DURHAM CITY SUSTAINABLE TRANSPORT DELIVERY PLAN 2019-2035

DELIVERY PLAN

Durham County Council

SYSTRA

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1. INTRODUCTION

This Sustainable Transport Delivery Plan 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 Delivery Plan is therefore timely in informing the preparation of the Local Plan, and will form part of the supporting evidence base relating to transport.

The delivery plan provides a framework within which the future sustainable transport provision for the City can be delivered. It is a vital element of the evidence base in demonstrating how development within the Local Plan can be accommodated within Durham City through maximising opportunities presented by new developments, and through the provision of appropriate levels of sustainable transport infrastructure to support development. Other work will be undertaken to provide evidence on 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 delivery plan also has a wider role in its position alongside the County's Local Transport Plan, which is a rolling strategy in its 8th year. This Sustainable Transport Delivery Plan therefore provides an opportunity to focus solely on Durham City and to consider how the latest evidence and research may apply to Durham. There are no anticipated changes to the LTP3 Strategy for the County as a result of the development of this Sustainable Transport Delivery Plan. However, future strategic transport plans will provide an overarching context to further support sustainable transport in Durham City while action plans will provide more clarity on the detail and timing of interventions. This delivery plan addresses specific local issues within the built up area of Durham City such as identified road safety concerns and local traffic congestion.

The Sustainable Transport Delivery Plan has been prepared in accordance with the objectives set out in the Sustainable Community Strategy. County Durham has a strong vision and 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 vision 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 Delivery Plan will help deliver this vision and 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 greater 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. The plan will tie in with the aims of the World Heritage Site Management Plan and the Conservation Area Appraisal.

As demonstrated in the logic maps within the section below on vision and objectives, the delivery plan has been prepared in accordance with the Sustainable Community Strategy and LTP3, and as such it has considered the need to promote equality, including the equality of opportunity and involving people, particularly disabled people in the preparation of the document, which aims to provide better accessibility for all people in the County.

There is significant potential for active travel and sustainable modes of transport in Durham. 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 that also work in the city are already walking to work (2011 Census). This compact nature also provides significant potential to promote 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 Sustainable Transport Delivery Plan seeks to address the City's transport challenges and support the City's local economic needs over the next 16 years, and will be followed by the development of area specific action plans.

This delivery plan 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 access to 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, SYSTRA will:

- Define the vision and objectives;
- Provide some background and context to the development of the delivery plan, including reference to a complementary *Issues and Opportunities Report*;
- Outline the delivery plan including ideas to be taken forward in later area action plans. This includes both infrastructure investments, to be delivered in phases across the City, and city-wide *smarter choices* and sustainable travel investments;
- Outline a monitoring and evaluation framework to measure the success of the delivery plan going forward.

1.1 Defining the vision and objectives

1.1.1 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. 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 Delivery Plan 2019-2035 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, a Sustainable Integrated Transport Delivery Plan is required to enable future economic, social, and cultural success to meet the ambition for a thriving Durham City. According to National Travel forecasts there will be a growing demand for travel in the period to 2035. The development of this Sustainable Transport Delivery Plan will be critical in meeting the needs of this growing demand for travel while supporting wider environmental and social outcomes across Durham City.

The vision therefore cannot simply be to accommodate all modes freely and without constraint. Economic growth will inevitably mean increases in movement, but we cannot accommodate this increase in movement by traditional cars within Durham's historic, and restricted, streetscape without adding to the air quality and safety issues that currently exist, or without damaging the very fabric of the city that makes it special. Therefore, this delivery plan must deliver the future demand for movement sustainably by increasing levels of walking, cycling, and public transport.

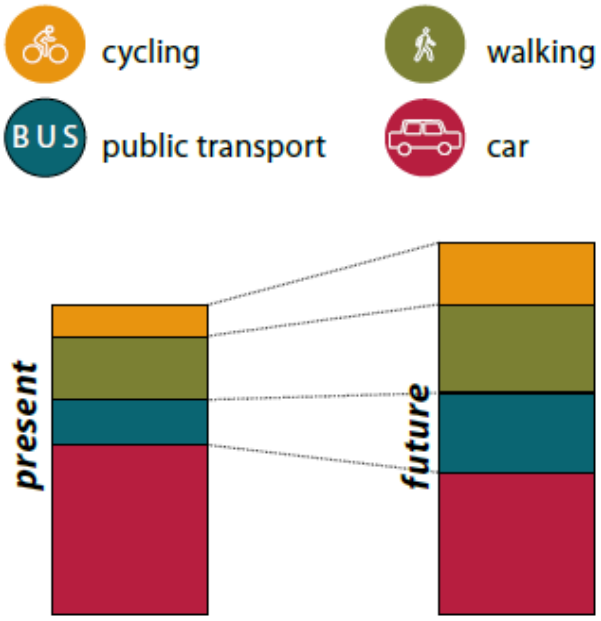


Figure 1.1 Future demand for travel

The infographic illustrates the challenge facing Durham City over the period of the Sustainable Community Strategy to 2035. There will be a growing demand for movement; and yet the car alone cannot meet all the demands for increased travel as wider environmental and townscape objectives necessitate reducing reliance on the private car, particularly in the city centre. A sustainable transport plan needs to be developed that seeks to reduce the need to travel in the context of economic growth and sustainable development in Durham City, and enables walking, cycling, public transport and car sharing to perform an increased role in meeting the city's movement needs.

1.1.2 Objectives

The Durham City Sustainable Transport Delivery Plan 2019-2035 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 Delivery Plan 2019-2035 will therefore have five objectives that will support these priority themes, namely to provide a transport network:

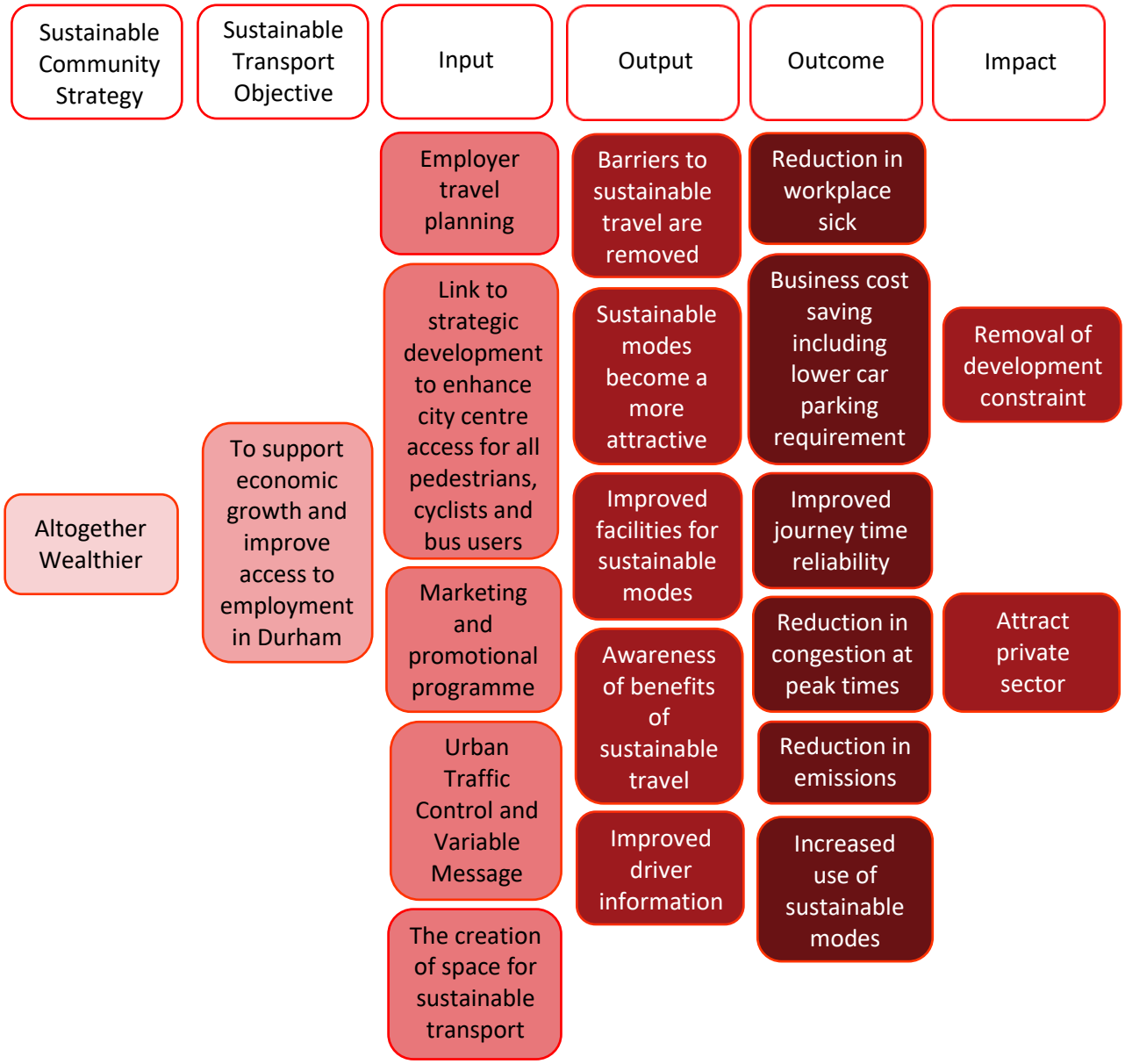
- To support economic growth and improve access to employment in Durham City;
- To improve access to education, training and economic opportunity for young people in Durham City;
- To improve the health of all people living, working and studying in Durham City;
- To improve the safety of all people travelling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

A number of logic maps are set out below to illustrate how the Sustainable Community Strategy themes and the five objectives of the Sustainable Transport Delivery Plan will deliver the long term transport needs of the city.

1.1.3 Altogether Wealthier

Making Durham altogether wealthier can be supported through the objective 'to support economic growth and improve access to employment in Durham City'. The inputs from the delivery plan include principles such as employer travel plans and links to strategic developments for pedestrians including wheelchair users, cyclists and bus users. Employer travel plans deliver outputs including the removal of barriers to sustainable travel, for example through the provision of workplace shower facilities, season ticket discounts or cycle purchase schemes, helping to make sustainable modes a more attractive way of travelling to work. This in turn delivers the short to medium term outcomes of increased use of sustainable travel modes, a healthier more productive workforce, reduced business costs, improved journey time reliability and the potential of reduced congestion at peak times. These short to medium term outcomes in turn lead to longer term impacts including the removal of development constraints and attracting private sector employers to Durham City. The removal of development constraints results from a possible reduction in congestion at peak times and increased use of sustainable modes leading to lower car trip generations for new developments and a reduced requirement for infrastructure improvements to facilitate development. Attracting private sector employers to Durham City follows from providing an attractive business location. In transport terms this can be seen as the provision of good transport links including a comprehensive sustainable modes network, business cost savings.

