

Final Draft

Local Transport Strategy

(2016-2021)

Contents

Executive Summary

1 Introduction

2 Context

Policy

Progress since the last Local Transport Strategy

3 Strategy Development

4 Framework Strategy

5 Objectives

Support

Strategic Rail Network

Shipping and Ferry Services

Air Services

Freight

Trunk Road Network

Aberdeen Western Peripheral Route

Maintenance

Road Carriageway and Footway Maintenance

Lighting

Structures

Flooding

Winter Maintenance

Contingency Planning and Utilities

Management

Car Parking

Community and Demand Responsive Transport

Taxis and Private Hire Cars

Coaches

Traffic Management and Road Safety

Enforcement

Air Quality

Noise

Sustainable Development and Travel

Land Use Planning

Travel Plans

Car Sharing

Car Clubs

Ultra-Low Emission Vehicles

Travel Information and Awareness

School Travel and Young People

Climate Change Mitigation and Adaptation

Biodiversity and the Green Space Network

Improvements

Walking

Cycling

Bus

Rapid Transit

Powered Two Wheelers

Road

Intelligent Transport Systems

Public Realm and the Sustainable Urban Mobility Plan

5 Delivery of the Local Transport Strategy

6 Monitoring

7 Implementation and Action Plan

Executive Summary

This Local Transport Strategy (LTS) has been developed to set out the policies and interventions adopted by Aberdeen City Council to guide the planning and improvement of the local transport network over the next five years.

In preparing this LTS we have undertaken a robust assessment process that has included a review of the previous LTS, an analysis of current transport trends and problems, a wide policy review and two rounds of consultation. As a result of this work, this LTS sets out a balanced approach that the City Council believes will not only tackle the various problems and issues identified, but also reflects a consensus on the way forward.

The previous LTS was adopted in 2008 and focussed on delivery of the Aberdeen Western Peripheral Route (AWPR) and the opportunities that this new road capacity would afford to reorganise and improve the use of the City's overall road network. Although the 2008 LTS has come to the end of its intended lifespan, as Aberdeen remains in a pre-AWPR state, much of the content is still relevant and will continue to be so going into the period 2016 to 2021.

Following publication of a Main Issues Report in 2014 which summarised changes in policy, likely future trends and reviewed the objectives and actions of the 2008 LTS, it was apparent that, whilst a great deal of progress had been made, the major infrastructure required to alter the transport landscape so that it meets the vision, aims and aspirations for the City had been delayed, largely due to external circumstances such as the legal challenge on the AWPR.

It has therefore been determined that a fundamental change in the overall policy approach is not required; instead a 'refresh', reflective of changes to national, regional and local policy and circumstances since 2008, is appropriate. Given that the AWPR will be completed by late 2017, this LTS refresh focuses its attention on the delivery of the range of actions required to achieve a series of newly formed outcomes for the City and ensure that complementary measures, which 'lock in' the benefits of the AWPR and other major infrastructure improvements, are maximised for everyone.

Given the increasing role of transport in contributing, both positively and negatively, to the health agenda the vision for the LTS refresh has been slightly updated and is now to develop "A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment".

Taking into account the Scottish Government's strategic objectives (wealthier and fairer, safer and stronger, smarter, greener, healthier) and the City Council's 'smarter mobility' objectives, the five high-level aims have been updated to:

1. A transport system that enables the efficient movement of people and goods.
2. A safe and more secure transport system.
3. A cleaner, greener transport system.
4. An integrated, accessible and socially inclusive transport system.
5. A transport system that facilitates healthy and sustainable living.

In response to the Main Issues consultation a number of stakeholders commented that the Council did not appear committed to the vision, aims and objectives as little progress appeared to have been made, particularly in relation to public transport, active travel, safety and well-being. As a result, a series of outcomes have been set, with associated indicators and targets, to better enable progress to be measured. By 2021 Aberdeen's transport system should have:

- A. Increased modal share for public transport and active travel;
- B. Reduced the need to travel and reduced dependence on the private car;
- C. Improved journey time reliability for all modes;
- D. Improved road safety within the City;
- E. Improved air quality and the environment; and,
- F. Improved accessibility to transport for all.

The Strategy has been designed around a framework where the Council will:

- **Support** partners in the development of the region's transport infrastructure and services in terms of improvements to the trunk road network (including implementation of the AWPR), the strategic rail network, shipping and ferry services, air services and measures to ensure the efficient movement of freight.
- **Maintain** transportation assets, including roads, footways, street lighting and structures, and ensure that policies and procedures relating to flooding, winter maintenance and contingency planning lead to minimal disruption to the travelling public.
- **Manage** transportation assets and services, including car parking, Community and Demand Responsive Transport, coaches, taxis and private hire cars and CCTV while enabling traffic flow, improving road safety for all users and addressing the problems of poor air quality and noise, where these are attributable to transport.
- **Promote** the use of sustainable transport through land use planning policies; supporting and facilitating the expansion of Travel Plans, car sharing, Car Clubs and Low Emission Vehicles; improving and increasing information and awareness; and ensuring that the environmental impacts of transport are minimised.
- **Improve and add to** transport infrastructure and services by implementing a range of projects and schemes to improve transport conditions and the travelling environment for all users, adopting a hierarchical approach, with the needs of pedestrians and cyclists considered first and private vehicular traffic last.

It should be stressed that the successful implementation of an integrated transport strategy will be dependant on commitment to and the delivery of all aspects of the Strategy, as opposed to implementation of cherry-picked schemes. This can ensure that despite many of the policies and interventions being progressed by individual teams or organisations, all involved are working towards the delivery of a shared vision and achieving a suite of outcomes.

Based on the interventions contained in the Strategy, a Costed Action and Delivery Plan have been developed to accompany the LTS. This will provide a framework for delivery; recognising that progress on individual elements of the Strategy will be dependant on funding and the outcomes of a number of processes and statutory

requirements, including partnership working, consultation and technical assessments and appraisals.

In order to ensure the LTS remains up to date over its five year lifespan the Council will produce Annual Progress Reports on the LTS, reporting on the delivery of the Objectives and progress towards meeting the Outcomes. This will be accompanied by a continually updated Action and Delivery Plan taking into account the funding sources available and priorities in that financial year. This will ensure that the LTS remains up to date, incorporating any changes to the overall network, and improves accountability and delivery.

Introduction

Why a Local Transport Strategy for Aberdeen?

Although progress has been made over the past five years in transport the main focus of the 2008 Local Transport Strategy (LTS) was on the delivery of the Aberdeen Western Peripheral Route (AWPR) and the opportunities that this new road capacity would afford to reorganise and improve the use of the City's overall road network. When the 2008 LTS came to the end of its intended lifespan however, Aberdeen was still in a pre-AWPR state. With an intended completion date of Winter 2017 much of the content of the original document is still relevant and will continue to be so going into the period 2016 to 2021; we still need to develop those projects that will ensure that the benefits of major investment are 'locked in' and maximised for everyone.

The landscape of the City is also changing dramatically. Strategic and Local Development Plan proposals will add more than 27,000 homes in Aberdeen by 2030 with a consequent impact on the City's transport networks. The most sustainable way to guarantee this does not add further pressure to the network is to ensure that new developments are designed around liveable communities accessible by active and public transport.

A City Centre Masterplan, intended to kick start a 25 year regeneration programme for the city centre, has also been approved and will result in a number of housing, building, public realm and transport projects. In order to facilitate the delivery of these projects the way that people currently move around the City and its centre must change radically with a focus on people, rather than vehicular, movement by ensuring that appropriate and alternative options are made available so that access to the city centre is maintained for all.

The role transport can play in health by positively addressing obesity issues, or negatively affecting the air we breathe, with serious consequences to the general health of the City's populace is becoming more apparent. Meanwhile changes in technology to allow for 'smarter' movement of people; informing them of their journey options, helping them move around when they are out and about or avoiding travel or areas of congestion altogether, has to be taken advantage of and appropriately invested in.

The budget climate is also becoming more complex. The finalisation of this Strategy is occurring during a downturn in oil prices, an associated reduction in vehicular traffic on all of the main transport corridors, and a reliance on more economic means of getting around the City. In the meantime a City Region Deal is being negotiated for Aberdeen City and Aberdeenshire with a focus on infrastructure and an economic strategy.

All of the above factors have the opportunity to positively influence transport in the City. This Local Transport Strategy (LTS) has therefore been developed to set out the policies adopted by Aberdeen City Council to guide the planning and improvement of the local transport network over the next five years (2016-2021) to ensure that all, both within and outwith the Council, are working towards the same vision, aims, outcomes and objectives for the City.

2. Context – Policy and Progress

Policy Context

Introduction

The development of the LTS has considered a range of strategic European, national and regional transport policies and priorities, and is also aligned with the objectives of the Nestrans Regional Transport Partnership and the Scottish Government.

EU White Paper on Transport

Published in 2011, the EU White Paper, *Roadmap to a single European transport area – towards a competitive and resource efficient transport system* presents the European Commission's vision for the future of the EU transport system and sets the policy for the next decade. Four vision statements are identified:

- Growing transport and supporting mobility while reaching a 60% emissions reduction target;
- An efficient core network for multimodal intercity travel;
- A global level playing field for long-distance travel and inter-continental freight; and,
- Clean urban transport and commuting.

Carbon reduction is a key focus of the White Paper and Aberdeen must ensure that it includes transport within carbon reduction targets. This will principally consist of prioritising clean transport and active travel, as well as reducing travelling distances with implications for land use planning and development. Also relevant to Aberdeen are the policies set out for rail, air and sea transport by the EU which include completion of a single European sky, revision of airport slot regulation, innovation, technology and safety.

The National Transport Strategy

In December 2006 the then Scottish Executive published Scotland's first *National Transport Strategy* (NTS). It establishes three strategic outcomes to deliver to 2025:

- Improve journey times and connections between our cities and towns and our global markets to tackle congestion and provide access to key markets;
- Reduce emissions to tackle climate change and improve local air quality; and,
- Improve quality, accessibility and affordability of transport to give people the choice of public transport and real alternatives to the car.

The NTS outlined the intention that these outcomes are the Scottish Government's guiding principles when developing strategy and prioritising resources within Scotland. A review of the NTS is currently ongoing however the key outcomes are expected to remain as above. In terms of transport in Aberdeen these objectives have been considered as part of our aims and outcomes that all projects we are taking forward should aspire to achieve.

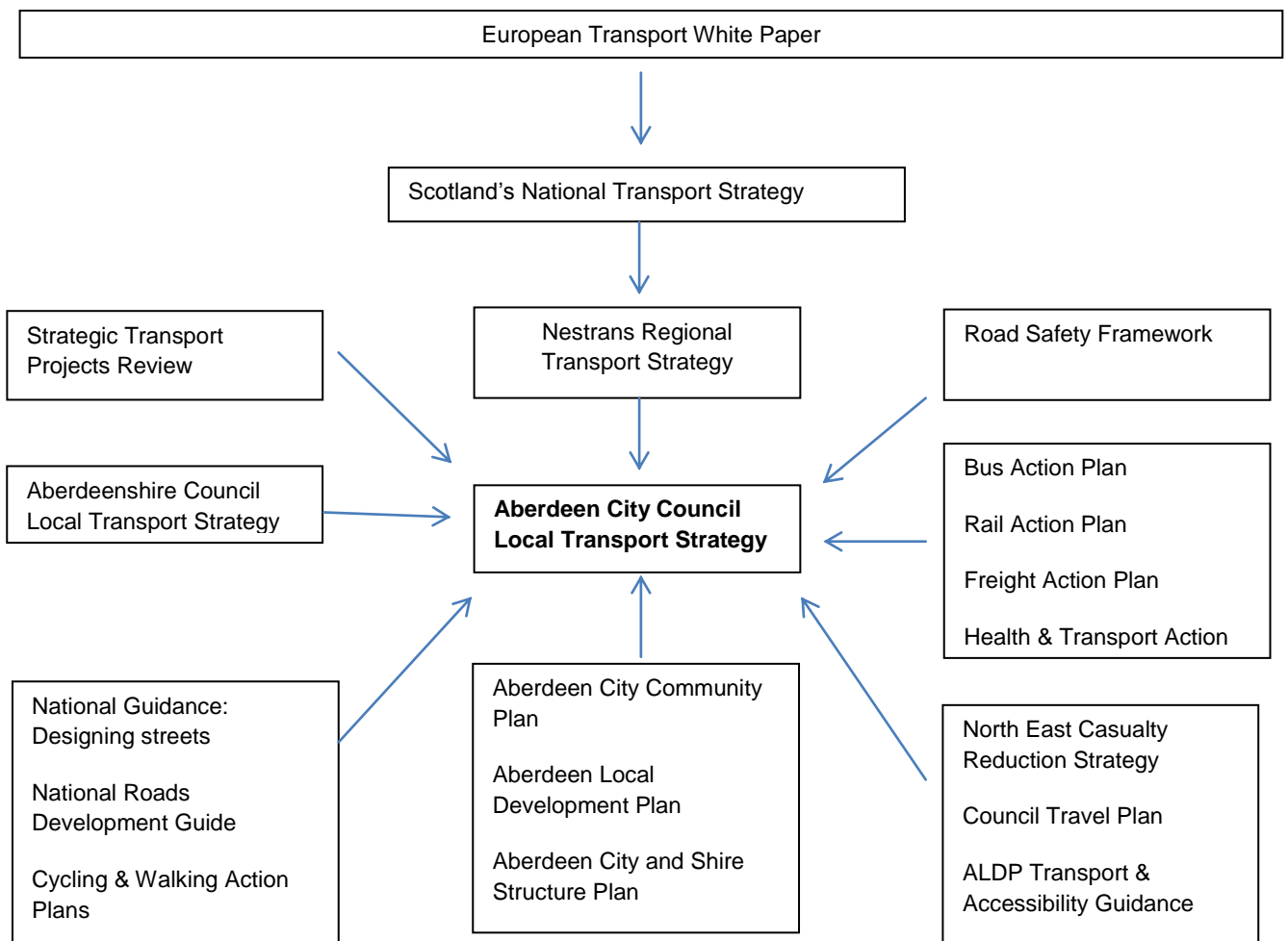
Regional Transport Strategy

The Nestrans Regional Transport Strategy (RTS) was published in 2008, and replaced by a Refresh approved by Scottish Ministers in January 2014. Taking the lead from the NTS the RTS has four strategic objectives:

- **Economy:** To enhance and exploit the north east's competitive economic advantages, and reduce the impacts of peripherality.
- **Accessibility, Safety and Social Inclusion:** To enhance choice, accessibility and safety of transport of all in the north east, particularly for disadvantaged and vulnerable members of society and those living in areas where transport options are limited.
- **Environment:** To conserve and enhance the north east's natural and built environment and heritage and reduce the effects of transport on climate, noise and air quality.
- **Spatial Planning:** To support transport integration and a strong, vibrant and dynamic city centre and town centres across the north east.

