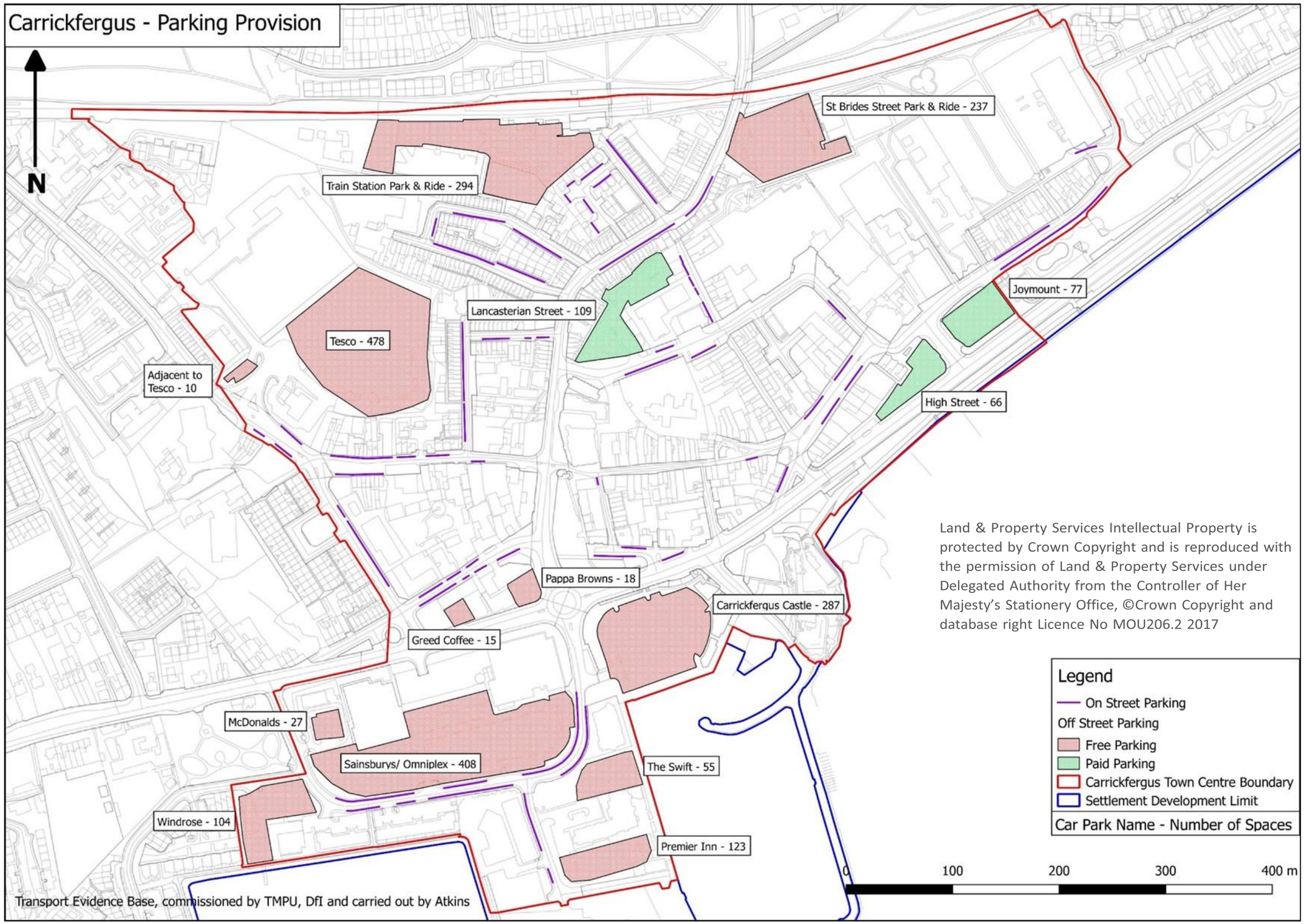

Table A-7 – Off-Street Parking Provision by Spaces and Type in Carrickfergus

Site Name	Free/Paid	Ownership	Total Number of Spaces	Includes Number of Disabled Spaces
Lancasterian Street	Paid	Council	109	4
Joymount	Paid	Council	77	6
High Street	Paid	Council	66	5
St Brides Street Park & Ride	Free	Council	237	9
Tesco	Free	Private	478	28
The Swift Restaurant	Free	Private	55	4
Castle	Free	Council	287	14
Sainsburys/ Omniplex	Free	Private	408	20
Premier Inn	Free	Private	123	8
Windrose Bar & Restaurant	Free	Private	104	7
Mc Donalds	Free	Private	27	2
Greed Coffee/ 4-Star Pizza	Free	Private	15	1
Papa Browns	Free	Private	18	0
Adjacent to Tesco	Free	Private	10	0
Train Station Park & Ride	Free	Private	294	16
		TOTAL	**2308**	**124**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Table A-8 – On-Street Parking Provision in Carrickfergus

Parking Length Description	Number of Parking Spaces	Percentage of Total Spaces
Limited Waiting 8am-6:30pm Monday-Saturday 30 minutes no return within 1 hour	2	0.5%
Limited Waiting 8am-6pm Monday-Saturday 1 hour no return within 1 hour	74	19.1%
Unrestricted Kerb	291	75.0%
Disabled Persons Parking - Limited Waiting 8am-6pm MondaySaturday 1 hour no return within 1 hour	2	0.5%
Disabled Persons Parking - Limited Waiting 8am-6pm MondaySaturday 2 hour no return within 2 hour	5	1.3%
Disabled Persons Parking - Unrestricted Kerb	4	1.0%
Loading and Disabled Badge Holders Only	10	2.6%
Total	**388**	**100%**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Figure A-36 – Map of Parking Provision Locations in Greenisland