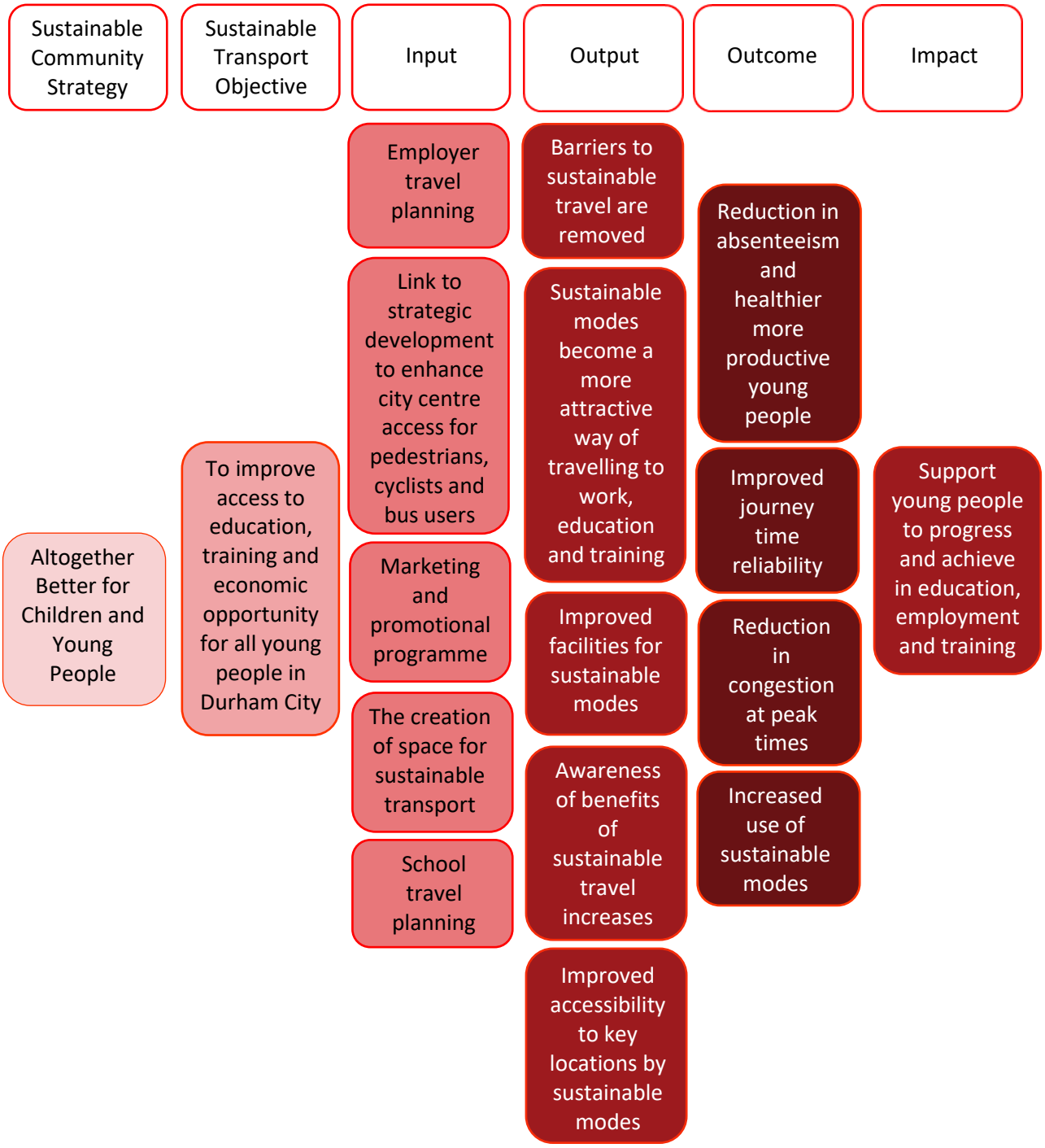
Figure 1.2 Altogether Wealthier



1.1.4 Altogether Better for Children and Young People

Making Durham City altogether better for children and young people is supported by the objective 'to improve access to education, training and economic opportunity for young people in Durham City'. The inputs from the delivery plan include principles such as school travel plans and the creation of space for sustainable transport. The plan also aligns with the key ambitions of the Durham University Strategy 2017-2027, helping to facilitate the University's strategic investment zones, character zones and joining up key walking and cycling routes around the University. These principles improve the accessibility of key locations by sustainable modes and make them a more attractive way of travelling, leading to an increased use of sustainable modes and subsequent reduction in congestion at peak times. The longer term impact of these principles is to support young people in progression and achievement in education, employment and training. This is delivered through provision of a safe, efficient and sustainable transport network to key locations for children and young people including links to schools, college, the university and work places. The principles also support and promote healthy lifestyles for children and young people through increased awareness of sustainable and active travel and a consequent increase in physical activity.

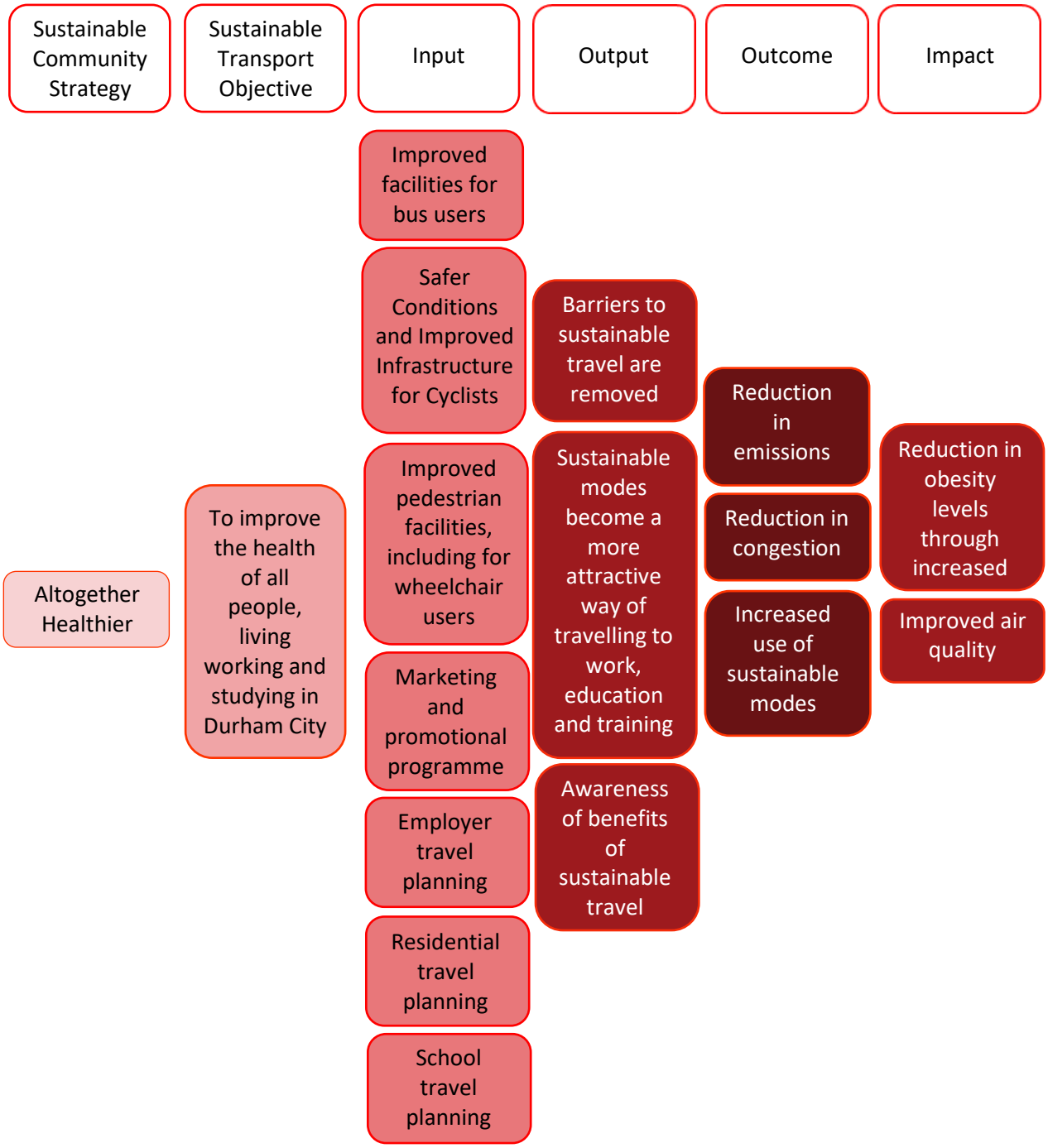
Figure 1.3 Altogether Better for Children and Young People



1.1.5 Altogether Healthier

Making Durham City altogether healthier is supported through the objective 'to improve the health of people living, working and studying in Durham'. The inputs from the delivery plan which feed through from this objective include residential travel planning and improved facilities for pedestrians including wheelchair users, cyclists, and bus users. Sustainable modes therefore become a more attractive choice for travelling, leading to an increased use of sustainable modes and a subsequent reduction and congestion and associated emissions. The longer term impacts include a reduction in obesity levels through an increase in physical activity, and improved air quality through reduced levels of congestion and emissions.