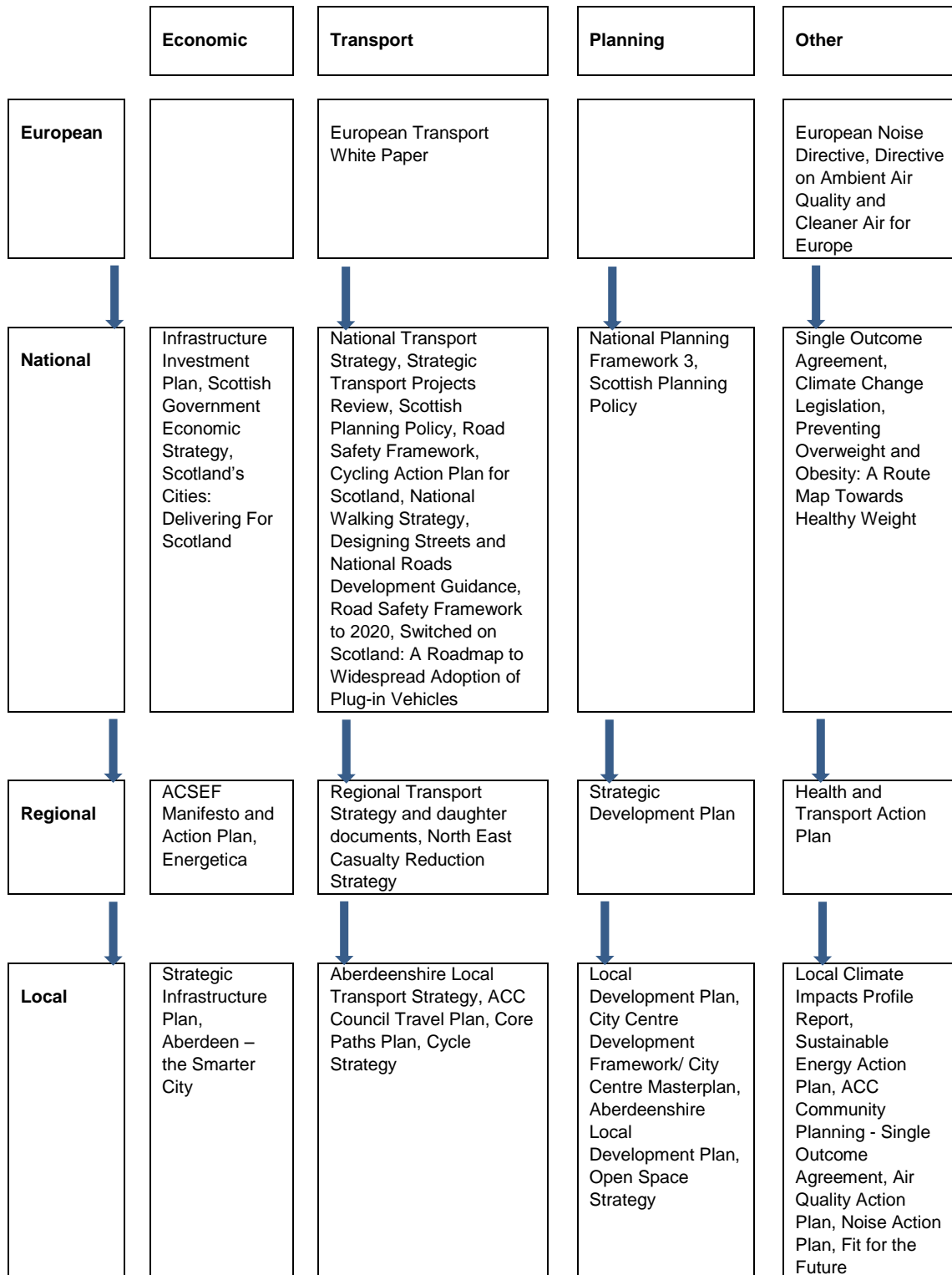
These objectives have provided the framework for the vision, aims and objectives developed for this LTS, and form a key part of the projects that are delivered by the City and funded by Nestrans.

Figure 1: Transport Strategy Hierarchy



This LTS has been developed to coordinate and deliver Aberdeen City’s transport priorities and as such European, national and regional transport policies are primary considerations, however, it has also taken into account other national and regional planning and economic development policies, as well ensuring it is fully integrated with the Council’s wider objectives and outcomes. Over the past five years a number of policies and strategies have emerged which are highlighted in both Appendix A and the diagram below.

Figure 2: Wider Context



Progress Since the Last LTS

Introduction

Since 2008, a number of the specific schemes and projects committed to in the previous LTS have been implemented in Aberdeen, many in partnership with others including Nestrans. These include:

- Delivery of a third bridge for pedestrians, cyclists and vehicles over the River Don;
- Delivery of a bus turning circle on the west side of Dyce Station;
- Improvements to pedestrian and cycle infrastructure throughout the City, including incremental improvements to the Deeside Way and Formartine and Buchan Way long-distance routes and new facilities on key commuting corridors such as the A96;
- Development of Aberdeen's first cycle demonstration neighbourhood based around Greenbrae School in Bridge of Don;
- Formation of the Getabout partnership for co-ordinated smarter choices awareness-raising campaigns, events and promotions throughout the North East;
- Development of a new public transport (bus/rail) interchange at Union Square;
- Launch of a revised Quality Partnership for Public Transport and a Bus Punctuality Improvement Partnership;
- Increased bus priority measures in the City Centre;
- Improvements to information provided at bus stops throughout the City;
- Implementation of a shuttle bus between Dyce Station and the Airport;
- Decriminalisation of bus lane violations leading to improved enforcement;
- Development of a safe Night Time Transport Zone in the City Centre;
- Implementation of the Aberdeen Car Club;
- Launch of hydrogen buses;
- Development of a network of electric vehicle charging points across the City; and
- Revised parking policies, including new maximum standards included in the Aberdeen Local Development Plan 2012.

Analysis has also been undertaken of the progress made in delivering the actions and targets articulated in the 2008-2012 LTS. The full monitoring report comprises Appendix B to this revised LTS. The main points to be noted are, however, summarised below.

Progress Against Key Performance Indicators 2008-2012

The overarching aim of the LTS is to encourage modal shift from the private car to more sustainable and active modes of transport. The indicator below is therefore one of the key indicators in establishing the success, or otherwise, of meeting the vision and aims of the 2008-2012 LTS. With all the indicators a brief description, followed by some commentary on the Council's progress towards meeting each of these, is detailed below:

Usual method of travel to work of employed adults (16+), not working from home, resident in Aberdeen City.	
Target	By 2012, the percentage of employed adults living in Aberdeen, driving to work in either a car or a van is reduced by at least 5% compared to the average between 2001/2 and 2005/6.
Source	Scottish Household Survey (SHS)
Progress	Figures show that driving to work levels fell to 54.5% in 2012 from a 59% baseline, a reduction of 7.6% from the baseline (and 4.5 percentage points). This suggests the target has been achieved, and in fact exceeded for this time frame.

Accompanying the mode share indicator five other key performance indicators were identified as providing the most reliable measure of success or otherwise in meeting the vision and aims of the 2008-2012 LTS.

Pupils in full-time education at school – usual main method of travel to school	
Target	By 2012, it is hoped that the percentage of pupils driven to school is reduced by at least 10%, compared to 2007 baseline.
Source	Hands Up Scotland Survey
Progress	The percentage of children being driven to school decreased from 22% to 20% between 2007 and 2012, a reduction of 9% from the baseline (and 2 percentage points) therefore this target has just fallen short of being fully met, and is certainly moving in the right direction.

Traffic levels (mill veh km) on local and trunk roads in Aberdeen City Council area	
Target	Success will firstly be demonstrated by a reduction in rates of local traffic growth, and by a stabilisation of traffic levels on local roads.
Source	Scottish Transport Statistics
Progress	There was a steady decrease in vehicle kilometres on all roads between 2007 and 2012 from 1.39 billion vehicle kilometres to 1.30 billion – a fall of over 6%. However, vehicle kilometres have been increasing again on trunk roads since 2009, and saw an increase again in all roads between 2011 and 2012, but levels have yet to return to the highs of 2007. This target has therefore been partially met.

Monitoring of road traffic casualty statistics for the Aberdeen City Council area, specifically: killed/seriously injured (KSI), children KSI and slight casualty rate	
Target	<p>The initial targets for this indicator were set in 2008 and have since been updated to reflect Scotland's Road Safety Framework for 2020 (June 2009). It sets targets for 2020, compared to the average for 2004-08 to achieve:</p> <ul style="list-style-type: none"> • a 40% reduction in the number of people killed in road accidents; • a 55% reduction in the number seriously injured; • a 50% reduction in the number of children killed and 65% reduction in children seriously injured; and • a 10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle

	kilometres.
Source	Reported Road Casualties Scotland 2013
Progress	<p>By 2013, compared with the average for 2004-08, Aberdeen saw:</p> <ul style="list-style-type: none"> • a 33% reduction in road fatalities; • a 23% increase in the number of people seriously injured; • a 100% increase in the number of children killed and 29% in children seriously injured; and • a 24% reduction in the slight casualty rate per 100 million vehicle kilometres travelled. <p>Compared to other authority areas Aberdeen has low KSI rates and so low numbers affect percentage figures. Performance has continued to improve year on year and the aim will always be to try and reduce these further by continuing to target vulnerable groups.</p>

Petrol and Diesel consumption of road vehicles driven within the boundaries of Aberdeen City and the associated amount of CO₂ production	
Target	There is a Scottish Government target to reduce emissions by 80% by 2050 which requires a 3% per annum reduction in carbon dioxide.
Source	Scottish Transport Statistics
Progress	The volume of fuel consumed in Aberdeen has fallen steadily since 2008. Average CO ₂ consumption has on average fallen by more than 3% per annum therefore this target is on course to be met.

Adults (16+) – percentage of adults who walked / cycled at least quarter of a mile, at least one day in the previous 7 days	
Target	By 2012, the percentage of adults walking for transport at least one day in the previous week is increased by at least 10% compared to the 2005/06 baseline. By 2012, the percentage of adults cycling for transport at least one day in the previous week is increased by at least 20% compared to the average between 1999 and 2006.
Source	Scottish Household Survey
Progress	The walking target has been met and in fact exceeded. Difficulties have been met gathering the data for cycling, although cycle to work levels suggest that this target has not been achieved.

Summary

It can be seen that there has been significant progress towards meeting the key targets of the previous LTS although further improvements can still be made in some areas. Traffic and accident reduction figures have not fallen to their desired levels so it is clear that further work needs to be done in these areas. Even where targets have been met (such as a reduction in driving and an increase in walking to work and a fall in consumption of petrol and diesel), efforts will have to continue to ensure that these figures remain at desirable levels or improve further in the future.

This LTS has therefore been developed in light of the progress made since 2008, and at the same time has also been based on an analysis of recent transport trends, summarised in the next section.

3. Strategy Development

Introduction

As this document is a refresh, this chapter describes the main steps taken to bring the 2008 LTS up to date to take account of any new issues.

Identification of Problems and Options

The 2008 LTS was developed in accordance with the Scottish Transport Appraisal Guidance (STAG) methodology. The first stage in the process was to understand the key problems, issues and opportunities that the LTS should address. A range of consultation exercises were undertaken to help identify real and perceived problems with transport in Aberdeen. Three options were then identified to be taken forward for assessment of addressing issues:

- Option 1: Do Minimum - Encourage sustainable travel: The base option, essentially “business as usual”. Past experience suggested this would not be successful in meeting the objectives set. Its main purpose was to act as a baseline for comparing the other options.
- Option 2: Positive Encouragement - “Locking in” the benefits of AWPR and RTS schemes: This option represented a concerted effort by the Council to promote the use of sustainable transport modes and utilise capacity released by the committed schemes to improve the effectiveness of sustainable travel modes.
- Option 3: Pro-active Encouragement - Managing demand for transport and increased investment: This option assumed more significant intervention by the Council by not only promoting the use of sustainable transport modes but also discouraging use of cars, particularly for journeys to work in the City Centre.

Following further consultation on, and appraisal of, these three options, a Preferred Strategy, consisting of a hybrid of all three options, was developed and this became the adopted Aberdeen Local Transport Strategy 2008-2012.

Development of the Refreshed Local Transport Strategy (2016-2021)

The first stage in the development of the refreshed LTS was a public and stakeholder consultation exercise. The responses received reflected the opinions of a broad range of stakeholders, including business representatives, Community Councils, bus operators and specific user groups. Officers also met with groups representing the views of vulnerable members of society, such as the elderly and disabled, for more specific views.

Although many projects have been delivered over the past five years, as Chapter 2 has highlighted, when the Strategy reached the end of its anticipated lifespan in 2012 there was a sense that, as a result of delays to the implementation of the AWPR and associated projects, the bulk of the significant measures to tackle the problems facing the City that had been identified in the LTS had yet to be delivered. It was felt therefore that the majority of problems identified in 2007/08 remained and additional problems were identified that the 2016-21 LTS also required to resolve:

Economy

- Congestion at key locations and times in the City
- Lack of non-car options for circumferential and non-radial journeys
- Poorly maintained roads (and pavements)
- High fares on public transport
- Limited rail travel opportunities
- Choice and journey times by public transport to the rest of Scotland and beyond
- Development of infrastructure keeping pace with planning developments

Safety and Security

- Road accident levels could be reduced further
- Perception of personal safety and security has deteriorated, particularly after dark

Environmental

- Poor air quality particularly in the City Centre and on strategic routes
- Carbon dioxide emissions from congestion and traffic growth
- Noise from aircraft and traffic is problematic in some areas

Accessibility

- High fares on public transport
- Barriers to the use of public transport (comfort, direct journeys, travel times)
- Poor accessibility for socially excluded groups due to lack of non-radial public transport networks
- Single operator ticketing for all public transport users
- Ageing population
- Difficulty accessing the City Centre

Integration

- Dispersed development patterns create car dependency
- The dispersal of population from the City to the country increases car use
- Barriers to interchange for passengers and freight
- Barriers to walking and cycling
- Rising levels of obesity

Towards an Updated Vision, Aims, Outcomes and Objectives

As was the case for the 2008 LTS, this refresh has taken its lead from the National and Regional Transport Strategies. Although it has been determined that a fundamental change in the overall policy approach is not required, a review of the vision, aims and objectives to take account of new policies has been undertaken. The consequence is that the vision has been largely maintained and the aims streamlined and complemented by high level outcomes with individual objectives now related to specific modes.

