

Durham City Sustainable Transport Strategy 2016-2033

STRATEGY REPORT

09/05/2016



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09/05/2016



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Durham City Sustainable Transport Strategy 2016-2033

INTRODUCTION

This Sustainable Transport Strategy for Durham City represents an important opportunity to initiate a step change in the provision of sustainable transport in the City at a time when there is the opportunity to shape the future development of Durham. A new Local Plan for County Durham and a Neighbourhood Plan for Durham City are being prepared. This Sustainable Transport Strategy is therefore timely in informing the preparation of the Local Plan, and forms one part of the evidence base relating to transport. The strategy provides a framework within which the future sustainable transport provision for the City can be delivered; other work will be undertaken to provide evidence around other aspects of transport as the Local Plan progresses, including work to identify the transport infrastructure required to meet the needs of future development.

The Sustainable Transport Strategy seeks to address the City's transport challenges and support the City's local economic needs over the next 15 years, and will be followed by the development of action plans to enable the delivery of the strategy. The strategy sits alongside and complements other plans and programmes, such as those within the County's Local Transport Plan, to tackle specific local issues within Durham City such as identified road safety concerns and local traffic congestion.

County Durham has a strong ambition for the future of its communities, including Durham City, encapsulated in the *Sustainable Community Strategy for County Durham*. The County Council, working with its communities, seeks to make County Durham an *Altogether Better Place* that is *Altogether Better for People*. Within this ambition for people to have better, more prosperous, *altogether wealthier* lives, there is a strong ambition to make the lives of the people of County Durham *altogether healthier, altogether safer*, and that the environment of County Durham will be *altogether greener*.

This sustainable transport strategy will help deliver this ambition for Durham City, as it seeks to develop a transport system that helps people become more active, walking and cycling more often; that promotes more use of cleaner, greener public transport; and that provides a catalyst for reducing the impact of motor vehicles on people's lives in Durham City; on road safety, on local air quality, and on the built environment of the City.

There is significant potential for active travel and sustainable modes of transport. Durham City is a compact city, of a scale that is walk-able, as is evidenced by the already substantial levels of walking in the City. This existing propensity to walk is illustrated by the fact that over one-third of those people resident in the city who also work in the city, are already walking to work (2011 Census). This compact nature also provides significant potential for cycling for many journeys within the City, a

mode of travel that presently accounts for relatively small numbers of journeys. There is already a good public transport system in the City, with an extensive and well used local bus service, Park & Ride, and a main line rail station. There is potential to build further on this successful network.

The economic future of Durham City will be built on the quality of its environment. The City is internationally renowned for its character and heritage. Durham Cathedral and Castle form one of a select number of places in Britain to be designated as a World Heritage Site in recognition of its outstanding international importance. Tourism and the visitor economy based around the City's heritage and cultural attractions, combined with the City's position at the heart of County Durham as an employment and retail centre with high quality shopping in a stunning historic environment, means that quality of place is paramount in continuing to attract people to work, study, and spend their leisure time in Durham City.

This strategy therefore represents an opportunity to tackle issues of congestion, air quality, safety and the health of the local community, by providing improved opportunities for active travel and public transport, while seeking to retain, and indeed enhance, the very character of Durham City that will be fundamental to its continuing economic success.

In the chapters that follow, JMP will:

- Define the vision and objectives for the strategy;
- Provide some background and context to the development of the strategy, including reference to a complementary *Issues and Opportunities Report*;
- Outline the strategy;
- Outline a monitoring and evaluation framework to measure the success of the strategy going forward;
- Outline indicative ideas to be taken forward in later action plans.

Defining the vision and objectives

VISION

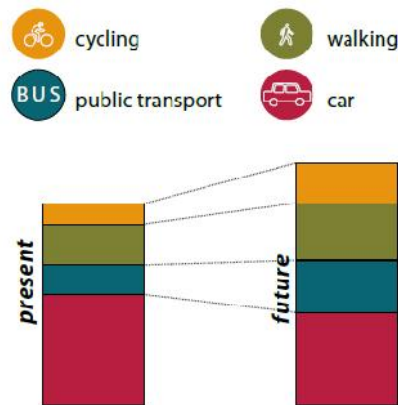
Durham City lies at the heart of County Durham, economically, socially and culturally. The Sustainable Community Strategy for County Durham sets the vision for the County in 2030. Over the next 15 years, the County Council, working with its communities, will seek to make County Durham an *Altogether Better Place* that is *Altogether Better for People*. Within Durham City, the World Heritage Site and the University are already “world class”.

The vision for this Sustainable Transport Strategy 2016-2033 therefore seeks to:

“Enhance the transport networks and services within Durham City to help make the city a world class place where people can move around for work, for education, to access healthcare and other services that will help improve quality of life, and to access the social and cultural opportunities that Durham City offers, while protecting and enhancing its unique historic and natural environment.”

Against this background, sufficient transport provision is required to enable future economic, social, and cultural success to meet the ambition for

a thriving Durham City. There will therefore be a growing demand for travel in the period to 2033, and the development of this Sustainable Transport Strategy will be critical in meeting the needs of this growing demand for travel while supporting wider environmental and social outcomes across Durham City.



The graphic above illustrates, to no particular scale, the problem facing Durham City over the period of the Sustainable Community Strategy to 2030. There will be a growing demand for travel; the car cannot meet all the demands for increased travel and, arguably, wider environmental and townscape objectives might demand a reducing reliance on the car, particularly in the city centre. A sustainable transport strategy therefore needs to be developed that supports this context of growth, and enables walking, cycling and public transport to perform an increased role in meeting the city’s travel needs.

OBJECTIVES

The Durham City Sustainable Transport Strategy 2016-33 will build upon the Sustainable Community Strategy and its themes:

- Altogether Wealthier;
- Altogether Better for Children and Young People;
- Altogether Healthier;
- Altogether Safer;
- Altogether Greener.

Future transport policy is likely to influence all five themes which are, in any case, inter-related. The Durham City Sustainable Transport Strategy 2016-2033 will therefore have five objectives that will support these priority themes, namely to provide a transport network:

- To support economic growth and improve access to employment in Durham City;
- To improve access to education, training and economic opportunity for young people in Durham City;
- To improve the health of people living, working and studying in Durham City;
- To improve the safety of people travelling around Durham City;
- To enhance the built, historic, and natural environment of Durham City.

Context for the strategy

INTRODUCTION

Promoting sustainable transport across Durham City will help contribute to the achievement of all of the objectives for County Durham to be an altogether wealthier, healthier, safer, and greener place. Sustainable modes are available and accessible to all users, including children and young people, helping to achieve that objective too. Later in this introduction we present evidence from across the UK and elsewhere that underlines the value of investing in sustainable transport: economically, socially and environmentally; evidence which provides strong justification that investing in sustainable transport is the right thing to do.

First, however, we will look at some of the background, and the issues and opportunities that sustainable transport can address in Durham City. This context for the strategy is set out in detail in the *Issues and Opportunities report* that accompanies this strategy. This identifies the policy background to the strategy as well as the strengths, weaknesses, opportunities and threats for each transport mode. It also presents a summary of the findings of the consultation undertaken with a variety of key stakeholders, to help us understand and respond to the issues facing transport within the city.

This section summarises the overarching issues and opportunities for the strategy, drawing upon this evidence base.

SUMMARY OF ISSUES AND OPPORTUNITIES

Durham City is a great place

The starting point is that Durham City is a great place to live, work, study, and has much to enjoy as a visitor. Durham City is a special place, with its own unique character and history. The quality of the environment attracts people to come to the city.

Much of Durham City is a conservation area, and, however the city might change in future years, economically, socially or physically, and however we respond to these changes with investment in transport services or infrastructure; protecting and enhancing the special character of Durham City has to be one of the outcomes that we will need to achieve.

Durham City is compact and walk-able

Durham is a relatively small, compact city. This does mean that it lends itself to the promotion of sustainable modes of travel, including active modes, such as walking and cycling. Moreover, vehicular access to the Peninsula has been actively discouraged for more than a decade, including through the congestion charge. This makes active

travel (especially walking) and public transport fundamental in providing access to the Durham Cathedral and Castle World Heritage Site.

There are, without doubt, many journeys within the city that are short trips. It is clear from views presented by stakeholders that many of these trips are presently undertaken by car and that some could be undertaken by active modes.

Durham is a very walk-able city, with a significant proportion of the built up area of the city within reach of the Market Place in central Durham within 20 minutes on foot. The network of sign-posted footpaths further enhances the attractiveness of walking in the area.

Walking is already an important means of everyday travel for many people in the city, especially to and from the University and its Colleges, and on the journey to and from work. Census data from 2011 identifies that 36% of people living in Durham City walk to and from work. Enhancing the pedestrian environment to support those already walking, and to encourage more people to do so is a key opportunity for the city. Investing in a better walking network, seeking to improve pedestrian priority at key junctions, and extending and improving footways between key locations should be a priority, as should promoting walking through education and travel planning.

The following issues, however, prevent walking in the city centre from reaching its full potential:

- Confusing layout of the city centre for first time visitors;
- Lack of or difficult to interpret signage in some places;
- Safety issues and concerns for pedestrians on main roads through the city centre;
- Congestion on footpaths between the city centre and University;
- Issues with conflict between pedestrians, cyclists and motor vehicles in shared spaces and on shared paths, especially when these areas are busy;
- Severance and the lack of direct at grade crossings at major junctions and along the A690;
- The pedestrian route from the train station to the World Heritage Site, the principal attractor of visitors, is difficult to negotiate, as the route is steep, and there are challenging road crossings.

Beyond the city centre, pedestrian access to district centres is generally good, with a good provision of footpaths adjacent to roads through the city and a network of off-road walking routes. The Durham Gateway initiative will also further improve links between Aykley Heads and the Railway Station.

There are, however, issues which limit pedestrian accessibility to key district and employment centres, including:

- Limited signal controlled pedestrian crossing facilities on roads adjacent to district centres, employment areas and the hospital;

- Severance caused by the lack of pedestrian crossings across the A1(M);
- Severance caused by the internal layout of business park sites;
- Seclusion and personal safety issues along off-road footpaths and underpasses;
- Limited crossing facilities where off-road footpaths intersect with trafficked roads.

Building on a successful 'track record': Park & Ride, local buses and rail

The city also has longstanding history of being a 'trail blazer' in implementing measures to support sustainable transport use, being the first location in the country to implement a congestion charge in 2002. More recently, the opening of Park and Ride sites serving three of the key radial routes into the city, which complement good local bus services, means that bus services in Durham are one of the strengths of the city's transport network. Durham City has a frequent and comprehensive bus network that serves the city centre and most major housing and employment sites. This good network of bus services is being supported by the delivery of a major investment to improve journey time reliability on the important bus corridors in County Durham.

In combination, the compact, walk-able nature of the city, allied to a record of promoting sustainable travel through the Park & Ride and other bus-based initiatives, provides a sound basis for further development of sustainable travel options.

Looking forward, the critical issue to address in Durham City with respect to bus users in the city is the stopping and waiting facilities, particularly in the city centre. There is a need to ensure that bus stopping and passenger waiting facilities are conveniently located and well connected to key destinations in the city centre, such as the main shopping areas and tourism attractions. Better integration with other modes is also desirable.

Durham City also benefits from excellent long distance rail connectivity due to its position on the East Coast Mainline.

The following issues, however, have been identified which prevent public transport in Durham City from reaching its full potential:

- The bus station is perceived to be relatively distant from the Durham City's main historic and commercial core. The existing bus station entrance is unattractive and not easily identifiable;
- The bus stops on Millburngate are congested with bus services and waiting passengers;
- The bus stops on Leazes Road closest to the historic centre and Prince Bishops Shopping Centre have old shelters and no electronic information;
- The Leazes Road bus stops are difficult to access for people leaving the City due to lack of at-grade crossing points;
- Some 'cross city' journeys are difficult or unattractive by bus, requiring two separate bus trips and interchange in the city centre. This

may in some instances raise issues of affordability for some users;

- There is no multi-operator ticket in Durham City which necessitates 'paying twice' to use different operator's services, raising issues of affordability for some users;
- Congestion impacts bus journey times and reliability in certain areas;
- The Park and Ride bus stops are not specifically signposted or branded;
- The Park and Ride service does not operate late enough for some potential users, such as shift workers, or for leisure activities such as the theatre or cinema. This is also an issue for some local bus services;
- Although popular, the Park and Ride still requires a subsidy from the County Council to operate;
- Belmont Business Park has limited service, with only an hourly service through the day operating past the site, and few buses operating into the business park itself;
- Access between the station and the city centre on foot is challenging, especially to and from the World Heritage Site;
- Rail connections to local settlements such as Chester-le-Street and Sunderland are limited and services to Newcastle do not run at regular 'clock face' intervals.

Opportunities for cycling

A significant area of opportunity for a city the size of Durham is the infrastructure to encourage greater

levels of cycling. The very compactness of Durham City that encourages such high levels of walking may as a consequence be a significant factor that has constrained cycling levels. Other challenges may also be an influence, including the somewhat hilly nature of the city; and the city's historic fabric, such as cobbled streets, which do not provide a particularly comfortable surface for cyclists. Whatever the reasons, cycling levels in Durham City are low for a city that is a compact 'university town'.

In spite of these issues, there is a significant opportunity to implement a step change in provision to support cycling. The challenge is to provide continuous, safe routes.

The Government is committed to a national Walking and Cycling Investment Strategy through the Infrastructure Act 2015, and there is a timely opportunity to invest in high quality provision for cycling. The Council is presently undertaking cycle audits across County Durham, and is developing *Cycling Super Routes*, and a network of complementary routes throughout the County. This represents a significant opportunity to develop Durham City's cycle network through the provision of continuous, safe routes. There is also an opportunity to work with Durham City's major employers to promote cycling to work.

These measures will complement facilities for pedestrians, helping to support active, healthy travel options for everyone across the city.

In terms of detailed issues and characteristics which contribute to the low level of cycling across the city, the following are pertinent:

- Limited provision of coherent and continuous cycling infrastructure;
- The cycle routes through the city centre are complex and incoherent. NCN route 14 through the city centre takes a circuitous route and requires the cyclist to frequently dismount;
- The one-way system on North Road limits cycle accessibility from east to west;
- There is limited infrastructure provision for cross-city cycle movements from Newton Hall and Arnison Centre to and from Belmont Business Park and Carrville;
- The absence of a north-south cycle link or quality cycle link to Durham University from the city centre and areas with a high proportion of student rental properties around Hawthorn Terrace, Atherton Street, and Sutton Street;
- Saddler Street, along the Peninsula, is unattractive for cyclists due to the contra-flow in operation and cobbled surfaces;
- There are many heavily trafficked junctions on the outskirts of the city which have no provision for cyclists;
- There is limited marketing of the existing cycle network and there is no Durham City cycle map;
- The hilly topography is off-putting to potential cyclists;
- Cycle parking is inadequate in certain city centre locations. There are issues for example with the quality and security of cycle parking at the bus station.

The district centres around Durham City also have some more localised issues to be addressed, namely:

- Busy roundabout junctions in immediate proximity to some district and employment centres which make cycling on the roads unattractive and potentially hazardous;
- The Belmont Link Road, which provides access to Belmont Business Park, has a 60mph speed which could be off-putting and potentially hazardous to cyclists;
- There are severance issues at the Dragonville District Centre and Belmont Business Park. Circuitous journeys are therefore required to reach neighbouring residential areas.

Powered two wheelers

Mopeds and motorcycles can offer an affordable alternative means of transport to people for trips where public transport is limited and walking and cycling unrealistic. Powered two wheelers can consequently increase mobility and widen employment opportunities. While mopeds and small motorcycles may produce benefits if they substitute for car use, the intention should not be to encourage people to switch from sustainable transport options - walking, cycling or public transport.

These benefits include some cost and economic benefits, easier parking, and reduced journey times. In the majority of circumstances, powered two wheelers do not add to traffic congestion, and journey times are more predictable in congested

conditions due to their ability to filter through traffic which has stopped.

Disadvantages of powered two wheeler use, in common with other vulnerable modes, predominantly centre on road safety issues.

The challenge of space

The principal challenge in providing enhanced support for walking, high quality public transport, and in encouraging a step change in cycling, is space. One of the great assets of Durham City, its built heritage, and historic environment, can also be a weakness, with narrow streets, cobbles, and limited space for people, and vehicles, presenting a challenge. At present, all modes often compete for the same spaces, whether it is in the attractive narrow streets of the Peninsula, on busy heavily trafficked roads, or on shared use paths across the city. The challenge is the same: how do we provide safely for people to walk and to cycle, and for buses to be given sufficient priority to enable the provision of reliable service?

The negative impact of major traffic roads in the heart of the city

Nevertheless, and in spite of the constraint of limited space, Durham City, including its conservation area, is a busy environment that experiences very high volumes of traffic. Some parts of the historic core can become very congested at rush hour and school run times. This has a crucial influence on the physical environment and the area's character and appearance.

