Getting Around Bath

A Transport Strategy for Bath

Launch Document

April 2014

Bath and North East Somerset Council

Mott MacDonald

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Content

Foreword

Getting about is important to all of us. This document launches 'Getting Around Bath', which sets out some options for consideration in the development of a Transport Strategy for the city. It is proposed that the Strategy will be adopted by the Council later this year.

It is a high level review of existing transport policies and commitments in the light of the Council's commitment to housing and economic growth within the city. It looks to develop a set of policies to support this growth.

'Getting Around Bath' is designed to set out an agreed long term vision for transport which needs broad and enduring agreement. It will cover the period up to 2029 to reflect the period for the Council's agreed Draft Core Strategy. It will support the preparation of the Council's Placemaking Plan and the Masterplan for the Bath City Riverside Enterprise Area.

The aim of the Strategy is to support this growth agenda and also improve the environment within the city itself, both of which can be damaged by the impact of traffic and congestion. The longevity of the Strategy is key to providing a consistent vision for the city and to accommodate the ambitious housing and employment aspirations.

The Strategy will build upon existing initiatives, including those delivered through the Bath Transport Package (such as the expanded Park and Ride Sites and Variable Message Signs), the EU funded Civitas Renaissance programme (such as the Urban Freight Consolidation Project and Better Bus Area funding), whilst also recognising the importance of Network Rail's electrification programme for the Great Western Main Line.

The planned consultation will seek to gain broad agreement to the following vision:

> *"Bath will enhance its unique status by adopting measures that promote sustainable transport and reduce the intrusion of vehicles, particularly in the historic core. This will enable more economic activity and growth, while enhancing its special character and environment and improving the quality of life for local people".*

The strategy is also driven by the Public Service Board vision which is:

> *"Bath and North East Somerset will be internationally renowned as a beautifully inventive and entrepreneurial 21st Century place with a strong social purpose and a spirit of wellbeing, where everyone is invited to think big – a 'connected' area ready to create an extraordinary legacy for future generations".*

The reduction of the impact of vehicles is vital in this unique UNESCO World Heritage city and will require a combination of measures. These can be summarised as follows:

- A walking/cycling strategy to make Bath the UK's most walkable city;
- Improved accessibility for people with mobility impairments;

- A parking strategy to support the economic growth but at the same time reducing the amount of off-street spaces within the city centre;
- Supporting greater use of public transport to reduce the number of cars entering the city;
- Continue to expand our existing Park & Ride sites where we can to help reduce the demand for parking spaces within the city;
- Better management of Heavy Goods Vehicles within the city;
- Finding a new location for coaches to park once they have dropped visitors off in the city centre.

The Council will hold a number of events following Cabinet's consideration to engage with communities and stakeholders. All views will be important in helping the Council develop this key Strategy for the City of Bath.

1. Vision

1.1 Context

Transport is fundamental to the successful economy and wellbeing of the city, its residents and visitors. It also contributes to the unique environment of the city but the volume and impacts of vehicles are undermining the fabric of buildings and air quality. Consequently, the historic core of Bath and key arterial routes are suffering from the intrusion of cars and the quality of life throughout the city is being adversely affected.

The strategy is needed to provide the framework within which individual proposals can be considered and assessed against the objectives. A number of initiatives have been delivered including three Park and Ride sites, an ongoing parking strategy, Local Sustainable Transport Fund measures and using Better Bus Area funding. The strategy will also support delivery of the Core Strategy, enabling growth. It will also build on the policies and measures included in successive Joint Local Transport Plans.

This report outlines the proposed strategy and the evidence that lies behind the proposals is included in a separate report.

1.2 A Proposed Vision

There are some strong issues that are shared by the key stakeholders in that they all recognize the importance of transport to the local economy and the wellbeing of the city, its residents and visitors. It is also evident that inappropriate traffic levels are eroding historic buildings and adversely affecting air quality and consequently the quality of life.

In developing a vision, it is important to set it in the context of progress made to date through various initiatives promoted through successive Joint Local Transport Plans and other funding sources. In addition, the emerging Core Strategy reflects the changes in the planning system manifest through the National Planning Policy Framework that supports the principles of sustainable development.

A strategy needs a vision, in effect a statement that outlines the main aims. In this context, the proposed transport vision reflects the wider vision for a healthy, prosperous and unique city:

> ***Bath will enhance its unique status by adopting measures that promote sustainable transport and reduce the intrusion of vehicles, particularly in the historic core.***
>
> *This will enable more economic activity and growth, while enhancing its special character and environment and improving the quality of life for local people.*

The strategy is also driven by the Public Service Board vision which is:

> *Bath and North East Somerset will be internationally renowned as a beautifully inventive and entrepreneurial 21st century place with a strong social purpose and a spirit of wellbeing, where everyone is invited to think big – a 'connected' area ready to create an extraordinary legacy for future generations.*

1.3 Objectives

There is considerable common ground evident from the documentation available and discussion undertaken. This provides a good starting point for the strategy. There appears to be a shared view on the following which provide the objectives:

- Supporting and enabling economic growth, competitiveness and jobs;
- Promoting sustainable mobility;
- Widening travel choice;
- Widening access to opportunities: jobs/learning/training;
- Improving air quality & health, reducing vehicle carbon emissions;
- Safeguarding and enhancing the unique historic environment and World Heritage Site status; and
- Improving the quality of life in the city.