The Vision

The vision for the Aberdeen City LTS is to develop 'A sustainable transport system that is fit for the 21st Century, accessible to all, supports a vibrant economy, facilitates healthy living and minimises the impact on our environment'.

Aims

As part of the refresh we asked stakeholders if our aims are still relevant with the consensus being that they are. Taking into account the Scottish Government's strategic objectives (wealthier and fairer, safer and stronger, smarter, greener, healthier), the City Council's 'smarter mobility' objectives and the 2008 LTS, the aims have been updated to:

1. A transport system that enables the efficient movement of people and goods
2. A safe and more secure transport system
3. A cleaner, greener transport system
4. An integrated, accessible and socially inclusive transport system
5. A transport system that facilitates healthy and sustainable living.

Outcomes

In response to the Main Issues consultation a number of stakeholders commented that the Council did not appear committed to the vision, aims and objectives as little progress appeared to have been made, particularly in relation to public transport, active travel, safety and well-being. As part of the LTS refresh we asked stakeholders whether clear outcomes for the City, i.e. the changes and benefits that we should be aiming towards, rather than objectives, should be included. The majority of stakeholders responded positively as long as the outcomes were SMART (Specific, Measureable, Achievable, Realistic and Timebound), and there was a clear link to the existing objectives. The following outcomes have therefore been produced and associated indicators are detailed in Appendix E.

By 2020 Aberdeen's transport system should have:

- A. Increased modal share for public transport and active travel;
- B. Reduced the need to travel and reducing dependence on the private car;
- C. Improved journey time reliability for all modes;
- D. Improved road safety within the City;
- E. Improved air quality and the environment; and
- F. Improved accessibility to transport for all.

Appendix D contains a table demonstrating to what extent the outcomes and objectives for individual modes still meet the overall aims. Objectives are now presented alongside the mode that they represent. In order to ensure that we monitor the success, or otherwise, of our aims, outcomes and objectives a monitoring programme has been put in place and can be seen in Appendix E.

4. Strategy Framework

Introduction

The underlying principle behind the LTS 2008 was that the AWPR provided additional road capacity and therefore opened up opportunities to free up capacity on the City's road network, thereby reducing congestion, pollution and improving journey times. The Strategy also acknowledged that without further intervention the benefits of the new road would quickly erode due to additional traffic over time.

The LTS 2008 proposed to preserve and 'lock in' the reduced congestion and pollution and improved journey time benefits of the new road by giving over space to public and active transport modes thereby providing adequate infrastructure to allow these modes to become viable, safe, efficient and provide a comparable and competitive journey in both time and convenience to the private car for most journeys.

Key conclusions that were drawn from that original consultation process were that:

- There was a general acceptance that the city should aim to be less car dependent and move to a position where we make more use of sustainable forms of transport or, indeed, travel less;
- There was a desire that transport infrastructure and services should be well maintained and safe to use;
- The city should be planned so that all our citizens have easy access to jobs and services; and
- Ease of access to key commercial and industrial areas needs to be improved.

The Refresh

For the purposes of the Refresh this position has not changed, and has in fact been strengthened by recent updates to national and regional policy and strategy and the early engagement with stakeholders and the public to inform this refresh. The broad approach therefore continues to support national and regional initiatives that flow from the National and Regional Transport Strategies and the policies and actions that are proposed. The five different strands that this incorporates remain the same i.e. the Council will:

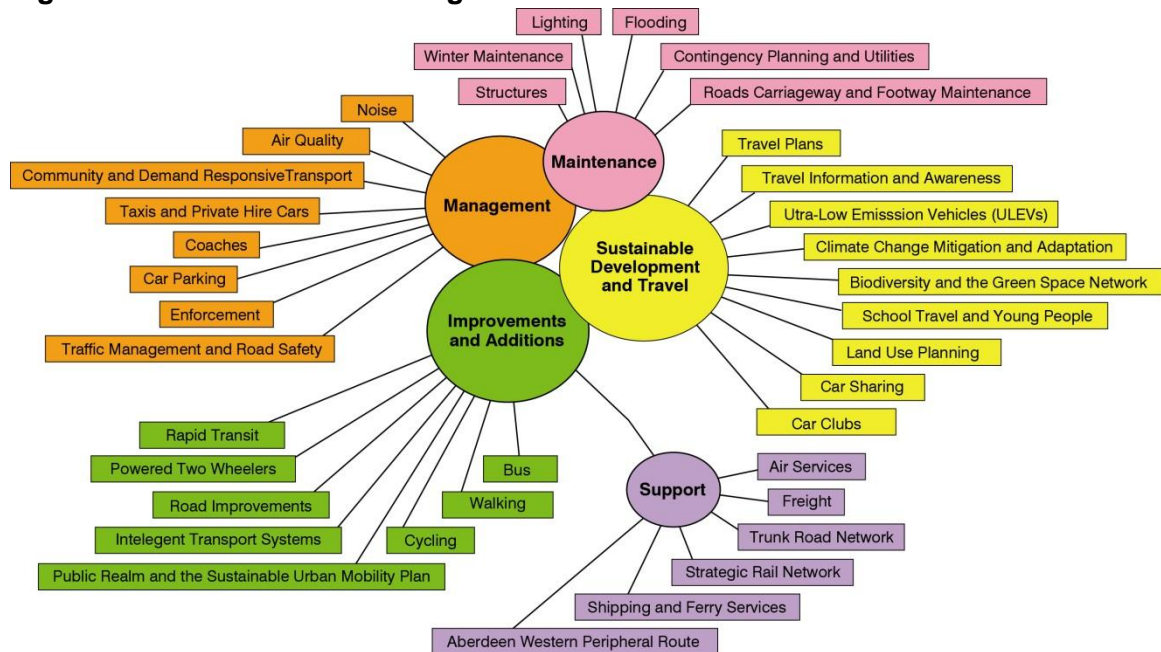
- Support partners in the development of the region's transport infrastructure and services;
- Maintain its transportation assets;
- Manage its transportation assets and services;
- Promote the use of sustainable transport; and
- Improve and add to its transport infrastructure and services.

It should be stressed that the successful implementation of an integrated transport strategy will be dependent on commitment to and the delivery of, all aspects of the Strategy, in an integrated fashion to a long-term framework. This can ensure that despite many of the policies and interventions being progressed collaboratively, all involved are working towards the delivery of a shared vision and achieving a suite of outcomes. This approach enables actions to be taken forward in a more integrated

manner and, for example, that the benefits of new infrastructure is more readily identified and accommodated.

Figure 3 below illustrates the relationship between the categories of intervention and the types of intervention within each category. Structuring the Strategy in this way means that actions are not dealt with in isolation. Instead, the relative needs of each mode are considered under each of the Council's areas of responsibility.

Figure 3: LTS Intervention Categories



This can ensure that despite many of the policies and interventions being progressed by different teams within the Council, and by different local, regional and national Partners, all are working towards a shared remit. A fully Costed Action and Delivery Plan is being worked up to take into account the different delivery partners and will sit alongside the Local Transport Strategy.

5. Objectives

5.1 Support

Introduction

This section of the LTS considers those transport schemes which are important features of the Strategy but which are being promoted and developed by other bodies, either because the elements being considered are not the direct responsibility of Aberdeen City Council or because they are nationally or regionally important schemes being promoted through the National or Regional Transport Strategies. For regionally important schemes, the Council's key partners are Nestrans, the Regional Transport Partnership, and Aberdeenshire Council. One of the main benefits of having a Regional Transport Partnership is that it can better manage and co-ordinate transport improvements which cross Local Authority boundaries, given its strategic focus and broader geographical responsibility.

Strategic Rail Network

Fast, frequent and reliable rail services are essential to the delivery of an integrated, sustainable transport system for the region and while many local improvements are implemented by Aberdeen City Council, the vast majority stem from the Nestrans Rail Action Plan (2010) which seeks to prioritise and thereafter implement rail improvements in the North East. Their actions include: reduced rail journey times to Edinburgh, Glasgow (and further south) and Inverness; improving train capacity, comfort and reliability; and, supporting High Speed Rail connections to London.

Rail patronage to, from and within Aberdeen has increased steadily since the LTS was adopted in 2008, thanks in part to the re-opening of Laurencekirk Station in 2009 and the securing of additional services to and from Stonehaven and Portlethen. Through services from the Central Belt to Dyce and Inverurie via Aberdeen have also proven successful in attracting passengers. Additional carriages have been introduced on some services but overcrowding remains a problem at peak times.

Significant station improvements have taken place in Aberdeen. The Union Square transport interchange opened in 2009 and an overbridge and lifts have been installed at Dyce Station to enhance facilities for passengers and to comply with the Equality Act 2010. A new bus service linking Dyce Station to Kirkhill Industrial Estate and Aberdeen International Airport was launched by Nestrans in 2008 and is now operated on a fully commercial basis. An improved turning circle for buses at Dyce Station, also using funding from Nestrans, has been delivered. Access to both the Aberdeen and Dyce Stations would benefit from further walking, cycling and public transport interchange connections and the City Centre Masterplan has provided detailed plans for improvements around the Aberdeen Station area.

At a national level, the Scottish Government's 2011 Infrastructure Investment Plan and Strategic Transport Projects Review reaffirmed the need to improve rail infrastructure between Aberdeen and Inverness and between Aberdeen and the Central Belt, including a commitment to upgrading the Aberdeen to Inverness line (allowing for faster and more frequent services) and reducing journey times between Aberdeen and the Central Belt by 20 minutes.

In March 2014, the Scottish Government announced a £170 million package of improvements for the Aberdeen to Inverness rail corridor to be delivered between 2014 and 2019, with the aim of improving commuter opportunities and capacity into both Aberdeen and Inverness. A further phase will seek to make passenger journeys quicker, more frequent and more comfortable. Improvements include redoubling of the track between Aberdeen and Inverurie and local improvements around Aberdeenshire and Moray, including infrastructure to support the reopening of Kintore Station. Future phases of the scheme will support an hourly service between Aberdeen and Inverness with the average journey set to reduce to two hours.

From April 2015 Abellio has operated ScotRail services while InterCity, a consortium of Stagecoach/ Virgin, has operated the East Coast main Line services to London. Both of the contract arrangements have indicated potential upgrades and improvements to services and capacity under the new arrangements.

Objective

To work with partners to increase opportunities for rail travel to, from and within Aberdeen.

Shipping and Ferry Services

Aberdeen Harbour is one of the UK's busiest ports and represents a vital part of Scotland's transport infrastructure. It plays a key role in Europe's energy sector, supports life-line ferry services to the Northern Isles and has commercial trading links to 39 countries. With over 5 million tonnes of cargo passing over the quayside annually, with a value of more than £1.5 billion, and the port managing over 28 million vessel tonnes, the port has witnessed record levels of activity in recent years and is key to sustaining the commercial growth of the region.

The Nestrans RTS acknowledges the national importance of the Harbour and the measures required to support its continuing function. These include: joint working through the North East Freight Forum; improving access and facilities at ports and interchange with passenger ferries; enhancing freight and passenger facilities at north east ports; and continued dialogue with the Scottish Government and Northern Isles ferry service operator to ensure continuing services from Aberdeen.

Recent development of the Harbour has seen a new rail freight terminal at Waterloo Quay with direct access to the deep water quayside, the first phase of the Torry Quay redevelopment and widening of the navigation channel. In 2012 a feasibility study investigated the potential expansion of the harbour into Nigg Bay where additional deep-water facilities could be developed. The Scottish Government has recognised this as National Development within the third National Planning Framework (NPF3). Ensuring appropriate access to this site will be key to Aberdeen Harbour Board being able to develop the site adequately.

The Council also recognises the valuable role of the ferry service between Aberdeen and the Orkney and Shetland Islands, with Aberdeen enjoying important historical, social, cultural and economic links to the Northern Isles. The growth in passenger numbers in recent years has had benefits for the City in terms of the development of tourism and City Centre trade and improved interchange between Aberdeen ferry

terminal, the city centre and the bus and rail stations is essential. Maintaining the ferry terminal in the city centre will be extremely important in ensuring that individuals can continue to access Aberdeen without a vehicle. Given the coastal route has both strategic walking and cycling routes improvements to the road network to access Nigg will have to consider all modes.

Objective

To work with partners to ensure that Aberdeen Harbour remains a world-class port and the main port of call in Scotland for the Northern Isles ferry services with appropriate access for all users.

Air Services

Despite the economic recession, Aberdeen International Airport has returned to growth in recent years; in 2013 the Airport served 50 destinations and was the busiest year ever, handling 3.5 million passengers. The Airport is also Europe's busiest commercial heliport, handling over 35,000 helicopter movements every year, the majority serving the off-shore oil and gas industry. It therefore plays a vital role in the economic development of the region and the Council supports a number of initiatives that are being delivered to facilitate continued growth and service improvement.

The Aberdeen International Airport Masterplan sets out the strategy for the airport's development to 2040 and focuses on airport infrastructure, upgrades to terminals, the potential for further runway extension and increasing the number of direct flights to international destinations. The Nestrans RTS commits to supporting the above as well as acknowledging that aviation is known to be a growing source of carbon emissions and that more modern, efficient aircraft as well as direct flights can help to emit less CO₂ emissions per passenger as well as reduce the need for making multiple flights or travel to different airports, reducing environmental impacts.

Surface access to the Airport has also improved significantly for all modes of transport. New bus services, referred to under the 'Strategic Rail Network' section, serve Dyce Station to the Airport, while another high-frequency service now links Union Square and the City Centre with the Airport. A bus/cycle/taxi lane has been implemented on Argyll Road, walking and cycling infrastructure on Dyce Drive has been upgraded, improvements have been made to taxi operations and a new multi-storey car park with dedicated bicycle and motorcycle storage facilities have been constructed. The new Dyce Drive link road from the A96, due for completion in 2016, will also significantly improve access to the Airport by vehicle.

Objective

To support the future growth and improvement of Aberdeen International Airport, including surface access, in order to support the economic strength of the region and ensure continued connectivity to key businesses and leisure destinations.

Freight

The efficient movement of freight to, from and within the region by all modes of transport is key to economic growth in the North East with a number of initiatives being progressed to improve conditions for freight movements.