This challenge of space is nowhere more visible than in the crossing point of the River Wear. The absence of sufficient vehicular crossings of the river causes a concentration of flows on the A690 on Milburngate Bridge. The A690 through the heart of the city presents a significant barrier for pedestrians and cyclists, and exemplifies the problems to be addressed. The historic nature of the city means that alternative routes are narrow and constrained; and the absence of suitable crossing points for cyclists to enable passage to, and through, the city centre epitomises the lack of continuous cycle infrastructure which acts as a constraint to encouraging more cycling.

The impact of the presence of the A690 in such a critical location through the centre of Durham City is not limited to severance, and the constraints it imposes on space for active travel and buses. The problem of peak hour traffic congestion is illustrated by the fact that over 47,000 cars cross Milburngate Bridge every day. Data collected in 2015 shows that congestion in the peak hours has grown since 2007 (particularly the morning peak).

This large volume of traffic passes within 500 metres of a World Heritage Site and has a significant impact on the health of local people, with emissions from traffic creating local air quality issues, alongside road safety issues that exist on the route.

Furthermore, baseline data from traffic modelling work (using 2015 surveys) reveals that 35-40% of all trips, varying by time period, are being made using vehicles that do not stop anywhere in the City, or use its facilities. This 2015 data indicates

that only 55% of trips using Milburngate Bridge in the morning peak have an origin or destination in Durham City, which falls to 45% between the peaks, and to 39% in the evening peak.

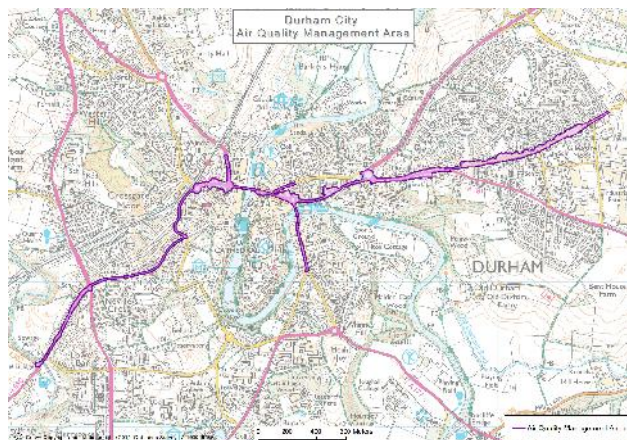
Much of the traffic passing through the city on the A690 therefore apparently has no reason to be within Durham City at all. This presents an opportunity to remove this traffic, and re-allocate the road space to create the space for active modes and for buses. At the same time, this removal of motor vehicles from the city centre will have significant benefits for local air quality, for public transport reliability, and for road safety.

Emissions from traffic and the impact on local air quality

One of the most significant impacts of traffic in Durham City is that of emissions from traffic on local air quality. The EU's European Environment Agency says pollution is now also the single largest environmental health risk in Europe, responsible for more than 430,000 premature deaths, and the World Health Organisation has issued new warnings about deadly levels of pollution in many of the world's biggest cities, including the influence of traffic emissions¹.

Durham County Council has declared an Air Quality Management Area (AQMA) in Durham City due to elevated concentrations of nitrogen dioxide (NO₂)

near to major roads². The plan below illustrates the AQMA in Durham City.



The air quality problems within the AQMA directly result from the traffic levels on roads through the heart of Durham City, providing a strong rationale supporting the removal of traffic from these areas. The main axis of the AQMA passes directly across Milburngate Bridge, and reduction of traffic levels will support the aims of the recently developed Air Quality Action Plan for Durham City and benefit the long term health of people in the area.

The Air Quality Action Plan for Durham City identifies³ that that with no action, improvements to

vehicle emissions may achieve the predicted reduction targets on some roads by 2020, but would be insufficient to achieve the targets on the most significantly affected roads. A series of actions are identified within the Air Quality Action Plan to help address air quality issues, including:

- The introduction of an Urban Traffic Management Control (UTMC) or SCOOT system to coordinate traffic through a network of junctions within Durham City and reduce congestion;
- Measures to reduce emissions from buses operating in Durham City;
- The development of cycle ways;
- Promotion of Smarter Choices with businesses in the city to encourage large employers within the city to implement car sharing and pooling or the use of alternative forms of travel;
- Installation of variable message and a car park direction signing system to direct traffic to available parking, and the provision of other driver information related to air quality to influence travel behaviour in real time.

One of the principal environmental benefits of this Sustainable Transport Strategy will be to improve air quality in the City Centre. In the short term, this will be done by encouraging modal shift through the measures set out in this Strategy, in combination with the reduction of congestion and standing traffic

¹ The Observer (online), *Shock figures to reveal deadly toll of global air pollution*, article dated 16th January 2016

² AECOM (2015) Durham County Council Draft Air Quality Action Plan for Durham City

³ AECOM (2015) Durham County Council Draft Air Quality Action Plan for Durham City

through improved UTMC and Variable Message Signage (VMS).

Parking

The city centre has sufficient supplies of publicly available car parking to meet most current visitor and retail needs. Off-street city centre parking is available in council and private car parks, and is reasonably priced relative to other historic towns and cities in England. One of the challenges of delivering an effective approach to demand management through car park pricing mechanisms in the city centre is that much of the supply is in private sector control, and there are a number of operators.

Of greater relevance to demand management through car parking policy is the extensive parking that is available, in some cases free of charge, at major employment sites across the city. This does represent an opportunity to control both the quantity and price of parking available to people working in Durham City, with the consequent potential to influence peak hour travel in particular.

On-street parking is available to many residents, but the Durham Controlled Parking Zone can also be accessed by non-residents for a fee. This on-street car parking uses space on some narrow roads which could potentially be allocated to sustainable modes.

Taxis

Durham City has an ample supply of taxis, which, in the view of many stakeholders, represents over-

provision. Anti-social behaviour from customers at taxi ranks means that it has been challenging to find sufficient suitable permanent ranks, resulting in taxis being responsible for localised congestion in parts of the city centre, especially on Friday and Saturday nights. The congestion on roads such as Claypath has raised concerns from stakeholders about both road safety and bus reliability.

THE VALUE OF INVESTING IN SUSTAINABLE TRANSPORT

It is widely recognised that investing in transport can yield significant benefits. It is important to recognise that a broad range of investments can deliver these economic gains, not simply investment in traditional highways infrastructure solutions. A holistic transport strategy can provide a wide variety of impacts through a range of interventions, with benefits beyond improvements in mobility and economic performance. Health benefits and a range of social benefits can also be gained.

A number of these potential transport interventions that can deliver economic benefits, and the benefits that can be derived from them, are illustrated in the paragraphs that follow.

The value of high quality streets and spaces

Investment in better streets and places can deliver commercial returns to businesses and investors, as

well as improve consumer perceptions of high streets⁴. There is a substantial amount of evidence available to show high social returns (especially for health and the environment) but it is a challenging area within which to make robust claims about commercial returns, and especially whether a public realm investment creates additional benefits. Hard, quantitative assessments are rare, but there is a broad range of case study evidence that shows public realm investments deliver significant benefits to consumers⁵.

The National Planning and Policy Framework⁶ states that town centre plans should 'establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit.' From an economic perspective, quality town centre environments can:

- Attract visitors due to improved perception and public safety;
- Promote efficient movement of pedestrians;
- Promote the image and identity of a town;
- Provide an inviting location for inward investment.

The economic benefit of improved streets and places is clear, and quality town centre environments can provide a feeling of safety,

⁴ JustEconomics on behalf of Living Streets, *The Pedestrian Pound*, 2013

⁵ JustEconomics on behalf of Living Streets, *The Pedestrian Pound*, 2013

⁶ Department for Communities and Local Government, National Planning Policy Framework, 2012

encourage visitors to stay longer and also generate a higher propensity to spend⁷. The benefits can be seen in terms of:

- Impact on existing business performance (footfall and retail);
- Urban regeneration (new business, rental income, employment, social exclusion);
- Improved consumer and business perceptions.

Research⁸ has identified the value of the urban realm and the impact of 'walk-able' streets. Improvements in walk-ability can increase 'economic productivity, employment, business activity and investment.' Furthermore, this research identifies that carefully implemented pedestrian areas can improve an area's competitiveness and revitalise urban areas. Alongside the economic benefits, this work stresses the impact walk-able streets can have upon other policy objectives, such as improving accessibility for vulnerable groups and reduced morbidity.

Higher quality pedestrian environments can improve access for all, as acceptable walking distance may be greater where the pedestrian environmental quality is perceived to be higher⁹.

⁷ JustEconomics on behalf of Living Streets, *The Pedestrian Pound*, 2013

⁸ Todd Litman, Economic Value of Walkability. *Transportation Research Record 1828*, Transportation Research Board pp. 3-11, 2003

⁹ Adrian Davis, Travel West essential Evidence on a page: No 124: Acceptable utility walking distance, 2014

Businesses and retailers place a high value upon the accessibility of their premises. The British Retail Consortium¹⁰ recognises that an attractive urban environment, with pedestrian priority, good paving and security and quality signage is important.

The benefits of active travel

Successive governments have placed more emphasis on walking and cycling on health, environmental and safety grounds. Active travel also complements efforts to revive high streets and create liveable communities.

Walking is the most basic form of physical activity humans can undertake to maintain good health¹¹. A key paper¹² setting out the benefits of walking was published in 1997 and remains an important resource for walking promotion. This set out that regular walking reduces the risk of cardiovascular and respiratory diseases, type 2-diabetes, some cancers, deaths from all causes, and helps to counter depression and maintain mental wellbeing.

Yet, low levels of walking are a major factor in today's widespread waste of the potential for health and well-being that is due to physical inactivity. Car use has substantially eroded levels of walking since

¹⁰ BRC, Getting into town: a guide for improving town centre accessibility, 2014

¹¹ Adrian Davis, Travel West essential evidence on a page - No. 6: Walking to health, 2009

¹² Morris, J., Hardman, A. Walking to health, *Sports Medicine*, 23(5): 306-332, 1997.

the 1980s¹³. This is manifest in impaired functional capacities, overweight, disease, disability, premature death and the concomitant human and economic costs.

These economic costs, and the benefits provided by investment in active travel modes such as walking and cycling are increasingly being acknowledged. Economic analysis of cycling interventions suggests that average benefit per additional cyclist is £590 per year, and that small increases in cycling numbers can justify investment in new cycling infrastructure principally due to the health benefits which accrue¹⁴. These health benefits are universal. If people can be convinced to cycle, around two-thirds of the economic benefit generated does not depend on the location or type of facility.

Internationally, the World Health Organisation (WHO) has developed a tool called the Health Economic Assessment Tool (HEAT). This allows for an assessment of the wider health impacts of improving walking and cycling infrastructure. Schemes in England have been assessed using this methodology, with the following results:

¹³ Department for Transport, 2007 *National Travel Survey 2006*

¹⁴ Adrian Davis, Travel West essential evidence on a page: No.24, Economic Benefits of Cycling, 2009

- The 'Cycling Towns' project in Brighton & Hove generated £220,115 in annual benefits as a result of a 30% increase in cycling¹⁵;
- Sustrans found that the combined benefits of walking and cycling levels along the National Cycle Network in 2011 alone were £442m due to reduced mortality and morbidity levels¹⁶;
- A retrospective appraisal of the Living Streets *Walk to School Outreach Programme*, which aimed to encourage more children to walk to and from school, identified that the programme, as well as promoting significant modal shift, delivered over £4 of transport and health benefits for every £1 spent. Including the health benefits to children, as well as targeted adults accompanying them, this rises to more than £5 of benefits for every £1 spent¹⁷.

Post-scheme analysis of the DfT 'Cycling demonstration towns' initiative identified that the

¹⁵ World Health Organisation (2014). Examples of Applications of the health economic assessment tool (HEAT) for cycling. Available at: <http://www.euro.who.int/en/health-topics/environment-and-health/Transport-and-health/activities/guidance-and-tools/health-economic-assessment-tool-heat-for-cycling-and-walking/examples-of-applications-of-heat>.

¹⁶ Sustrans (2012) The real cycling revolution: how the face of cycling is changing. Available at: http://www.sustrans.org.uk/sites/default/files/file_content_type/real-cycling-revolution.pdf

¹⁷ Capita (2015) Living Streets Walk to School Outreach Programme Economic Appraisal

programme had generated significant benefits through increased cycling levels relating to¹⁸:

- Mortality;
- Morbidity;
- Absenteeism;
- Air quality;
- Congestion;
- Journey ambience.

Car park management and economic performance

There is limited research available that examines the direct relationship between local economic success and parking policy. Proving direct causal links therefore between parking management and economic performance is difficult, but the literature available shows that parking is not usually the primary factor in a town's competitiveness.

Headline findings¹⁹ from the available research include:

- People are drawn to towns, or away from them, by factors other than parking, such as place of work and the quality of shopping facilities and public spaces;

¹⁸ DfT, Analysis and synthesis of evidence on the effects of investment in six Cycling Demonstration Towns, 2009.

¹⁹ JMP, unpublished review of research on the link between car parking management and economic performance in town centres, February 2014

- The primary factors in terms of retail choice tend to include the quality or uniqueness of the non-food shopping 'offer' and the attractiveness of the local environment; the scale of the retail offer; and the quality, scale and proximity of the retail offer in competing settlements;
- Effective management of parking, which can include appropriate pricing levels, can help town centres as part of an integrated transport policy. Mechanisms to promote the turnover of parking spaces, of which pricing is one, are important;
- Perceptions and views on the influence of parking and the importance of car travel to the economy of town centres are often mistaken when viewed alongside empirical evidence, with a tendency to over-estimate the importance of customers arriving by car to the retail economy.

Public transport and the local economy

Public transport, whether bus, Metro or conventional rail, contributes significantly to local economic growth.

The bus plays a key role in achieving strong and sustainable economic growth by connecting people and businesses to opportunities, reducing congestion and increasing economic productivity²⁰.

²⁰ pteg, Making the connections: The cross-sector benefits of supporting bus services, 2014

Evidence from UK Metropolitan areas shows that bus networks are estimated to generate over £2.5bn in economic benefits against public funding of £0.5bn²¹, a return of £5 for every £1 invested. Around half of these benefits are to bus users stemming from greater access to jobs, training and leisure opportunities. The remaining benefits accrue to other transport users and society at large, through reduced congestion, pollution and accident rates as well as through improved productivity²².

The regional rail network in the North of England delivers net economic benefits in terms of improved efficiency, productivity and well-being amounting to £1.6bn per year²³. Only one quarter of these economic benefits accrue to rail passengers themselves. The rest come in the form of reduced road congestion, improved business productivity and the option or insurance value which rail networks provide.

Low cost transport facilitates agglomeration economies, bringing firms closer together, and resulting in lower unit costs and higher productivity. Public transport is fundamental in supporting local economies in this way.

The bus, together with other public transport, provides easy access to markets, customers and

²¹ pteg, The Case for the Urban Bus, 2013

²² pteg, Making the connections: The cross-sector benefits of supporting bus services, 2014

²³ pteg, The economic value of rail in the North of England, July 2014

qualified staff²⁴. It is estimated that bus networks in Metropolitan areas alone generate in excess of £400m per year in agglomeration benefits²⁵.

There is also a direct economic impact for our high streets. More people access high streets by bus than by any other mode, bringing a combined retail and leisure spend of £27.2bn²⁶. Trains also provide vital connections to shopping, leisure and education opportunities. 15% of those travelling to city centres for shopping and leisure purposes get there by rail and light rail, spending an average of £56 per visit, and in the North of England supporting total retail and leisure spending in excess of £1 billion per year²⁷. The British Retail Consortium²⁸ recognises that high quality public transport, including fast and efficient bus services, high quality infrastructure and quality interchange locations is important.

Public transport plays a vital role in enabling access to employment. In British cities outside London, 77% of jobseekers do not have regular access to a car, van or motorbike²⁹.

²⁴ pteg, Making the connections: The cross-sector benefits of supporting bus services, 2014

²⁵ pteg, The Case for the Urban Bus, 2013

²⁶ Institute for Transport Studies, Buses and Economic Growth, 2012

²⁷ Institute for Transport Studies, Buses and the Economy II: Survey of bus use amongst the unemployed, 2013

²⁸ BRC, Getting into town: a guide for improving town centre accessibility, 2014.

²⁹ Institute for Transport Studies, Buses and the Economy II: Survey of bus use amongst the unemployed, 2013

Having found employment, affordable bus travel helps ensure that work pays and can be sustained. One in ten bus commuters would be forced to look for another job, or give up work altogether, if they could no longer travel by bus³⁰. If rail services weren't available then close to 2 in 10 journeys made wouldn't be made at all³¹ meaning that many workers who currently use the train would be forced into a less productive job or move out of work³².