1.4 Coverage

The strategy covers the city of Bath and its immediate environs (but not the whole of the Bath and North East Somerset administrative area). For the purposes of this strategy, the central part of the city is regarded as being the area from The Circus (north) to the river (south) and from Charlotte Street (west) to London Street (east).

2. Adopting a Structured Approach

2.1 Key Issues

A number of key issues have been identified; these have complex inter-relationships but some common strands have been used as the basis for a transport strategy that will enhance the city and maintaining its attractiveness whilst supporting economic growth. Each of the key strands is set out below together with an indication of the data sources. A large amount of data has been compiled as part of the process of developing the strategy and this has been used as supporting evidence.

Bath has all the pre-conditions to be an exemplar sustainable transport city with strong public transport, a cycling culture (taking into account the topographical constraints) and a high proportion of walking trips. This, coupled with the unique built environment and development site potential, presents significant opportunities to transform the city from one where sustainable transport takes a dominant role and where traffic movement is managed more effectively. This does not mean that the strategy is anti-car but instead rebalances transport options against the economic and environmental needs of the city. Car use will continue to be important and in some cases the only option but containing the number of journeys made by car will benefit everyone in terms of health, environment and local economic activity. A range of measures are proposed which, in combination, will address the objectives of the strategy.

The strategy needs to be durable in that delivering measures will be longer than any single administration and hence it should be supported by all political interests. It is important as it enables the Core Strategy to be delivered and is vital for the Enterprise Area which is likely to take many years to complete.

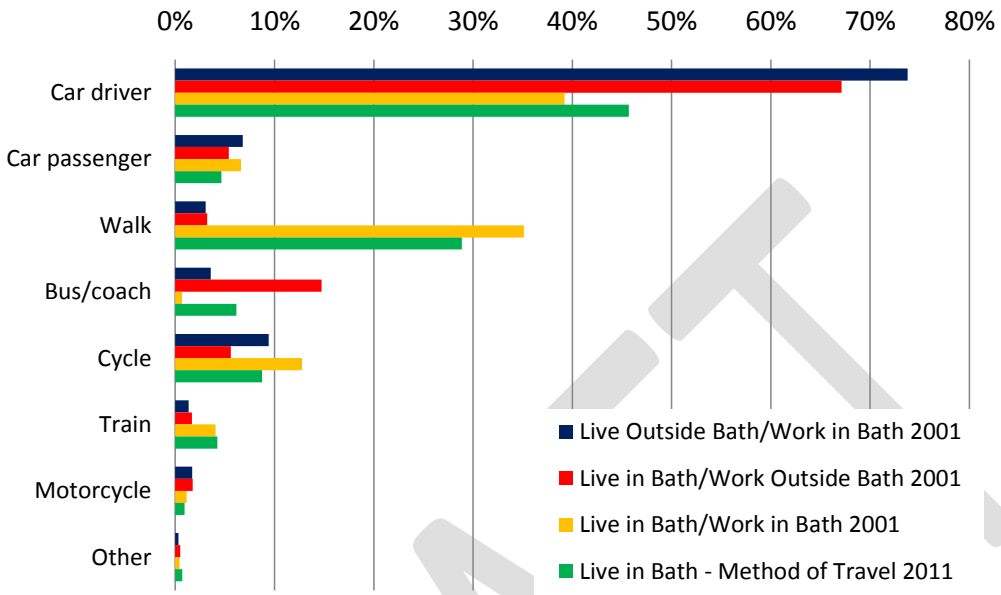
2.1.1 Reducing the Impact of Vehicles

Bath has a unique city centre environment of World Heritage status. This attracts substantial numbers of visitors but has many constraints. These constraints are accentuated by too many cars in the central area. A key strand of the strategy is to reduce the impact of vehicle movements through a combination of measures including better traffic management, comprehensive parking controls, expansion of park and ride and enabling people to walk, cycle and use trains and buses. All these contribute to reducing in car journeys and addressing the problems manifest in the Air Quality Management Area.

Parking in particular is a key issue and progressive reductions in the supply of public on- and off-street parking to support a shift to the provision of long stay parking at Park and Ride sites have been implemented in recent years. This policy needs to be strengthened and extended to create more long stay capacity at the periphery, in tandem with further constraints on parking in the central area. Some reductions in capacity will occur as a result of flood alleviation but parking policy is an essential element of delivering the Enterprise Area. The consequences are better air quality, less vehicle intrusion (noise and street impacts), maintaining the built environment, better visitor experiences, accessibility for people with mobility impairments and a healthy economy.

A good starting point is the mode share – how many people move by which means. Some data is available on this from Census journey to work figures and local monitoring as shown in Figure 2.1.