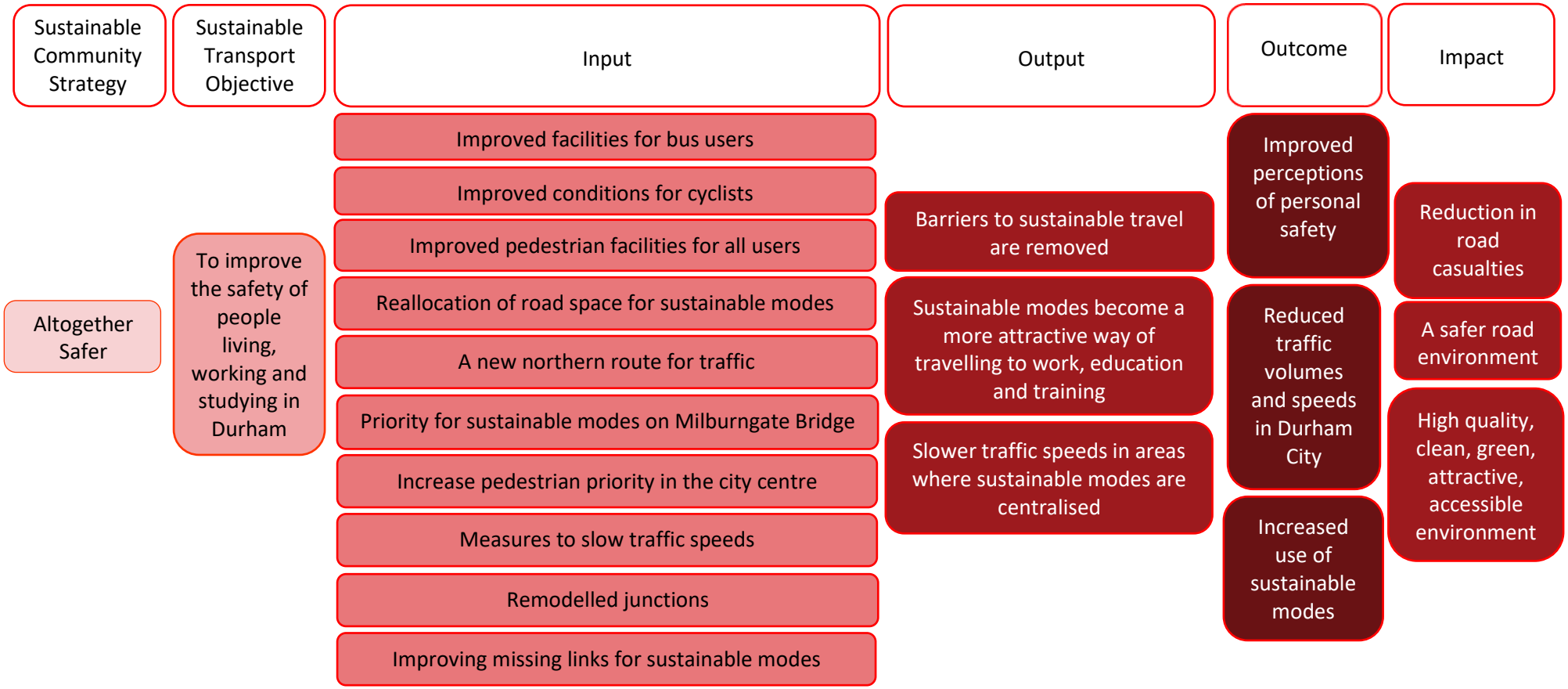
Figure 1.4 Altogether Healthier



1.1.6 Altogether Safer

Making Durham City altogether safer is supported through the objective 'to improve the safety of people living, working and studying in Durham'. The principles to deliver this objective include reallocation of road space for sustainable modes, remodelling junctions, improving missing links for sustainable modes, a new northern route for traffic and measures to slow traffic speeds. The outputs of these principles include slower traffic speeds in areas where sustainable modes, including vulnerable road users, are concentrated, alternative routes for through traffic reducing the volume of traffic in Durham City, and an improved walking and cycling environment for all users. The longer term impact is a safer road environment and a reduction in road casualties.

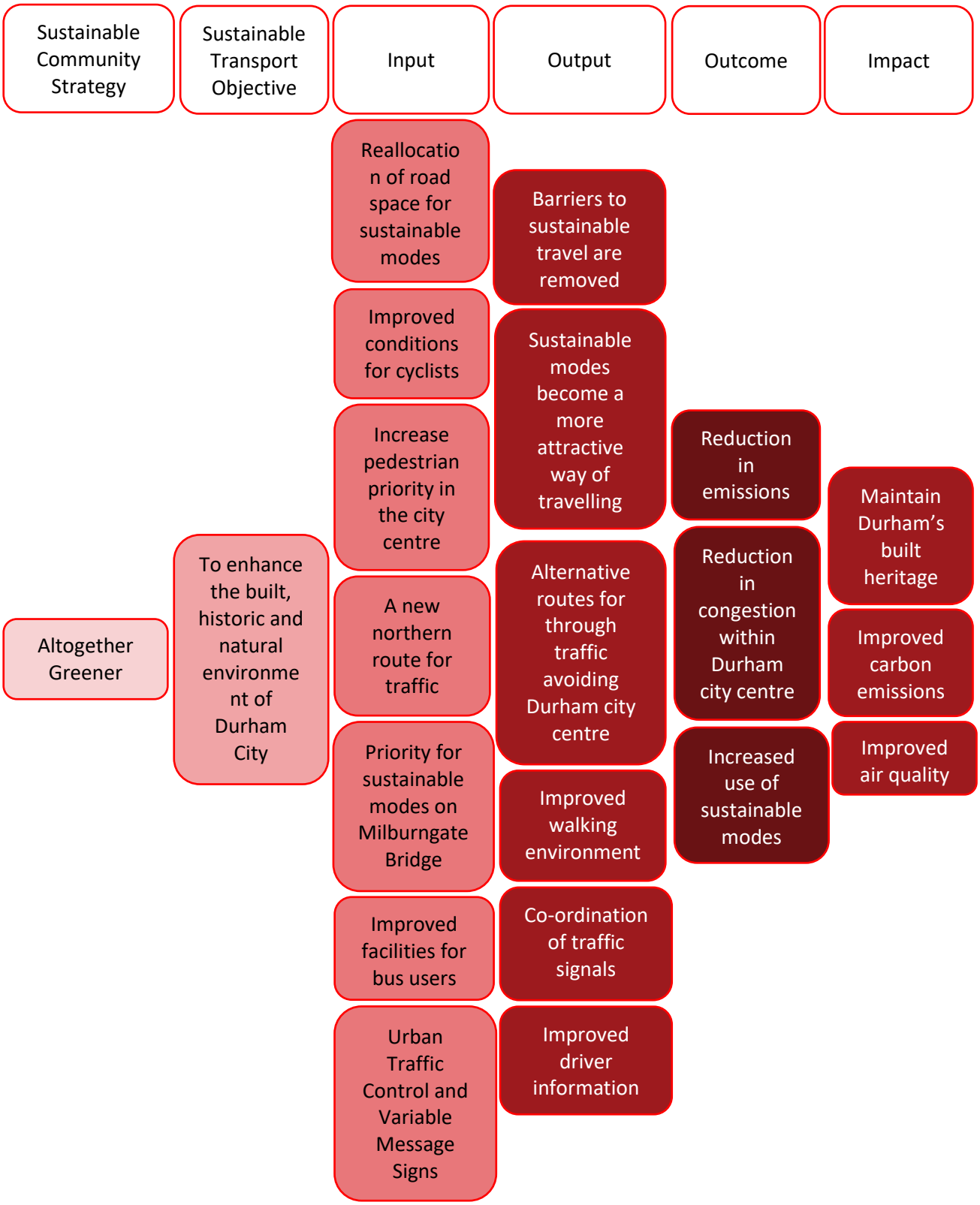
Figure 1.5 Altogether Safer



1.1.7 Altogether Greener

Making Durham City altogether greener is supported by the objective 'to enhance the built, historic and natural environment of Durham City.' The principles to deliver this include priority for sustainable modes on Milburngate Bridge and a new northern route for traffic. These principles provide an alternative route for through traffic avoiding Durham city centre and help to create more space for travel by sustainable modes. The short to medium term outcomes of this are a reduction in congestion within Durham city centre and a reduction in emissions associated with traffic volumes and congestion in Durham city centre. The longer term impact of these outcomes is to maintain Durham's built heritage by reducing through traffic, making the centre of Durham City more people centric and improving air quality.

Figure 1.6 Altogether Greener



2. CONTEXT FOR THE DELIVERY PLAN

2.1 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 older people, disabled people and children and young people, helping to achieve that objective too. Appendix A presents 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 delivery plan is set out in detail in the *Issues and Opportunities report* that accompanies this delivery plan. This identifies the policy background to the plan 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 plan, drawing upon this evidence base.

2.2 Summary of issues and opportunities

2.2.1 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 and heritage of Durham City has to be one of the priority outcomes that will need to be achieved.

2.2.2 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 private car and that some of these journeys could actually be undertaken by active modes.

Durham is a very walk-able city, with a significant proportion of the built up area of the city in 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. These improvements would also be of benefit to disabled people including wheelchair users. 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, wheelchair users, 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[1] 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 has improved links between Aykley Heads and the Railway Station. The County Council has created a new shared use pedestrian and cycle path to complement the existing cycle and pedestrian route on both sides of the A691 Framwellgate Peth to the train station. It also provides new pedestrian access via steps just to the north of the existing railway bridge. This work also includes:

- Widening of the existing footpath to station on the west side of A691 Framwellgate Peth;
- Improving street lighting and surfacing;
- Improving the current wooded environment with new trees and woodland wildflower planting.

This investment has helped improve key cycling links to the railway station, and created better pedestrian access routes to the railway station, which also benefits other users including disabled people in mobility scooters or wheelchair users.

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

[1] District centres are the Arnison Centre in the North West and Sherburn Road in the East.

- Limited signal controlled pedestrian crossing facilities on roads adjacent to district centres, employment areas and the hospital;
- Severance caused by the lack of adequate facilities at and direct access to existing pedestrian crossings over the A1(M);
- Severance caused by the internal layout of business park sites;
- Seclusion and personal safety issues along off-road footpaths and underpasses which are sometimes unlit;
- Limited crossing facilities where off-road footpaths intersect with trafficked roads.

2.2.3 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 principles 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 has been recently 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 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. This raises issues of affordability for some users, particularly for those people with less disposable income who are often more reliant on public transport;
- 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 and for disabled users in wheelchairs or using mobility aids 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.

2.2.4 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, or for disabled users in wheelchairs or using mobility aids. 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 and to improve surfaces for the benefit of disabled users. 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 a Cycle Network Planning process to audit, assess, plan and build a strategic network as part of the Councils Local Cycling and Walking Investment Plan (LCWIP). This includes the development of 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 principles 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 signal controlled shuttle in operation and cobbled surfaces, which also impact on disabled users;
- 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 the 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.

2.2.5 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 are unrealistic options for travel. 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 centres on road safety issues.

2.2.6 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 services?

2.2.7 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 at 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. Furthermore these narrow and constrained routes also prevent access for wheelchair users.

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 in 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. The traffic may also be impacting upon the historic fabric of the nearby heritage assets.

Data from 2015 (Durham City Model Rebase – Review of 2015 Traffic Data & Key Trends Analysis, July 2016) reveals that 33-36% of trips into the City are by vehicles that have no origin or destination in the city and this through traffic uses up limited highway space in the city and is a major factor in peak hour congestion. 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 wheelchair users 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 and of critical importance, is the potential improvement to the public realm within close proximity of the World Heritage Site.

2.2.8 Air quality

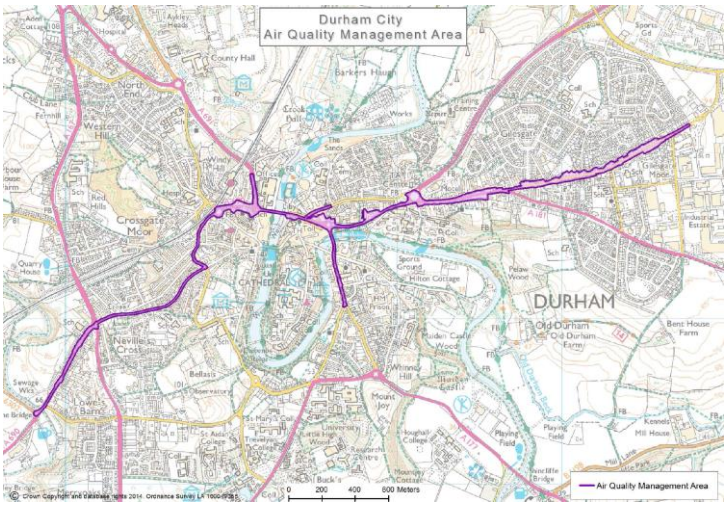
One of the most significant impacts of traffic in Durham City is that of emissions from traffic on local air quality. The EU's European Environment Agency says pollution is now also the single largest environmental health risk in Europe, responsible for more than 430,000 premature deaths, and the World Health Organisation has issued new warnings about deadly levels of pollution in many of the world's biggest cities, including the influence of traffic emissions[2].