In addition to the economic benefits, public transport, and in particular the bus is a unique and effective tool of social policy. Vulnerable and socially disadvantaged groups in society are most reliant on bus networks, including low income households; young people in education, or trying to enter the job market; older people; disabled people; jobseekers; and women. Bus services are fundamental to providing access to opportunity including providing the jobless with access to work; young people to education and training; and providing a way out of social isolation for older and disabled people³³. Rail networks also enable children and young people to access work, training, education and other opportunities.

Decongestion benefits resulting from public transport investment can be very significant, if often overlooked.

³⁰ Institute for Transport Studies, Buses and Economic Growth, 2012

³¹ DfT Rail Diversion Factors research

³² pteg, The economic value of rail in the North of England, July 2014

³³ pteg, The Case for the Urban Bus, 2013

The Strategy

INTRODUCTION

It was noted in the introduction to this report that the economic future of Durham City will be built on the quality of its environment. There is, as we have seen, strong evidence that demonstrates that investing in high quality spaces is economically beneficial. Evidence from across the UK also demonstrates that developing a transport system that helps people become more active, walking and cycling more often; that promotes more use of cleaner, greener public transport also has economic benefits. But such a strategy also will deliver so much more in helping achieve the ambition to be altogether a better place for people. Such a strategy will also act as a catalyst for people to live healthier, safer lives, and will have substantial benefits for local air quality, and for the built environment of the City, the very environment that makes the City so special.

In meeting the aims and objectives set out earlier, the overarching strategy therefore is to encourage greater sustainable transport use in Durham City over the next 18 years through the following themes:

The creation of space for sustainable transport

Creating space for movement within Durham City will help to realise the ambitions to promote

sustainable travel, and will help to release the constraint on increasing levels of walking, cycling, and bus use, bringing all of the economic, social, and environmental benefits that this will enable. The creation of space will enable the establishment of priority routes for people walking, cycling, and using the bus.

At present everyone competes for the same space, with the consequence that, in places, the car dominates, and people walking and cycling are squeezed for space, or are presented with barriers to direct, continuous routes. Buses, for the main part, have to share the space with cars, suffering from delays alongside those cars when traffic conditions become congested, especially at peak hours.

Creating the space to support sustainable travel and enabling the re-allocation of existing spaces to sustainable transport users can be achieved by a combination of:

- Managing the demand for travel, especially by car;
- Provision of additional space for motorised traffic, catering for those vehicles that do not need to be present in the city centre;
- Positive re-allocation of road space to sustainable modes.

Smarter choices

Both the management of demand and the re-allocation of space will require programmes of support in promoting and educating people in changing their travel behaviour – programmes often known as ‘smarter choices’ - to ensure that we ‘lock in the benefits’ of the investment in infrastructure to support sustainable modes. Such programmes will help promote the benefits of shifting shorter journeys from the private car to walking, cycling and public transport, and will help facilitate the creation of better places and spaces within the city centre.

Managing demand

This encouragement of the use of sustainable alternatives, promoting long term changes in travel behaviour will be one of the principal tools within this strategy to deliver a mode shift to sustainable modes. This will help reduce the demand for car travel.

One of the principal challenges in managing the demand for car travel is the abundance of (often free) parking at major employers within the city. This can act as a barrier to the consideration of sustainable modes. Durham City is a significant attractor of commuter trips, with the 2011 Census identifying that more than 30,000 people travel into Durham City for work each day, aside from more than 9,000 people that both live and work in the city. For many commuters the choice of the car is

made easy by this freely available car parking, even when high quality alternatives are available. Freely available work place parking has its impact at the most critical times on Durham City's road networks. Problems of congestion are manifest during the 'peak hours' when people are travelling to and from work and school.

Management of the demand to travel by car on the journey to work, and to school, during peak hours, is therefore one of the principal opportunities within Durham City. Controlling the demand for car travel can be sustained in the long term by reducing the supply and increasing the price of car parking at appropriate employment locations. Opportunities to reduce the use of work place car parking must therefore be considered alongside smarter choices programmes in managing the demand for car travel. These opportunities in the medium to longer term will include the potential relocation of the Council offices to a more central location with less car parking.

Re-allocation of road space to sustainable users

The other principal focus for the strategy is the re-allocation of road space; in the city centre and on corridors across the city. Creating safe continuous routes for people walking and cycling, and clear uncongested routes for buses, will help support a shift to sustainable modes.

To enable this re-allocation to occur at critical points in the city, action will have to be taken to remove some of the traffic that currently travels through the city. Influencing travel behaviour in the city itself

can only go so far, tackling principally those journeys with destinations within the city. However, evidence from recent traffic surveys (2015) suggests that around 35-40% of traffic passing through the city has no destination locally, and therefore an alternative route, ostensibly to enable these trips to cross the River Wear, needs to be provided.

This additional road space should be provided as a complement to the re-prioritisation of space for active modes and public transport where it is needed in the city centre. The additional space should serve the needs of 'through traffic' taking it away from the limited routes through the city, thereby serving multiple objectives around managing economic growth while at the same time improving health, road safety and the environment in the city centre. This will enable a focus on providing access for people wishing to visit the City and the economic opportunities including employment, shopping and tourism; rather than catering for those people that are just 'passing through'.

Opportunities in a growing city

Opportunities to provide improved facilities for people walking, cycling, and using public transport are presented by new developments in the city. There are, for instance, areas of the city centre where significant change is planned. Any strategic development sites in a future Local Plan present a tremendous chance to enhance city centre access for pedestrians, cyclists, and bus users.

These major development proposals close to the heart of the city must be used as opportunities to fund and deliver new facilities for walking, cycling and public transport. This may be in the form of improved passenger waiting and bus stopping facilities in the city centre, or for new routes for walking and cycling, and in the provision of high quality cycle parking facilities.

For example in the city centre at Claypath and North Road, there is an opportunity in these areas for transport measures to complement redevelopment in order to support the long term vitality of Durham City Centre as a major retail, leisure, cultural and tourism destination in the North East.


There is also likely to be significant growth in employment in the city, and the development of new housing areas; which can be designed to help promote a shift towards sustainable forms of transport.

PLACE AND MOVEMENT HIERARCHY

In developing the Durham City Sustainable Transport Strategy 2016-2033, the hierarchy of users, and the concept of place and movement from the Department for Transport's *Manual for Streets* provide an appropriate framework for developing the focus of interventions within the strategy.

The *Manual for Streets* advocates a user hierarchy, based upon a priority for considering the needs of sustainable modes, as follows:

This guidance also identifies that place and movement are the most important functions in determining the character of streets, with ‘place’ denoting the relative significance of a road or street in ‘human’ terms (whereby the centre of settlements or centres of activity are the most important places) and with ‘movement’ expressed in terms of traffic volume and the importance of the street within a network, either for general traffic or for a particular mode e.g. bus or cycle.

<p>Consider first</p>  <p>Consider last</p>	Pedestrians
	Cyclists
	Public transport users
	Specialist service vehicles (e.g. emergency services, waste, etc.)
	Other motor traffic

The relative importance of routes is therefore defined in terms of place and movement functions for example:

- Motorways – high movement function, low place function;
- High streets – medium movement function, medium to high place function;
- Residential streets – low to medium movement function, low to medium place function.

In the past, across the UK, typically road designs have been based exclusively on the importance attributed to vehicular movement, which has led to the marginalisation of pedestrians and cyclists in

those areas with a high movement function (and low place function) and the principle that a road was primarily for motor traffic has tended to filter down into the design of streets which have a high place function.



This strategy therefore reflects the recommendation of *Manual for Streets* that ‘streets should no longer be designed by assuming ‘place’ to be automatically subservient to ‘movement’. Both should be considered in combination with their relative importance depending on the street’s function within a network.’ In the context of Durham City, where the quality of place is high, this is particularly pertinent.

LAND USE PLANNING

Good land use planning, which ensures that development is placed in the most suitable

locations to take advantage of existing sustainable transport networks and is designed to ensure that travelling by sustainable modes is the primary choice, rather than the last choice, is fundamental to ensuring that the vision and aims of the strategy are achieved.

Durham is currently a net importer of commuting trips (with more than 23,000 net in-commuting trips, Census 2011), and therefore through the emerging Local and Neighbourhood Plan process there is the opportunity to promote mixed use planning ensuring, first and foremost, that areas of employment are placed within close proximity to areas of housing (and vice versa) to reduce the need to travel to these destinations by motorised transport. Sites should also be selected to link easily with existing wider sustainable transport networks to avoid costly extensions of these networks to reach development sites.

Individual site designs should ensure high quality access on foot, by cycle and by public transport (linking with existing wider networks rather than stopping at site boundaries), as well as providing for home working. New developments offer the opportunity to ‘design in’ walking, cycling and high-quality public transport links from the beginning. Durham County Council’s Parking and Accessibility guidelines (2014) already require that developments ‘are designed to encourage travel by more sustainable modes of travel’, and advises that demand for travel can be influenced the availability of parking provision ‘at the place of destination’.

Current standards go some way towards ensuring that sustainable transport is considered in the

design phase, but it is recommended that the highest possible standards are adopted. In the case of walking and cycling the following measures may be included:

- Ensuring developments are 'permeable' for walkers and cyclists. A grid system is preferable to cul-de-sacs as these allow for more direct routes. Large developments should include walking and cycling routes that are direct and which reflect desire lines. To encourage this, maximum distances from developments to bus stops and designated cycle routes could be specified for new developments, and the design of buildings should reflect access to sustainable modes;
- Changes in level should be minimised; and a co-ordinated approach should be taken to the provision of street furniture to reduce street clutter, especially in the conservation area, to enable improved accessibility for people with reduced mobility, and to improve the overall visual environment within the city centre.

In relation to public transport, the following measures should be identified for large new developments:

- Spine roads through large developments wide enough for buses and road layouts which allow buses to manoeuvre;
- A 'traffic light' assessment of bus accessibility from new developments, with those in the 'amber' or 'red' categories required to fund interventions;

- Ensuring that developer funding for bus services is targeted directly at access to new and existing employment developments. In the case of Durham City this could include new services or route extensions to the key business parks and district centres.

Demand for travel by car can be influenced by the availability of parking space at the place of destination. The amount and control of parking associated with new development is therefore also an essential factor in encouraging the use of sustainable modes. Hence a balance needs to be struck between the lower levels required to support the sustainable transport strategy and the potentially higher levels requested by developers. Parking in developments should be kept to a minimum, especially in central areas of Durham City within reasonable walking and cycling distance of the city centre. Higher provision of high quality cycle parking within developments is required, including in residential development within the city. This should be formalised within planning policies.

All new development should also incorporate electric charging points for low emission vehicles (in support of the council's Air Quality Management Area Action Plan) and consider the introduction of a car club (where there is sufficient demand for viability) in order to support more flexible mobility and the possibility of residents giving up one or more household vehicles.

Development control policies based around these principles should be incorporated into the emerging Local Plan in order to ensure high quality design which incentivises the use of sustainable modes for

all new development. It is recommended that the council works towards ensuring that these best practice measures are incorporated into new developments, which could be achieved through developing a Sustainable Design Guide.

DELIVERING THE STRATEGY

Delivering a strategy that promotes sustainable modes will require a series of inter-related short and long term actions. The strategy focuses on the whole of Durham City, broadly defined in the map below:



In the short term, this means that promoting and influencing changes in travel behaviour will be one of the principal tools that manage the demand for car travel, and which encourage a mode shift to sustainable modes. These *smarter choices* and behavioural change measures will be supported by investment in smaller-scale infrastructure improvements that will seek to give priority to sustainable modes of transport wherever possible

in the short term. The design of these infrastructure improvements should account for all users and modes.

In the longer term, to sustain the mode shift to sustainable modes will require larger-scale infrastructure improvements to 'lock in the benefits' of the short term gains in travel behaviour. This will ensure that these changed behaviours, and greater use of sustainable modes, are embedded in the long term travel habits of people living, working, studying and visiting Durham City. A long-term commitment to supporting *smarter choices* and travel behaviour change programmes will be an important element of ensuring the enduring success of the strategy.

Smarter choices strategy

The *smarter choices* strategy will cover the whole of Durham City. The evidence in Durham City suggests that this needs to focus on large employers and schools. The traffic problems that are both demonstrated by evidence, and articulated by stakeholders, are mainly observed in peak hours. There is also evidence that there are large numbers of freely available work place parking spaces at major employers, and that some of the employees working at these major employers drive relatively short distances within the city on their journeys to work. This suggests significant potential for change.

Focusing in the short term on *smarter choices* has a number of advantages. Firstly, there is extensive experience across the UK, and indeed locally in neighbouring parts of County Durham and the North

East of England, in delivering successful programmes of *smarter choices* measures that deliver real change. Also, a targeted programme of *smarter choices* measures delivers benefits immediately. Mobilisation of the delivery of *smarter choices* can start straight away, through initial engagement with employers and schools. This is an advantage over infrastructure investment, which often has long planning and lead-in times, and which delivers its benefits over a longer period.

Infrastructure strategy: the re-allocation of space to sustainable modes

The re-allocation space to sustainable modes in the short and long-term is required city-wide, to lock in the benefits of mode shift resulting from changes to travel behaviour delivered through the *smarter choices* strategy. This will include the provision of more priority for pedestrians, cyclists and public transport, in line with the hierarchy of users identified earlier in this report.

Some measures will require the removal of traffic lanes, and the removal of on-street parking. Some of these measures will be potentially unpopular amongst individuals directly affected, but the re-allocation of space will support the strategy's vision and objectives to improve quality of life for all people in Durham City, regardless of mode of travel, and to help make Durham altogether wealthier, healthier, greener and safer.

To complement meaningful re-allocation of space to walking, cycling and public transport in the city centre, where space is most constrained, in support of providing access for people wishing to take

advantage of economic opportunities including employment, shopping and tourism, this strategy proposes that additional space is constructed to enable the removal of some of the traffic from the city centre.

In the chapters that follow we will therefore describe the strategy in terms of:

- A *smarter choices* strategy to influence travel behaviour, and managing the demand for travel, especially by car; and promoting the use of sustainable modes;
- A strategy to re-allocate space to sustainable modes, through investment in infrastructure across Durham City.

Smarter Choices Strategy

INTRODUCTION

Promoting and influencing changes in travel behaviour will be the principal catalyst to encourage a mode shift to sustainable modes in the short term. Improving sustainable travel infrastructure and services is an essential complement for growing the use of sustainable travel modes, and will enable us to 'lock in the benefits' of changed travel behaviour.

In the long term, it is vital to complement investment in infrastructure with promotional measures to raise awareness and encourage actual behaviour change. Also, physical improvements to networks and services enjoy much greater uptake and adoption when there is effective marketing and promotion of them.

There is strong local and national evidence about the significant impact that well designed *smarter choices* measures can have and, as relatively inexpensive measures, the value for money of these measures tends to be very high. Also, because these are 'soft measures', they can be implemented in the short-term.

Whilst there is an array of successful, proven measures that the Council and its partners can already deliver, technology enhancements and social trends provide the opportunity to significantly enhance the sustainable travel offer in the future.

While implementation can commence, and have an immediate impact in the short term, promoting

behaviour change to sustainable travel modes is also a long-term process and requires ongoing long-term support. This *Smarter Choices* Strategy proposes how to enact this long-term process in Durham City.

APPROACH

We therefore recommend that in the short-term Durham County Council delivers a targeted programme of proven *smarter choices* measures, but as a part of this strategy, has an ambition in the long-term to strengthen the promotion of sustainable travel choices by integrating information and payment for the suite of sustainable travel options into customer mobility accounts, reflecting the emergence of mobility as a service with customer expectations in line with other products.

The *smarter choices* strategy should focus on target markets for behaviour change. In the first instance, the focus should be on the 'easier' markets such as commuter journeys for employees of large organisations and students' journey to school. This is supported by evidence that the most significant traffic congestion is at 'peak' times.

The *smarter choices* strategy should adopt a social marketing approach where insight is gathered about the target markets for behaviour change in order to understand both the barriers stopping people from taking up sustainable travel choices as well as the

motivations for encouraging them, and then designing targeted interventions accordingly.

In the first instance, we recommend that the *smarter choices* strategy focuses on the following core activities:

- Employer travel planning, initially targeting major employers in or close to the city centre to address both the journey to work and business travel;
- School travel planning to promote sustainable travel to school, as well as to provide education and training to school children;
- Residential travel planning to promote sustainable travel options to new residents;
- Umbrella marketing and promotion programme to provide comprehensive information about sustainable travel options and to provide ongoing campaigns and activities to encourage Durham residents, workers and visitors to try out sustainable travel choices.

Once these core activities have been successfully implemented, they can be rolled out, or the strategy can begin to target further markets.

Longer term mobility management

As information technology improves and smart integrated ticketing begins to be rolled out through the North East, there is an opportunity to significantly strengthen the promotion of sustainable travel.