Figure 2.1: Mode Share



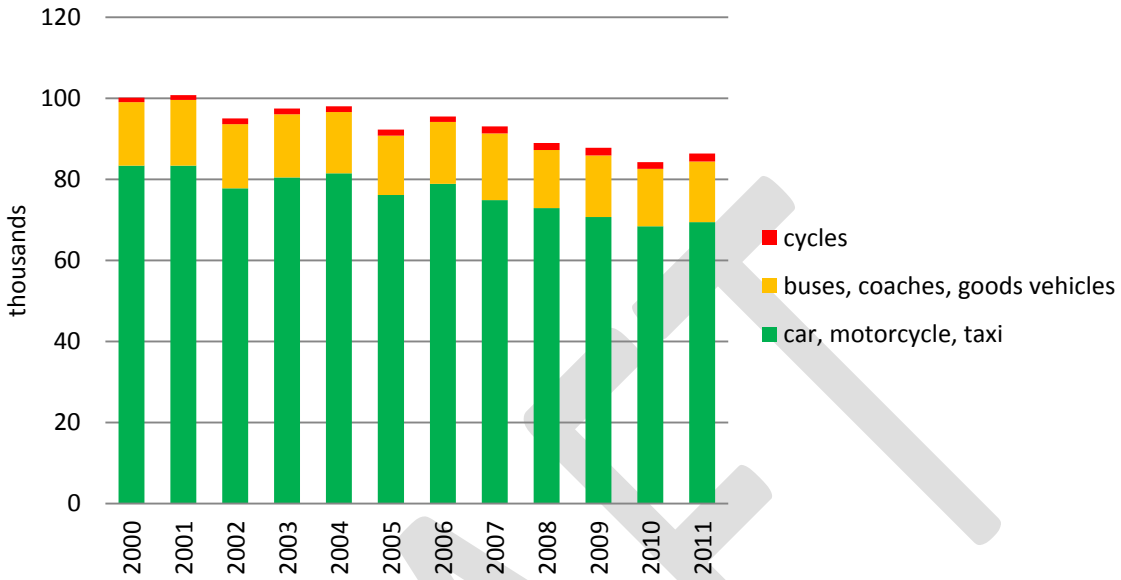
Source: Census data.

The high proportion of walking shown by mode share surveys (around 30%) indicates that this is a primary means of travel in the city, indicating that there is potential to expand and improve walking opportunities and hence substituting for some car journeys. (Determining mode share from Census data is possible for 2001 but full data sets for 2011 have yet to be published. In 2011, walking accounted for 35.1% of all journeys to work made by people living and working in Bath.)

Traffic levels have been declining consistently over a number of years, evidenced by the traffic count data collected at various locations around the city (see Figure 2.2). While some of this may be attributable to the wider economic situation, it demonstrates that traffic reductions occur and provide the opportunity to accommodate additional traffic from development sites if required. Some count data is available to show the composition of traffic, indicating that much of it is cars and that the proportion of heavy vehicles is comparatively low.

Some data on traffic distribution is also available from recent counts, indicating that around 12% of movements in the city centre are through trips i.e. do not have an origin or destination in the centre.

Figure 2.2: Inner Cordon Daily Traffic Flows 2000 to 2011



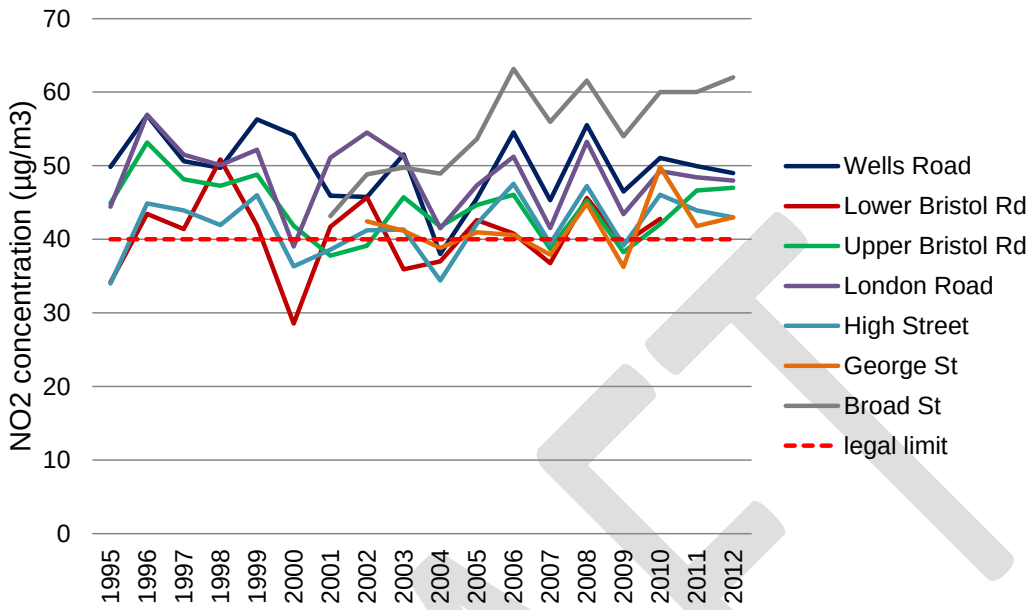
Source: B&NES count data.

Minimising the volume of vehicle movements entering the city centre will contribute to improved air quality (and therefore health) as well as reducing congestion. It will also address the intrusion of traffic in the historic setting – noise, visual intrusion and severance (particularly affecting people with mobility impairments) – all of which contribute to the visitor experience and economic vitality.