Durham County Council has declared an Air Quality Management Area (AQMA) in Durham City due to elevated concentrations of nitrogen dioxide (NO_2) near to major roads[3]. The plan below illustrates the AQMA in Durham City.

[2] World Health Organisation, *Shock figures to reveal deadly toll of global air pollution,* article dated 16th January 2016

[3] AECOM (2016) Durham County Council Air Quality Action Plan for Durham City

Figure 2.1 Durham City AQMA



The levels of NO_2 vary across the extent of the declared AQMA. In particular, the levels of nitrogen dioxide have exceeded the national annual mean air quality objective (40 microgrammes/m^3) at the following locations:

- The north side of Gilesgate, in close proximity to the Gilesgate roundabout;
- In close proximity to the junction of Church Street and Hallgarth Street in New Elvet;
- On Belle Vue Terrace in close proximity to the junction of Church Street and Hallgarth Street in New Elvet;
- On Sutton Street and Alexandra Crescent on the approach to the traffic lights at the Crossgate junction;
- In close proximity to the junction at Nevilles Cross.

These are locations in the city where traffic congestion or the queuing of vehicles occurs.

However, it is noted that the measured level of NO_2 has not exceeded the one hour short term air quality objective (200 microgrammes/m^3 that must not be exceeded on more than 18 occasions over a year) at any of the above locations.

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 for supporting the removal of traffic from these areas. The main axis of the AQMA passes directly across Milburngate Bridge, and a 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[4] complements the Sustainable Transport Delivery Plan in terms of air quality objectives and solutions for the city and identifies 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:

[4] AECOM (2016) Durham County Council Air Quality Action Plan for Durham City

- 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;
- The retrofitting of emissions abatement systems on diesel engines on buses using routes within the declared AQMA;
- The encouragement of hybrid bus operation on routes within the declared AQMA;
- Ensuring Park and Ride buses are compliant with the Euro VI emissions standard;
- The development of a comprehensive cycle network to encourage modal shift across Durham City that links into national and county cycle routes;
- The 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;
- To undertake detailed dispersion modelling of air quality emissions from any development growth and infrastructure that may potentially have an impact on air quality within and on the periphery of the declared AQMA. The outcome of this will enable opportunities to mitigate any detrimental impacts and potential benefits to be identified;
- The establishment of an Air Quality Strategy that will integrate the strategic policies covering air quality in relevant local strategic policy documents;
- To raise awareness of air quality by undertaking a campaign that will integrate with and involve other campaigns elsewhere in the Council to improve air quality;
- Installation of variable message and a car park direction signing system to direct traffic to available parking;
- The provision of other travel and driver information integrated with the UTMC and to explore the provision of information on air quality through the use of texts, email alerts and social networking;
- To explore whether it is viable or not to progress the introduction of variable charges for residential parking permits with preferential rates for low polluting vehicles (with regard to local air quality effects);
- To explore whether it is viable to extend existing Park and Ride routes and/or the provision of further Park and Ride sites;
- To explore the options for additional highway infrastructure to enable the removal of through traffic from the city centre.

One of the principal environmental benefits of this Sustainable Transport Delivery Plan will be to improve air quality in the city centre. In the short term, this will be done by encouraging modal shift through the principles set out in this delivery plan, in combination with the reduction of congestion and standing traffic through improved UTMC and Variable Message Signage (VMS).

As well as these transport interventions, the Council is looking at enhancing Green Infrastructure within the City by erecting green walls in the AQMA as a way of reducing transport related air pollution and to increase the deposition rates of NO_2, PM and carbon emissions.

Both NO_2, PM and carbon are deposited onto surfaces at rates that vary according to the nature of the surface. Deposition rates to vegetation are much higher than those to hard, built surfaces. By increasing deposition by planting vegetation in key areas throughout the city environment, and in particular along the main roads, this can reduce street-level concentrations by as much as 40% for NO_2 and 60%[5] for PM and can act as a carbon sinks. Features such as street trees, hedges, green roofs and

[5] Environmental, Science and Technology (2012) Effectiveness of Green Infrastructure for Improvement of Air Quality in Urban Street Canyons, 4th June 2012https://pubs.acs.org/doi/abs/10.1021/es300826w).

living/green walls all help to contribute to an increase in deposition and therefore a reduction in concentrations of both NO_2 and PM as well as sinking carbon emissions.

These features also provide other benefits for example by increasing urban cooling, managing storm water, surface water flow, and creating a more aesthetic environment to work and visit.

2.2.9 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. The Council as a major employer within the city, is reducing the number of free parking spaces available to its own staff, as a result of the relocation of its headquarters. There will be investment in additional park and ride capacity to offset the reduction in parking spaces available for Council staff on site.

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 is hazardous to pedestrians and wheelchair users, and could potentially be allocated to sustainable modes.

2.2.10 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.

3. DELIVERY PLAN

3.1 Introduction

3.1.1 The value of investing in sustainable transport

It is widely recognised that investing in transport can yield significant benefits: economic, social and environmental. In developing this plan it is important to recognise that a broad range of investments will be required to deliver these economic gains, not simply investment in traditional highways infrastructure solutions. A holistic transport delivery plan can also provide a wide variety of impacts through a range of interventions, achieving associated benefits beyond improvements in mobility and economic performance. These include health benefits and a range of social and environmental benefits. Empirical evidence and case studies that illustrate this value can be found in Appendix A.

A delivery plan to invest in sustainable transport will help achieve the ambition for Durham to be an altogether better place for people. Such a plan 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. To meet the aims and objectives set out earlier, the overarching delivery plan must encourage greater sustainable transport use in Durham City over the next 16 years through the implementation of the following themes:

3.1.2 The creation of space for sustainable transport

At present everyone competes for the same space, with the consequence that, in most places, the car dominates, and wheelchair users 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 space for movement within Durham City will help to realise the ambitions to promote sustainable travel, and to release the constraint on increasing levels of walking, cycling, and bus use, bringing economic, social, and environmental benefits. The creation of space will enable the establishment of priority routes for people walking including wheelchair users, cycling, and using the bus.

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

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

3.1.3 Re-allocation of road space to sustainable users

A principal focus for the delivery plan is the re-allocation of road space; in the city centre and on corridors across the city. Creating safe continuous routes for people walking including wheelchair

users and cycling, improving park and ride and creating clear uncongested routes for buses, will help support a shift to sustainable modes and help reduce transport pollutants.

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 help, tackling principally those journeys with destinations within the city. However, evidence from recent traffic surveys (2015) suggests that around 33-36% 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 replacement 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 replacement 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'.

3.1.4 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'. 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.

This encouragement of the use of sustainable alternatives, promoting long term changes in travel behaviour will be one of the principal tools within this plan to deliver a mode shift to more 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 travelling by 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 noteworthy 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 longer 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 relocation of the Council offices to a more central location with less car parking.

3.1.5 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 opportunity to enhance city centre access for pedestrians including wheelchair users, cyclists, and bus users.

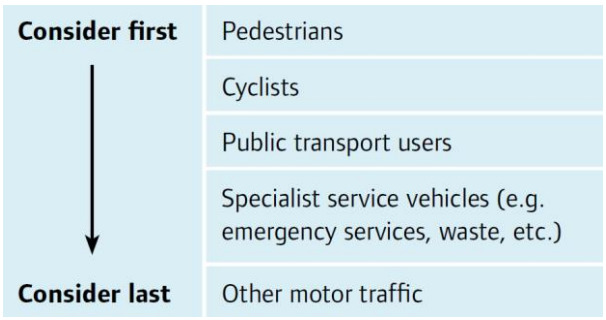
These major development proposals close to the heart of the city must be used as opportunities to fund and deliver new facilities for walking, cycling and public transport. This may be in the form of improved passenger waiting and bus stopping facilities in the city centre, or for new routes for walking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

3.2 Place and movement hierarchy

In developing the Durham City Sustainable Transport Delivery Plan 2019-2035, 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 delivery plan.

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



In addition to the user hierarchy quoted above, Durham County Council's Parking and Accessibility Standards (2014) place mobility impaired and disabled persons at the top of the list of users to be considered when designing development.

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.

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 plan 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, this is particularly pertinent.

3.3 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 plan 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 must 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 Standards (2014) already require that developments 'are designed to encourage travel by more sustainable modes of travel', and advise that demand for travel can be influenced by 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 principles may be included:

- Ensuring developments are 'permeable' for walkers including wheelchair users and cyclists. A grid system is preferable to cul-de-sacs as these allow for more direct routes. Large developments must 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 must be specified for new developments, and the design of buildings must 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;
- As part of improvements to the walking and cycling network, the opportunity exists to design and introduce Green Infrastructure. This can include city tress and walls for carbon sinking or green corridors, such as river and canal banks and cycling routes, and urban greenspaces, such as urban parks and informal recreation spaces.

In relation to public transport, the following measures must 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 will 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 spaces at the place of destination. Hence a balance needs to be struck between the lower levels required to support the Sustainable Delivery Plan 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.

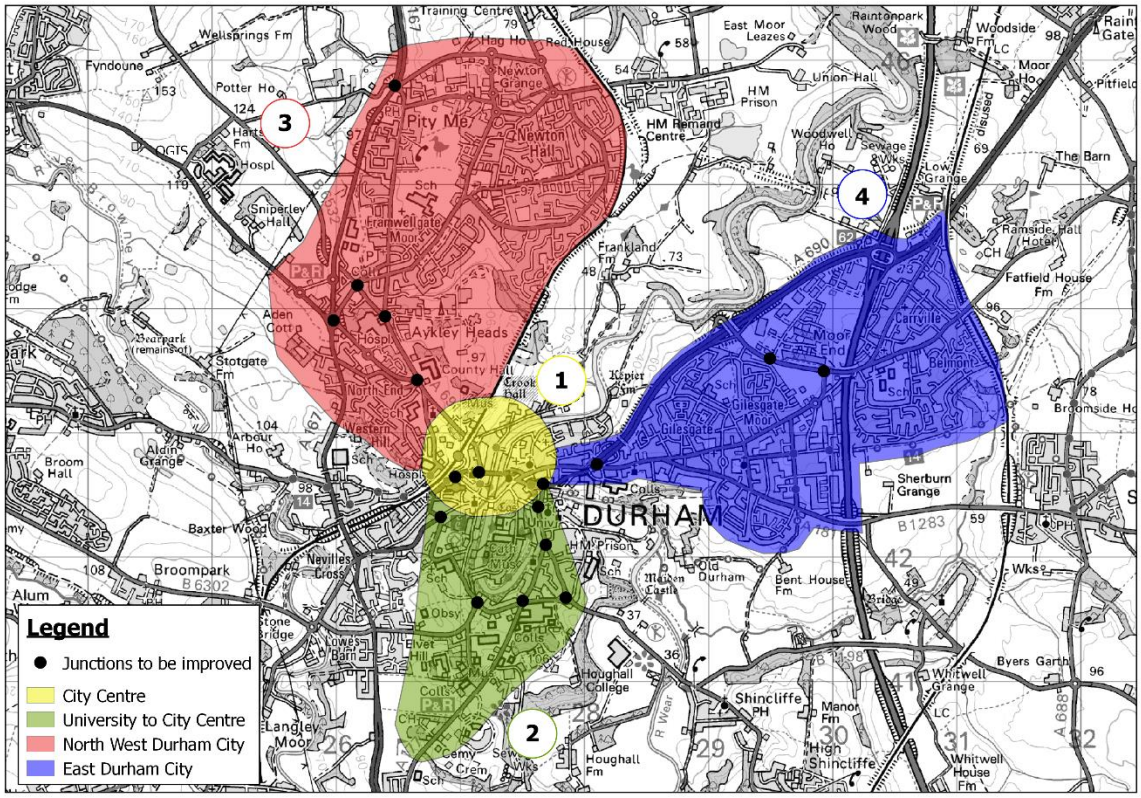
All new development should also incorporate electric charging points for low emission vehicles (in support of the council's Air Quality Management Area Action Plan) and consider the introduction of a car club (where there is sufficient demand for viability) in order to support more flexible mobility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

Development control policies based around these principles will 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 principles are incorporated into new developments, which could be achieved through developing a Sustainable Design Guide.