We would advocate the development of personal customer mobility accounts for the travelling public. The development of customer mobility accounts reflects the emergence of mobility as a service. This would, in due course, enable smart payment for all travel modes including bus, rail, car club, bike hire, taxi and car parking. A unified payment system may be delivered through a smart card or an App. Technological advancement in this field is rapid, and it is important that however the product is delivered it meets customer expectations, and responds to the latest available technology. This will in turn help to reduce the entry barriers to public transport (complex ticketing is often identified as a major barrier to new users) and encourage people to become more multi-modal.

In association with this mobility account, it will become possible to provide people with news feeds and promotional offers, ultimately building a customer relationship with them and enabling customer reward programmes to be developed. It is vital that the account is linked to up-to-date information provision about travel options, services and related activities, alongside rewards and promotions, in order to maximise the benefits to customers of participation.

This would most likely be delivered at a North East level, in association with the North East Combined Authority (NECA) and Go Smarter and in relation to the roll out and expansion of the NESTI programme and Nexus Pop card.

EMPLOYER TRAVEL PLANNING

Introduction

Durham City has several large employers, providing a large proportion of the jobs in the city, such as the University, the County Council, University Hospital of North Durham, National Savings, Passport Office, Land Registry and New College. Many of these employers are located in, or close to, the city centre, where traffic congestion issues are most pronounced, but sustainable travel options are the strongest.

Currently, many employers offer large amounts of car parking at no, or minimal charge to employees. There is an immediate opportunity for these employers to develop travel plans that can significantly reduce reliance on the car, both for journeys to work and journeys through the course of work, whilst increasing the uptake of sustainable travel choices. This opportunity has already been recognised by these large employers, and there is an embryonic partnership developing informally to discuss and take forward the coherent development of employer travel plans in Durham City. Some of these employers already promote sustainable travel through a range of initiatives, including some funded through the Local Sustainable Transport Fund 'walk to' programme, being delivered by Living Streets.

We therefore recommend that a major element of this strategy should be for the Council to work with employers to develop travel plans and initiate a programme of actions to promote more sustainable travel to work and for work. The group of

employers should commit to working together to address travel to work issues, including parking management and control, and the funding of travel plan activities, and to create a formal partnership to work together in the long term.

Whilst developing a Travel Plan provides a framework for undertaking travel plan measures, it is the activities on the ground that are important, rather than the production of a Travel Plan document itself. Planning policy should focus on employers becoming accredited on the Modeshift STARSfor programme and then maintaining accreditation, rather than just producing a Travel Plan.

Evidence also shows that whilst positive promotional measures can have a positive impact, travel plans generate much more significant impact when measures are included to manage car parking and address business travel practices.

Travel Plan Measures

Through the Local Motion programme, a workplace engagement package (Modeshift STARSfor) has been developed which should form the basis for engaging with the major employers in Durham City.

This package provides a basis for employers to develop or update their travel plan, beginning with templates for executing staff travel surveys, as the basis for developing the travel plan. It also offers an accreditation scheme to recognise employers for their efforts and progress.

The Council should work with employers to develop a 'menu' of advice and support services that

employers can offer to their staff as part of their travel plan implementation, including:

- Advice and support on agile working policies to reduce the need to travel;
- *Living Streets*' walk doctor;
- Season ticket discounts or bulk buy of discounted ticket products;
- Cycle Purchase Scheme;
- Promotion of the soon-to-be launched Durham Liftshare scheme, particularly as part of business travel plans with major employers;
- Safe and fuel efficient driver training sessions (as currently offered through Road Safety);
- Promotional events, including information stalls, adult cycle training, Dr Bike maintenance and secure bike marking services. These events could also incorporate lunchtime walks and guided cycle rides for staff, as well as encouraging workplace 'champions' to sign up to undertake walk leader and ride leader training;
- Offering Personal Travel Planning (PTP) advice either through one to one engagements with trained travel advisers at promotional events, or by using staff origin postcodes provided in baseline travel surveys to generate a personal journey plan;
- Workplace commuter challenge events where employees compete to log the most sustainable trips to work over a short period of time.

In association with the above, employers who sign up to the travel plan programme should be eligible

for match funding for travel plan measures, such as providing secure cycle parking, shower facilities, tele- or video-conferencing facilities, pool pedal or electric bikes, installation of electric charging points or marking out of preferential parking bays for car sharers.

Car park management

The Council should also seek to offer employers advice and support to examine their car parking strategies, such as providing advice on potential options for introducing car park charging or permit schemes that incentivise staff to consider alternatives.

As noted above, many employers currently offer large amounts of car parking at no, or minimal charge to employees. With commitment to a programme of travel planning incentivising travel by active modes, public transport, and other forms of more sustainable transport, combined with the introduction of car parking management policies, there is an opportunity for car parking spaces that are currently freely available to be removed from the parking stock in the longer term. The principal opportunity to influence this parking stock is likely to be as part of new developments, where opportunities to better manage car parking as part of a wider travel plan can be investigated.

Business travel

In addition to the above measures to promote more sustainable travel to work, employers should be encouraged to consider their business travel policies and practices for travel during the course of

work. There is a large body of evidence showing the financial savings, as well as the duty of care, administrative benefits and emissions savings that employers can derive from examining their business travel.

Employers should be encouraged to adopt a Travel Hierarchy where employees are encouraged to consider whether they need to travel, then whether they can travel by sustainable modes (public transport, cycling, walking), then by pool car or hire car with grey fleet as the mode of last resort. Where employers introduce such a policy, it has been shown to typically reduce business travel mileage by at least 30%.

The Council should begin by assessing its own potential for introducing a new business travel regime. This could include using car club vehicles to act as pool cars, making the Council an 'anchor tenant' for growing a car club to serve the whole of Durham City.

Through developing such a hierarchy, the need to travel to work by car can be reduced, as a common reason for driving is the potential for needing to use the car on company business.

Prioritisation

In the first instance, we recommend that Durham County Council looks to step up its own travel planning activities. Whilst it already provides a range of promotional measures such as pool cars, a cycle to work scheme, and car share assistance; the possibility of introducing a formalised *Travel Hierarchy*, as laid out above, should be

Salford City Council Case Study

In 2015, Salford City Council introduced a new management regime for business travel.

This involves a Travel Hierarchy which stipulates how travel on Council business should be undertaken. First, the need to travel should be questioned; then the use of public transport, walking or cycling is promoted. Where a car is the most practicable option, staff should use a car club car or, for longer journeys, a hire car. Grey fleet should be used as a mode of last resort and requires special sign off by managers.

The scheme was initially introduced with a couple of Council sections and is now being rolled out across all staff at the main Civic Centre. Business mileage has reduced by 27% since the scheme began and it is on track to deliver the projected £100,000 savings during the first year.

This initiative has enabled the Council to introduce a car club for Salford. Initially, 11 vehicles were procured, block-booked for Council business during the day. With the roll out of the scheme to all Council staff at the Civic Centre, this has now been expanded to 21 cars. These cars are now being made available to the public and other businesses in the surrounding area, further boosting the car club viability and providing an additional community benefit.

investigated. This could generate significant business travel savings as well as reducing the need for people to travel to work by car. This work

would also assist in preparing for the potential relocation of the Council offices to a more central location with less car parking.

Alongside the Council's activities within its own organisation, and as the benefits of this scheme are emerging – such as helping to establish the car club in Durham City - we recommend that the Council works with other employers in Durham City to develop a formal partnership to enact more ambitious travel plans including car park management and business travel. The focus should be on large employers where good relationships exist and they already engage in travel planning activities. A number of these have already expressed interest in developing a partnership approach across Durham City.

Working intensively with these large employers will generate significant results and provide case study evidence of the benefits with which to advocate engagement with further employers.

SCHOOL TRAVEL PLANNING

Introduction

There is a long tradition of school travel planning in the UK, including in County Durham, which demonstrates that schools are one of the most productive arenas to promote sustainable travel.

School children are particularly receptive to environmental messages and enthusiastic about sustainable and active travel modes.

It is also important to introduce children to sustainable travel options so they have the skills to travel safely and capability for independent travel as they grow up.

Furthermore, the 'school run' generates high volumes of traffic at the height of the peak.

We therefore recommend that Durham County Council should look to work intensively with schools within the city as a major element of the Sustainable Travel Strategy.

Bikeability and Pedestrian Training

First of all, the successful and proven national cycle training programme, Bikeability, should continue to be offered to all school students in Durham City, along with pedestrian training.

Modeshift STARS

Broader engagement with schools should be conducted under the framework of the Modeshift STARS programme, which has already been used in South Durham in association with the Local Motion project.

Modeshift STARS is the national schools awards scheme that has been established to recognise schools that have demonstrated excellence in supporting cycling, walking and other forms of sustainable travel.

When a school registers for Modeshift STARS, it receives advice, information and support on developing a school travel plan, involving pupils in developing schemes and behaviour change tools.

The National STARS School Travel Awards provides bronze, silver and gold awards for schools developing their programmes and demonstrating a positive impact:

- Bronze award: For schools that demonstrate a commitment to promoting sustainable transport by conducting an annual survey, identifying travel issues and solutions and delivering a range of travel initiatives;
- Silver award: For schools that achieve a reduction in car use on the journey to school, deliver a whole-school approach and deliver above and beyond what is normally expected;
- Gold award: For schools that have excelled with promoting sustainable travel and achieved a noticeable reduction in car use on the journey to school by fully embracing sustainable travel as the norm throughout the entire school community.

Within this framework each school can be supported in developing its own activities, appropriate to its individual circumstances and capacity.

Dependent upon resources, support could be offered for delivery programmes within the schools such as:

- Delivery of class-based curriculum activities and school assemblies to provide positive messages around sustainable travel;

- Participation in *Living Streets*' Walk once a Week scheme - or WoW – which encourages children to walk to school by rewarding them with collectible badges; walk to school month and other national, regional and local walking campaigns;
- Participation in national, regional and local cycling promotion programmes;
- Pedestrian promotion programmes.

The Council should continue to conduct the annual hands up survey with schools which provides a useful measure of progress with which to assess the impact of these schemes.

Prioritisation

The approach should first of all focus on those schools which are most enthusiastic about participating in the programme, as internal commitment is a key driver in the success of programmes. Generally, primary schools tend to be the most enthusiastic due to less curriculum pressures, the attitudes of younger children and the more localised trip-making which gives greater potential for walking and cycling trips. A second priority is to provide targeted support to students in transition (i.e. move from primary to secondary and secondary to college) by providing journey plans, travel information and signing students up to travel cards.

As with the employer travel planning work stream, we would recommend that the Council seeks to work as intensively as possible with schools delivering the most comprehensive programmes.

This will maximise the return on investment, demonstrating the value for money and helping to embed a culture of sustainable travel within schools. This will also provide an exemplar for other schools to follow. It is vital that school engagement is sustained over the long-term so that schools remain engaged. Modeshift STARS provides a good framework for ensuring this.

RESIDENTIAL TRAVEL PLANNING

Introduction

A further focus for promotional activity is 'residential travel planning' with residents of new developments.

It's well established that engaging people at 'life change moments' is a highly effective time to get people to re-assess their travel choices. There is, over the period of this plan, likely to be a real opportunity in Durham City as the Local and Neighbourhood Plan emerges, with the likelihood of significant levels of new housing coming forward as part of this process.

New developments present both an opportunity and a threat to sustainable travel. They will generate new trips by new Durham City residents and, without intervention, it is likely that many people will automatically start using the car to make their trips round Durham City and then become habituated to undertaking their travel in this way. However, if good quality sustainable travel networks and services are provided and residents receive information and incentives to try them out, it offers

the opportunity to establish sustainable travel patterns.

In order to maximise the uptake of sustainable travel options for residents of new developments, we recommend the following.

Land use planning and design

First of all, the Local and Neighbourhood Plan needs to identify appropriate locations for new development which can be easily connected to public transport, cycling and walking networks. These planning policies should also seek to promote the provision of local facilities that reduce the need to travel and ensure that amenities are within walking and cycling distance.

For individual new developments, supplementary planning documents should ensure that walking, cycling and public transport facilities are placed at the heart of new developments, making them easily accessible and visible. Parking standards should resist the over-provision of parking. The provision of car club vehicles in new developments should be considered where size and location of the development makes this appropriate. Electric charging points should also be incorporated.

Infrastructure should be designed so that walking and cycling facilities are as direct as possible and are not subject to intrusion from motor vehicles. 20mph zones should be supported on new residential streets. Accessible, secure cycle parking should be provided with housing units so that residents are able to easily access cycles. In short, the way in which developments are laid out

should promote sustainable modes as the 'default option'.

Within all new developments there should be a strong 'proofing' of proposals as part of the design process, to ensure that the infrastructure supports sustainable transport use in the long term.

Promotional activities with new residents

Where good quality sustainable transport facilities and services are provided, there is an opportunity to promote uptake amongst new residents.

Before people move in, there is an opportunity to promote the sustainable transport facilities of the new development, and indeed, use it as a positive selling point for the development. On, or just prior, to moving in, *Welcome Packs* can be provided to new residents, incorporating travel information and offers, such as promotional offers on public transport season tickets or discounted membership of the car club. These *Welcome Packs* are important, and should be high quality in terms of both content and design. Promotional materials should be co-ordinated, and consistent with, any community based lifestyle websites that often emerge in the promotion of developments.

Once people have moved in, this should be supplemented by household visits by *Travel Advisers* to introduce the households to their travel options and further offer incentives for people to try out sustainable transport choices. Activities such as guided walks or bike rides can be offered in association with social events in the new community.

The opportunity for local ambassadors to be recruited to promote sustainable travel options should be investigated. For example, in Norwich, the car club uses existing members to promote the scheme at events, in return for additional driving credit.

Derwenthorpe Case Study

Derwenthorpe is a new residential development in eastern York of 500 homes. The developer, Joseph Rowntree Trust has offered incentives to new households of £150 voucher towards bike purchase or a public transport season ticket, free car club membership and £50 drive time (a car club car is available in the development) and a community bike loan scheme. Travel Advisers visited the 160 households already in occupation in July 2015 to offer personal travel planning advice alongside these incentives.

UMBRELLA MARKETING AND PROMOTION PROGRAMME

A fundamental building block of a *smarter choices* strategy is to provide comprehensive information about sustainable travel options and marketing and promotion activities to raise awareness and encourage uptake.

This should include the following elements:

- **Development of a project brand and identity:** A long-term project brand or identity should be established for the promotion of sustainable travel choices in Durham City. Whilst South Durham has benefited from the Local Motion LSTF programme over the last few years, we would recommend that Durham City aligns its programme branding with the Go Smarter programme in Tyne and Wear, given the inclusion of County Durham in NECA and the strong transport links between Durham City and Tyne and Wear. This will help to build integration with NECA and grow awareness of the Go Smarter brand, rather than creating an additional new 'competitive' brand. It will also enable Durham County Council to utilise existing information portals and generic marketing materials that have been developed through this programme.
- **Development of information resources:** comprehensive information about the range of sustainable travel options should be provided and made available in appropriate media including hardcopy, electronic and on-line:
 - High quality map of Durham City, such as an axonometric map, that will help promote walking around the City;
 - A Durham City cycle map (which should include information about cycle parking, bike shops, 20mph zones etc.);
 - A sustainable travel map for the wider catchment area highlighting longer-distance cycle routes and bus routes

connecting the surrounding villages into Durham City;

- A schematic map showing the network of local bus services. An interactive electronic version should allow users to easily request timetable information for each service;
- Leisure walking guides;
- Leisure cycle route guides.
- **Development of a project website:** which is the 'go to' place for sustainable travel information for Durham City and should incorporate the following:
 - A local multi-modal journey planner that enables people to investigate travel options for specific journeys and to compare different travel options (including the car);
 - Pages providing information about bus, train, cycle, walk, car share, car club and taxi options in Durham City;
 - An app or mobile friendly version of the website to provide people with travel information 'on the move', as well as providing real time information feeds so people can receive up-to-date travel information on their phones whilst travelling;
 - Pages highlighting sustainable travel services and offers available to different target markets, such as employers and employees, and schools and students.
- As stated before, we recommend that Durham

City aligns itself with the Tyne and Wear Go Smarter programme. If appropriate, this could involve incorporating Durham City information into the Go Smarter website, or creating a 'sister' Durham City website utilising the same branding (e.g. www.gosmarter.co.uk/durham). The Go Smarter multi-modal journey planner could be extended to Durham City to promote the journey planning service.