Air quality is important for health with particular impacts on respiration-related illnesses. Much of this can be attributed to vehicle emissions but also emissions from rail rolling stock and other sources. A number of locations in the city currently exceed legal nitrogen dioxide levels as shown in Figure 2.3. Particulates and other pollutants also affect the Bath stone used for much of the city's built environment.

An Air Quality Management Area has been declared for the city centre and its approaches, reflecting the effect that road traffic has on the built and natural environment and the health of people in the city. Slow moving traffic is a particular concern while reducing the levels of traffic would help improve the problem. Air quality data is collected continuously but relating changes to traffic conditions is difficult. However, monitoring is important in relation to the AQMA, even if the designation is removed through changes in the legislative requirements, to understand how addressing transport issues can help improve community health and help preserve the fabric of the city.

Figure 2.3: Nitrogen Dioxide Levels 1995 to 2012



Source: B&NES data.

Recommendation: That a strong emphasis should be given to reducing the impact of vehicles by supporting trips that are made by means other than car, particularly walking and cycling with more people using improved bus and rail networks.

2.1.2 Walking – a Walking-Friendly City

Walking is central to the strategy. Many people choose to walk because it is relatively direct and quick and the city's layout is conducive to good walking experiences. However, the infrastructure needs to be improved – better footways, crossings, public spaces and higher priority than at present. The scope for daytime pedestrian priority can be considered, enabling vehicle access at other times.

Walking journeys are reliable in that they have predictable journey times, promote healthier living, reduce traffic levels (many car journeys are short enough for walking to substitute) and promote social interaction and vibrant communities.

Adopting a strategy based around walking is entirely appropriate for a constrained, historic city. Promoting Bath as a highly walkable city is a radical move, delivering walking as a priority with appropriate levels of investment in infrastructure to improve the walking experience. This can include better street lighting, surfacing, road crossings, seating, signing, etc. Enabling more people to walk more often also involves an element of information to identify suitable and safe routes and to understand the options available. The health benefits are likely to be considerable both directly to individuals and also collectively, contributing to fewer car journeys and better air quality.

The Public Realm and Movement Strategy provided a helpful framework for improving the walking experience in the city centre and highlighting the importance of streets and spaces. These principles could be extended to the whole city, focusing on core walking routes and overcoming conflicts with vehicle movements, identifying pleasant and safe routes.

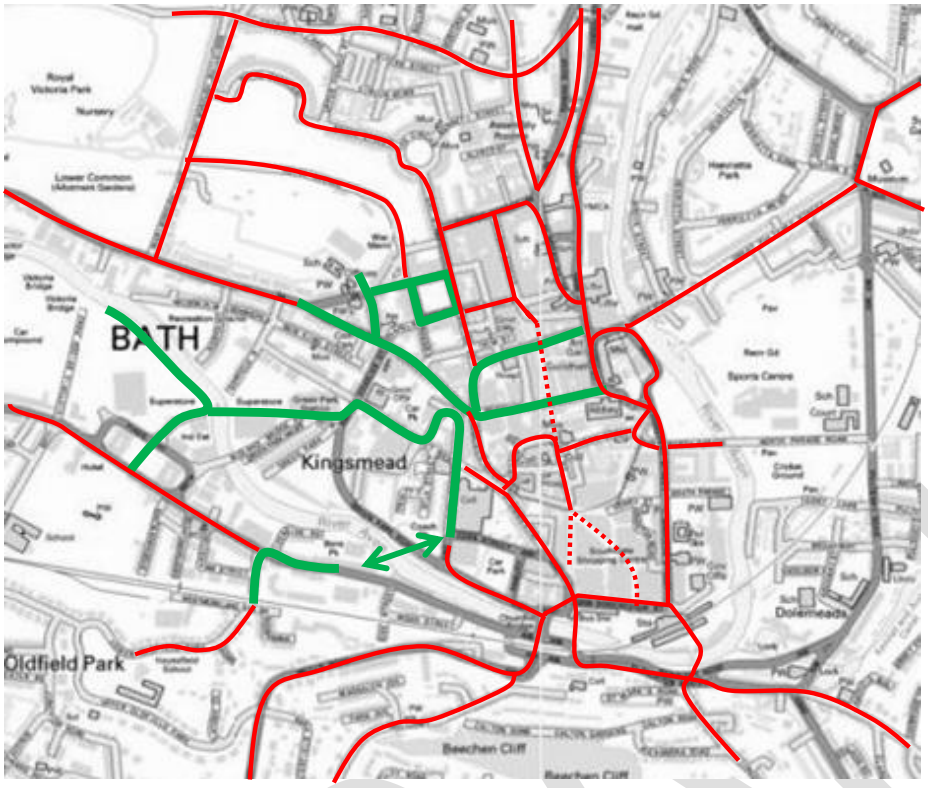
Accessibility for people with mobility impairments (walking difficulties, visual and hearing impediments) should feature when walking routes are considered. Improvements should include level surfacing, dropped kerbs at junctions, careful consideration of street furniture, effective lighting and clear crossing arrangements.