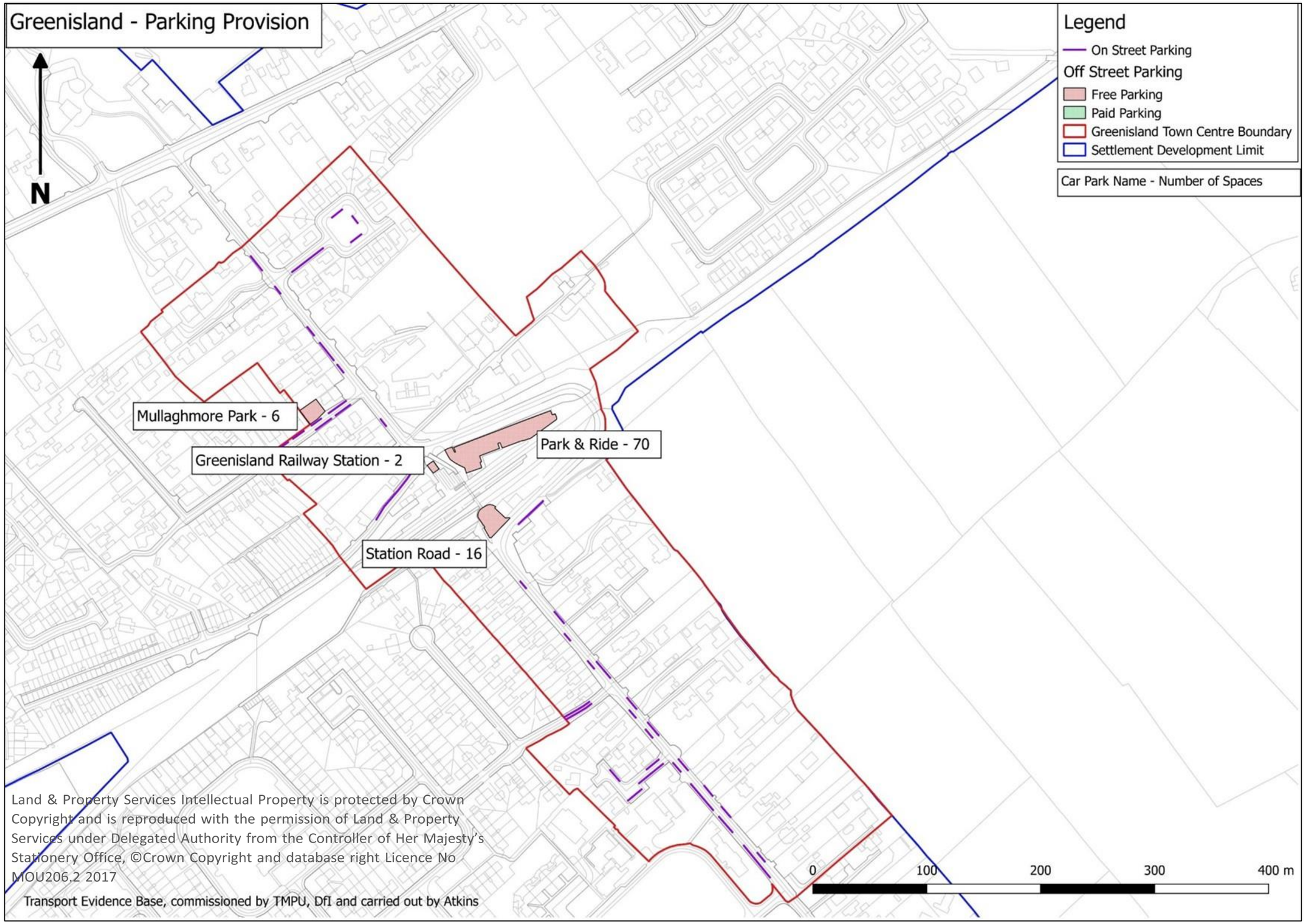

Table A-9 – Off-Street Parking Provision by Spaces and Type in Greenisland

Site Name	Free/Paid	Ownership	Total Number of Spaces	Includes Number of Disabled Spaces
Railway Park & Ride	Free	Private	70	2
Station Road	Free	Private	16	3
Greenisland Train Station	Free	Private	2	2
Mullaghmore Park	Free	Unknown	6	0
		TOTAL	**94**	**7**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Table A-10 – On-Street Parking Provision in Greenisland

Parking Length Description	Number of Parking Spaces	Percentage of Total Spaces
Unrestricted Kerb	96	100.0%
Total	**96**	**100%**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Figure A-37 – Map of Parking Provision Locations in Larne