- **Establishment and advertising of a range of sustainable travel promotion services:** various offers can be promoted to different target markets that they can request. This information should be provided on the website and in communications to target groups, showing the support they can request. Such services and activities could include health walks promoted by the NHS and public health authorities, leisure walks, pedometers and related activities such as pedometer challenges, calorie maps and calculators, Bikeability cycle training, Dr Bike, bike maintenance courses, assisted cycle purchase schemes, bike loan schemes, scooter loans, public transport season ticket discounts, smarter driving lessons, car share scheme, road safety education and training, grant funding for travel plan measures and so forth. Essentially, any service that Durham County Council or partners provide should be featured showing potential users how to access such services.
- **Establishment of a calendar of activities:** existing sustainable travel initiatives could be packaged up and presented as an annual

calendar of activities under the project brand alongside new activities throughout the year. This could include New Year's Resolutions, where target markets are encouraged to take up a resolution to try out a new way of travelling; 'Spring into Action' promoting walking and cycling when the clocks go forward to British Summer Time; Walk to School week; Fresher's week; liftshare week; regular health walks and social bike rides; attendance at Durham City festivals and events; events to coincide with launches of sustainable travel improvements (e.g. openings of cycle paths, new bus services); periodic campaigns focusing on, for example, bus promotion or health and activity.

- **Ongoing PR and communications to promote the brand and programme:** to maintain awareness of the programme and to give a sense of momentum and activity, it is vital to provide ongoing PR and communications about the programme. This should include news items (updates to sustainable transport services), events advertising, promotional offers, feedback (such as post-event summaries and case studies of champions). This media mix should primarily utilise the website and social media, with occasional PR offerings to mainstream media.
- **Signing up programme participants on-line and increasing interaction:** in due course, the level of interaction with programme participants can be increased and the programme can seek to establish more of a customer relationship with them. Individuals

could be encouraged to sign up for personal accounts, where they can set an individual profile to request particular types of information feeds. So, for example, one individual may state an interest in cycling activities so that every time a news item is generated on the website regarding cycling, an update is emailed or texted to them. Someone else may say they are interested in a particular bus service, so that each time the bus timetable changes, they are automatically emailed with an up-to-date timetable. The programme could encourage more feedback and interaction from individuals through occasional consultations and polls.

- As stated in the introduction to this section, in the longer-term, this customer relationship could be further developed by providing individuals with mobility accounts. This should be developed and rolled out in association with NESTI.
- The information enhancements identified here should be complemented by physical measures on the ground such as real time information (RTI) at stops and interchanges and way-finding and signage. QR (quick response) codes or NFC (near field communication) should be used at bus stops without RTI to enable people to get timetable and real time information feeds to their phones.

In York, the i-Travel York brand has been developed to promote sustainable travel choices. A website www.itravelyork.info brings together

transport information and a journey planner. Mobile apps for bus information (pictured overleaf) and live traffic updates have also been created.



Infrastructure Strategy: the re-allocation of space to sustainable modes

INTRODUCTION

To 'lock in the benefits' of mode shift resulting from changes to travel behaviour, infrastructure investment needs to be delivered as a complement to the *smarter choices* strategy. This infrastructure investment needs to be delivered both in the short term, and needs to be sustained in the long term throughout the plan period 2016-2033.

This investment will focus on the re-allocation space to sustainable modes in the long term and will include the provision of more priority for pedestrians, cyclists and public transport, in line with the hierarchy of users identified earlier in this report.

In the chapter that follows we will illustrate the strategy required to re-allocate space to sustainable modes across Durham City. This is presented spatially as follows:

- City centre and associated investments;
- University to the City Centre;
- North-western corridor towards Aykley Heads, Sniperley, Framwellgate Moor, Newton Hall;
- North-eastern corridor along Gilesgate, the A690, and towards Belmont and Carrville.

CITY CENTRE

Introduction

Within the city centre, the transformational long term strategy hinges on the ability to provide more space 'for people' travelling on foot, by cycle, and when using public transport in accessing economic opportunities, such as employment, shopping and tourism. To encourage more walking and cycling across the city, the barriers to direct continuous routes need to be removed. Nowhere are barriers to these direct continuous routes for sustainable modes more apparent than in the city centre itself.

Some of the measures needed to deliver this transformational change are costly options, and not likely to be deliverable until the later part of the strategy, beyond 2020. First though, the shorter term strategy is articulated. This is illustrated in Figure 1.

Short term strategy

In the short term, Durham County Council is already investing in improvements to the transport network in the City Centre. The Council's investments will deliver improved conditions for people walking, cycling, and on public transport.

Measures in the city centre to support pedestrian access and safety in the short term include Durham County Council's existing plans for improving four

specific areas within the Conservation Area. These investments are designed to maintain the historical and aesthetic appearance of the City streetscape and ensure its attractiveness to visitors. The investment seeks to retain existing heritage characteristics where possible and maintain the areas to the highest possible standard.

The proposals are at the following locations:

- North Road;
- Old Elvet Bridge;
- North & South Bailey;
- Claypath.

Measures already planned to improve conditions for cyclists include Local Transport Plan-funded projects to improve the National Cycle Network (NCN) in the City from the Leazes Bowl to Riverside, Baths and Gilesgate Bridge. The Council is also investing in improvements to cycling routes at Franklands Lane, and on the A167 'Great North Cycle Way'. There is also investment in providing cycle access to the Rail Station as part of a Station 'Gateway' project.

Measures to improve facilities for bus users include the Council's commitment to improving the bus station facilities as part of the wider regeneration of North Road, proposed for delivery in 2018. This investment, as well as providing a new bus interchange, will create better retail facilities, and will create a more pleasant environment on North Road improving pedestrian links between the shops

and the bus and rail station. There are also plans to upgrade a number of bus shelters throughout the City.

The Council is also investing in the Urban Traffic Control (UTC) system in the City Centre, with SCOOT – co-ordinating traffic signals to work better in combination - being installed across the City, and improving driver information through new variable message signage (VMS). This will help manage congestion and reduce emissions, assisting in tackling air quality problems in the city centre. The SCOOT system will deliver a more dynamic and responsive approach to traffic control, and will automatically adjust timings of traffic lights when incidents and events occur in the city that change normal traffic flows and patterns. This will involve the signalisation of Gilesgate and Leazes Bowl Roundabouts, with the coordination of signals.

The scheme will deliver more predictable peak time journeys through the city centre, reducing delays, and assisting bus operators in planning and managing more reliable service delivery, reducing the impact of traffic congestion on local bus services. Improvements for pedestrians and cyclists at signalised crossings will also be delivered. Finally, in integrating the UTC improvements with the North Road development, the A690 roundabout will be replaced with a signalised junction (with pedestrian phases), helping to remove physical barriers between the rail and bus stations.

These planned investments represent a good start in delivering the Strategy, but more will need to be done in the short term. There remains an important

requirement in the short term to achieve a more convenient crossing of the River Wear in the city centre for cyclists, and to improve both pedestrian facilities, and bus waiting facilities in the city centre, in order to help encourage greater use of sustainable modes.

Further measures to support pedestrians in the city centre in the short term will include:

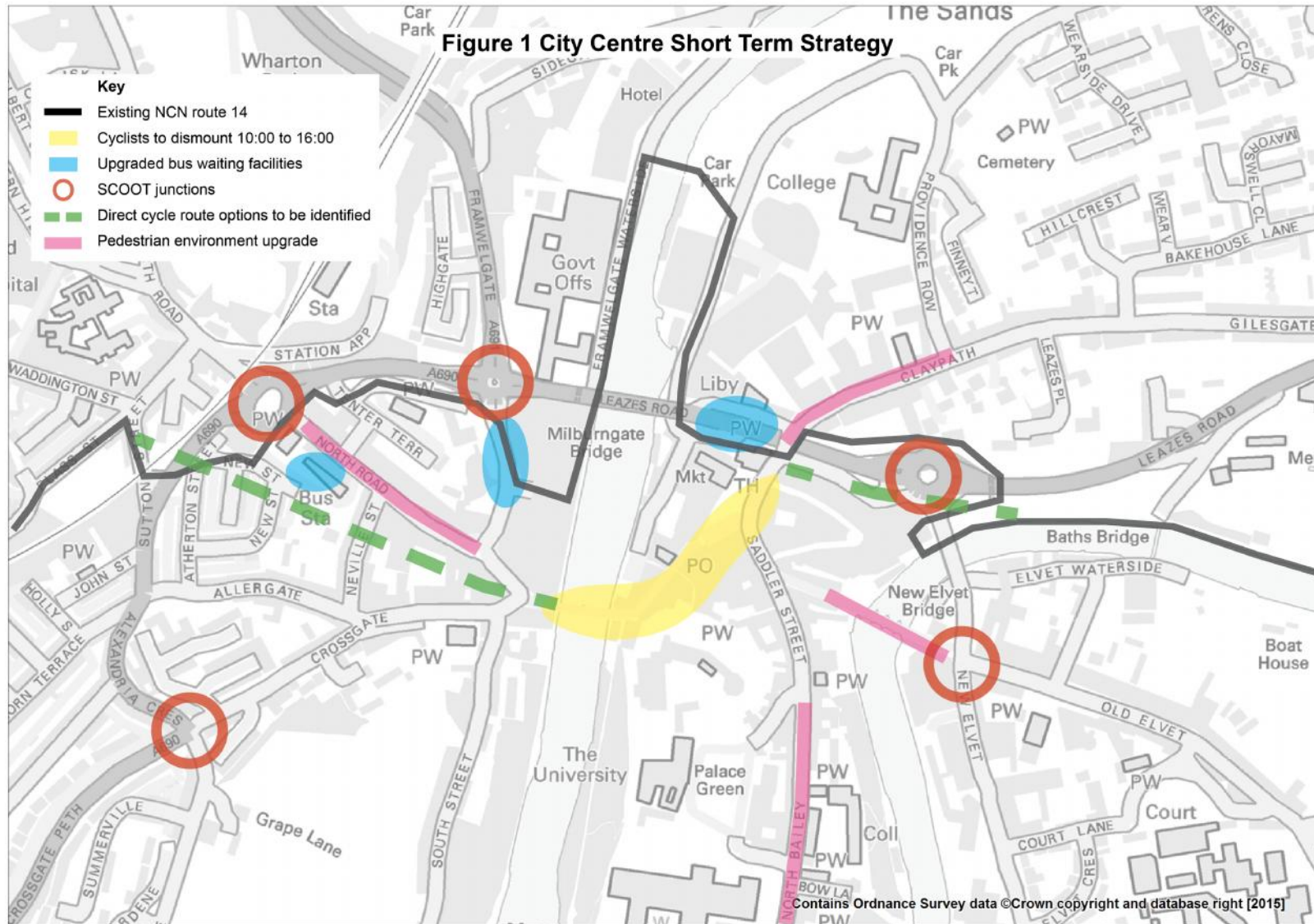
- Improved pedestrian crossings from key transport interchange areas including North Street Bus Station and Claypath bus stops;
- More benches around the central core area to assist those with mobility difficulties;
- Provide consistent pedestrian signage in the city centre, in particular from the bus stops on Leazes Road and on the Peninsula in order to assist first time visitors in orienting themselves. The different levels throughout the city centre can lead to confusion.

A short term priority to meet the needs of utility cyclists is the provision of continuous, safe routes, for utility and leisure cyclists wishing to access and cross the city, including the provision of good cycle access to the commercial and cultural heart of the city centre. This report noted earlier that the current National Cycle Network (NCN14) and other cycle routes through the city centre do not meet the needs of utility cyclists. NCN route 14 through the city centre takes a circuitous route and requires the cyclist to dismount frequently. Therefore, there is a pressing need for a more direct route for cyclists through the heart of the city centre, allowing use of Framwellgate Bridge into the Market Place and the commercial and retail centre of the historic city.

The NCN route 14 should be directed via Market Place and Silver Street to rejoin the NCN route close to Leazes Bowl. To support this, cycling will be permitted in the pedestrian area on Silver Street except between 10:00 and 16:00, with cyclists being required to dismount through the pedestrianised section along Silver Street during the hours between 10:00 and 16:00. This will ensure that safe conditions for pedestrians are maintained during the period of high pedestrian flows in the middle of the day. It will, however, allow cyclists a more direct route through the centre at peak commuting times, allowing utility trips before and after the principal retail and visitor peak. A similar arrangement operates in the York 'Footstreets' where cycling is permitted outside the pedestrian priority hours of 10:30 until 17:00.

At the eastern end of the city centre, the NCN is indirect in the area of the New Elvet junction. The route for cyclists here should be safe and direct, removing the 'dog leg' and the need to 'double back'. The detail of how this is delivered needs to form part of future short term Action Plans.

On the western side of the city centre, providing a direct route agreeable to all stakeholders is more problematic. A suitably direct, safe, route for cyclists is needed to allow cyclists to reach, and then pass over the Framwellgate Bridge and through into the Market Place to and from the west. This needs to be developed in detail as part of future Action Plans with involvement from residents and retailers in the streets in the area between the A690 and Crossgate.



An alternative cross city route for the NCN14 has also been proposed by stakeholders which uses Prebends Bridge and the Old Bailey on the Peninsula. Such a route could be provided as part of an ongoing initiative around pedestrian improvements in the historic core. While providing an alternative route for leisure cyclists using NCN14 (as it does provide good access to the World Heritage Site), this route does not provide for direct access to and across the city centre for utility cyclists, and would therefore be a complement, rather than an alternative, to use of Framwellgate Bridge.

In addition to the planned investment at North Road, the short term strategy should also include investment in better waiting facilities for bus passengers (including shelters and seating as necessary), improved information provision, and improvements to safety and security around stops such as better crossing facilities and lighting. The stops on Millburngate are a priority for improvement in the short term due to their strategic position close to the historic and commercial centre and the large number of services using them. Further capacity is required in this area, together with improved waiting facilities to cater for current demand and future growth. The stops on Leazes Road will also benefit from investment.

Long term strategy

The long term strategy to provide more space 'for people' travelling on foot, by cycle, and when using public transport is as follows:

Priority for sustainable modes on Millburngate Bridge

Specifically, more space is needed when crossing the River Wear in the vicinity of the current Millburngate Bridge, removing the barrier to active and sustainable travel that this presents at the heart of the city centre. More space is also needed for pedestrians and cyclists at locations and on routes across the city; ideally separate, dedicated facilities to encourage the safe use of all modes.

To complement safe and continuous walking provision throughout the city centre: sufficient, dedicated space for continuous, direct cycling; and reliable, uncongested bus routes through the city centre can most realistically be achieved through transferring space to cyclists and buses on Millburngate Bridge. In terms of cycling, this approach aims to tackle the issue that the current National Cycle Network (NCN14) and other cycle routes through the city centre do not meet the needs of utility cyclists, namely the provision of continuous, safe routes, with good access to the commercial and cultural heart of the city centre. This dedicated space for cyclists while crossing this bridge will ensure convenient continuity of NCN14 through Durham City and, in doing so, provide a safe route for utility and leisure cyclists wishing to access and cross the city.

Better facilities for pedestrians attempting to cross the barrier that is presented by the A690, especially at the roundabout junctions at either end of the Millburngate Bridge, are required in facilitating safe and continuous walking provision.

This package of improvements for Millburngate Bridge, and the two roundabout junctions either side (the junctions with Millburngate, and with New Elvet) will be subject to feasibility studies, consultation with local residents and businesses and if necessary, subject to the development of a business case to attract external funding.

Nevertheless, in concept, the improvement of facilities for pedestrians, cyclists, and increased priority for buses can be achieved by the reduction of traffic lanes from four to two. To provide continuous, safe access across the city centre for cyclists, this reduction in highway carriageway space will accommodate the provision of dedicated cycle lanes.

The narrow carriageway width across the bridge means that the road at this point is not wide enough to provide standard width bus lanes in each direction in addition to a traffic lane. It is therefore likely buses will have to remain within the general traffic stream, but bus reliability should be supported by the fact that there should be much reduced traffic levels across the bridge. Figure 2 at the end of this section illustrates the long term plan in concept.

To achieve this radical vision of dedicated, separate spaces for people walking and cycling across Millburngate Bridge, and priority for buses, coupled with the removal of severance and the air quality problems that the high traffic levels currently create. As noted earlier, the smarter choices measures to influence travel behaviour that form an important cornerstone of this strategy, encouraging the use of sustainable modes through working with employers

Shoreham Road Case Study

Old Shoreham Road in Brighton is a busy ‘A’ road through the city. It also connects with residential areas and schools along the route. In order to make the route safer and more attractive for cyclists (given a previous average speed of 45mph despite a speed limit of 30mph), a segregated cycle lane with supporting facilities such as raised junctions at side roads, pre-greens at traffic signals and shared use areas at bus stops was implemented in 2012.

The scheme consists of cycle lanes on each side of the road for 750m and cost £720,000. Brighton and Hove City Council has stated that cycling in the area has increased by nearly 40% to 440 cycles on a weekday and cycling to schools in the area has doubled.



and schools to influence ‘peak hour’ trips, can only go so far, tackling as it does those journeys with destinations within the city.

There is significant traffic passing through the city has no destination locally (around 35-40% dependent upon time of day according to 2015 surveys), and therefore an alternative route, ostensibly to enable these trips to cross the River Wear, needs to be provided.