Shared use of space by walking and cycling should be encouraged. This is necessary in some locations due to the limited space available but creates a good ambiance with minimal signing and road markings. There is no evidence to suggest that sharing space generates accidents and cycle speeds will be low where pedestrian levels are high. Best practice from Europe supports shared use applications.

Walking routes are often rendered difficult by one or more specific locations, such as a road crossing, unlit route or poor surfacing. Many people do not realise that journey times can be short and routes are attractive when compared with other options. Evidence has been obtained from the Public Realm and Movement Strategy, discussions with stakeholders and on-street observations.

An improved walking network will decrease the number of pedestrian casualties recorded and support a shift towards walking from motorised modes. A plan of the key pedestrian routes in the city centre is shown below (Figure 2.4), highlighting those where improvements should be seen as a priority.

Figure 2.4: Plan of Key Walking Routes



Key:

key routes	
proposed prioritised improvement	
existing pedestrianisation	

To achieve a walking-friendly city, the strategy will:

- Enable walking to the centre and within the city;
- Define the walking network – utility and leisure routes
  - Effective maintenance;
  - New infrastructure: crossings, shared space, lighting;
  - Contribute to health and accessibility;
- Deliver the Public Realm and Movement Strategy;
- Extend the principles of the Public Realm and Movement Strategy to core routes throughout the city; and
- Engender a cultural shift to walk as the first choice for many journeys.

Recommendation: That walking be given highest priority in the strategy. It creates a healthier population, an ambience to the historic core of the city and reduces the number of local car journeys. Bath should be an exemplar walking city demonstrating commitment to sustainable transport at a European level.

2.1.3 Access for People with Mobility Impairments

A significant proportion of people have some form of mobility impairment, either some form of infirmity, visual or hearing problems and others, such as those with shopping or pre-school children, may encounter difficulties walking around the city or using other transport such as buses. Improved engagement with organisations representing these groups will be important.

Potential measures will include:

- Undertaking an access audit on key walking routes;
- Reducing street clutter.

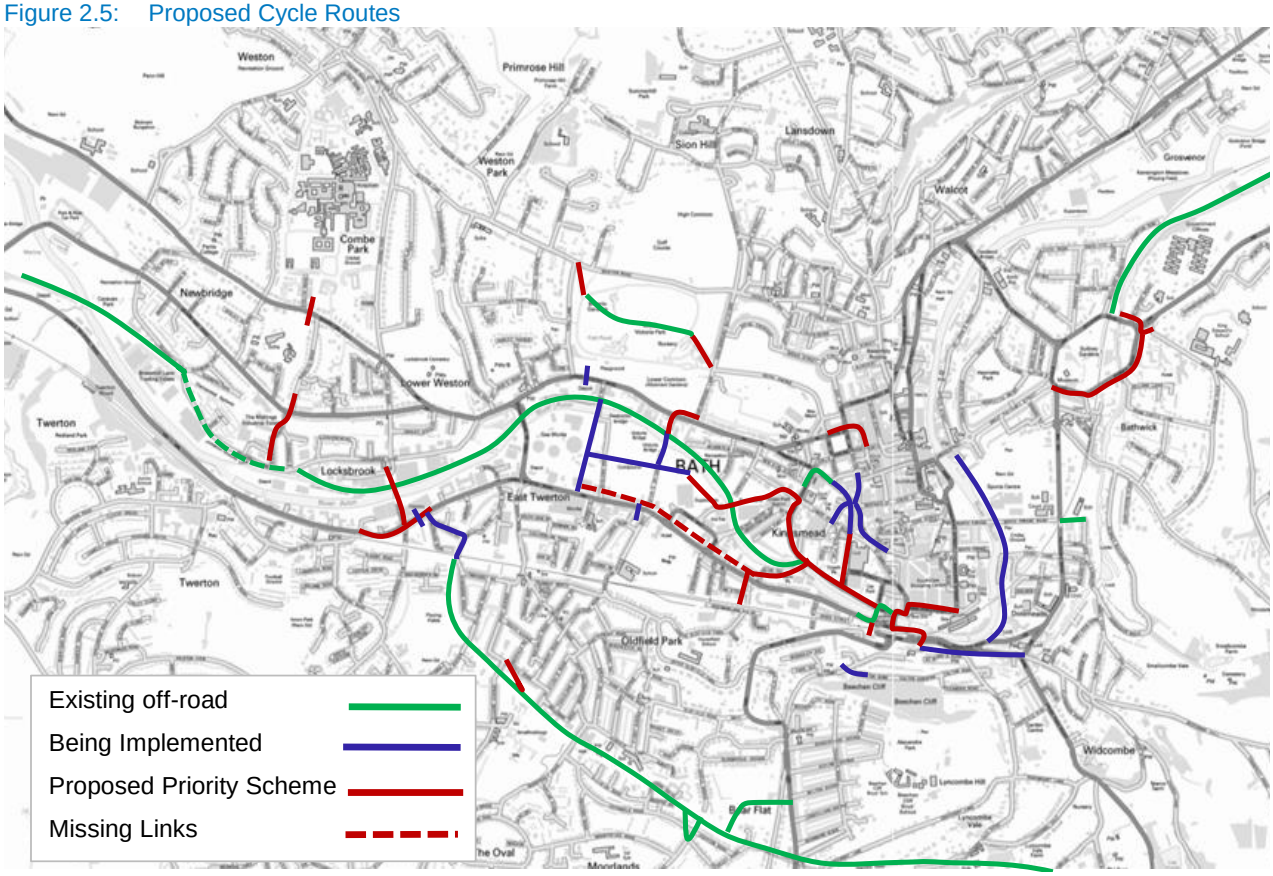
Recommendation: That consideration for the needs of people with mobility impairments is regarded as a core element of the strategy and the measures included within it.