The Nestrans Freight Action Plan was published in 2009 and refreshed during 2013. One of the main outputs of this was the establishment of a permanent North East Freight Forum. Meanwhile, new rail freight terminals have been developed at Raiths Farm, Craiginches and Waterloo Quay, while new opportunities will be afforded by the extension of Aberdeen Harbour to extend links with sea, rail and road. The RTS also commits to investigation of potential measures to provide more reliable journey times for HGVs and identify a trial route for implementation of priority measures.

Given that the majority of freight movement in the North East take place within the North East, for many trips there is often no alternative to road travel. Between 2006 and 2010, for example, the average amount of freight carried by HGVs from Grampian to elsewhere in the UK was over 19 million tonnes and more than 80% of this had a Grampian destination. For this reason, efficient management and maintenance of Aberdeen's strategic road network is vital. The AWPR will also assist with the movement of freight by providing a guaranteed fast-link for freight and goods from all over the North East to markets in the south.

The lack of suitable lorry parking facilities in Aberdeen has also been raised as an issue in recent years. The Council therefore welcomes the inclusion of lorry parking provision in plans for the A90 South Park and Choose site, currently being developed by Aberdeenshire Council.

Objective

To work with partners to ensure the efficient movement of freight to, from and within the North East of Scotland.

Trunk Road Network

Trunk roads within Aberdeen currently comprise the A90 and the A96. The A90 south provides a continuous dual carriageway from Aberdeen to the Central Belt, while the A90 north is the main link into Aberdeen for many settlements in the North East corner of Scotland, including Ellon, Peterhead and Fraserburgh. The A96 connects Aberdeen to Inverness and is the main link to the City from the many towns and villages north-west of Aberdeen.

As part of the AWPR project, the A90 between Balmedie and Tippetty will become dual carriageway. The Scottish Government has also committed to the full dualling of the A96 by 2030 as part of the Infrastructure Investment Plan. The Council welcomes these decisions, recognising the benefits these projects will have for passengers and freight travelling to and from the City. Ensuring complementary non-motorised routes are delivered alongside these improvements also form part of the Council's approach to delivering the Nestrans and Council Active Travel Action Plans.

Significant bottlenecks exist on the trunk road network, particularly around the Bridge of Dee (A90) and Haudagain Roundabout (A90/A96) and the Council is therefore working with Transport Scotland and Nestrans to implement measures to tackle these problems. A Scottish Transport Appraisal Guidance (STAG) assessment is underway to identify options for the Bridge of Dee, while the Scottish Government is committed to improvements at the Haudagain Roundabout following implementation of the AWPR in 2017.

When the AWPR comes on line, the A90 and A96 through Aberdeen will be 'detrunked' with most strategic traffic expected to stay on the AWPR. The resulting capacity created on what will become local roads requires a rethink of the use of these roads and their primary function. A future network Roads Hierarchy Study is currently being developed to enable a reclassification of the strategic City road network towards the radial corridors with priority for public transport. Given the key purpose of this LTS is to reorganise and improve the use of the City's network for sustainable transport, so that the benefits of the AWPR are 'locked-in' for everyone, a number of interventions will be initiated over the lifespan of this LTS which are detailed in the next section.

The maintenance of these strategic routes is also vital to the economic development of the City. Sections of the A90 and A96 will be de-trunked following the completion of the AWPR. It will therefore be important that these roads are in efficient order when passed over to the Council.

Objective

Support improvements to the trunk road network for the benefit of people and freight travelling to, from and within Aberdeen.

Aberdeen Western Peripheral Route

The AWPR will provide a new strategic route to improve travel in and around Aberdeen and the North East of Scotland. Backed by the Scottish Government, the road is being developed by Transport Scotland in partnership with Aberdeen City and Aberdeenshire Councils.

The 30km route, travelling from the A90 near Blackdog in the north of the City to the A90 in the Charleston area, south of Aberdeen, is scheduled to be completed in Winter 2017. The road, designed as an alternative route from north to south bypassing the City, will be a dual carriageway with grade separated (flyover or underpass) junctions. Flyovers or underpasses will also be provided for pedestrians and cyclists crossing the AWPR, while local junctions will be bridged over or under the route.

The Council is fully committed to the delivery of the AWPR, recognising that this will be key to delivering many of the objectives of this LTS. It will be vitally important that the benefits that the new road brings are fully realised and the opportunity is taken to 'lock-in' improvements to congestion and journey times to ensure that these are not eroded through additional traffic growth. The AWPR also allows the Council an unparalleled opportunity to revise the operation of the transport network in the City, through the Roads Hierarchy Study, with options to utilise the freed-up capacity

anticipated on many routes to prioritise the movement of sustainable modes of transport. It will also facilitate the delivery of many of the City Centre Masterplan projects and its associated transport masterplan, the Sustainable Urban Mobility Plan.

The following list of schemes represents the key actions for implementation on key corridors. A number of schemes have now been completed and are no longer referenced. Many others are in the developmental phase and can be implemented prior to the opening of the AWPR, others however, will require to be 'shovel ready' for when the AWPR opens or will require review in light of the Roads Hierarchy Study:

Stonehaven Road – Bridge of Dee (A90)

- Cycle/ pedestrian/equestrian route on the east side of the A90. The route will integrate with existing facilities in Aberdeen and Stonehaven
- Bus or bus/ HOV lane extending from the Charleston Interchange to the Bridge of Dee, including priority at junctions

Anderson Drive, Bridge of Dee – Haudagain (A90)

- Circumferential bus route travelling the length of Anderson Drive, with priority at junctions and stops/ interchange facilities along the route
- Improve and increase the number of pedestrian crossings. Introduce pedestrian phases on existing signalised junctions where they do not exist
- Parallel cycle lanes and junction improvements for cyclists
- All roundabouts converted to signals or signalised roundabouts
- Change signal timings to give greater east-west priority
- Upgrade junctions to accommodate large vehicles and to improve their manoeuvrability

Peterculter – Westhill (B979)

- Cycling and walking improvements
- Cycle/ pedestrian/ equestrian route along roadway, integrating with existing facilities
- Pedestrian crossing at A93/B979 junction

Wellington Road, Queen Elizabeth II Bridge – Charleston (A956)

- Improve key junctions along the corridor to allow easier manoeuvring of HGVs

Peterculter – Holburn Junction (A93)

- Bus or bus/ HOV lane with junction priority, operational for eastbound vehicles only
- New cycle/ pedestrian/equestrian lane

Mason Lodge – Hutcheon Street (A944)

- Pedestrian/cycle route from B9119 junction to Berryden Road
- Alter signalised roundabout timings
- Extension of bus lane or conversion of existing bus lane to bus/ HOV lane from bus gate on Lang Stracht to Berryden Road, with junction priority for bus and HOV
- Signalise roundabouts to give greater east-west priority

Switchback – Holburn Street (B9119)

- Extension of existing bus lane or conversion of existing eastbound bus lane to bus/HOV lane to be continuous from A944/ B9119 Switchback junction to Anderson Drive junction, with priority for bus and HOV
- Junction/ signal changes to allow greater east-west priority

Kinellar Roundabout – St Machar Drive (A96)

- Extension of the dual use pedestrian/cycle lane from airport to Kirkhill
- Extension of existing bus lane or conversion of existing bus lane into bus/HOV lane from the Park and Choose to Haudagain junction with junction priority for bus and HOV
- New bus/ HOV lane from the airport to the A96
- Improvement of A96/B979 junction at Tyrebagger

Victoria Road / Stoneywood Road, AWPR – Bucksburn (A947)

- Cycle/ pedestrian link between Bucksburn and Formartine and Buchan Way. Links to Riverview Drive cycleway and Dyce Train Station
- Advisory cycleway on Riverview Drive upgraded to mandatory
- Bus or bus/ HOV lane on approach to A947/A96 junction. Investigate extending this along entire A947 and, if not possible, localised and junction improvements to give priority to bus and HOV

The Parkway (A90)

- Remote cycle and pedestrian link along the verge of the Parkway
- Toucan crossings at Woodside Road and between Scotstown Road and Ellon Road
- Improve underpass crossing
- Improve Parkway/Woodside Road junctions to facilitate large vehicle manoeuvres and right turning vehicles in a safer manner

Ellon Road, Balmedie – St. Machar Drive

- Pedestrian crossings at Ellon Road/Parkway roundabout
- Convert and extend intermittent bus lane to continuous bus/ HOV lane between St Machar roundabout and as yet undetermined point north of Balmedie

Every scheme promoted on the local network will therefore, at a minimum, ensure that it causes no detriment to pedestrians, cyclists and public transport. In many cases this will require complete reorganisation and reprioritisation of the network to ensure that the safety of non-motorised users and the connectivity of communities are prioritised ahead of traffic flow.

Objective

To support the implementation of the Aberdeen Western Peripheral Route (AWPR) and to fully realise the benefits the new road will bring in terms of improving conditions in the City for users of sustainable modes of transport.

5.2 Maintenance

Introduction

Aberdeen City Council is responsible for the maintenance of the local transport network, comprising roads, footpaths and cycleways, as well as verges. This includes signs, road markings, traffic signals, bus infrastructure, street lighting, structural maintenance, winter maintenance and flood/ coastal defence works. The effective maintenance of the combined network is crucial to allow the efficient movement of people and goods throughout the City, ensuring that our transport infrastructure and services are safe and fit for purpose.

Levels of investment in maintenance must keep pace with the level of infrastructure being installed, and also address historic under-investment. Potential risks of a failure to effectively maintain our transport network can result in increased volumes of public liability claims against the Council. Health and Safety is of paramount importance to Aberdeen City Council, a point reflected by increased emergency repairs and resultant strain on existing budgets. A Road Asset Management Plan has been developed and this describes the approach Aberdeen City Council will use in managing its infrastructure network. The Plan values road assets at £1.4 billion and an investment of approximately £200 million to achieve an ideal road condition. Through this LTS, efforts will therefore be taken to sustain if not increase levels of investment in network maintenance against a projected backdrop of reducing funding in the public sector over the next five years.

Road Carriageway and Footway Maintenance

There are approximately 500 miles of roads in the Aberdeen City Council area, with a further 1,000 miles of footways which are suffering from historic levels of underinvestment. In addition, the severe winters experienced between 2008 and 2011 were extremely damaging to the condition of roads. In order to address this backlog, considerable funds are required to comply with recommended road maintenance performance indicators. While appreciating that this is a national problem, it remains the case that action is required in Aberdeen.

While increased finance is critical, other initiatives have been developed to make better use of available resources. For example, the Council adopted its first Roads Asset Management Plan in September 2012 to make the management and maintenance of the Council's road network more efficient, effective and transparent.

Objective

To improve the condition of the road, footway and cycle networks.

Lighting

Aberdeen City Council currently maintains approximately 32,000 street lights in Aberdeen and 4,000 lit traffic signs and bollards. These are on publicly maintained roads and footpaths throughout the city.

Columns have been a major issue in recent years with some road lighting columns now over 30 years old, despite their average design life being 25 years. In addition, defective construction methods are becoming apparent through structural failures and this is necessitating revision of column replacement programmes. Poor street lighting will have obvious detrimental effects on the safety of carriageways and footways.

A continuing programme to replace obsolete lantern and lighting systems with modern energy efficient equipment is going. Significant progress has been made with improvements to the efficiency of lighting units, but the acceptability of reduced operating hours or lower lighting levels is under review. New technologies such as Light Emitting Diode (LED) units may offer at least a partial solution and these systems are being incorporated in operational systems where their whole life costs can be evaluated.

Objective

To ensure that all street lighting columns in Aberdeen are fit for purpose, safe and sustainable.

Winter Maintenance

Aberdeen City Council has winter maintenance arrangements in place to address its statutory obligations. This includes taking steps as it considers reasonable to prevent snow and ice endangering the safe passage of pedestrians and vehicles over those public roads for which it has responsibility as local Roads Authority. By definition those public roads include carriageways, footpaths, cyclepaths and pedestrian precincts.

Aberdeen City Council carries out winter maintenance operations using a priority system which is detailed in the Roads Winter Service Plan and outlined below:

Priority 1 routes are principal roads or other classified roads serving as the main routes of major traffic distributors. These carry heavy traffic flows or serve as major public transport routes or give essential access to public service or emergency facilities.

Priority 2 routes are principal and other classified roads not included in the priority 1 list but which serve as main roads or as traffic distributors and which carry medium traffic flows or give access to community or public facilities of a non-essential nature.

Priority 3 locations are access roads, service roads and minor roads where it could be expected that residents could make their way with some difficulty in all but abnormal conditions to the nearest higher priority route.

When required by weather conditions, priority 1 routes are repeatedly gritted until they remain clear and safe for vehicular, cycle and pedestrian traffic. Depending on the severity of the conditions, treatment can often be delayed on priority 2 and 3 routes as all the Council's resources are tied up on priority 1 routes. It is believed that low levels of central government grant for winter maintenance is an issue that needs to be addressed to reflect the needs of the North East climate conditions.

Aberdeen City Council, working with six other Councils in the East and North East of Scotland, has procured a joint winter service for weather information through the Met Office and road surface condition information through Vaisala. This joint procurement has not only kept cost down but allows more cross-council working to take place.

Objective

To ensure the safe movement of traffic on carriageways, footpaths, cycle paths and pedestrian precincts to minimise delays caused by adverse winter weather.

Structures

Aberdeen City Council is responsible for the maintenance of over 840 bridges and other highway structures throughout the City. Bridges are a crucial element within the City's transport system, while also forming an important part of Aberdeen's built heritage. There is a backlog of bridge strengthening and repair works required throughout the City. Funding has been secured for strengthening the Rob Roy Bridge (A93) at Peterculter however two further bridges are subject to temporary weight restrictions and, in addition to three other bridges, are awaiting availability of funds for strengthening works or replacement.

Objective

To ensure that all road related structures in Aberdeen that the Council is responsible for are managed and maintained, safe and fit for purpose.

Flooding

The City Council is responsible for the long-term assessment and implementation of flood defence schemes throughout the city and in relation to the transport network is mostly concerned with rainfall and the resulting river and urban flooding as well as drainage issues.

The most frequent climate related impact in Aberdeen City between 2008-13 was damage to infrastructure such as roads, railways and networks with flooding causing severe disruption to the local transport network. Recent flooding has affected large areas of the City with over 100 incidents reported, causing damage to the roads infrastructure and consequent disruption for travellers. Flooding due to blocked drains is addressed by Roads Maintenance. There is also a regime for the inspection of open watercourses in place, and hecks (trash screens) are inspected on a monthly basis and before anticipated high level rainfall. The Council are currently undertaking a review of the Integrated Catchment Study to understand and assess if the predicted outputs from the flooding model match those seen on the ground.