This additional space will complement action to support active travel modes and public transport, and help to provide space where it is needed in the city centre. The additional space should serve the needs of ‘through traffic’ taking it away from the limited routes through the city, thereby serving multiple objectives around managing economic growth while at the same time improving health, road safety and the environment in the city centre. The focus in the city centre will then be in providing access to people wishing to visit the City for employment, shopping and tourism, rather than just passing through.

A new northern route for traffic

A proposed Northern Relief Road was part of the County Durham Plan submitted to the Planning Inspectorate in 2014. Indeed, there are long standing proposals, described in the current adopted Durham City Local Plan, for an “A690 Durham Northern By-Pass (Stage 2)”, and a route is safeguarded. Such an investment, or a similar proposal, is a critical complement of improvements for sustainable transport in the city centre. This road proposal, which was specifically included in

the Durham County Structure Plan of 1999, will complete the link from Pity Me to the A1(M) at Carrville.

At that time, the local environmental benefits in the city centre were highlighted: “The road is important in local terms to alleviate the environmental problems resulting from east/west traffic through the City Centre. As such, it will provide an additional river crossing to the congested Milburngate Bridge thereby enabling possible improvements for other modes of travel to take place during the Plan period as part of an integrated transport strategy for Durham City.” This holds true today, and the additional river crossing remains an essential element of this strategy to promote better sustainable transport facilities within the heart of Durham City.

A fundamental caveat in the inclusion of this additional road space to the north of the city, to enable the removal of east-west through traffic from central Durham, is that it should **only be provided to enable significant re-allocation of road space to pedestrians, cyclists, and buses within the city centre.**

Furthermore, it is advocated that this new route should not be a ‘fast’ route for traffic. The new route should also accommodate facilities for cycling: a new segregated cycle route alongside or adjacent to the highway, to provide for cycling between the residential and employment areas to the north-east (around Belmont) and north-west (around Newton Hall) of the city. This would be complementary to an additional off-road cycle route across Belmont viaduct.

Alternative approaches

This approach to the sustainable transport strategy, focused on promoting reducing car travel by influencing travel behaviour on local trips, especially those to employment and education in the peak hour; complemented by investment in improving walking, cycling and public transport infrastructure to lock in the benefits of changed behaviour; and by the construction of additional road capacity to cater for the significant numbers of vehicles that have no origin or destination in Durham City, is not the only approach that could be adopted. Stakeholders have offered alternative approaches, including active restraint of the car and HGVs through congestion charging, parking restrictions particularly at large employers, and bans on HGVs passing through the city. The strategy as articulated does include for significant action with employers, including car parking restraint, but stops short of congestion charging and general restraint on cars and HGVs. These approaches have not been proposed, as there is little widespread appetite, especially amongst business stakeholders, who have concerns over the impact of such measures on retail and visitor economies, for these types of approaches.

Improved public transport interchange

There is generally a good network of bus services in Durham City. The long term strategy for public transport therefore focuses on providing a step change in the quality of bus interchange in the city centre and good integration with other modes, particularly walking and cycling. Across the city,

measures to improve end-to-end journey experience are required including improved waiting facilities, targeted bus priority measures and enhanced on-board services.

In the short term, as outlined above, this will be provided by a new bus station or interchange facility in the North Road area, taking advantage of commercial development opportunities in the city. The facility should be located as conveniently close to the city centre as possible, and should be located and designed with passenger needs at its heart.

Also, bus stops on Leazes Road must be enhanced to provide a much improved waiting area serving people accessing the historic and commercial core of the city. Much reduced traffic levels and a significant change in the priority of the current A690 will also provide an opportunity to significantly improve the public realm around the Leazes Road stops. This will help to address the difficulty in navigation and access from these stops due to the dominance of the highways infrastructure, and the differing levels between Leazes Road and the main city centre destinations.

Increased pedestrian priority in the city centre

In the long term, the ability to focus cross-city bus and cycle movements on a route through the heart of the city centre over the Milburngate Bridge provides the opportunity to extend the pedestrian priority area that is currently focused around the Market Place and within the Peninsula.

Presently, the edge of centre shops and restaurants in the lower Claypath, or Walkergate, area feel

distant from the Market Place and the rest of the Peninsula, even though in reality, they are a very short walk away. Stakeholders have indicated that the Walkergate area is perceived to be detached and distant from the centre, and the area is not obviously visible to visitors unfamiliar with the city. This principally results from the severance caused by the A690, regardless of the fact that there is an at-grade crossing between Walkergate and the Market Place. The townscape in this area is dominated by the rear of buildings and highway carriageway. It does not invite visitors to explore beyond the edge of the Market Place.

Similarly, there is a perception that the North Road shops, and in particular the bus station, is distant from the heart of the city in the Market Place and the Peninsula.

In both instances, the evidence presented earlier that higher quality pedestrian environments can improve access, as acceptable walking distance may be greater where the pedestrian environmental quality is perceived to be higher, is pertinent.

Bringing a greater degree of pedestrian priority into the two areas of Walkergate and North Road will extend the core city centre area, supporting local businesses. In the case of North Road, this will alter the perception of the distance between the either the present or proposed new bus station and the Market Place, making the bus station on North Road feel part of the city centre – in reality this is the case given that the actual walking time between the Market Place and North Road is only five minutes for many people.

To summarise this long term proposal, extending the pedestrian priority area in the city centre to encompass the whole of North Road and the western end of Claypath, or Walkergate, has a number of benefits:

- It will extend the city centre bringing edge of centre, peripheral developments into the core of the city, benefiting local business;
- It will improve perceptions of the bus station (in either its current location or on a new site) and ensure that it feels part of the city centre;
- It will address the severance caused by the current arrangement across the A690, which hides Walkergate from visitors;
- It will help capitalise on known development opportunities in these areas to support the economic growth of the city centre.

This package of improvements to increase pedestrian priority in North Road and Walkergate will be subject to feasibility studies, consultation with local residents and businesses and, if necessary, subject to the development of a business case to attract external funding. Specifically, the service provided by local buses that presently use Claypath and North Road will need to be examined, and options will need to be assessed that carefully promote improved public realm for people visiting these streets, while retaining bus access through a pedestrian priority area into the heart of these important, and hopefully thriving, local shopping streets. Options will need to address bus stopping arrangements within the re-designed public realm.

The extended pedestrian priority will also require diversion of existing taxi ranks, servicing areas and disabled bays in the two areas and as well as the taxi ranks on the approach to Claypath. This provides the opportunity to improve taxis ranks and disabled parking facilities in a new location on the periphery of the pedestrian area - potentially on Millburngate or beyond the Providence Row junction with Claypath. Future servicing could follow the existing system in the pedestrianised area on Silver Street.

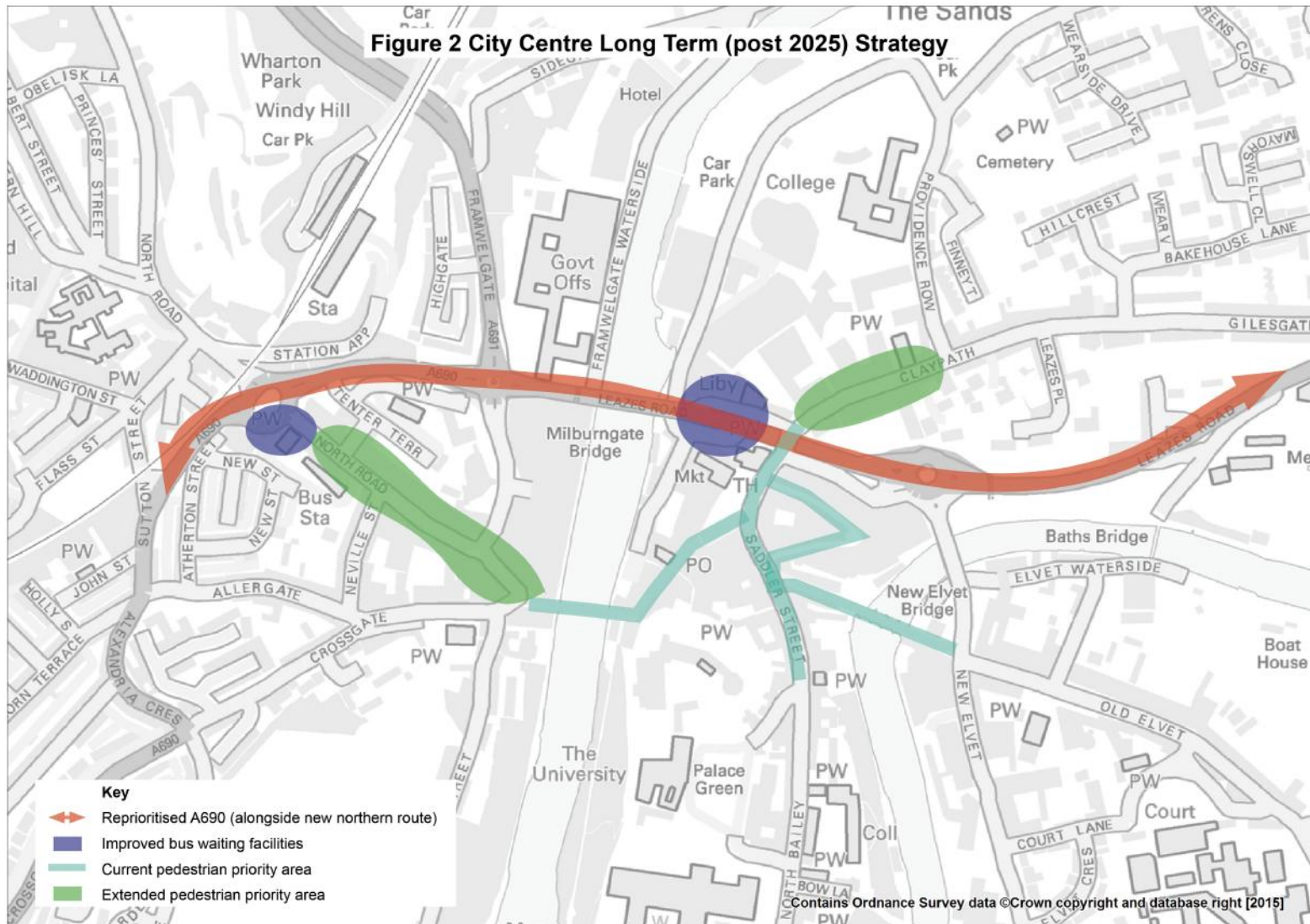
Exeter City Centre Case Study

Between 2000 and 2010 Exeter City Centre was improved with a series of measures including removal of vehicular traffic, traffic management and an increase in pedestrian and shared spaces. It was a phased enhancement programme, including wider development schemes, to create new retail space and reinvigorate the city centre through a connected pedestrian network of public spaces and a high quality public realm.

The programme cost £4.5m over ten years and has resulted in improved permeability and connectivity and the council being able to attract high-end retailers to the retail core as well as supporting the historical identity of the city, including enhancing the St. Peter's Cathedral as a focal point. Footfall increased by 30% between 2002 and 2010 and retail rents increased within the redevelopment area

compared with declining rents in other towns in the region.





INVESTMENT IN SUSTAINABLE MODES ACROSS THE CITY

Investment in improved infrastructure is also needed across the city in the short term to support the *smarter choices* measures, and to lock in the benefits of a shift to sustainable modes. However, the scale of the investment required across Durham City to improve pedestrian environments, and to secure safe, continuous routes for cycling will in likelihood mean that sustained programmes of investment will need to be developed across the period of the strategy to 2033. In practical terms, the limitations on resources will require these programmes to be prioritised, and to take advantage of funding opportunities associated with new developments, in addition to publicly funded programmes of investment.

This sustained investment in walking and cycling infrastructure needs to deliver a change in priorities across the city, in line with the place and movement hierarchy. In practical terms, given the space available in parts of the city, this will acknowledge that space cannot always be re-allocated, and that there will be elements of sharing. So, the need to slow traffic, in order to make places safer for pedestrians and cyclists, and crucially to make these places feel safer will also form an important element of the strategy across the city; in addition to increasing space for pedestrians and cyclists where possible.

Durham County Council is investing in a first phase of pedestrian improvements in the city centre to improve conditions for people walking around the

Conservation Area and within the World Heritage Site (detailed on p34).

In the sections that follow, the strategy is presented for each of the three 'corridors' outside the city centre. There is an implicit priority in the ordering of the sections, with the areas of Durham City to the south of the city centre presenting an immediate opportunity to build upon the already high levels of active travel within the corridor towards the University. Figure 3 shows the short term strategy for the four areas in the City that will be targeted for different types of sustainable transport interventions. The strategy should however be flexible, and funding opportunities arising from new development and third party investment should enable the delivery of important improvements across Durham City. Figure 4 at the end of this section illustrates the city wide strategy plan in concept.

UNIVERSITY TO THE CITY CENTRE

After the City Centre, this is the first priority area to be tackled, with an Action Plan to be developed for delivery between 2016 and 2018. The strategy within this corridor will be to improve conditions for pedestrians.

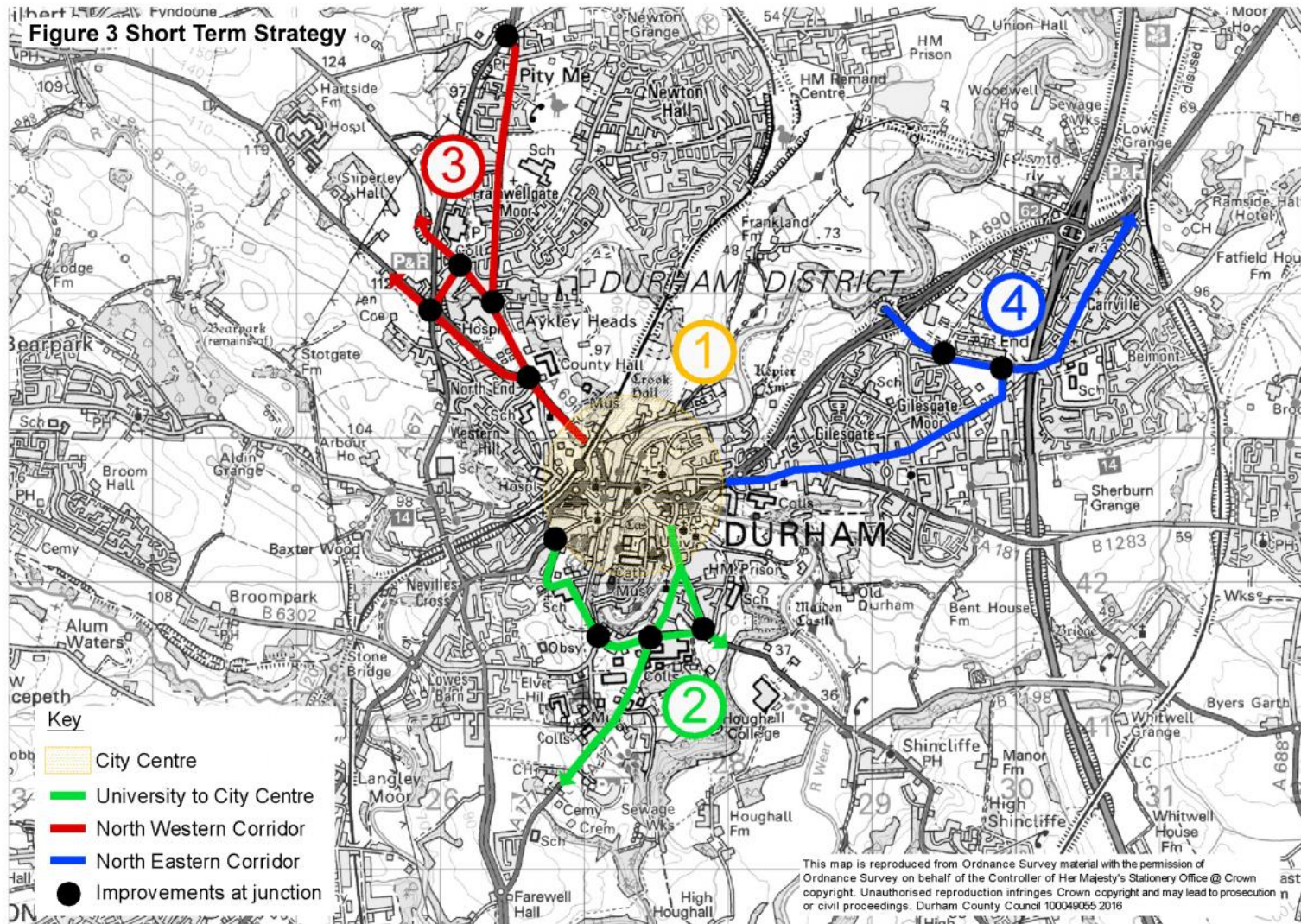
Southern parts of the city, and in particular those areas that form part of the University, already represent areas of the city with low levels of car ownership, and is a part of the city where the already high levels of sustainable transport use (especially walking) need to be supported and reinforced. This corridor to the south of the city

includes the University 'hill' colleges; and is also home to significant parts of the University's teaching and research facilities.