2.1.4 Cycling – Building on Potential

Cycling is having a huge resurgence across the country. There is a network of routes around the city which need to be coordinated to form a coherent network, ironing out conflicts with vehicular traffic and attracting new cyclists. The topography of parts of the city is a deterrent to some would-be cyclists but many corridors are more conducive to regular cycling. It is also a healthy means of travel which also contributes to improved air quality if cycling can substitute for car journeys. A riverside route through the Enterprise Area would be very suitable for cycling.

Figure 2.5 below shows cycle route improvements that should be considered as priorities, to complement the existing routes and those being implemented, to create a basic network of high quality routes.

Figure 2.5: Proposed Cycle Routes



Measures to increase the number of cycling trips and to improve quality of the cycling experience include schemes at specific junctions, designated routes, direction signing, secure cycle parking and training for new or returning cyclists. In addition, the provision of shower facilities at workplaces as travel plan measures will support regular cyclists. The use of cycles to access other modes is becoming increasingly important. Extensive cycle parking is available at Bath Spa station but is less evident at other stations and security is a key issue. Enabling cyclists to use secure parking at bus stops should also be considered; this would extend the journey possibilities for many who do not wish to cycle longer distances or for whom it is impractical to do so.

The number of cyclists is increasing (shown by mode share surveys) but journeys can be very individual. Improvements need to involve route audits where appropriate and local knowledge from users, building on the dialogue that is taking place and developing an extensive network of routes. Further mode share surveys, user satisfaction surveys and casualty records will indicate the effectiveness of the measures proposed.

Specific measures will include:

- Linking together existing and planned cycle schemes to give a basic network of high quality routes in the short term;
- Develop the network in the medium to long term, taking into account the recent review undertaken by Sustrans;

- Overcoming problem locations e.g. junctions where cyclists are vulnerable;
- Reducing traffic levels on certain routes to create an environment that is conducive to cycling;
- Provide additional secure cycle parking at workplaces, leisure facilities, rail stations, city centre locations;
- Workplace shower facilities; and
- An inclusive training programme.

Recommendation: That cycling be promoted through better cycling routes with appropriate infrastructure where needed, building a cycling culture for people of all abilities.

2.1.5 Traffic Management – Reducing the Intrusion of Vehicles

Traffic management does not necessarily imply more engineering. Making traffic flow more easily may involve new approaches with fewer junction controls and a subtle approach that suits the settings. However, managing traffic is also linked with where people want to go for which parking is a key determinant. Hence rearranging the supply of parking will influence the decision to drive. Additional parking in the core of the city is not really an option because space is scarce and more traffic would be undesirable. Instead, parking within walking distance of all the main destinations should be available. The Council have shown that a comprehensive approach to parking is effective and forms a sound approach for future measures.

Measures to restrict traffic, such as that using Pulteney Bridge, can be highly effective. Such measures need to be considered in the wider context to understand the implications for other parts of the city. Accordingly, a Traffic Management Plan for the city centre is proposed that will provide the context for management measures and to co-ordinate individual initiatives. The Plan will set out co-ordinated measures including traffic signal control, parking management through signing and the parking policy of reducing the supply of central area spaces, accommodating walking and cycling more conspicuously and other measures to improve traffic flow while deterring vehicle movements for which an alternative is available.

Through traffic is perceived to be a problem. This includes traffic with both an origin and destination outside the city which has no purpose in Bath and should use other routes. There is also an element of internal through traffic i.e. vehicle movements that start on one side of the city and finish on another and so use the city centre, estimated to account for 12% of all city centre traffic. These journeys contribute to congestion and some could be made by other means.

For streets to function effectively, enforcement of regulations needs to be effective. This includes loading and parking controls and ensuring that Blue Badge holders can access designated parking spaces.

Technology can be deployed to direct motorists to parking spaces (extending the existing variable message signing), to manage traffic signals in a coordinated way and to inform transport users about current conditions on trains, buses and roads. Managing information can be a useful tool, particularly when there are events such as sports fixtures.

Car sharing can be initiated through workplace travel plans. This reduces the number of vehicle movements, reduces pressures on parking and reduces travel costs for individuals.

Traffic delays occur where demand exceeds the road space available and is often associated with motorists seeking parking spaces, an obstruction or similar incidents. Some detailed junction analyses have been undertaken which show the delays incurred to traffic and other road users, particularly pedestrians. Improving options to avoid driving into the central area will help to reduce traffic levels.

In the longer term additional road links could be considered to overcome the limited options presented by the current road network. . A comprehensive approach to traffic management will help make journeys more reliable, evidenced through traffic speed data and user satisfaction surveys.