3.4 Delivering the plan

Delivering a plan that promotes sustainable modes will require a series of inter-related short and long term actions. The plan focuses on the built up areas of Durham City and outlines an area-based approach to the infrastructure programmes, supported by city wide measures to support sustainable transport modes. The infrastructure programmes within the plan are focused on four areas, illustrated in Figure 3.1.

Figure 3.1 Area-based approach to sustainable transport investment



Both infrastructure investment and activities to promote travel behaviour change to more active and sustainable forms of transport are necessary. The two strands of activity will need to be delivered in parallel, as complementary programmes of investment. In the short term, this means that promoting and influencing changes in travel behaviour will be one of the principal tools in managing the demand for car travel, and to encourage a mode shift to sustainable modes. These *smarter choices* and behavioural change principles 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 mode shift to more 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 delivery plan.

The Durham City Sustainable Transport Delivery Plan will be followed by the development of area specific action plans.

3.4.1 Smarter choices plan

The *smarter choices* plan 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* principles 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.

The smarter choices plan is defined fully later in this document, in chapter 5.

3.4.2 Infrastructure plan: the re-allocation of space to sustainable modes

Infrastructure investment needs to be delivered to achieve the re-allocation of space to sustainable modes, to lock in the benefits of mode shift resulting from changes to travel behaviour delivered through the *smarter choices* plan. This will include the provision of more priority for mobility impaired and disabled users, pedestrians, cyclists and public transport, in line with the hierarchy of users identified earlier in this report. This hierarchy demands the consideration of provision for mobility impaired and disabled users first, in accordance with Durham County Council's Parking and Accessibility Standards.

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 plan'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.

The provision of replacement road space is supported, to enable the removal of some of the traffic from the city centre as a complement to meaningful re-allocation of space to walking, cycling and public transport in the city centre. It is the city centre where space is most constrained, and where the support of sustainable modes in providing access for people wishing to take advantage of economic opportunities including employment, shopping and tourism is most crucial.

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

- Measures to re-allocate space to sustainable modes, through investment in infrastructure across Durham City. This requires action in the short-term, and a commitment to investment over the next 15-20 years;
- A *smarter choices* programme to influence travel behaviour, and managing the demand for travel, especially by car; and promoting the use of sustainable modes.

4. INFRASTRUCTURE MEASURES: THE RE-ALLOCATION OF SPACE TO SUSTAINABLE MODES

4.1 Introduction

In this chapter we will illustrate the principles required to re-allocate space to sustainable modes across Durham City. There are 'mini-plans' for each sub area. This is presented spatially as follows:

- City centre and associated investments – to continue to improve the City's transport infrastructure, with, in the longer term, significant re-allocation of space to pedestrians, cyclists, and public transport, including on routes across the city such as on Framwellgate Bridge;
- University to the City Centre – with a focus on providing more space for the existing large numbers of pedestrians using the corridor between the University and city centre;
- North-western corridor towards Aykley Heads, Sniperley, Framwellgate Moor, Newton Hall – with a focus on the missing links for walking and cycling, including through and across main roads and junctions on the busy trafficked roads in the area;
- North-eastern corridor along Gilesgate, the A690, and towards Belmont, Carrville and Dragonville – including appropriate improvements for all modes, including walking, cycling and public transport on congested routes in the corridor.

4.2 Investment in sustainable modes across the city

Investment in improved infrastructure is needed across the city in the short term to support the *smarter choices* principles, 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 plan to 2035. In practical terms, the limitations on resources will require these programmes to be prioritised within the Local Cycling and Walking Investment Plans (LCWIPs), and to take advantage of funding opportunities associated with new developments, in addition to publicly funded programmes of investment.

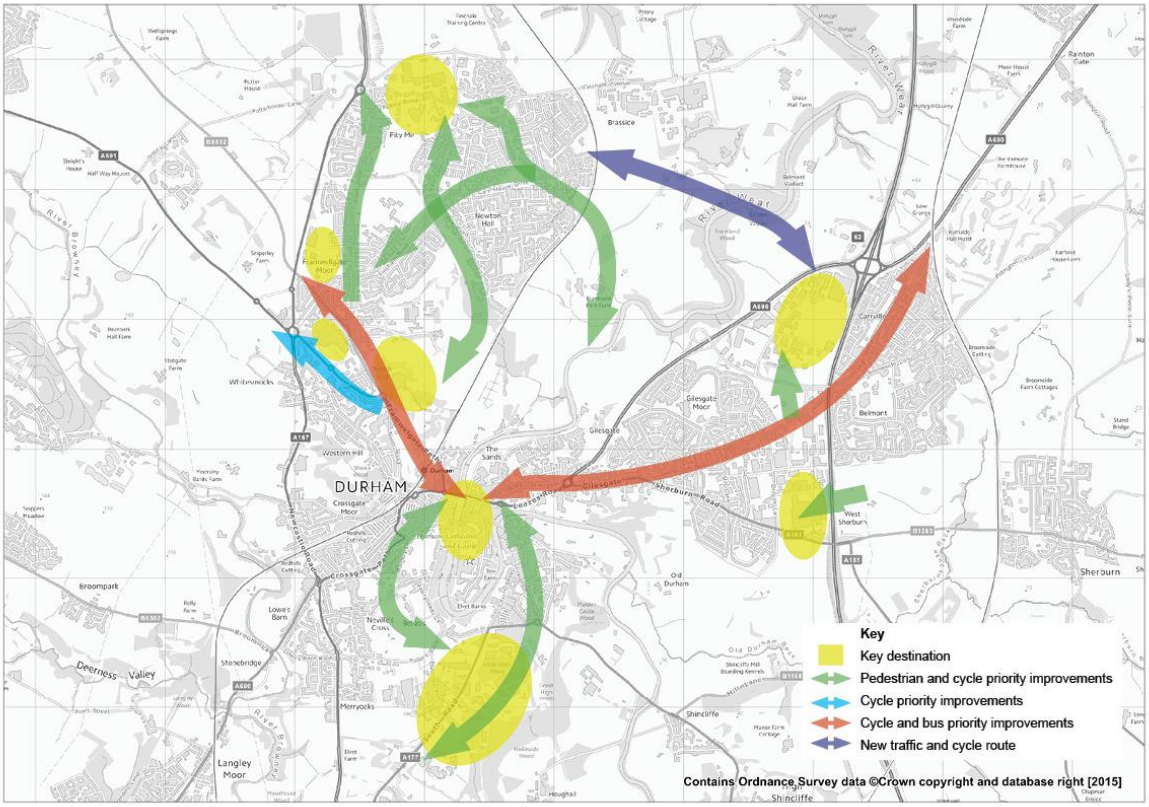
This sustained investment in walking and cycling infrastructure needs to deliver a change in priorities across the city, in line with the place and movement hierarchy. In practical terms, given the space available in parts of the city, this will acknowledge that space cannot always be re-allocated, and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

Durham County Council is already 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 p40).

In the sections that follow, the plan is presented for the city centre, and each of the three 'corridors' outside the city centre. There is an implicit priority in the ordering of the sections, with focus on the city centre being vital, and 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 4.1 illustrates Durham's long term plan for improvements to sustainable

transport movements across the city. An important complement to improvements for sustainable transport in the city centre in the long term movement plan is the implementation of the Northern Relief Road, releasing space in the city centre for investment into sustainable modes, and removing traffic that is the principal source of harmful emissions within the city centre.

Figure 4.1 Whole city long term plan



4.3 City Centre

4.3.1 Introduction

Within the city centre, the transformational long term plan 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 that 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 plan, beyond 2020. First though, the shorter term plan is articulated. This is illustrated in Figure 4.2.

4.3.2 Short term plan

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 (completed in 2017);
- Old Elvet Bridge (completedin 2018);
- 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). The Council is also investing in improvements to cycling routes on the A167 'Great North Cycle Way'. There has also been significant recent investment to provide improved cycle access to the rail station as part of a Station 'Gateway' project (described earlier on p20).

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. 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 and waiting areas throughout the City.

The Council is also investing in the Urban Traffic Management and Control (UTMC) system to improve driver information through new variable message signage (VMS) and journey time equipment, together with the installation of a SCOOT system to co-ordinate the operation of traffic signalled junctions in the City Centre. 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 network based approach to traffic control, which will respond intelligently and continuously by automatically adjusting timings of traffic lights as traffic flow changes and fluctuates throughout the day and when incidents and events occur in the city. This has involved the signalisation of Gilesgate and Leazes Bowl roundabouts, two critical junctions on the major A690 route through the city. 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 within the Gilesgate and Leazes Bowl junctions have also been delivered.

Six new variable message signs (VMS) within the City and two on the A167 will help to keep commuters informed of delays, incidents and events all through the day but will be particularly helpful when exiting the City in the PM peak. This will help drivers make an informed choice about which route to use and help the Council manage the traffic from their traffic control centre.

The six VMS can be delivered quickly following the successful implementation of an 'outer ring' of VMS, completed in 2015/16. An additional four VMS have recently been installed in the City, primarily to provide 'real-time' car park occupancy information but with the facility to display strategic messages when required. The VMS will provide drivers with relevant and timely travel information and help with the following Council objectives:

- Improve the efficiency of traffic management;
- Deliver urban traffic management solutions;
- Reduce CO_2 emissions.

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.

The council have already developed several links that improve conditions for cyclists in and around the city centre and the rail station. Increasing priority for cyclists crossing the City is a challenge due to the high volumes of pedestrian and vehicular traffic and limited options for improving river crossings. The Council will continuously monitor this situation but have few options in the short term due to the fundamental lack of space to create new cycle networks on these river crossings.

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 Milburngate Bridge 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 plan 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.