The Scottish Environment Protection Agency (SEPA) has predicted that Aberdeen could see a 20% increase in rainfall and up to a 1/2 meter sea level rise over the next century with the annual cost of flood damage in Aberdeen estimated at £17million. Areas at risk from flooding have been identified and after a flooding event a local plan is drawn up to highlight any previously unidentified areas. The Council is currently

working to develop a North East local plan, which is due to be published in 2015 in collaboration with SEPA, Scottish Water, Moray and Aberdeenshire Council. This flood risk management report commits Aberdeen City Council to actions within six years.

The maintenance of coastal defences and guarding against flooding is another area that the Council will continue to oversee in order to ensure the safe and efficient maintenance of the City's transport networks. The Council recognises the increased risk of flooding as a result of climate change and will continue to implement a range of hard and soft engineering measures when dealing with flood risk management and mitigation.

Objective:

To ensure that the road network is as resilient as possible in case of flooding from extreme weather conditions.

Contingency Planning and Utilities

The significant growth in both housing and commercial developments across the region, as well as advances in communications technology, has necessitated a great deal of investment in supporting utility infrastructure.

A large proportion of roadworks in the city are carried out by utility companies and coordination of these works in tandem with the City Council's improvements are important to ensure that the road system operates as smoothly and effectively as possible. Timely information and publicity about the nature and programming of highway maintenance works will therefore continue to be provided to those affected. Any delays or extensions to work will also be conveyed in a timely manner, particularly to bus companies who have to plan services well in advance.

Contingency planning is required to manage traffic during periods of both routine and emergency road maintenance, as well as in severe weather conditions, such as flooding, and road accidents. Road closures can be commonplace, leading to the requirement for signed diversions and alternative routes. The Council has a key role in ensuring that this information is conveyed to the public and transport users in an efficient manner, allowing people to make informed travel choices. The Council has several approaches in this regard. Appropriate diversions for all travellers are required on the local road network while Variable Message Signs on strategic routes will inform the travelling public of any difficulties. In addition, the Smart Journey project is an interactive and immediate way for the travelling public to receive live traffic information through their smartphone or computer, and this will be further publicised to encourage members of the public to join.

Objective:

To ensure efficient flow of traffic.

5.3 Management

Introduction

In this section, policies and proposed interventions are set out for elements of the transport network for which Aberdeen City Council has a responsibility to manage and coordinate.

Car Parking

The Nestrans Regional Parking Strategy 2012 details the overarching issues, opportunities, objectives and actions for parking covering both City and Shire. The Council's parking policies and actions have been revised to take this document into account with further detail on City-specific policy areas provided.

The Council and this Strategy recognise that parking is a key element of managing demand and influencing modal choice. Parking controls can be used, where appropriate, as part of an integrated strategy to contribute to:

- Improving the financial viability of bus, Park & Choose and rail services;
- Encouraging shorter trips within the urban areas to transfer to walking, cycling and public transport;
- Locking in the benefits of reduced traffic by reallocating road space to people through pedestrianisation and public realm enhancements; and,
- Improving quality of life in both residential areas as well as the city centres through greater opportunities for active travel, less motorised travel movements and emissions.

The Council is responsible for the management and maintenance of all on-street parking, the enforcement of Controlled Parking Zones (CPZs), the administration of parking permits, provision of parking spaces for disabled people as well as a number of off-street car parks.

Turnover of spaces

Whilst looking to introduce new parking policies which discourage non-priority users and help maintain the vitality of the City Centre, we recognise the importance of providing an adequate supply of short stay parking to support the needs of businesses, short stay shoppers and visitors.

Edge of City Park and Choose car parks on the strategic road network will continue to be developed for longer stay parking and off-street car parking in the city centre will focus on short to medium-stay requirements. This will ensure maximum turnover of spaces and discourage all day commuter parking, as additional city centre commuter parking would have a detrimental effect on peak period congestion.

A review of how space is allocated within off-street car parks is required in order to facilitate parking for residents, visitors, car sharers, car clubs and environmentally friendly vehicles. If space were freed up on street from reduced parking pressure opportunities could then be explored for the removal of on-street parking and reallocation of road space to pedestrians, cyclists and public transport.

Evening parking availability and Sunday parking requires to be balanced between the requirements for residential parking in the City Centre and those requiring to access businesses during the night time and weekend.

Charges

As well as being a mechanism for managing the length of stay, and therefore turnover of spaces, pricing can significantly influence travel demand. Within Aberdeen the City Council has control of approximately half of available off-street public parking. Parking charges at Council facilities will be considered alongside inflation, local bus fares, park & choose charges and rail fares and we will work closely with private operators, using contractual and planning powers, to influence their approach. The focus will be on adjusting price to encourage commuters and long stay parkers to use public transport thereby leaving town and city centre spaces available for short stay customers, service users and residents. This may require review in some areas to ensure prices and time limits are consistent across zones and streets.

An option to pay for parking by mobile telephone is available in all ACC off-street car parks and in the vast majority of on-street zones. This payment method is increasingly popular and presently 20% of all transactions are made through this system. This convenient means of payment should enable a reduction in pay and display machines which are often subject to vandalism.

Given the current Air Quality Management Areas within the City the Council has also explored emission based parking charges in order to incentivise the take up of more environmentally friendly vehicles.

Permits

The availability of permits requires to be carefully managed in order to minimise the over-subscription of permits and sterilisation of road space as well as favour environmentally friendly vehicles. The Council's off-street public parking facilities are regularly monitored to ensure that spaces available to permit holders are limited to ensure a balance between the demand for permits and the demand for Pay & Display bays.

Disabled Users/ Mobility Impaired Drivers

We will continue to consider the needs of disabled users, ensuring an adequate supply of blue badge spaces are provided at the most convenient locations. The Council will continue to support and promote the national Blue Badge Scheme, which provides parking concessions for disabled people, allowing them to park closer to their destination.

Management

We also acknowledge that in order for our parking policies to have an impact, as well as to support the efficient movement of public transport services, better enforcement of illegal parking will be required. Rationalisation of on-street parking along some of

our major corridors, which can contribute to reduced levels of service for all transport network users, also has to be reviewed on a corridor by corridor basis.

It is recognised that misuse of blue badges is relatively commonplace and initial assessments in Aberdeen demonstrates that this is an issue that requires action. Blue badge fraud has various negative implications: causing unnecessary congestion and denying disabled people from accessible parking. This LTS supports the continuation of the investigation service to reduce fraudulent use of Blue Badges.

As parking standards for new developments have an important influence on how people travel, car parking standards for developers will be strictly adhered to, to avoid exceeding maximum standards. Where feasible the Council will support car-free developments or developments with limited parking, provided it is combined with high quality public transport and other sustainable transport initiatives, for example, Car Club schemes.

Where there are increases in on-street parking demand, either because of development or overspill from existing facilities, a pragmatic approach to prevent indiscriminate parking will be applied. Where residential amenity is affected, or unrestricted parking is undermining other forms of transport and creating congestion, Controlled Parking Zones will be extended (where there is support from the local residents). Parking and loading controls (i.e. single and double yellow lines) will be used to enable safe and effective movement by all means of transport.

Objective:

To develop a car parking regime that sustains and enhances the economic vitality of the City Centre and district shopping centres.

Community and Demand Responsive Transport

Demand Responsive Transport (DRT) is a flexible form of community transport and has an extremely important role in Aberdeen in combating problems of social exclusion and access to healthcare. Community transport can take many forms and is essentially a pre-arranged lift, commonly operated by volunteers and not for profit. The key to the success of Community Transport is that it is community led by the people who it is intended to benefit. The Council will continue to support groups looking to develop Community Transport schemes by providing guidance and assistance in preparing funding applications.

In Aberdeen the Council manages a DRT service which provides door to door, demand responsive, wheelchair accessible minibuses five days a week. The service supports social inclusion by providing access to shops, medical appointments, and other local services and facilities for those that have no alternative means of transport. The service has been a great success and with unprecedented demand there is a need for further DRT services in Aberdeen.

The Council will be working with our partners through the Health and Transport Action Plan (involving Nestrans, Aberdeenshire Council, Moray Council, NHS Grampian, Scottish Ambulance Service and the Community Transport Association, with links to each Local Authority areas Third Sector Interface) to improve access to

Health and Social Care, part of this will be driven by the THInC (Transport to Healthcare Information Centre) project, which includes a pilot DRT service and will consider current demand for services, how these can be delivered, and any opportunities to integrate and coordinate partner agency transport with community transport schemes and other DRT services. The THInC project will be instrumental in working towards a centralised transport booking service which will seek to pull together Local Authority services with those of the voluntary and health sectors into one centralised booking and dispatch database. It is believed there are a range of services in Aberdeen City and the Aberdeenshire and Moray areas which could collectively be brought together into such a centralised transport mobility agency.

Objective

To continue to work with Partners to deliver Demand Responsive Transport for the benefit of the public.

Taxis and Private Hire Cars

Taxis and private hire cars (PHCs) are an important part of the public transport network, as they play a variety of roles in an integrated transport system. In 2009 bus lane rules were relaxed to allow taxis and PHCs full access as they are particularly important in providing a flexible, demand responsive service at times or in places where public services are not available. The Council also makes extensive use of them for transporting school children and social care clients.

In 2014 there were 1,352 taxis and PHCs, an increase of 21% on 2007 levels. The current limit for the number of taxis licensed in Aberdeen has been capped by the Licensing Committee at 1,079 after an independently conducted Taxi Demand Survey determined that there was significant unmet demand. Currently 53% of the taxi fleet are accessible vehicles (AVs). The Council also has implemented a policy commitment to ensure that the taxi fleet is 100% accessible by 2017 in order to meet its obligations in terms of the Public Sector Equality Duty under the Equality Act 2010.

As vehicle exhaust emissions are a principal source of air pollution the Council is investigating the possibility of encouraging greater deployment of environmentally friendly vehicles into taxi and private hire fleets in order to meet our air quality targets. At this point availability of ultra-low emission Wheelchair Accessible Vehicles (WAVs) are limited and as such the Council will monitor the availability of ultra-low emission WAVs and investigate the potential for low emission vehicle standards as part of Licensing.

A Night Time Transport Zone has been developed for the City Centre in order to create a safe and secure transport zone in the evenings. This involved moving taxi ranks from the side streets onto Union Street between midnight and 5am in order to provide secure and centralised transport for the circa 20,000 people that enjoy the night time economy every weekend. The ranks have been extremely successful in reducing the number of incidents and have been running seven nights a week since 2011 with Transport Marshals in place at the weekend and on occasions of expected heavy usage. An associated Safer Aberdeen mobile App has also been developed.

Objective

To work in partnership with the taxi and private hire car trade to ensure an adequate supply of safe, clean and accessible vehicles.

Coaches

The increase in tourism to the north east of Scotland has been accompanied by an increase in the number of visitor and tourist coaches accessing the civic areas of the City. Waiting coaches can cause an obstruction and delays to other public vehicles and it is important that coaches pick up and drop off at identified quieter areas. With potential pedestrianisation proposals there will be a requirement to review appropriate stops. The Council will also continue to raise awareness amongst coach operators that coaches should wait at the beach area until required to make a pick-up.

Objective

To highlight appropriate pick up, drop off and waiting zones for tourist coaches.

Traffic Management and Road Safety

The Scottish Government's Road Safety Framework to 2020 sets the context for road safety, taking into account the needs of all users and focusing resources on activities in areas which will achieve maximum casualty reduction in the most cost-effective manner. In order to establish how the City contributes towards the ambitious targets as set out in the Framework, the Council published a Joint Road Safety Plan with Partners at Aberdeenshire City and Moray Council in 2011.

Aberdeen City Council has been particularly successful in improving road safety over the last five years and in order to determine where additional gains can be made the Community Safety Partnership, a group of both public and private sector partners, has been key to establishing priorities for the City. The Road Safety Working Group has identified thirteen emerging trends of which four are considered a high priority:

- Indiscriminate parking/ speeding around schools
- Cycle related collisions
- Car crime
- Alcohol related collisions/ pedestrian accidents

With the other nine medium and low emerging trends a further Action Plan is being developed to determine how each of the issues can be risk assessed, resourced and addressed.

Aberdeen City Council also continues to work with Partners to focus on the '4Es' of Engineering, Education, Encouragement and Enforcement. While much of Enforcement remains the remit of Police Scotland, the City's Wardens continue to be an invaluable asset in ensuring that vehicles are moved if they are causing an obstruction and further information on other schemes the Council is enforcing can be

found in the Enforcement section below. Education and Encouragement have tended to focus on safety messages to school children with the Council rolling out Bikeability to an increasing number of schools, however, the Getabout Partnership also hands out advice and gear to all travellers at various events throughout the year. The Council has expanded its educational remit to include Variable Message Signs throughout the City; all road users can now be targeted with safety messages as well being informed about road works.

Engineering is the main remit of the Council and in order to reduce speeds to levels aimed at minimising accident casualties, 20mph zones and traffic calming have been introduced around every school in the City. We also recognise that perceptions of road safety can have a major impact on walking, cycling and the use of the streetscape; the Council will continue to introduce traffic calming within residential areas and appropriate shopping areas. New road schemes will continue to be audited for safety to ensure that the optimum design for pedestrians and cyclists has been considered.

Objective

To work towards a road network where all users are safe from the risk of being killed or seriously injured, and the injury rate is much reduced.

Enforcement

Ensuring effective enforcement of traffic regulation orders will be key to achieving many of the Council's traffic management objectives.

Car parking is currently decriminalised in Aberdeen and the City Council enforce on-street throughout the City and within our off-street car parks in order to ensure safety benefits for pedestrians and road users, maintain an effective flow of traffic and ensure parking is available for the needs of legitimate users.

Bus lane enforcement is also now the responsibility of the City Council rather than Police Scotland. Eleven digital cameras have been installed on strategic routes across the city to tackle the growing problem of illegal use of the bus lanes. The main objectives are to improve traffic flow, journey times, encourage the use of public transport, and improve air quality in the city. Any monies received from bus lane enforcement are allocated towards achieving LTS objectives and delivering LTS actions. It is also recognised that stopping in bus lanes in sensitive locations can significantly affect the flow of traffic. As such the Council will explore additional legislation to ensure greater enforcement of the urban clearway principle with strict 'no stopping' regimes except for buses at certain times of the day.

Parental parking immediately outside schools has also been raised as an issue which requires constant enforcement and parental education, such as through the School Travel Planning process. The problem has been deemed as a high priority by the Community Safety Partnership with Police Scotland and City Wardens patrolling schools to ensure that indiscriminate parking is addressed. There is also a role for traffic management through implementation of no car zones outside schools (such as the East Lothian trial), footway widening, safe crossings and other self-enforcing measures to improve safety around schools and encourage active travel.