Measures will include:

- Development of a city centre traffic management plan;
- Setting principles
  - Removing gyratories ;
  - Removing traffic signals where possible;
  - Creating shared spaces ;
- Addressing strategic and local 'through traffic' (around 12% of volume) especially heavy vehicle enforcement; and
- Traffic management related to development sites e.g. Enterprise Area.

Recommendation: Vehicle movement should be better managed, particularly in those parts of the city where there is least space available.

2.1.6 Development Requirements – Promoting Sustainable Development

A number of development options are being presented. The emerging Core Strategy is identifying the locations where development can take place, refining this through the Placemaking Plan to specific sites. These can be designed to add to the economic success of the city and reflect its heritage. Inevitably, there are concerns that new development will generate more traffic but this is not necessarily the case; other means of travel are available, travel demand can change and some journeys will involve relocation. New activities can be the stimulus for better transport, particularly if they make buses more viable and add to the walking and cycling options.

The Enterprise Area (EA) is a major opportunity to develop sustainable transport by design, linked to the city by walking routes, cycling routes and bus links and containing the demand for travel by car. This is likely to focus on walking as the prime means of access to employment at the city centre parts of the area, supported by new river bridges. Bus access will also be needed along the east-west axis (possibly linking to parking at the periphery) and a network of cycle routes will help people to make journeys. Containment within the site or within the city, enabling people to live and work within one community, will reduce the

demand for longer distance travel, particularly by car, although this will depend on the type of jobs available. Transport is a fundamental consideration in the delivery of the Economic Strategy. Without coherent and attractive transport links, Bath will not be an attractive location for development. Striking a balance between car use and other access will influence the design of developments and there is a strong case for proposing high quality mixed development with a strong emphasis on access by walking, rail, bus and cycling. This would be appropriate in the Bath context and offer office, retail and residential accommodation that is different in quality and experience from locations elsewhere.

The process of masterplanning for the EA is at its early stages but discussions have taken place regarding its likely form and content. Evidence from previous Transport Assessments is helpful and further technical analysis will help to define the development in terms of the number of trips that it is expected to generate, their distribution and the modes of transport that could be expected to provide access. Evidence will be obtained from traffic flows, surveys of the number of pedestrians, cyclists and bus users and the extent to which travel plans have been effective. The planned EA includes a variety of land uses including office, retail and residential. It is expected that the office component will be at the eastern end of the site nearest the city centre, enabling many journeys to be made by walking or cycling to the centre and Bath Spa rail station, adding to the walking network and becoming part of an extended central area.

As other development takes place along the river, notably housing, the creation of riverside walking and cycling opportunities and new crossings of the river will create new connectivity. A new bus service will connect those parts of the EA furthest from the centre. Developing the office and employment activities initially would help establish the area as part of the city centre and hence its timing is closely related to that of Park and Ride expansion. Determining the wider parking strategy with the creation of additional Park and Ride spaces is an essential requirement for the EA. Developing housing progressively within the EA will allow travel patterns to develop incrementally.

Specific measures will include:

- Ensuring that development sites have sustainable transport options through design, planning conditions such as travel plans and limited car parking;
- Designing for sustainable transport in the Enterprise Area: strong and attractive walking and cycle routes to the city centre and Bath Spa and Oldfield Park stations, secure cycle parking, good links to bus services;
- Integrating new sites within the city by incorporating routes that link to established routes and destinations;

- Proportionate and complementary parking provision in new developments: link to off-site P&R capacity; and
- Developing appropriate parking standards.

Recommendation: That the Enterprise Area is developed as part of an integrated approach with strong sustainable transport links to the city centre and rail stations. The development should focus initially on office and related development at the eastern end of the site and have limited car parking. Subsequent housing development should also focus on accessibility by non-car modes.

2.1.7 Car Parking – Managing Supply

Parking is a key determinant of journeys and can be managed accordingly. It is proposed to continue the progress made in Bath to relocate long stay parking at Park and Ride sites, thus reducing vehicle movements into the constrained city centre. This underlies the efforts to reduce the impact of traffic and, while Park and Ride alone will not provide the solution, it is a valuable component of the wider strategy. It enables long stay spaces to be relocated at the periphery which creates options for the central area – converting long stay to short stay spaces or reducing capacity in favour of other land uses while reducing traffic levels. This works in favour of economic activity and is a more efficient use of scarce space in the centre, presenting opportunities to improve the walking environment. The overall supply of parking can be maintained with increases in Park and Ride capacity offsetting reductions elsewhere.

A large number of parking spaces have been taken away or relocated from the city centre over the years, with complementary expansion of the Park & Ride sites. This includes over 3,000 long stay on-street spaces as part of the residents parking schemes introduced in 2000/2001 and the 320 spaces at Royal Victoria Park no longer being available for free all-day parking (introduced in 2013).

This has not been detrimental to the local economy and has helped to reduce traffic levels and shows that parking resources can be managed more effectively. It will be desirable to withdraw more off-street spaces over time in tandem with expansion of the Park and Ride offer. The closure of Avon Street car park will mean that over 600 spaces are displaced, whilst the reduction in the city centre could be higher if other car park sites are developed as part of the Enterprise Area.