Approximately 45% of residents do not own a car in this area, and, as a result, pedestrian flows between the city centre, and South Road and the University campus and colleges are significant. Pedestrian flows often exceed the capacity of the footways, which in places are unable to cope with pedestrian numbers safely. This is a feature of busy periods during University term time on routes both to the east, and to the west of the Peninsula.

To the west of the Peninsula, streets such as Margery Lane and Quarry Banks Road are the focus of desire lines between the area with a high proportion of student rental properties around Hawthorn Terrace, Atherton Street, and Sutton Street, and the University campus on the 'hill'. To the east, the focus is on Church Street and New Elvet. On South Road, running through the heart of the University campus and 'hill' colleges, there are high pedestrian flows, coupled with inadequate footways and traffic speeds that feel inappropriately high for such a busy pedestrian area, even though this is within a 30mph limit. Some of the junctions in the area provide a poor environment for pedestrians, with the 'New Inn' junction being notable for small, inadequate areas for pedestrians waiting to cross.

There are no dedicated facilities for cycling in this area between the University and the city centre.



Appendix A includes plans that show the outline proposals for New Elvet, the Hallgarth Street/Church Street/Stockton Road triangle, South Road, and the Quarry Heads Lane area, through to the Crossgate junction and into the Viaduct area.

In these plans, indicative options are presented for area-wide enhancements to improve conditions for pedestrians and cyclists, including widening footways, dedicated cycle lanes, and re-designed junctions that better meet the needs of pedestrians and cyclists. Fundamental to this, measures should be incorporated into the streetscape to slow general traffic, making the environment less intimidating for pedestrians and cyclists, even where additional dedicated space is impractical, while being mindful of the important bus corridors in the area.

Key features that should be implemented as a priority include:

- Widening the footpaths across the area, including on South Road through the University and Colleges linking the student residential areas north of the Stockton Road/South Road junction to the city;
- Measures to slow traffic speeds throughout the corridor;
- Re-model junctions to provide priority for pedestrians and cyclists, and to slow general traffic speeds through the junctions;
- Removal of on-street parking to dedicate space to sustainable modes.

The package of improvements in this southern corridor between the University and the city centre will be subject to feasibility studies, consultation

with local residents and businesses; and where appropriate, subject to business cases to attract external funding. These feasibility studies will assist in determining the timing and priority of elements within the package.

NORTH-WESTERN CORRIDOR: AYKLEY HEADS, SNIPERLEY, FRAMWELLGATE MOOR, NEWTON HALL

This is the second priority area after the City Centre, with an Action Plan being developed between 2018 and 2021 for this area. The strategy in this area is to improve missing links for sustainable modes, especially where crossing main roads and junctions.

To the north-west of the city, the A691 corridor, including the A167 north of Sniperley roundabout, is a very busy traffic corridor, with significant employment and housing across the area, including the communities of Aykley Heads, Framwellgate Moor, Pity Me and Newton Hall. The roads in this corridor are often wide, and there are significant margins in some places, helping to facilitate the provision of segregated high quality facilities for sustainable modes in the long term.

There are also a number of key destinations in terms of leisure, health, education and employment in the area including the Arnison Centre Retail Park, New College Durham, the University Hospital of North Durham, and the Aykley Heads employment area.

It is possible that there may be some development in this area as a result of the Local Plan, but the spatial strategy is yet to emerge. Notwithstanding, there is some overlap here between broad proposals within this report and improvements identified in the Council's Infrastructure Delivery Plan in 2014.

Walking and cycling network improvements around key attractors such as Aykley Heads, the Arnison Centre are required in order to ensure that local people are encouraged to consider alternatives to private car use. The strategy in these areas focuses on improving 'missing links' involving crossing main roads and junctions. Improvements to existing off-road pedestrian links are also required in some areas around district centres.

Some bus priority and dedicated routes for cyclists already exist in the corridor. The strategy moving forward should enhance the provision for buses and cycling through the provision of high quality bus priority and cycle routes on the A691. Of particular importance is investment in the large roundabout junctions in the area, which present intimidating and potentially hazardous conditions for cycling as they are presently configured. Broad proposals are illustrated in plans within Appendix A, and include:

- Improve the roundabouts along the B6532, Dryburn Road and Southfield Way to provide greater cycle priority;
- Improve the roundabouts in the vicinity of the Arnison Centre to provide greater cycle priority - improvements may include full signalisation and a speed limit reduction to 40mph at the Pity Me roundabout (as recommended in an

independent *Strategic Cycle Routes Study* by Transport Initiatives);

- Ensure that adequate cycle priority (and protection for cyclists) is provided at the Sniperley roundabout at the junction of the A691 and A167;
- Consideration of widening the off-road footpaths through the area to allow for cyclists as well as pedestrians on the routes.

In terms of pedestrian priority, measures are similarly focused on providing safe, segregated facilities. Personal safety issues are also important in encouraging walking, and the strategy should seek to make walking routes to key destinations more attractive by providing better pedestrian priority at junctions and making walking routes safer and more direct, including the need for:

- Safer crossing facilities at roundabout junctions, to include the B6532/Southfield Way and B6532/Dryburn Road junctions;
- Improvements to address personal safety issues along off-road pedestrian routes to the north of Aykley Heads, to include improved lighting and vegetation clearance;
- Improvements to address personal safety issues along off-road pedestrian routes along neighbouring residential streets to the south of the Arnison Centre, to include improved lighting and vegetation clearance;
- Provision of adequate crossing facilities of vehicular routes intersecting the off-road routes;

- More frequent and conveniently located crossing points on routes to key destinations;
- Consideration of level crossing (raised tables) for pedestrians along key routes (rather than dropped kerbs).

The package of improvements in the north-west of Durham City will again be subject to feasibility studies, consultation with local residents and businesses; and where appropriate, subject to business cases to attract external funding. These feasibility studies will assist in determining the timing and priority of elements within the package, but in this area particular priority should be given to improvements for sustainable modes associated with any development that comes forward, and contributions from developers should be sought to help bring investment forward.

NORTH-EASTERN CORRIDOR: GILESGATE, BELMONT & CARVILLE

This area is the third priority area after the City Centre, with a detailed Action Plan for this area to be developed between 2020 and 2022. The strategy for this area is to reduce congestion by making appropriate improvements for all modes of transport.

To the north-east of the city, the residential areas along Gilesgate, and further afield in Belmont and Carrville are served by the A690 and the A181 Gilesgate-unclassified Sunderland Road.

The Belmont Business Park has significant employment, and the growing Dragonville Business

and Retail Park is a significant influence of travel patterns in the corridor.

Some roads in this corridor are wide, and there are significant margins in some places, helping to facilitate the provision of segregated high quality facilities for sustainable modes in the long term. Conversely some parts of the corridor represent more challenging spaces in which to provide segregation or priority.

The strategy moving forward should enhance the provision for cycling through the provision of high quality designated cycle routes on Sunderland Road-Gilesgate. The provision of shared use paths along Belmont Link Road between the A690 and High Street to remove the need for cyclists to travel along the Belmont Link Road should also be examined.

In the Dragonville area, congestion has become a major problem on Dragon Lane, and the Council has plans for a new Sherburn Retail Link Road. This seeks to address traffic issues around the Dragonville Retail Park through the provision of a new link road which essentially links Sunderland Road, Dragonville Retail Park and the A181 without requiring access on to Dragon Lane. Improvements to the National Cycle Network are needed in the Dragonville area, and such improvements should be incorporated into plans for the new link road and any associated housing growth in the area.

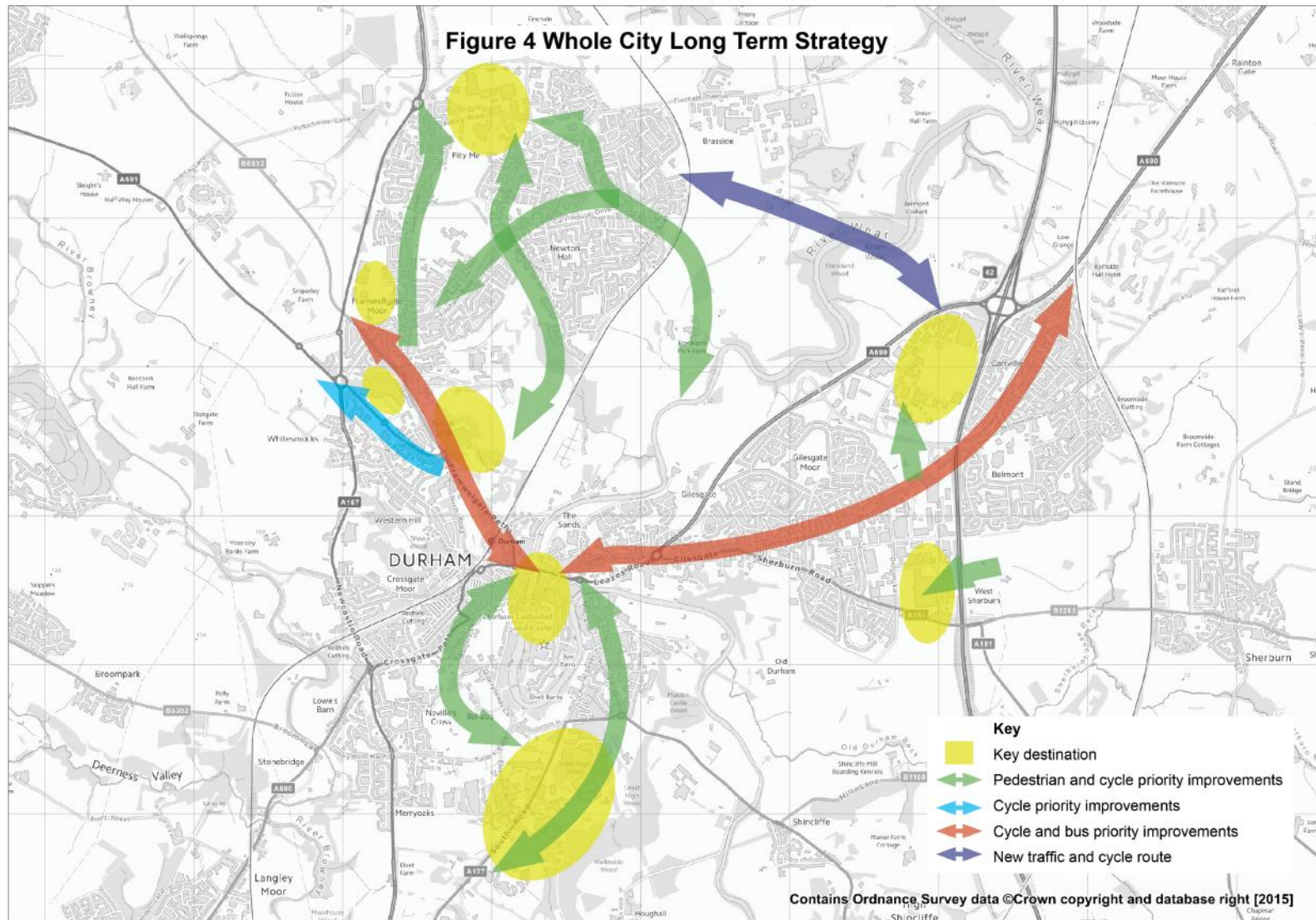
The adjacent A1 motorway causes significant local severance between some local communities. Near the Dragonville District Centre, improvements are needed to address the severance issues caused by the A1(M) to the east, to include improvements to

address personal safety issues at the A1(M) underpass to the east of Renny's Lane. Near the Belmont Business Park, options should not only be examined for reducing severance issues caused by a lack of crossing points along the A1(M), but there should be a focus on the internal road layout of the business park. This could include new off-road footpaths from internal roads to the Belmont Link Road to provide more attractive walking and cycling routes that do not necessitate utilising longer distance vehicular routes into the site. Provision of additional bus stops to better serve the eastern end of the site should also be considered alongside these proposals in support of the long term growth of the site.

Bus services to the Belmont Business Park are limited. Work on this issue should focus on discussions with operators to increase the frequency of bus service travelling into and past Belmont Business Park, potentially through the Sniperley-Belmont Park and Ride service stopping at Belmont Business Park, though other local bus service options may be more appropriate. The bus stops are not ideally located, and any upgrade to service should be complemented by the relocation of bus stops on Belmont Link Road to better serve Belmont Business Park.

A range of more minor measures can also be considered around Belmont and Dragonville that focus on address safety and connectivity problems for people on foot and cycling. The approach in these areas should focus on improving 'missing links', and in addressing crossing points on main roads and at junctions.

Broad proposals are illustrated in plans within Appendix A. The package of improvements in the north-east of Durham City will again be subject to feasibility studies, consultation with local residents and businesses; and where appropriate, subject to business cases to attract external funding. These feasibility studies will assist in determining the timing and priority of elements within the package.



City-wide supporting measures

INTRODUCTION

There are a number of interventions that will support the promotion of, and investment in sustainable modes that should be considered on a city-wide basis. These are illustrated in this section.

WALKING

Walking is the glue of all transport systems. All journeys, however short or long, by whichever primary mode, contain an element of walking, often at the start and end of journeys. In support of specific measures in certain locations, and activities with organisations such as employers and schools that have been described in the sections that precede this chapter, there are measures that are applicable across the city to support walking, consistent with the priority given to pedestrians in the hierarchy shown on p18 of this report.

Reducing the speed of traffic is an important outcome that makes walking safer, and more attractive. Many parts of the historic core of Durham City already have relatively low traffic speeds, due to the physical nature of streets in and close to the Peninsula. Consideration should be given to more widespread speed reduction on streets across the City, whether by direction through area wide 20mph speed limits, or through physical measures to promote speed reduction.

Facilitating convenient and safe crossing streets, even where there are signalised crossings, should be prioritised. Signal timings for pedestrian phases should be reviewed to ensure that pedestrians have sufficient time to cross roads, a measure that will be particularly beneficial to elderly and disabled people. Priority for pedestrians in crossing streets should be provided through pro-active measures, including reducing wait times when a 'green man' has been called by pedestrians at signalised crossings.

Safety and convenience for pedestrians can also be addressed through continued enforcement of traffic regulations. Enforcement already effectively addresses illegal and pavement parking, which obstructs pedestrian routes and can lead to safety concerns, and this should be sustained.

CYCLING

The strategy for cycling should include a wide-range of measures to increase cycling levels across Durham City, including investment in safe, continuous routes for cyclists. This approach should be based on a hierarchy of cycle routes tailored to local circumstances and the need for enhanced protection for cyclists.

The Council is presently undertaking cycle audits across County Durham, and is developing *Cycling Super Routes*, and a network of complementary routes throughout the County. This represents a

significant opportunity to develop Durham City's cycle network through the provision of continuous, safe routes.

The hierarchy of provision should follow an approach that prioritises traffic reduction, speed reduction, redesigning junctions and reallocation of road-space as the most desirable solutions for achieving more and safer cycling; while converting footways (pavements) to shared use for pedestrians and cyclists, remains the last consideration³⁴.

Segregated facilities separating cyclists from motorised traffic are suggested where roads are considered too busy or fast for cyclists to mix with other road traffic. This would typically include the main roads leading into or bypassing Durham City. Advisory on-road routes and junction improvements are suggested where traffic flows and speed limits are lower. Along these routes it may be that the key barrier to safe cycling is mainly caused by a junction or roundabout that does not currently cater for use by cyclists.

The user hierarchy from *Manual for Streets* must be considered when assessing the appropriate cycle infrastructure solutions and designs for all infrastructure should adopt a 'cycle proofing

³⁴ Department for Transport, 2008, Cycle infrastructure design

approach', to ensure that the needs of cyclists are addressed in all design. For example, shared use paths would not be appropriate where there are high levels of pedestrian activity and in this case the needs of pedestrians would take priority, with segregated or advisory routes required for cyclists.

A wider rollout of Advance Stops Lines at existing signalised junctions should be considered where space permits.

Cycle parking

Measures to increase the provision of high-quality and secure cycle parking should be brought forward, especially in the city centre. This should be conveniently positioned at frequent intervals through the city centre and at other district and employment centres.

Secure long-stay cycle parking should be provided at transport hubs, including the railway and bus station.

Cycle hire

Options should be explored for a public bike hire scheme at key points within the city. Electric bikes could be considered as part of the cycle hire offer – this aims to tackle the topography issue raised by stakeholders and to allow users to try something new.

Cycle information

An up-to-date city-wide cycle map detailing all routes and facilities including advisory routes and cycle parking should be published. This should be easily accessible, in both electronic and paper format.

PUBLIC TRANSPORT

The strategy for public transport should include a range of supporting measures to increase bus and rail use within Durham City.

This should include improvements to the presentation and information provision at the existing bus station and adjacent bus stops in the interim until the new bus station is constructed.