The use of speed cameras and other forms of surveillance technology will continue through the North East Safety Camera Partnership (NESCAMP) to improve levels of safety at accident black spots and to ensure that traffic continues to flow. Furthermore the Council acknowledges the role that average speed cameras can play in reducing vehicle speeds and improving safety levels. The use of CCTV on public transport and coverage at public transport interchanges as well as in the City Centre can also reduce the threat of violence and vandalism, and improve feelings of safety. In addition, by observing traffic flows and the occurrence of incidents officers can take appropriate steps to mitigate any congestion such as altering traffic signal timings and alerting drivers through Variable Message Signs or other media.

It is recognised that misuse of blue badges is relatively commonplace and initial assessments in Aberdeen demonstrates that this is an issue that requires action. Blue badge fraud has various negative implications: causing unnecessary congestion and denying disabled people from accessible parking. This LTS supports the continuation of the investigation service to reduce fraudulent use of Blue badges.

Objective

To ensure the Council manages and enforces the road network to ensure safety and effectiveness for the benefit of all users.

Air Quality

Standards for air quality in Scotland are set out in the EU Air Quality Directive, the Scottish Air Quality Regulations and the UK National Air Quality Strategy. Failure to achieve the European Limit Values for air pollutants could lead to fines being imposed on the Scottish Government. The Scottish Government has set more stringent standards for particulate (PM10) pollution than apply across the EU.

The main pollutants of concern in Aberdeen, NO₂ and fine particulate matter, are known to have an adverse effect on human health; studies have demonstrated that poor air quality is estimated to reduce the life expectancy of each person in the UK by an average of 6-7 months with estimated annual health costs of up to £20 billion. Emissions of PM2.5 (fine particles that have the greatest health impacts) were estimated to be an attributable factor in 86 deaths of people aged 25 or over in Aberdeen in 2010. Therefore it is necessary to protect the health of the City's inhabitants. In parts of Aberdeen, the EU NO₂ annual and hourly mean and the Scottish PM10 annual and daily mean concentrations are currently exceeded. This has led to the declaration of three Air Quality Management Areas (AQMAs): the City Centre, Wellington Road and Anderson Drive. In Aberdeen road traffic is recognised as being the most significant contributor, accounting for up to 90% of the total NO₂ concentration.

The Council is committed to improving air quality throughout the City and has produced an Air Quality Action Plan (AQAP) detailing specific measures to reduce concentrations of NO₂ and PM10s within the City. As transport is the main cause of air pollution five of the six categories designed to address air quality in the AQAP relate to transport: modal shift and influencing travel choice; lowering emissions and cleaner vehicles; road infrastructure; traffic management; and, planning and policies.

These are all areas that are reflected within this LTS and further detail on each of these elements is provided within the following chapters.

The planning system has a role in ensuring that, within the context of a thriving sustainable economy, additional vehicle trips associated with new developments do not result in a deterioration in air quality, particularly within or adjacent to AQMAs or other areas of poor air quality. Land use planning to promote and enable development that reduces the need to travel and minimise reliance on the private car will minimise the air quality impacts. Additional mitigation measures may be required to manage transportation impacts where the development may result in increased emissions within an AQMA and to avoid the declaration of any new AQMAs.

Objective

To improve air quality across the City, so that the existing Air Quality Management Areas are revoked and no further Air Quality Management Areas are declared.

Noise

The Environmental Noise (Scotland) Regulations 2006 implement the European Noise Directive 2002/49/EC and describe a two stage process to manage environmental noise. The first stage is the production of strategic noise maps and the second stage is the production and implementation of Action Plans. The regulations apply to environmental noise to which humans are exposed, in particular, in built up areas, public parks or other quiet areas in an agglomeration, near schools, hospitals, and other noise sensitive buildings and areas. The regulations apply to noise from road, railway, and airport sources, as well as industrial noise.

Strategic noise maps for Aberdeen were produced in May 2013 and the top 1% of identified noise areas were selected for consideration as Candidate Noise Management Areas (CNMAs) for road and rail. The mapping process also identified candidate Quiet Areas (cQAs). The candidate areas are then verified to identify which areas are to go forward as Noise Management Areas and Quiet Areas in Aberdeen. An Aberdeen Agglomeration Noise Action Plan has been produced and highlights actions to reduce the impacts of transportation noise in Noise Management Areas and the protection of Quiet Areas. The Action Plan and current Noise Management Areas and Quiet Areas are available at www.scottishnoisemapping.org.

Noise Management Areas will be assessed in terms of existing UK, Scottish, and local policies, plans, and programmes that may have an impact on the strategic environmental noise climate (e.g. transport plans and programmes, local plans, air quality management plans). Any potential noise mitigation measures to manage noise will be subject to a cost benefit analysis.

The planning system has a role in ensuring that within the context of a thriving sustainable economy new development does not result in increasing numbers of people exposed to adverse noise impacts. The Council will require mitigation measures, such as noise barriers, vegetation and fencing, where required for new transport schemes that may impact on existing noise sensitive receptors such as residential accommodation, hospitals and schools. By adopting good practice, from

the outset, it is hoped that the Council can reduce transportation noise through a range of measures that promote more sustainable transport.

Objective

To reduce transport noise within Aberdeen City.

5.4 Sustainable Development and Travel

Introduction

The sections up to now have concentrated on the supply side of transport and the maintenance and management measures that the Council will use to ensure the performance of the existing network is optimised. However, a further way to get better use out of the existing transport network is to change the demand for travel and encourage a travel behaviour change which enables better use of the existing transport system or, where possible, reducing the need to travel altogether.

Land Use Planning

Land use planning has a key role to play in reducing the need to travel and in creating the right conditions for greater use of sustainable transport modes. Aberdeen City Council is committed to development that encourages sustainable travel and recognises that transport provision should be considered at the very beginning of the planning application process. The Aberdeen Local Development Plan (ALDP) 2012 sets out the land use aspirations of the Council from now to 2030 and contains a series of policies that seek to minimise the transport impacts of new developments.

All new developments should seek to minimise travel by private car. Residential developments should be located in close proximity to a range of local facilities, including schools, shops, health and recreational sites thus encouraging shorter local journeys that can be undertaken on foot or by bike. New employment and industrial developments are encouraged on active and public transport corridors to make use of opportunities offered by existing infrastructure and the commercial bus network.

Access to, and movements within and between new and existing developments should prioritise walking, cycling and public transport, allowing for public transport penetration where appropriate. Street layouts should reflect the principles of Designing Streets, while Home Zones, where streets are designed to give pedestrians and cyclists greater priority over vehicles, and low and/or no-car housing and other developments will be encouraged in highly accessible locations.

The ALDP is accompanied by Supplementary Guidance on Transport and Accessibility to assist developers in the preparation of planning applications. This includes expected accessibility standards for new communities, detailed guidance on Transport Assessments and Travel Plans and maximum parking standards for new development. Parking standards for new developments play an important role in how people travel; they can assist with containing traffic generation, support the economic viability of locations that favour walking, cycling and public transport, as well as encourage uptake of these modes. To this end the Council will ensure that parking standards are strictly adhered to.

Objective

To promote and enable development that reduces the need to travel, minimises reliance on the private car and facilitates and encourages walking and cycling for everyday trips.

Travel Plans

A Travel Plan is a general term for a package of measures tailored to the needs of an individual site and aimed at promoting more sustainable travel choices to and from that site, thus reducing reliance on the private car. As well as having a positive impact on the local environment, Travel Plans can contribute to improved health, reduced congestion and fewer parking problems.

All significant developments are required to prepare a Travel Plan in support of an application for planning permission. This should outline measures to ensure the site is accessible by a range of transport modes, rather than just by car. These can include (but are certainly not limited to) ensuring the internal layout of the development facilitates walking and cycling and/or has been designed with public transport penetration in mind; installing secure bicycle parking on-site; subsidising a bus service for an agreed period; and implementing dedicated car share spaces on-site.

For residential developments, developers are urged to prepare a Residential Travel Pack for new homeowners and tenants to make them aware of the opportunities for active and sustainable travel in the area, and to supply new residents with the information they need to make informed choices about how they travel, such as providing local walking and cycle maps, public transport timetables, etc. In other new developments this will take a similar format so that all staff are aware of how to travel to the site by all modes.

Travel Plans are also encouraged for existing sites looking to minimise their impact on the local area and to improve the health and wellbeing of those using the site. An important element of travel planning however is reducing the need to travel in the first place. This is becoming increasingly possible with new technology allowing employees to work from home or in remote locations and to attend meetings or conduct conversations over the web, rather than requiring interaction between participants at the same location.

Objective

To ensure that the transport impact of existing and new developments are minimised by requiring workplaces, schools and developers to prepare Travel Plans and, where appropriate, Travel Packs for all sites in the City.

Car Sharing

Car sharing involves two or more people sharing a car to get from A to B instead of travelling alone and can deliver economic, environmental and social benefits. For example, if everyone was to car share just one day of the week for their travel to work, commuting car journeys would reduce by 10%, both parties would save money, time would be saved looking for parking spaces and carbon emissions would be reduced.

Although it is recognised that car sharing often takes place informally and on an ad-hoc basis, there is a formal car share scheme, freely available to all citizens of the North East, through Getabout at www.getabout.liftshare.com.

The Council currently promotes car sharing through travel plans and at Park & Choose sites. As the AWPR moves to completion, more ambitious schemes, such as High Occupancy Vehicle (HOV) lanes could be revisited as part of the efforts to 'lock in' or optimise the benefits of the new bypass.

Objective

To continue to promote and facilitate car sharing as a sustainable transport option.

Car Clubs

Until fairly recently non-car owners within the City had no opportunity to access a vehicle without purchase or car hire. A car club allows residents and businesses alike to access pay-as-you-drive vehicles located on-street as an alternative to conventional car ownership. A single car club vehicle in Aberdeen has been shown to replace seventeen cars, five from people giving them up and twelve choosing not to replace them when the time comes, thus helping to reduce parking pressure as well as improve mobility. As well as being cheaper than ownership payment at the point of use means people can clearly relate the cost of a car journey to the same trip by other means and this in turn encourages uptake of active and sustainable modes.

The Car Club tender was won by Co-wheels in 2011 and it has been extremely successful; it was the fastest growing in Scotland in 2012/13 and 2013/14. The Car Club is also proactive in trialling alternative fuels and different vehicles; it was the first in the UK to use Wheelchair Accessible Vehicles (WAVs), the first in the world to trial new hydrogen fuel cell vehicles and the first in Scotland to adopt electric vehicles. Going forward the Council is keen to ensure that new hydrogen fuel cell technology is adopted into the fleet full-time and will work with Co-wheels and other Partner agencies to enable this to happen.

As Co-wheels is a social enterprise company it has also been working to assist the Council and Partner organisations with delivering social priorities; the purchase of additional WAVs is enabling volunteer drivers in support of the Health and Transport Action Plan to deliver DRT services to the community. The anticipated arrival of electric vans into the Car Club fleet will allow further opportunities for the public, other businesses and services in Aberdeen as well.

Aberdeen City Council in partnership with the Car Club has also been trialling new technology through Aberdeen's smartcard, the Accord Card. This platform not only allows access to vehicles but provides concessionary travel amongst other benefits. It is anticipated that the sustained roll-out of the Car Club by the City Council and Co-wheels to additional locations in Aberdeen is an important contributor to meeting the LTS's aims and outcomes: improving social access, trialling alternative fuels, benefitting local businesses and organisations, reducing car ownership and increasing members' use of active and public transport. In order to facilitate this, policies are now integrated into the Planning process.

Objective

To continue to facilitate and promote the Car Club in order to provide transport choice without necessitating individual car ownership.

Ultra-Low Emission Vehicles

The Scottish Government has committed to almost complete decarbonisation of the road transport sector by 2050. Although the LTS is a five year plan this ambitious target requires consideration in the way that people and goods move around as well as a shift from current dependence on fossil-fuelled vehicles now. Although ultra-low and low emission vehicles affect congestion, parking and road safety they have an important part to play in meeting our air quality, noise and climate change targets; they have zero/ low emissions at the point of use, lower noise levels and more efficient fuel use than similar internal combustion vehicles. The Council has a key role to play in the promotion and encouragement of alternative vehicle adoption. In order to facilitate the uptake of ultra-low and low emission vehicles the Council has considered Low Emission Zones, emission based parking charges and undertaken infrastructure installation as well as vehicle trials.

Transport Scotland has developed “Switched on Scotland” a ‘Roadmap’ which specifically looks at electric vehicles powered entirely by batteries and plug-in hybrid electric vehicles (EVs) as these are best placed to make the most immediate impact in helping to achieve the required transformation. They also acknowledge that other technologies, such as hydrogen fuel cell electric vehicles, will complement electric and many of the challenges and opportunities that electric is facing will remain relevant.

Whilst the EVs network of charging points is still fairly new and not yet widespread, Aberdeen City has been making improvements in this regard; developing a comprehensive publicly accessible charging network serving the City and the trunk and strategic road network in partnership with Energy Saving Trust (Scotland), Transport Scotland and the Office for Low Emission Vehicles. The Council has also established Local Development Plan policies to facilitate the expansion of EV infrastructure in commercial and domestic properties, as well as at Park & Choose sites in order that all new developments are ‘EV ready’.

As well as expansion of electric Aberdeen has also developed a Strategy & Action Plan for Hydrogen (2015-2025). Hydrogen fuel cell electric vehicles are better for the environment than conventional fossil fuelled vehicles, particularly in relation to air quality as they emit only water vapour. The Strategy outlines the actions required in the short, medium and long term to secure investment for further vehicle deployments and refuelling infrastructure.

From 2015 ten hydrogen fuel cell buses have been deployed in the city with an associated hydrogen refuelling station. Two hydrogen - diesel hybrid transit vans have also been added to the Council’s fleet and the Council plans to expand this by adding two electric vans with hydrogen fuel cell range extenders. The Council’s leadership in demonstrating hydrogen vehicles is intended to encourage others to learn from our experiences and follow the Council’s lead in adoption of hydrogen vehicles. It is hoped that when a second refuelling station, capable of refuelling both buses and cars (350 & 700 bar) is built in Altens, that this will enable further expansion of hydrogen fuelled vehicles in the City.

The Aberdeen Car Club is particularly interested in utilising ULEV (Ultra Low Emission Vehicle) technology having become the first in Scotland to introduce electric vehicles to its fleet and the first in the world to trial hydrogen vehicles. Their

large membership base also allows such technologies to be easily accessible and trialled by a large number of people, which helps with public confidence in ULEVs.