4.3.3 Long term plan

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

4.3.4 Priority for sustainable modes on Milburngate Bridge

Specifically, more space is needed when crossing the River Wear in the vicinity of the current Milburngate 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 Milburngate Bridge. In terms of cycling, this approach aims to tackle the issue that the current 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.

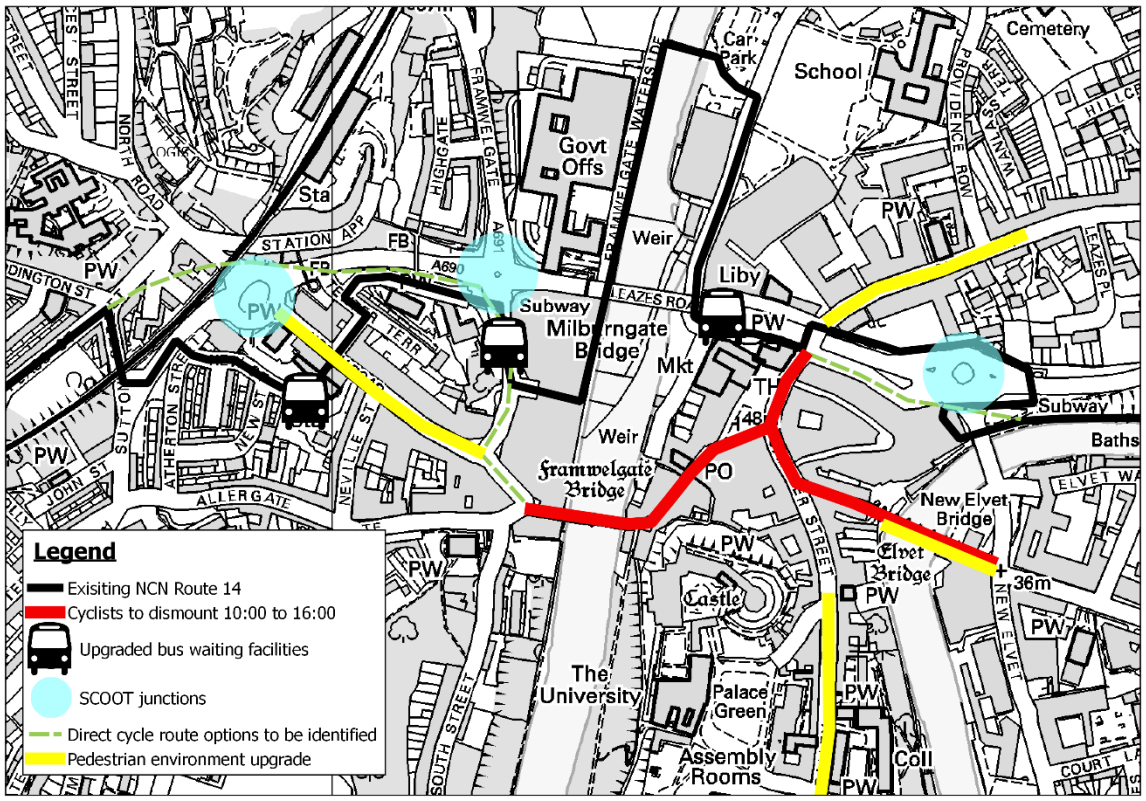
Better facilities for pedestrians attempting to cross the barrier that is presented by the A690, especially at the roundabout junctions at either end of the Milburngate Bridge, are required in facilitating safe and continuous walking provision.

This package of improvements for Milburngate 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. 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 alongside more space for pedestrians. A bus lane could also be considered on the Bridge.

Figure 4.2 City centre short term plan



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.

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 4.3 at the end of this section illustrates the long term plan in concept.

This long term plan is required to achieve this radical vision of dedicated, separate spaces for people walking and cycling across Milburngate Bridge, and priority for buses, coupled with the removal of severance and the air quality problems that the high traffic levels currently create. These improvements will be complemented by appropriate Green Infrastructure to help absorb unwanted traffic emissions. As noted earlier, the smarter choices principles to influence travel behaviour that form an important cornerstone of this plan , encouraging the use of sustainable modes through working with employers 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 33-36% 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 replacement 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 alternative route 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.

4.3.5 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 an important complement to 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 important element of this delivery plan to promote better sustainable transport facilities within the heart of Durham City.

A fundamental caveat in the inclusion of this replacement 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 and constructed to cycling super route standards, 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.

4.3.6 Alternative approaches

This approach to the sustainable transport delivery plan, focused on promoting reduced 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 replacement 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 plan 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.

Based on recent experiences elsewhere in the UK, it is likely that extending the congestion charge in Durham City would be unpopular with local residents. Schemes proposed in the larger cities of

Edinburgh and Manchester were overwhelmingly rejected in referenda in 2005 and 2008, by margins of 3-1 and 4-1 respectively. Only in London has such a scheme been implemented.

4.3.7 Improved public transport interchange

There is generally a good network of bus services in Durham City. The long term plan 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, principles 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 have now been enhanced to provide a much improved waiting area serving people accessing the historic and commercial core of the city. Replacement road space to the North coupled with 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.

4.3.8 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 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.

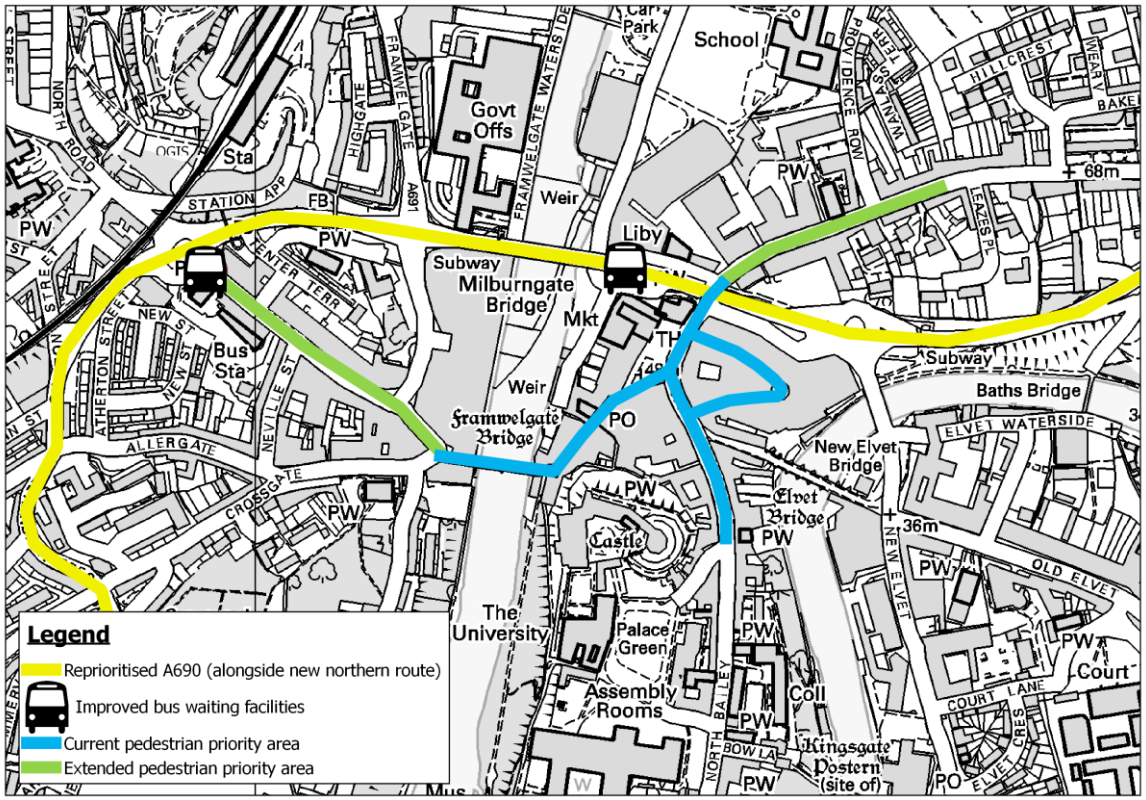
The extended pedestrian priority will also require diversion of existing taxi ranks, servicing areas and disabled bays in the two areas and as well as the taxi ranks on the approach to Claypath. This provides the opportunity to improve taxis ranks and disabled parking facilities in a new location on 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.

Figure 4.3 City centre long term plan (post 2025)



4.4 University to the City Centre corridor

After the City Centre, this is the first priority area to be tackled, with an Action Plan to be developed for delivery between 2019 and 2021. The plan within this corridor will be to improve conditions for pedestrians, particularly including maintenance.

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. These measures will be developed in partnership with the University and we seek to accommodate the proposals in this plan with the ambitions of the University masterplan.

Figure 4.4 shows 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. These improvements will help support the University of Durham Estate Masterplan in connection with the Mountjoy, Elvet and Hill College Areas.

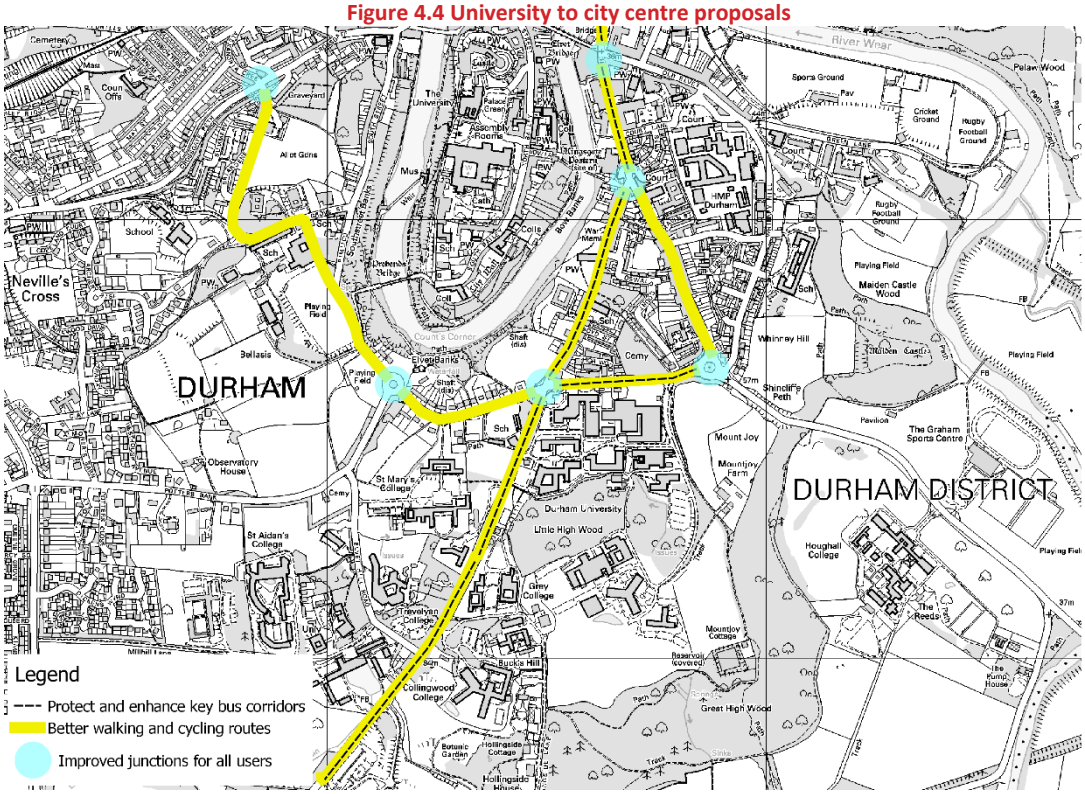
Indicative options are presented for area-wide enhancements to improve conditions for pedestrians and cyclists, including widening footways, dedicated cycle lanes, and re-designed junctions that better meet the needs of pedestrians and cyclists. Fundamental to this, measures should be incorporated into 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. The improvements to pedestrian and cycling routes will support the development of the Lower Mountjoy Teaching and Learning Centre, the Maiden Castle Sports Park and the Maths and Computer Science building at Upper Mountjoy.