There should be a continued rollout of real time information at stops across the city, which could be achieved through QR codes for individual bus stops as well as through visual displays.

Bus ticketing and on-board experience

The strategy encourages the continuation of work with bus operators to develop a competitively-priced multi-operator ticket for Durham City. Operators are working to develop an appropriate product.

Wi-Fi is popular on services as this is known to be a key incentive for younger travellers and will therefore attract the next generation of bus users. A programme of investment in updating all buses to include Wi-Fi should be encouraged.

Park and Ride

Distinctive branding on vehicles and at stops should be introduced to raise the profile of the service and aid visitors in finding the correct stop for the return service. The service could be marketed more prominently, including targeting of leisure users and visitors to increase usage outside of the peaks. This should include working alongside other stakeholders such as 'This is Durham.'

Extending the hours of operation for the Park and Ride services and sites should be considered to allow those working shifts or enjoying the evening economy to use the service. It is acknowledged that the extension of services to operate later in the evening will require a greater level of subsidy, possibly substantial.

Rail services

Durham City is well served by a main line rail station, which is hugely important for business, the visitor economy and the student population.

However, evidence from the 2011 Census shows that there are presently very limited numbers of in-commuters each day, and while there are more out-commuting trips, these flows are focused on journeys between Newcastle and Durham.

A short term aim should therefore be to address another potential local rail market, and investigate options to provide improved service (ideally an hourly service) to Chester le Street, given that it is a key travel to work market to Durham City and is only 6 to 7 minutes away by train.

To enable the timetabling of an improved service is complex given the constraints of operating on the East Coast Main Line, and the (entirely appropriate) prioritisation of long distance high speed trains on the line. Improvement to the service may possibly require investigation of very expensive, long-term aspirations, such as through the reopening of the Leamside Line, which could free capacity on the East Coast mainline to allow a more frequent service to Chester-le-Street.

Reopening of the Leamside Line (with a station at Belmont) would also provide a more convenient station for residents from the east of the city to access destinations in Tyne and Wear to the north, reducing the need to cross the Milburngate Bridge to access Durham Railway Station.

CAR CLUBS

Introduction

Car clubs form a useful component of the urban transport mix, providing an alternative travel option where particular journeys cannot easily be made by public transport, walking or cycling.

There is strong evidence of the beneficial impact of car clubs for cities, organisations and individuals. The Carplus 2015 Annual Survey for England and Wales shows that each car club car removes 4 private vehicles from the network and helps subsequently defer purchase of private vehicles amongst members. Once individuals become car club members their level of use of the car drops (on average by 22%) and their use of alternative modes (walking, cycling, public transport) increases.

Car clubs present an opportunity for businesses to significantly reduce their business mileage by moving some of their business travel to the car club instead of grey fleet. This can deliver financial savings, administrative savings and support the employer's objectives with regards duty of care and corporate social responsibility.

Car clubs also have a demonstrable beneficial impact on emissions. The age and environmental

performance of the car club fleet is superior to the national fleet and, mile for mile, produce far lower levels of CO₂, NO_x and PM10 emissions.

Over the last decade, car clubs have been enjoying double digit growth. In London, there are 135,000 car club members and there is ambition to grow car club membership to 1 million, illustrating the potentially significant scale they could reach and role they could perform.

Approach

Durham City currently has a small, quite new car club operated by Co-Wheels.

We recommend that Durham County Council should strongly support the development and expansion of car clubs in Durham City (and across the county).

This support should be reflected in parking policy, with spaces provided for car club vehicles where there is demand for them.

The introduction of car club cars at interchanges and in new developments should be supported.

Car clubs should be integrated into the broader mobility offer: car club information should be incorporated into general transport information, such as on-line information portals. Public transport smartcards should incorporate car club membership. In the longer-term, car club membership should be incorporated into personal mobility accounts (where users pay for public transport and other transport services), to provide seamless access to the suite of transport choices.

Adoption of car club for Council business travel

A major opportunity to grow the Durham City car club whilst promoting travel planning is for the Council to examine the business case for using the car club as pool cars for business travel. If this is done in association with the introduction of a 'Travel Hierarchy' - where grey fleet is only used as a mode of last resort - it offers the potential for the Council to reduce its business mileage and make financial savings, whilst providing a strong base for the Durham City car club to expand from.

LOW EMISSION VEHICLES

Low emission vehicles (LEVs) will become more popular and important over time. They offer significant air quality benefits as well as financial savings on fuel.

Barriers at the moment to their wider uptake are lack of awareness and the limited extent of the charging network (alongside perceived 'range anxiety').

Approach

Durham County Council should strongly support the uptake of LEVs as part of a wider Low Emissions Strategy.

It should look to use every opportunity to expand the network of charging points to support electric vehicle use, into public car parks (including Park & Ride), at interchanges, in new developments and at

key trip destinations such as hospitals, supermarkets and hotels.

Through the employer travel planning work stream, the Council should look to encourage employers to adopt LEVs for pool cars. This may involve support to install electric charging points and offering trials of electric vehicles as pool cars over short periods so that employers can assess whether they work for them, alongside support for hybrid and other LEVs. Once there is a critical mass of employers involved in employer travel planning, the council should organise an LEV 'roadshow' which provides test drives of electric and other LEVs, and electric bikes as well as the opportunity to sign up to a LEV or car club trial.

The taxi trade can be encouraged to take up LEVs through an incentive scheme whereby when a taxi firm or driver is replacing a current vehicle, the Council provides a grant to 'upgrade' to a like-for-like LEV model.

Similarly, local bus operators should be encouraged to consider the potential for using LEVs on local bus services. The Park & Ride and shuttle bus services may be particularly appropriate as localised services.

Car clubs can also be used as a mechanism for rolling out LEVs, giving people the opportunity of experiencing them.

POWERED TWO WHEELERS

Typically, policy levers to support powered two wheeler use focus around the provision of sufficient and appropriate secure parking; the use of bus lanes and other priorities; and the prevention of theft.

Powered two wheelers can presently park free of charge in any on-street pay and display bay, any Council operated car park, and in any permit holder area in Durham City. Secure motorcycle parking is available at Claypath, Framwelgate Waterside, Sands Car Park, and the Rail Station. Evidence from Durham County Council suggests that this provision is adequate and meets the needs of users. Should evidence suggest that additional parking is needed, this strategy supports the investigation and provision of additional secure facilities as appropriate.

The Council presently allows motorcycles to use bus lanes in Durham City. This priority for powered two wheelers should be supported while evidence suggests that the benefits of the policy remain positive, and that this does not lead to safety issues for pedestrians, cyclists, powered two wheeler users, and other road users.

Evidence supplied by Cleveland and Durham Specialist Operations Unit (traffic management team) identifies that only one motorcycle has been stolen from a public car park in the Durham City area in the five years to February 2016. This strategy supports the continued provision of secure parking facilities for powered two wheelers to maintain this level of security.

Finally, investigation of the use of powered two wheelers in enabling (often young) people to access employment through 'wheels to work' schemes will be supported, should the need for such a scheme be established in Durham City.

'Wheels to work' is a term used to describe schemes which provide affordable transport to individuals who are unable to access training, employment or education due to a lack of public or private transport. Schemes generally offer a scooter or moped to eligible applicants, with charges varying from scheme to scheme; however, others also offer journey planning advice and bike loan facilities. Typically these types of intervention have been promoted in rural areas where public transport is not available and transport options are very limited.

Whilst there are differing organisational models behind 'wheels to work' schemes, there are many common features in the actual operation as follows:

- Focus on helping young people aged 16-25 years;
- Aim to assist people access work, education or training opportunities;
- Loan of 50cc scooters (and other types), usually for limited periods of time (e.g. 6 months), together with provision of protective equipment;
- Provision of compulsory basic training;
- Comprehensive insurance is included, but users are liable for paying an excess for damage which is their fault.

FUNDING AND RATIONALE

There are a number of relatively low cost marketing and public transport supporting measures for immediate implementation, potentially using Local Transport Plan (LTP) or other stakeholder funding, which aim to support the recommendation for the immediate investment in *Smarter Choices*.

There is also an ongoing programme of *Smarter Choices* promotion throughout the lifetime of the plan with schools, employers and residents, which would ideally be funded through the Local Sustainable Transport Fund (LSTF). However, this funding stream is not currently anticipated to continue beyond March 2016, and there may be a need to fund part of the recommended *Smarter Choices* programme through other funding streams. This may include the LTP where appropriate. It will also be important to develop programmes of investment in order that the County Council and its partners are well placed to bid for specific competitive funding streams that may emerge to replace or supplement LSTF and similar programmes.

For example, it is envisaged that government will announce new funding to deliver the Walking and Cycling Investment Strategy in 2016, and there could be revenue funding available to deliver parts of the recommended *Smarter Choices* programme through this funding stream.

The Council should also engage with large employers in Durham City which are relocating (such as NS&I and the Passport Office) and with developers of new homes and businesses to

ensure any funding opportunities that may emerge are captured through third parties.

In terms of infrastructure, short term improvements in the city centre and measures to improve the pedestrian and cycle priority on the southern corridor towards the university should be the priority for implementation in the early years of the strategy. Short term improvements in the city centre could be funded through the LTP. The Local Growth Fund is a potential source of additional support for larger measures that contribute to delivering economic priorities across the City, including around the University. Also, as with funding for *Smarter Choices* measures, there may be capital funds available for measures to support the Walking and Cycling Strategy in 2016 from central government funding. This re-emphasises the importance of having programmes of investment ready for delivery to take advantage of ad hoc competitive funding opportunities. In all cases, early initiation of work on detailed feasibility and a business case to support improvements will be required.

In terms of the long term aspirations to reprioritise the A690 and provide sustainable transport improvements in the city centre alongside a new northern crossing of the River Wear, these measures will likely be delivered towards the end of the strategy due to high scheme costs, and the interdependencies between these proposals and other investments.

This means that there is then the opportunity to implement the north-western and north-eastern infrastructure improvements in the middle of the strategy (approximately years 5 to 10) to promote a

'whole city' approach and to ensure that the sustainable feeder routes to the city centre are fit for purpose when the transformational change expected from the A690 reprioritisation is implemented.

Opportunities to achieve the delivery of measures using third party (potentially developer) funding should be embraced where possible, throughout the course of the strategy. Again, this further emphasises the importance of having programmes of investment ready for delivery.

Monitoring and Evaluation

IMPACT OF MEASURES WITHIN THE STRATEGY

The broad impact of measures contained within the strategy (identified from available research) is presented in Table 1. Due to the different aims and objectives of the individual schemes, different outcomes have been measured with different impacts across the population concerned; therefore it is difficult to provide consistent comparisons of impacts across the variety of measures.

Nevertheless, in terms of a whole town approach, the town of Darlington was designated as one of three 'Sustainable Travel Towns' and implemented a programme of *smarter choices* measures estimated at £4.4m between 2004 and 2009. The town was also selected as one of six Cycling Demonstration Towns in 2005 which resulted in an additional £500k of funding per year to 2009, largely for cycling infrastructure improvements. The town therefore provides a strong local example of what may be achieved through a combination of infrastructure investment and the implementation of *smarter choices* initiatives over a number of years.

Within Darlington, from 2004 to 2008, the following changes in the number of trips by residents were observed³⁵:

- 10% increase in walking trips
- 5% increase in cycling trips
- 2% decrease in public transport trips
- 5% decrease in car passenger trips
- 11% decrease in car driver trips

It should also be noted that the biggest falls in car driver mode share appear to have been among groups either at a point of change in their lives (at college, looking for work, or recently retired) or on a reduced income. There was a smaller per head reduction in car trips by those in full-time work, though this still constituted 40% of the total reduction. This emphasizes the importance of timely intervention of *smarter choices* measures as part of a wider programme.

Table 1 on the following page is a summary of key impacts that may be achieved from the main individual measures included in the strategy taken from published research.

³⁵ L. Sloman, S. Cairns, C. Newson, J. Anable, A. Pridmore, P. Goodwin, The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Summary Report

Table 1 Potential impact of key strategy measures

Measure	Impact
Workplace Travel Planning	High quality Workplace Travel Plans (usually involving bus subsidy and/or parking management) can reduce commuter car use by 15-20%. Though marketing, cycle and car sharing measures alone are likely to achieve much less of an impact.
School Travel Planning	Car use at schools with a Travel Plan is generally 5-20% lower than those without.
Residential Travel Planning	Personalised Travel Planning with residents can achieve 20-35% increases in walking, 20-40% increases in cycling and approximately 15% increases in bus use. With a third of residents stating that they have reduced their car use, with mileage reduced by 20%.
Large investment in cycling infrastructure	Increase in cycling trips of approximately 10%, casualty reductions of up to 30%.
Improved bus station	New interchanges have generally been shown to provide personal security and accessibility benefits, but also an increase in footfall and spending in town centres (+5.5% and +7.4% respectively in Mansfield)
Reprioritising A690	On Maid Marion Way in Nottingham, remodelling of the dual carriageway through the city has resulted in a 56% increase in pedestrian counts on weekdays and a 29% increase on Saturdays.
Improved pedestrian environments	The Sheaf Square and Howard Street route in Sheffield (between the rail station and the city centre) has resulted in increases in pedestrian movements from approximately 3,200 to 8,700. Other improvements such as 20mph zones, safe routes to school and traffic calming were found to reduce accidents and increase take up of active travel.

The table shows that in terms of achieving significant levels of modal shift, *smarter choices* measures are those where previous research has identified the greatest benefits. However, the infrastructure based measures were shown to produce other benefits including increased spending in town centres and reductions in accidents, which could be considered just as important in promoting the prosperity of the city in accordance with the aspiration for an *Altogether Better Place* that is *Altogether Better for People* from the Sustainable Community Strategy.

EVALUATING THE IMPACT OF THE STRATEGY

The objectives of the Durham City Sustainable Transport Strategy are as follows:

- To support economic growth and improve access to economic opportunity in Durham City
- To improve access to education, training and economic opportunity for young people in Durham City
- To improve the health of people living, working and studying in Durham City
- To improve the safety of people travelling around Durham City
- To enhance the built and natural environment of Durham City

In order to monitor success against these objectives, the indicators presented in Table 2 will be used; which aim to build upon existing available data, or data that can be established at low cost through existing channels or working alongside stakeholders.

There is now the need to establish a baseline position for each of the indicators in the table, so that these can then be compared year-on-year to monitor the impact of the strategy in achieving its stated objectives.

Table 2 Strategy objectives and associated indicators

Objective	Indicator	Baseline	Target	Data source
To support economic growth and improve access to economic opportunity in Durham City	Accessibility of Durham City Centre as an employment centre (access within one hour and by 08:30 by public transport)	Accessibility as an employment centre, Baseline in 2010/11 ³⁶ - Durham City 74.9%	Maintain or improve accessibility of Durham City Centre as employment centre.	Durham County Council Accession Tool
To improve access to education, training and economic opportunity for young people in Durham City	Percentage of pupils walking, cycling or using public transport to school identified through hands-up survey	Baseline 2012 ³⁷ - Primary 51% - Secondary 72.1%	Target for a 15% increase in use of walking, cycling or public transport.	Mode Shift STARS
	Percentage of students walking, cycling or using public transport to training opportunities identified through site travel plan monitoring	Baseline to be established through site travel plan monitoring	Target for a 15% increase in use of walking, cycling or public transport.	Site travel plan monitoring
To improve the health of people living, working and studying in Durham City	Level of nitrogen dioxide at monitoring sites within Durham Air Quality Management Area	Baseline to be established as part of Air Quality Management Area Action Plan	Target to be established as part of Air Quality Management Area Action Plan.	Durham County Council monitoring
	Percentage of pupils walking or cycling to school identified through hands-up survey	Baseline 2013 ³⁸ - Primary 47.8% - Secondary 33.1%	Target for a 10% increase in use of walking, cycling or public transport.	Mode Shift STARS
	Percentage of employees walking or cycling to work identified through employer travel plan monitoring	Baseline to be established through employer travel plan monitoring	Target for a 10% increase in use of walking or cycling.	Employer travel plan monitoring
To improve the safety of people travelling around Durham City	Number of pedestrians killed or seriously injured annually in Durham City	- 24 per year (average over period 2010 – 2015)	40% reduction	STATS19
	Number of cyclists killed or seriously injured annually in Durham City	- 9 per year (average over period 2010 – 2015)	40% reduction	STATS19
To enhance the built and natural environment of Durham City	Level of nitrogen dioxide at monitoring sites within Durham Air Quality Management Area	Baseline to be established as part of Air Quality Management Area Action Plan	Target to be established as part of Air Quality Management Area Action Plan.	Durham County Council monitoring

³⁶ Local Transport Plan 3, Durham County Council

³⁷ County Durham Sustainable Modes of Travel Strategy 2012

³⁸ Ibid

Appendix A – Indicative plans for wider city area