Objective

To facilitate the uptake of ultra-low and low emission vehicles as a contribution towards improving air quality in the City.

Travel Information and Awareness

The formation of the Getabout partnership in 2009 (comprising representatives of Aberdeen City Council, Aberdeenshire Council, Nestrans, NHS Grampian, the University of Aberdeen, the Robert Gordon University, Aberdeen College and Home Energy Scotland) has allowed a region-wide approach to travel behaviour change initiatives to be undertaken, with partners sharing and combining resources, assisting one another with events and working together on large-scale events and campaigns. This has led to the development of the recognisable Getabout brand with clearly stated objectives, consistently promoted throughout Aberdeen City and Shire.

Working with Getabout, the number of transport-themed events and campaigns in the City has increased significantly since 2009, with an annual programme now in place to mark key behaviour change campaigns throughout the year, including Bike Week in June and European Mobility Week in September. Events take place on-street, in parks, schools, universities and workplaces to promote the use of sustainable modes of transport and provide advice on reducing private car use. Since 2010, an 'In Town Without My Car Day' event has been held annually in Aberdeen during European Mobility Week, where a road has been closed to motorised traffic and filled instead with activities and stalls for members of the public to engage with on the themes of sustainable travel and air quality. Given the thousands in attendance at the 2015 event it is hoped that this will become an established annual City Centre event, representing the Council's commitment to sustainable City living.

Information on 'smarter' travel choices is also made available by the Council and Getabout via printed maps and leaflets, the respective websites, Facebook pages and Twitter accounts. Travel Packs issued with new developments inform all working or living in a new area of the facilities on their doorstep and options of how to access them. As well as informing drivers of travel issues on the network Variable Messaging Signs (VMS) are linked to Bluetooth monitoring stations that record journey times across the City. These will be used to guide drivers to Park and Choose sites informing them of the difference in times to get into the city centre by bus or by car, or where congestion is slowing travel down. The Smart Journey website also allows the travelling public to receive live traffic information through their smartphone or computer. In addition, a wayfinding scheme, informing people in the city centre of points of interest and walking times to venues has been developed. Subject to its success, this could be installed throughout the city centre and at key node points. A Bus Information Action Plan will also be developed and will detail what information should be available to members of the public for bus services.

Objective

To engage with members of the public, employers and schools on travel behaviour-change campaigns, events and promotions and to provide the information that citizens and visitors need to let them undertake 'smarter' journeys in the City.

School Travel and Young People

The Council recognises that school travel arrangements can play an important part in fostering the development of future generations of sustainable transport user as well as contributing to their improved health, alertness at school and wider environmental policies.

There are more than 21,000 pupils travelling to and from school on a daily basis within Aberdeen. Increases in car ownership and use, greater parental choice of school, increased pressures on time and concerns over child safety in recent years have resulted in more and more children being driven to and from school and fewer children travelling by active and sustainable modes of transport. The consequences of this are more traffic on our roads at peak times (leading to more pollution, road safety concerns and increased congestion outside schools) and less opportunity for children to be physically active thus impacting on their overall health and wellbeing. Children also have less opportunity to develop independence and road safety skills if they are habitually driven to school.

Despite the worrying trend, however, significant levels of active travel are being reported by individual schools, with some showing walk to school rates well in excess of 80% and some reporting cycle to school figures above 10%, thereby demonstrating what can be achieved when the right conditions are in place. The results of initiatives such as Give Me Cycle Space and the Greenbrae Cycle Project have also shown the benefits of working closely with individual schools on in-depth projects, whilst improvements and additions to cycle and scooter parking facilities at schools have also been shown to have a perceptible impact on active travel levels.

Objective

To ensure that all young people have the opportunity to travel to school by active and/or sustainable modes of transport and are equipped with the necessary knowledge, skills and infrastructure to allow them to undertake local journeys safely and independently.

Climate Change Mitigation and Adaptation

Scotland has a target of reducing greenhouse gas emissions by 42% by 2020 and 80% by 2050 (compared to 1990 levels) and transport is a key area which is proving static in terms of reducing emissions. The need to minimise emissions that contribute to climate change is ever more pressing, and under Scotland's Climate Change Act the Council is obliged to take local action to address this global threat. Aberdeen City Council has signed up to a number of environmental carbon reduction programmes and is currently working towards implementation of a Sustainable Energy Action Plan (SEAP).

It is widely acknowledged that Greenhouse Gases (GHGs) are contributing to changes in the global climate, with extreme weather conditions becoming increasingly common. By the end of this century Scotland is expected to have warmer, wetter winters, less snowfall and an increased risk of flooding. We therefore need to build infrastructure which is more sustainable, climate resilient and adapted to our environment, ecological conditions and landscape setting. The Council has specific actions for developing innovative and climate change adaptive methods and techniques in relation to coping with contingencies in extreme weather or flooding.

As noted in the Flooding section, the most frequent climate related impact in Aberdeen City between 2008-13 was damage to infrastructure such as roads, railways and networks with flooding causing severe disruption to the local transport network. However, transport has a key role to play in preventing this potential disruption and damage in the first place. Flood Risk Management Plans (FRMPs) are being prepared for Aberdeen to address localised and regional flooding problems. This LTS will contribute towards achieving objectives as proposed in the North East Scotland Area Management Plan and related plans relevant to transport. The main issues relevant to this LTS are morphological alterations (culverting, straightening and channelisation of water bodies) having an impact on the water environment; by using soft engineering techniques/ practices the Council can provide soft landscaping/ more natural habitats that assist with water conveyance and storage, thereby reducing flooding risk.

The Council can also reduce transport emissions contributing to climate change by encouraging individuals to reduce their number of journeys, undertake journeys by active and sustainable modes, and by considering alternative fuels and car sharing all of which are detailed within this LTS.

Objective

To contribute to Aberdeen's carbon emissions targets and develop climate resilient infrastructure.

Biodiversity and the Green Space Network

Under the Nature Conservation (Scotland) Act 2004, Aberdeen City Council has a statutory duty to further biodiversity in exercising its functions. Transport can have an effect on biodiversity in a number of ways, with transport corridors and bridges causing habitat fragmentation and severance for a wide variety of wildlife. Avoiding construction on sensitive habitats and providing escape routes to wildlife by creating tunnels and wildlife corridors help to reduce these impacts. Roads can often sever or act as barriers between otherwise contiguous areas of value to biodiversity. In taking forward any transport infrastructure works as part of this LTS, efforts will be taken to ensure that existing wildlife linkages / corridors are maintained, or new ones created. More generally, mitigation measures will be considered for all transport improvement works that could have an adverse impact on biodiversity.

As part of the aim of furthering biodiversity through this LTS, maintenance methods will be managed in order that they do not destroy or disturb habitats. The Council encourages the adoption of measures to manage all adopted road verges in a way that maintains, establishes or manages verges for habitat and species enhancement.

The disposal of surface water from roads can, in some circumstances, cause flooding and pollution to water bodies and land contamination to adjoining areas. The Council will continue to implement Sustainable Urban Drainage Systems (SUDS), as appropriate, as part of road improvement schemes and, where necessary, SUDS will be incorporated into existing road layouts to mitigate against the contamination or pollution of land, water courses, habitats and species lying adjacent to roads.

Improving access to open spaces and natural green spaces is another issue that measures set out in this LTS will aim to address. Aberdeen City Green Space Network (GSN) enhances, improves and links various habitats and species. The GSN takes into account the Core Paths Plan for the City to enhance access to the City's landscape, countryside and wildlife, while at the same time providing opportunities for healthy recreation.

Objective

Improve accessibility to open spaces and contribute towards the development of the green space network through implementation of core paths and appropriate mitigation as part of transport scheme delivery.

5.5 Improvements

Introduction

Within this section, interventions designed to add to or improve our existing transport infrastructure and services are detailed. The Council strives for continuous improvement of the services it provides. In this context, improvement indicates an enhancement to an existing piece of infrastructure or service.

Walking

Walking is a healthy, sustainable and low cost form of transport, ranked at the top of the national transport mode hierarchy. As well as the obvious health benefits, there are clear social and environmental benefits to be gained from encouraging a shift from vehicular transport to walking, while a greater pedestrian presence has been shown to boost economic activity in neighbourhood centres and city centres and to play an important part in urban regeneration and revitalisation.

Obesity levels are also rising throughout Scotland, and most people are not achieving their recommended levels of physical activity, which is currently 30 minutes of moderate intensity activity per day on most days of the week for adults and an hour for children. Walking is, for most people, an easy way to reach these targets, requiring neither serious exertion nor specialised equipment.

The 2011 Census has 59% of Aberdeen residents living within 5km of their place their work. These are distances where walking and cycling could be the first choice, however recent Scottish Household Survey (2012) results show that 36% of respondents in Aberdeen had not walked for more than a quarter of a mile as a means of transport (travelling to work or shopping) in the previous seven days. Levels of walking for pleasure or keep fit are even lower, with 55% of respondents stating that they had not walked at all for recreation during the previous seven days.

Most people are aware that walking is good for their health and the wider environment, and therefore this LTS will focus on the improvements required to facilitate short journeys on foot. While the Active Travel Action Plan will contain improvements to the main strategic networks the Council is currently piloting a wayfinding scheme within the City Centre in order to inform pedestrians of points of interest and walking times to venues. As part of urban realm improvements the Council has also developed a 25 year City Centre Masterplan. This calls for a dramatic reorganisation of the road infrastructure and reduction in the dominance of the car in order to create new spaces to linger with enhanced connections for pedestrians and cyclists as part of an urban realm strategy to create 'Places for People'. Improvements to the pedestrian environment (pedestrian friendly areas, greening, safety interventions, improved navigation, directional signage and creation of a cafe culture) will be key to encouraging more people to walk in the City for recreation, utility and commuting trips.

Objective

To increase the number of people walking, both as a means of travel and for recreation, in recognition of the significant health and environmental benefits it can bring to our citizens.

Cycling

Like walking, cycling is a cheap, healthy and non-polluting form of transport, providing a quick and hassle-free means of undertaking short trips within the City. There are numerous examples of cities where a 'cycling culture' has developed and where cycling is the first choice travel mode for a sizeable proportion of the population. Not only does this make a useful contribution to reducing car traffic and congestion, it improves personal health and wellbeing and creates a safer and more pleasant urban environment for all. Despite the benefits, the cycling mode share in Aberdeen is still some distance away from meeting the vision set out in the Cycling Action Plan for Scotland, that 10% of all trips will be undertaken by bicycle by 2020.

The consultation in preparation of the Active Travel Action Plan found that the main barrier to cycling in Aberdeen is the perception that cycling is an unsafe activity. Although the presence of conveniently located secure cycle parking at key destinations is necessary, training for both children and adults instrumental, safety messages to both cyclists and car drivers important, gritting of cycle routes in the winter required and information on cycle routes helpful, it remains the case that the infrastructure in Aberdeen is perceived as disconnected and, where lacking, unsafe.

The Council's Active Travel Action Plan will help to map out a coherent and integrated plan to address this issue and will complement the work already undertaken in improving the network. We have been successful in securing significant funding in recent years from Nestrans and Sustrans Scotland for implementing cycle routes on key corridors throughout Aberdeen. Working with various partners we will also deliver safety initiatives and traffic management measures and will look to work with bus companies to improve integration with public transport through the Park and Choose sites, as well as bikes on buses.

On-road cycling improvements will focus on ensuring that cyclists are exempt from traffic management schemes introduced to mitigate the adverse effects of motor traffic (e.g. reducing rat running through residential streets, or speeding). As part of the Locking in the Benefits schemes roundabouts in key locations are being assessed. Given the poor safety record on this type of junction for cyclists, as well as the inconvenience for pedestrians seeking to cross the road, where possible these will be replaced by signalised junctions.

Recognising, however, that some cyclists will never feel entirely comfortable cycling on-road, it will also be vital to improve our off-road infrastructure for cyclists in line with Cycling by Design's Link Specification Guide. It is occasionally necessary to make use of sections of footway for creating this network. The use of such facilities is not first preference as it can bring pedestrians and cyclists into conflict but the Council will look to assess areas where segregated facilities, such as those installed along the Third Don can be further developed. This will complement the strategy within the City Centre Masterplan for the cycling network which proposed relocation of car movements in order to create traffic-free spaces, cycle priority measures and a programme of cycle friendly street improvements. The detail of the network will be further developed in the Active Travel Action Plan.

Objective

To foster a cycling culture in Aberdeen by improving conditions for cycling in Aberdeen so that cycling becomes an everyday, safe mode of transport for all.

Bus

Bus services are at the heart of delivering a sustainable, integrated and accessible transport system for the City. Key to achieving many of the outcomes of this LTS will be encouraging a significant transfer of private car trips onto public transport, especially commuting journeys, as buses are the most effective and efficient form of motorised transport. A significant proportion of households across Aberdeen do not have access to a car and better access for all to buses will address social exclusion issues and ensure better accessibility to priority areas, such as health services. It is therefore important that bus services are available as an attractive and competitive option in terms of accessibility, journey time and cost. Furthermore, it is imperative that bus access to new developments is secured from day one of occupation to encourage sustainable travel patterns from the outset. Given the importance of bus services in the City, it will be important to identify if there are any gaps in provision of services.

Quality Partnership and Bus Punctuality Improvement Partnership

Aberdeen City Council sits on the Local Authority Bus Operators Forum (LABOF) with representatives of First Aberdeen, Stagecoach Bluebird, Aberdeenshire Council and Nestrans. The Forum works together to improve conditions for buses throughout the region, with all partners signed up to a voluntary Quality Partnership and a Bus Punctuality Improvement Partnership (BPIP).

Monitoring of the Quality Partnership standards and targets has shown that progress has been made in recent years in improving vehicle quality and accessibility, information provision and waiting facilities at bus stops. Punctuality has also improved but this has been at the expense of journey times with many services experiencing longer end to end journey times than they did five years ago. Although the key indicator of bus patronage has seen some decline in recent years, there has been growth in the year to March 2014.

One option for enshrining commitments to improve bus services would be to enter into a statutory Quality Partnership (sQP). This is a more robust agreement, with each signatory formally committing to an identified series of measures to improve the passenger experience with penalties imposed for non-compliance. Commitments could take the form of increased bus priority measures, traffic management or junction improvements, improved waiting facilities and increased information provision at bus stops, with bus operators assuring improved frequencies, fare guarantees and less polluting vehicles. Strides have been taken in relation to less polluting vehicles, with hybrid and hydrogen buses forming a component of both the First and Stagecoach fleet.