Key features that should be implemented as a priority include:

- Widening the footpaths across the area, including on South Road and Church Street 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;
- Raised pedestrian crossings;
- New junctions with pedestrian stages.

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.

Figure 4.4 University to city centre proposals



4.5 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 2019 and 2022 for this area. The plan 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, SEN Durham Trinity School and Sports College, 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.

Walking and cycling network improvements around key attractors such as Aykley Heads, the Arnison Centre and to the new Council Headquarters are required in order to ensure that local people are encouraged to consider alternatives to private car use. The mini-plan 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 the Arnison Centre.

Some bus priority and dedicated routes for cyclists already exist in the corridor. The plan 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 Figure 4.5 and include:

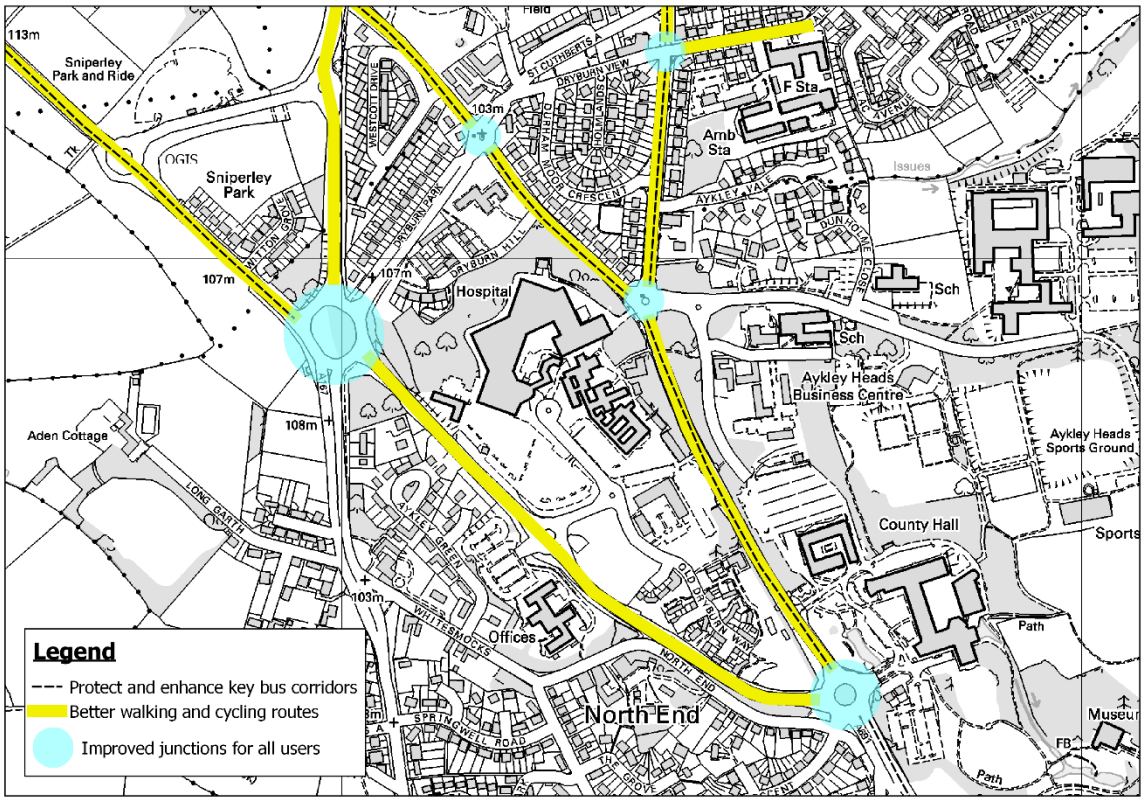
- Improve the roundabouts along the B6532, Dryburn Road and Southfield Way to provide greater cycle priority;
- Improve the roundabouts in the vicinity of the Arnison Centre to provide greater cycle priority – improvements may include full signalisation and a speed limit reduction to 40mph at the Pity 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;
- Widening the off-road footpaths through the area to allow for cyclists as well as pedestrians on the routes;
- Segregated cycling routes on uphill sections of the B6532.

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 plan 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, such as High Carr Road/Finchale Road, 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.

Figure 4.5 North-western corridor proposals



4.6 North-Eastern corridor: Gilesgate, Belmont and Carrville

This area is the third priority area after the City Centre, with a detailed Action Plan for this area to be developed between 2021 and 2023. The plan 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 plan moving forward should enhance the provision for cycling through the provision of high quality designated cycle routes on Sunderland Road-Gilesgate. In addition, there is the attractive National Cycle Network that could be used. 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.

Reducing severance caused by the A1(M) would be best achieved by connecting the new Cycling Super Route on the A690 (near West Rainton) to an improved route on Carrville High Street and then over the A1(M) via the existing crossing on Broomside Lane. Carville High Street currently experiences resident parking on both sides of the street, making it challenging to improve cycling infrastructure but feasibility work may determine how best to improve safety for cyclists in this area.

As well as the above improvements, there is also an opportunity to create a safer cycle route from Broomside Lane to Sunderland Road by improving an existing pathway to Eden Terrace, which connects with Sunderland Road. A key corridor requiring improvement is Renny's Lane, which would benefit from surface enhancement and an upgrade of the junction with Dragon Lane to improve cycle safety.

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.

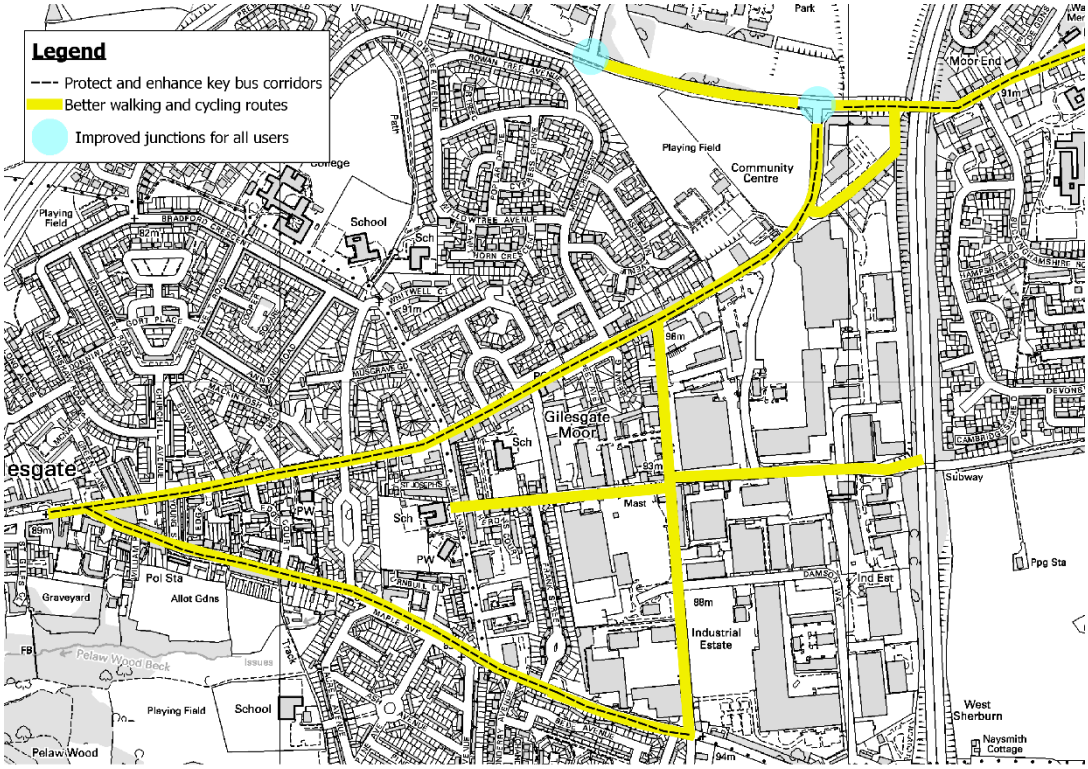
Bus services to the Belmont Business Park are limited. Work on this issue should focus on discussions with operators to increase the frequency of bus service travelling into and past Belmont Business Park, potentially through the Sniperley-Belmont Park and Ride service stopping at Belmont Business Park, 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.

In terms of rail, existing and disused local rail corridors could be co-ordinated with the Tyne & Wear Metro network to create a unified Metro and local rail network. This includes the Leamside Line from Pelaw Junction to Ferryhill in County Durham, passing through Washington. In addition, the disused alignment running west from the current Metro terminus at South Hylton, joining the Leamside alignment just south of the River Wear, could be utilised.

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 Figure 4.6. 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.

Figure 4.6 North-eastern corridor proposals



5. SMARTER CHOICES PLAN

5.1 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* principles can have and, as relatively inexpensive measures, the value for money of these measures tends to be very high. The support of this approach is part of the Air Quality Action Plan, which includes the promotion of Smarter Travel Choice as Action Measure 6. 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* plan proposes how to enact this long-term process in Durham City.

5.2 Approach

We recommend that in the short-term Durham County Council delivers a targeted programme of proven *smarter choices* principles, but as a part of this plan, 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* plan 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* plan 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* plan 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 promotional programme to provide comprehensive information about sustainable travel options and 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 plan can begin to target further markets.

5.2.1 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 (most buses in the City now accept contactless payment cards), 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. Progress has begun to be made on this with bus operators now working with the North East local authorities and NEXUS to structure fares in a more customer friendly way so fares can be capped and be less complex.

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 could include journey time and modal choice options hosted on the Council website.

This would most likely be delivered at a North East level, in association with the Joint Transport Committee (JTC) and Go Smarter and in relation to the roll out and expansion of the NESTI programme and Nexus Pop card. There may also be a role in the future for private companies to provide mobility accounts as part of a wider mobility as a service product.

5.3 Employer travel planning

5.3.1 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 a 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 previous Local Sustainable Transport Fund ***'walk to'*** and Go Smarter programmes.

We therefore recommend that a major element of this plan 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, 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 STARS programme and then maintaining accreditation, rather than just producing a Travel Plan.

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

5.3.2 Travel Plan measures

As part of the Local Motion programme, a workplace engagement package (Modeshift STARS) 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.

5.3.3 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.

5.3.4 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 employees using their own cars 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%.

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.

5.3.5 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 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 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.