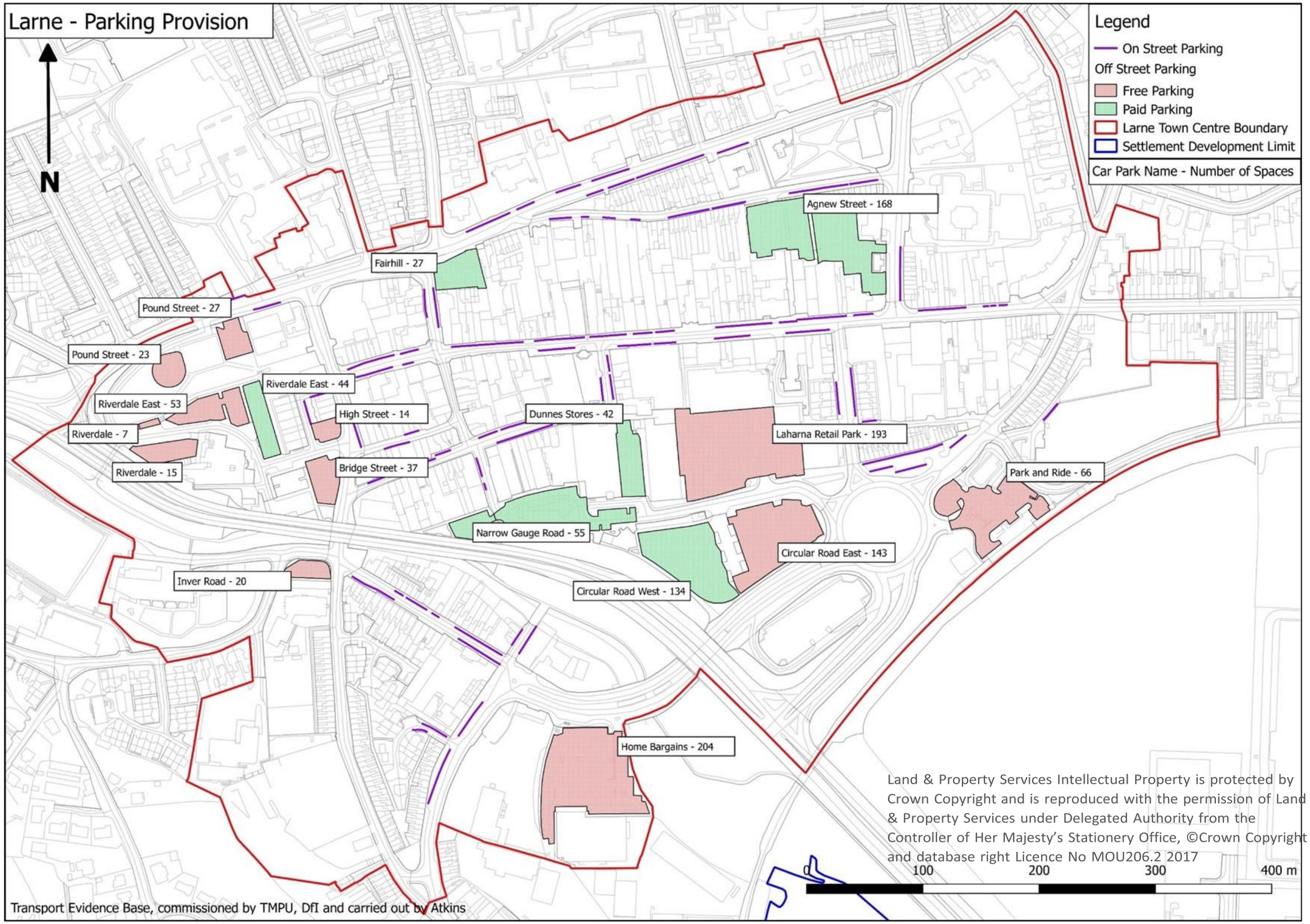

Table A-11 – Off-Street Parking Provision by Spaces and Type in Larne

Site Name	Free/Paid	Ownership	Total Number of Spaces	Includes Number of Disabled Spaces
Railway Park & Ride	Free	Private	66	2
Circular Rd East	Free	Council	143	8
Circular Rd West	Paid	Council	134	0
Narrow Gauge Road 1	Paid	Council	29	8
Narrow Gauge Road 2	Paid	Council	26	1
Dunnes	Paid	Private	42	2
Laharna Retail Park	Free	Private	193	11
Agnew Street	Paid	Council	168	10
Fairhill	Paid	Council	27	2
Pound Street 1	Free	Private	27	0
Pound Street 2	Free	Private	23	0
Riverdale East 1	Free	Council	53	0
Riverdale East 2	Paid	Council	44	3
High Street	Free	Council	14	0
Bridge St	Free	Council	37	2
Inver	Free	Council	20	0
Home Bargains	Free	Private	204	6
Riverdale 1	Free	Private	7	0
Riverdale 2	Free	Private	15	0
		TOTAL	**1272**	**55**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins

Table A-12 – On-Street Parking Provision in Larne

Parking Length Description	Number of Parking Spaces	Percentage of Total Spaces
Limited Waiting 9am-5pm Monday-Saturday 1 hour no return within 1 hour	100	29.3%
Limited Waiting 9am-5pm Monday-Saturday 1 hour no return within 2 hours	11	3.2%
Limited Waiting 9am-5pm Monday-Friday 1 hour no return within 1 hour	3	0.9%
Disabled Persons Parking - Limited Waiting 9am-5pm MondaySaturday 1 hour no return within 1 hour	10	2.9%
Disabled Persons Parking - Limited Waiting 9am-5pm MondayFriday 1 hour no return within 1 hour	2	0.6%
Disabled Persons Bay	6	1.8%
Unrestricted Kerb	186	54.6%
Loading Only 9am-5pm Monday-Saturday	17	5.0%
Taxi Only	6	1.8%
Total	**341**	**100%**

Source: Transport Evidence Base, commissioned by TMPU, DfI and carried out by Atkins