The efficient and effective operation of buses requires competitive bus journey times which are reliable and consistent. Working with partners in LABOF, the Council will develop proposals to ensure that bus journey times are improved and that punctuality and reliability of services can be maintained. Both the City Centre Masterplan and Sustainable Urban Mobility Plan reflect that the key to a successful City Centre is public transport permeability. The Plans have recommendations for bus only routes as well as further bus priority in areas like Union Street. Outwith the City Centre measures might include bus priorities in the form of bus lanes, traffic management, bus-only manoeuvres at junctions, revisiting operational hours of bus lanes or

implementing road widening schemes to enable bus service improvements for the benefits of passengers. Modelling has demonstrated that bus priorities can be implemented to provide significant benefits to bus users, without impacting unreasonably on other road users.

Park and Choose

Park and Choose is the term adopted by the Council to enhance the facilities at Park and Ride to integrate with all modes including bikes, car sharing and electric vehicle recharging. The development of a network of Park and Choose sites across the North East, with accompanying bus priority measures, will make it easier to offer a more attractive Park and Choose service which contributes to an integrated transport system and, in doing so, reduces the number of car journeys into the City Centre, and the demand for space for car parking.

A new site, on the A96 at Chapelbrae, will be delivered as part of the works at Dyce Drive during the life of this LTS, while Aberdeenshire Council has recently granted Planning Permission in Principle for a site close to Portlethen south of the City on the A90.

In recognition of the fact that the existing sites do not always operate at an optimal level, efforts are being made to address this and hence increase usage. The long-term future of the Bridge of Don facility has now been secured at its current location and, as part of the redevelopment of the Aberdeen Exhibition and Conference Centre (AECC) site, options for improving the site will be investigated, including increasing capacity and improved access/egress. Work is also ongoing to improve access to and through the Kingswells site for buses, which will enable its use by through buses – improving the service options and operational characteristics of the site which may lead to increased services, capacity and possibly further competition.

Nestrans and the LABOF partners will undertake a study to consider the key requirements for a successful Park & Ride network in the north east, considering issues such as journey times and measures which could improve them, ticketing options, costs, routeings, etc.

Bus Lane Enforcement

From April 2013, the Council took over the enforcement of bus lane violations from the police service and has been issuing penalty notices to offenders. This has reduced the number of unauthorised users driving in bus lanes and has thus improved the flow of buses, reducing delays and improving punctuality and journey times. Any money generated from this has been going back into delivery Local Transport Strategy actions and priorities. With proposals for additional bus priority as part of the City Centre Masterplan and Sustainable Urban Mobility Plan it will be essential to ensure that these are included to reduce car misuse.

Information and Ticketing

The Council also recognises that improved information awareness and ticketing initiatives are key to encouraging an increase in bus use. The Aberdeen Bus Information Strategy was developed 2011 and outlines a range of measures that the Council and bus operators agreed to implement to improve the quality and availability

of bus information in Aberdeen. The Council is also signed up to a regional Fares and Ticketing Strategy and continues to work with partners on a range of 'smarter' ticketing initiatives to improve the passenger experience which has included the creation of a single operator ticket, the Grasshopper. However, there has been a lack of progress on national ticketing schemes which are necessary to lead the development of smart, integrated ticketing.

Objective

To increase public transport patronage by making bus travel an attractive option to all users and competitive with the car in terms of speed and cost.

Rapid Transit

The Aberdeen Local Development Plan 2012 sets the land use planning framework for Aberdeen City to 2030, releasing significant pockets of land for new development, predominantly greenfield housing and employment sites forming an orbital pattern around the City. In order to continue to facilitate the growth of the City and to maximise and maintain the benefits of this investment into the longer term, substantial measures to encourage a modal shift to public transport are required. There is a danger that with continued growth of the City, and the region as a whole, traffic levels will continue to rise and without a major change in public transport provision the road network will come under increasing pressure.

In the Strategic Infrastructure Plan, the Council makes a commitment to investigate ways of maximising connectivity between new development areas, and will work with Nestrans to examine the feasibility of a rapid transit system serving the new developments on the outskirts of Aberdeen.

Objective

To investigate ways of maximising connectivity between new developments by public transport and encourage a step change in the perception and provision of public transport in Aberdeen.

Powered Two Wheelers

Motorcycles and other Powered Two Wheelers (PTWs) can play a significant role in maximising the efficient use of limited road space. In addition to providing the convenience of personal mobility, switching from car use to motorcycle use has the potential to reduce vehicle emissions and congestion as well as minimising the land required for parking provision.

A key concern in promoting the use of PTWs relates to rider safety. Accordingly, to reduce their accident involvement rate, the Council supports both engineering and non-engineering activities designed to improve the safety of riders, including efficient maintenance of our road networks, advanced motorcyclist training schemes and educational initiatives to raise awareness of rider vulnerability.

Operation Zenith, for example, is an initiative launched in 2010 with the aim of

reducing motorcycle casualties on North East roads by adopting an innovative multi-agency approach to raising awareness of motorcycle safety. This has seen a steady reduction in the number of injury collisions involving motorcycles in Grampian, with the campaign looking set to reach its target of a 15% reduction since 2009. This is now being rolled out across Scotland following its success in engaging with motorcyclists in the North East. While 2014 was the last year of the initial Operation Zenith campaign, partners are committed to continuing the campaign and are in discussions about what form it will take in the future.

The Council has, over the years, been encouraged to investigate the feasibility of allowing motorcyclists into bus lanes in Aberdeen. Officers' main concerns regarding this have been in relation to safety, particularly the increasing speeds of motorcyclists, motorcyclists moving from left to right through traffic on the driver's blind side, and the increase in pedal cyclists in the City and the consequent increased risk of collisions with motorcyclists when both users are travelling in the bus lane.

The Council is aware, however, of the recent trials that have taken place in London and Bristol, where some of the concerns raised did not seem to materialise, particularly with respect to the anticipated increase in collisions. We will therefore commit to a thorough review, in partnership with stakeholders, of the London and Bristol trials, looking in particular at the benefits and disbenefits experienced by all users and how the findings of this research could be applied to Aberdeen.

Objective

To improve conditions for motorcyclists on Aberdeen's roads, particularly in terms of rider safety.

Road Improvements

In terms of any future improvements to the road network, the Council supports the principle that priority investment should be determined in order to reflect all day demand relative to capacity, impacting on strategic movements and businesses, rather than where peak-hour demands cause short-term problems for commuters. Given the overriding principle of this LTS is to change the way people move around, complementary facilities to roads, such as facilities for pedestrians, cyclists and where necessary public transport, should be enhanced.

In its 2013/14 – 2017/18 Non-Housing Capital Programme of expenditure, the Council made allocations for a series of significant and long-proposed new road or road improvements schemes that will be delivered during the life of this LTS.

Third Don Crossing

2016 will see the opening of a new crossing of the River Don, linking the Bridge of Don with Tillydrone. The opening of a Third Don Crossing is predicted to provide significant journey time benefits between the Bridge of Don and the Central Aberdeen area, and will reduce traffic flows on the A947, the A90 at Persley Bridge and, most significantly, at the Bridge of Don on the A956.

Dyce Drive link Road

A new dual carriageway link road between the A96 and the Dyce Drive/ Argyll Road junction is due to open in 2016, although the connection to the A96 is currently subject to the AWPR contract programme. This will not only serve as an entrance and exit to the forthcoming Park and Choose site but, together with the Park and Choose, will also alleviate some of the severe congestion regularly experienced in this area.

Berryden Corridor

The Berryden corridor is a strategic route used both by traffic accessing or travelling through the City Centre and as a direct access route to a number of large retail developments along the corridor itself and has been identified as operating beyond capacity, leading to significant congestion and journey time delays. The full dualling of the route between the St. Machar Drive roundabout and Maberly Street is scheduled to commence construction in 2016.

South College Street

College Street is a strategic route into the City Centre with partial dualling. Options are being tested to address the capacity issues experienced at the most southern junction with Riverside Drive. A revised junction arrangement is expected to be delivered in 2016/17 with further traffic modeling is underway to confirm the final extent of this proposal, particularly in relation to other City Centre projects/priorities.

Wellington Road

Nestrans are currently undertaking a multi-modal transport study on the Wellington Road Corridor in the south of Aberdeen. The key objective is to generate and assess options for improving the journey of all modes. Any plans will address current and future planned developments on this corridor with improvements to be implemented alongside the completion of the AWPR in 2017.

Objective

To implement a programme of road improvement schemes to complement the AWPR in order to facilitate a restructuring of the roads hierarchy, minimising through traffic in the City Centre whilst reducing congestion, improving connectivity and addressing air quality concerns.

Intelligent Transport Systems (ITS)

Intelligent Transport Systems (ITS) are a range of tools used for managing the road network, enabling road users to make better informed decisions regarding journey planning and generally enhancing the service provided to road users.

ITS encompasses a range of technologies and in Aberdeen includes: an Urban Traffic Control (UTS) system to monitor congestion and traffic flows; real time passenger information for when buses are arriving at certain locations; variable message signing to inform drivers of congestion ahead or availability of parking spaces; intelligent puffin and toucan crossings that automatically vary crossing times to suit the individual; and, CCTV at strategic interchanges and bus lane enforcement cameras.

The benefits of using ITS effectively include:

- Reducing congestion by the monitoring and prediction of traffic conditions, the coordination of traffic signals, the provision of bus priority measures and providing effectively for pedestrians and vulnerable road users;
- Encouraging the use of public transport by improving service reliability and service information to users;
- Reducing the effects of pollution from vehicles by better traffic management;
- Improving road safety by providing facilities for all including vulnerable road users and pedestrians;
- Assisting drivers select the most appropriate route to their destination by providing them with information regarding the conditions on the roads and information to change that route should a major incident occur; and
- Aiding the enforcement of traffic restrictions through the use of enforcement cameras and CCTV.

Aberdeen City Council has been investing in Journey Time Monitoring in order to link local and regional Variable Message Signs and provide vehicular journey times on major traffic routes. This will enable the Council to redirect traffic on the network if a situation arises. The intention is also to display the difference in journey time information between public transport and private vehicles at park and choose sites, thereby encouraging individuals to utilise public transport.

Objective

To expand the use of ITS to manage traffic flow in order to improve the efficiency of the transport network in the City.

Public Realm and the Sustainable Urban Mobility Plan (SUMP)

The visual and physical quality of the City has a considerable impact on travel patterns; attractive, open spaces free from traffic create pedestrian friendly environments that encourage walking and cycling. Heavily congested roads with high levels of air and noise pollution on the other hand mean journeys by foot or bike are significantly constrained. The way we plan our City is therefore of central importance if travel behaviour change is to be delivered.

In order to achieve this, the Council is developing a Sustainable Urban Mobility Plan (SUMP) for Aberdeen; a transport masterplan looking at the way people move around the City Centre by different modes of transport. This is complementing the City Centre Masterplan which has identified that the dominance of car movement over people in Aberdeen is impacting on the quality and perception of open spaces and streets. Of key note is the intention for the City Centre to become a 'Place for People' in order to change perceptions of Aberdeen to a living city for everyone, encouraging business and trade to grow in the city centre. As well as improved connectivity for pedestrians and cyclists, the retention of public transport permeability is key to a successful centre and therefore enhancements to the walking, cycling, bus and rail networks, as well as localised traffic management measures will help reduce the volume of traffic and therefore deliver the masterplan objectives.

Objective

To improve the public realm by prioritising pedestrians, cyclists and public transport with consequent traffic circulation (to enhance environment, aesthetic quality and air quality of the City) for the benefit of shoppers, visitors and residents.

6. Monitoring

The Council recognises that having a robust monitoring regime is central to ensuring that the success of the Local Transport Strategy can be measured.

A set of performance indicators linked to the outcomes and objectives have therefore been developed to allow monitoring and evaluation of the Transport Strategy to be undertaken following implementation. Alongside this will be monitoring the delivery of particular interventions ensuring that Implementation Plan is being delivered.

The following indicators will be used to measure our progress between 2016 and 2021.

Measuring the Outcomes:

A. Increased modal share for public transport and active travel

- Employed adults not working from home, resident in Aberdeen City, usual method of travel to work by public transport and active travel
- Pupil's in full time education at school – usual main method of travel to school by active and public transport
- Number of passengers using Park & Choose sites

B. Reduced the need to travel and reducing dependence on the private car

- Employed adults working from home, resident in Aberdeen City
- Employed adults not working from home, resident in Aberdeen City, usual method of travel to work by private car
- Car Club membership numbers

C. Improved journey time reliability for all modes

- Journey time variability by public transport
- Journey time variability by private car
- Average time lost per vehicle kilometre on trunk roads in Aberdeen

D. Improved road safety within the City

- Percentage of the carriageway considered for maintenance treatment
- Monitoring of road traffic casualty statistics: killed/ seriously injured, children killed or seriously injured and slight casualty rate.

E. Improved air quality and the environment

- Exceedances of PM10s and NOx
- Number of Air Quality Management Areas and Candidate Noise Management Areas
- Carbon dioxide emissions from road transport

F. Improved accessibility to transport for all

- Monitoring of public transport times and public transport cost between regeneration areas to key destinations
- Cost of public transport and cost of car parking
- Views on the convenience of public transport

7. Funding and Delivery of the Local Transport Strategy

While a number of major projects have identified funding sources, delivery of other elements of this Strategy are dependant on available funding.

As well as its own internal resources, the Council will aim to reinvest any increased funding from any transport revenue generators, such as car parking and bus lane enforcement income back into the delivery of the Transport Strategy.

The City Council will also pursue external funding, particularly given that many of the proposed actions will have positive benefits for many stakeholders. External funding bids will be pursued with public bodies such as Transport Scotland, the Regional Transport Partnership Nestrans, Sustrans and the European Union. In addition, opportunities to secure private sector funding and support will also be identified, particularly through the development management process to ensure that development sites contribute towards additional pressure on the transport network. The City Council is also currently exploring opportunities to secure additional funding for longer term transport projects through the City Deal.

Based on the interventions contained in the Strategy, a Costed Action and Delivery Plan is being developed to accompany the LTS. This will provide a framework for delivery; recognising that progress on individual elements of the Strategy will be dependant on funding and the outcomes of a number of processes and statutory requirements, including partnership working, consultation and technical assessments and appraisals.

In order to ensure the LTS remains up to date over its five year lifespan the Council will produce Annual Progress Reports on the LTS, reporting on the delivery of the Objectives and progress towards meeting the Outcomes. This will be accompanied by the continually updated Costed Action and Delivery Plan taking into account the funding sources available and priorities in that financial year. This will ensure that the LTS remains up to date, incorporating any changes to the overall network, and improves accountability and delivery.