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.

5.4 School travel planning

5.4.1 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 recommend that Durham County Council should look to work intensively with schools within the city as a major element of the Smarter Choices Plan.

5.4.2 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.

5.4.3 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 collectable 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.

5.4.4 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.

5.5 Residential travel planning

5.5.1 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 principles are used.

5.5.2 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 on mixed use developments 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.

5.5.3 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.

5.6 Umbrella marketing and promotional programme

A fundamental building block of a *smarter choices* plan 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 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;

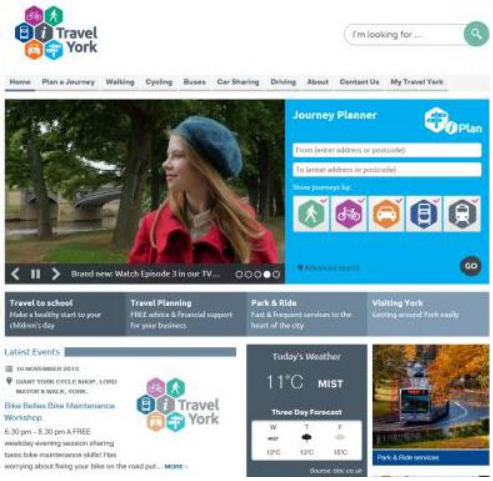
- Leisure cycle route guides.

- **Development of a project website**:
  - 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, and grant funding for travel plan measures. 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.
- 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.


Travel York
I'm looking for ...
Home
Plan a Journey
Walking
Cycling
Buses
Car Sharing
Driving
About
Contact Us
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Plan
From (enter address or postcode)
To (enter address or postcode)
Show journeys by:
GO
Brand new: Watch Episode 3 in our TV...
Travel to school
Make a healthy start to your children's day
Travel Planning
FREE advice & financial support for your business
Park & Ride
Fast & frequent services to the heart of the city
Visiting York
Getting around York easily
Latest Events
Bike Belles Bike Maintenance Workshop
6.30 pm - 8.30 pm A FREE
Travel York
Today's Weather
11°C MIST
Three Day Forecast
Park & Ride services


BUSYORK

6. CITY-WIDE SUPPORTING MEASURES

6.1 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.

6.2 Walking

Walking is the glue of all transport systems. All journeys, however short or long, by whichever primary mode, contains 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 in Chapter 3.

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.

In addition, due to the rate of development throughout the City and the impending introduction of interactive totems by Durham BID it will be necessary to do a complete review of the pedestrian signing throughout Durham City. This review will encourage input from a broad range of stakeholders including disabled groups.

6.3 Cycling

The plan 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 consideration[6].

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 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 including wheelchair users would take priority, with segregated or advisory routes required for cyclists.

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

6.3.1 Cycle parking

The Council are currently working in partnership with Park that Bike to deliver high-quality and secure parking but new sites should be continued to be brought forward, especially in the city centre. These 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.

6.3.2 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.

[6] Department for Transport, 2008, Cycle infrastructure design.

6.3.3 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.

6.4 Public transport

The plan 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 provision of information 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.

6.4.1 Bus ticketing and on-board experience

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

This should complement contactless payment facilities and the 'Pop' Pay As You Go (PAYG) card, a new way to pay for public transport in North East England. It simply needs topping up and then it can be used to pay for journeys as they are made. It is currently valid in County Durham and across the North East on selected bus services (all Arriva, Go North East and Stagecoach services), the METRO, and the Shields Ferry service. However, it does not currently offer multi-operator discounts.

Wi-Fi is also 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.

6.4.2 Park and Ride

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

The Council are seeking funding to extend the capacity of two Park and Ride Sites and create a new site at Stonebridge. As part of this extension, it will be necessary that routes will be revised to accommodate the extra site. 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 into the evening will require a greater level of subsidy, possibly substantial.

6.4.3 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 services (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.

The report *MetroFutures: The combined future of Metro and local rail in the North East* acknowledges that the Leamside alignment is important for a number of the NECA's ambitions for rail-based connectivity, including:

- A 'Wearside loop' Metro-style service connecting Sunderland and Washington;
- Local rail links between Durham (Belmont), Sunderland, South Shields and Newcastle;
- Additional capacity for passenger and freight services to relieve pressure on the East Coast Main Line;
- A potential route for a high speed rail link from the North East to Yorkshire and beyond in the longer term.

The current Durham Station Travel Plan was completed in January 2017 and is a key tool to enhance working relationships between relevant partners in the city and to lead a co-ordinated approach to improving access to the station by means other than the private car. The Station Travel Plan encourages rail users to consider using sustainable modes of transport to access the station and highlights areas of improvement at the station that need addressing to connect it better with the city centre and encourage the use of sustainable modes.

To date, a number of measures highlighted in the Travel Plan to improve access to the station have been delivered, including improved cycle access and parking at the station, improved wayfinding for pedestrians and cyclists to and from the city centre, and blue badge parking.

Proposals are already advanced for improvements to the pedestrian underpass between the North and South platforms. VTEC has all approvals in place (including planning permission and listed building consent) so it is ready to deliver when full funding is secured.

6.5 Car clubs

6.5.1 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 private 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 (employees own cars). 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 CO_2, 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.

6.5.2 Approach

Durham City currently has a small 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.

6.6 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').

6.6.1 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 will 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. This would help to address the following actions set out in the Air Quality Action Plan for Durham City (2016):

- Encourage the operation of hybrid buses using routes within the declared AQMA;
- Park and Ride buses already comply with Euro VI emission standards however, further improvements will explore the operation of ultra-low emission or electrically powered vehicles.

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

6.7 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 plan 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 including wheelchair users, 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 plan 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. A similar scheme is already operational in Chester-le-Street. The 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.

6.8 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*.

It will also be important to develop programmes of investment to ensure that the County Council and its partners are well placed to bid for specific competitive funding streams and bid for European and domestic funding pots where they currently exist.

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 plan. Short term improvements in the city centre could be

funded through the LTP or as part of a co-ordinated package supported by this over-arching delivery plan. Also, as with funding for *Smarter Choice*s measures, there may be capital funds available for measures to support the Local Cycling and Walking Investment Plan (LCWIP) 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 the longer term, aspirations to reprioritise the A690 and provide sustainable transport improvements in the city centre alongside a new northern crossing of the River Wear, are likely be delivered towards the end of the plan 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 plan (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 plan. Again, this further emphasises the importance of having programmes of investment ready for delivery.

7. MONITORING AND EVALUATION

7.1 Impact of measures within the plan

The broad impact of measures contained within the delivery plan (identified from available research) is presented in Table 7.1. 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 observed[7]:

- 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 7.1 on the following page is a summary of key impacts that may be achieved from the main individual measures included in the plan taken from published research and the progress that has been made so far in Durham since 2016.

[7] 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 7.1 Potential impact of key plan measures

Measure	Impact	Progress in Durham since 2016
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.	A number of employer sites have had workplace travel plans condition as part of their planning application being approved including: • Durham University (lower Mountjoy); • Philips, Belmont Industrial Estate; • The Gates, Milburngate; • Milburngate House. In 2017 the 'walk to' project engaged with over 300 employees across the city who made a pledge to walk more, 70% of employees met the pledge. In 2018, the Living Streets 'walk to' project reported that 50% of employees walked more and 10% walked a lot more because of the 'walk to' project and pledge events.
School Travel Planning	Car use at schools with a Travel Plan is generally 5-20% lower than those without.	Living Streets are supporting schools to deliver sustainable travel initiatives in Durham (external funding secured from DfT until 2020). A travel plan was secured as a condition of planning approval for Framwellgate Moor Primary School . The Council are developing improved planning conditions, monitoring systems and enforcement to ensure implementation and delivery of sustainable transport initiatives to support modal shift.
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%.	The Council are developing improved planning conditions, monitoring systems and enforcement to ensure implementation and delivery of sustainable transport initiatives to support modal shift. Mount Oswald is a residential site which has a travel plan conditioned for it being approved.

Large investment in cycling infrastructure	Increase in cycling trips of approximately 10%, casualty reductions of up to 30%.	The Council created and circulated a cycle route map which doubles as an information guide on the code of conduct for cycling in Durham City Centre. Cycle parking has been installed at the new passport office and Wearhouse with improvements also made to cycle parking at Durham City Railway. A new rail station link path has been built to improve access for cyclists leading up to the rail station. A counter has been installed on this path for monitoring purposes and data shows footfall across the path is high. Cycling and pedestrian improvements have been made in Gilesgate from the footbridge crossing the A690 to Heavyside Place including lighting improvements along this stretch.
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).	The bus station has been fitted with eleven improved real time displays to predict arrival times of buses to give customers quick and easy access to the times of buses at the station.
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.	The Leazes Bowl junction bus stops have been reconfigured and improved with bus shelter and real time displays. Ongoing signalling work at Leazes Bowl and Gilesgate roundabouts are being undertaken so that the UTC/SCOOT signalling systems can cope with unpredictable travel patterns such as dealing with increased traffic flow as a result of diversions.
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.	Improvements to pedestrian areas and crossings have been made at North Road, Neville's Cross and Elvet Bridge. Improvements to the rail underpass at Durham railway station are scheduled to start in January 2019. This will provide a safer and more attractive route between the station platforms.

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.

The table also highlights that progress has been made for each measure of the delivery plan since 2016 with the progress made supporting the County Durham Plan and Air Quality Action Plan. The full potential of each measure's impact will be fully realised once the STDP evolves into Action Plans for each area and the relevant measures and objectives for each area are completed.

7.2 Evaluating the impact of the plan

The objectives of the Durham City Sustainable Transport Delivery Plan 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, historic and natural environment of Durham City.

In order to monitor success against these objectives, the indicators presented in Table 7.2 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 plan in achieving its stated objectives.

The targets relate to the first five years of implementation (2019-2024), and will be revisited post-2024 implementation.

Table 7.2 Plan 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[8] – Durham City 74.9%	Maintain or improve accessibility of Durham City Centre as an employment centre.	Durham County Council Accession Tool
To improve access to education, training and economic opportunity for young people in Durham City	Percentage of primary school pupils walking, cycling or using public transport to school identified through hands-up survey	Baseline 2016/2017[9] Primary 47%	Target for a 15% increase in use of walking, cycling or public transport.	Durham County Council school hands up survey data
	Percentage of students walking, cycling or using public transport to training opportunities identified through site travel plan monitoring	Baseline 2016 Students walking, cycling or using public transport – 92%	Target for a 15% increase in use of walking, cycling or public transport.	Site travel plan monitoring

[8] Local Transport Plan 3, Durham County Council.

[9] Obtained from Durham County Council school hands up survey data.

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 primary pupils walking or cycling to school identified through hands-up survey.	Baseline 2016/2017[10] Primary 46%	Target for a 10% increase in use of walking or cycling.	Durham County Council school hands up survey data
	Percentage of employees walking or cycling to work identified through employer travel plan monitoring.	Baseline 2017[11] Walking 6% Cycling 4.6%	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

[10] Ibid.

[11] Go Smarter to Work Final Travel Survey report

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