The increase in parking demand in the future has been estimated based on the predicted number of additional jobs and houses that will created in the city. The calculation of demand is outlined in Table 2.1 which is based on estimating the increase in car commuting trips into the centre.

Table 2.1: Estimated Increase in Commuter Parking Demand

	Bath Residents		External trips	Total
	Centre	Outer Area		
New housing	3,000	4,000		7,000
Employees per dwelling	0.9	1.03		
Residents who work in centre	69%	32%		
New employees in centre	1,863	1,318	3,819	7,000
Car mode share to centre	12.4%	24.6%	63.8%	
New car trips to centre	231	324	2,436	2,992
Travel to work on average day	80%	80%	80%	
Parking demand	185	259	1,949	2,393

Allowance has also been made for an increase in non-commuting parking demand in the future (retail, tourist and visitor trips). Car park surveys in 2009 showed that around 13% of vehicles using city centre car parks and 43% using Park and Ride were commuters. By applying these figures to the total transactions for each type of car park, an estimation of the number of spaces occupied by commuters was made as shown in Table 2.2 (based on interview surveys and assuming that all commuters would be parked at the time of peak occupancy).

Table 2.2: Existing Peak Weekday Occupancy (November 2011)

Location	Total Users	Spaces used by Commuters	Spaces used by Non-Commuters	Total Spaces used
City Centre	3,380	439	1,346	1,785
Park & Ride	2,496	1,073	643	1,716
Total	5,876	1,513	1,988	3,501

If a 10% increase in non-commuting demand is allowed for, this results in the demand for an additional 199 spaces, giving a total expected increase of 2,592 spaces.

However, it is expected that increased use of non-car modes will reduce the overall parking demand in the future. Allowing for a 10% reduction in the additional future demand (259 spaces) and 10% reduction in existing commuting demand (151 spaces) gives an estimated net increase in demand of 2,182 spaces.

From the November 2011 parking surveys, the maximum occupancy was higher on Saturday than on weekdays, with a total of 3,998 spaces occupied (in the centre and at Park & Ride) representing 87% of the available capacity. By comparison, the maximum weekday occupancy was 3,482 spaces. If it is considered that the figure for Saturday represents the effective capacity of the car parks, there is spare capacity of 516 spaces on a weekday (when car parks operate at over 85% of capacity, congestion starts to occur due to vehicles searching for a space).

Since 2011, increased capacity has or will be provided by expansion of the existing Park & Ride sites:

- 390 spaces at Lansdown (completed February 2013);
- 230 spaces at Odd Down (completed November 2012);
- 248 spaces at Newbridge (planning permission received November 2013);
- 868 additional spaces in total.

However, as part of the planned redevelopment of sites for the Enterprise Area some city centre parking spaces may be displaced. Their replacement in the city centre will need to be considered within the strategy as a whole.

With the possible reduction in city centre parking capacity, greater use of Park & Ride will need to be made and encouraged, particularly for those staying three hours or more. However, good provision for shorter stays should remain in the city centre, whilst aiming to reduce traffic levels in the centre itself. All car trips into the city centre requiring parking could then be directed to the nearest car park on the edge of the centre, based on their incoming route:

- Southgate for trips from the south and east;
- Podium for trips from the north; and
- Charlotte Street for trips from the west.

With the above system, the need for traffic to pass through and circulate around the city centre should be reduced.

It may also be desirable to support 'informal' Park and Ride where car users can park at peripheral locations and use existing bus services to complete their journeys. This could be developed through workplace travel plans to inform people about the options, working with the owners of potential car parks such as pubs or supermarkets where spaces may be available during the day and gaining the support of bus operators.

Other parking issues include enforcement of regulations, a necessity to avoid obstruction of streets and to ensure that spaces are available to as many users as possible. Residents' parking schemes also form part of the picture.

Car park user surveys have been used to provide origin information and also show qualitative aspects of the parking offer. These have covered both central area car parks and Park and Ride and indicate the origins of users and their views on the parking offer. This baseline data can be compared with future survey data to assess the impacts of the parking strategy, particularly in terms of user satisfaction.

Recommendation: Car parking is a central feature of the strategy, enabling other components to take effect. The policy of reducing central area public parking and expanding long stay capacity at Park and Ride sites should continue, enabling greater emphasis to be given to walking, cycling and bus services in the historic core and on key corridors.

2.1.8 Park and Ride – Providing Long Stay Parking Capacity

Park and Ride is well-established with three sites in operation for the city. These are popular as evidenced by high levels of use and help to reduce vehicle movements into the city centre. Relocating long stay parking from the centre to park and ride is achievable although there is a revenue implication if Park and Ride is priced at a lower level than central area parking and the supply of the latter declines. A site to the east would complete the picture, allowing people to choose not to drive into the centre and thus contribute to a better city environment. Data shows that many trips originate from the east and that some motorists choose to use the Park and Ride facilities at Odd Down and Lansdown in the absence of a facility to the east. A designated site will need to be adopted, enabling bus and/or rail links to serve the city centre. The

three existing park and ride sites may need to be expanded further; work has recently commenced on the expansion of the Newbridge facility. There may be scope to reassess journey patterns, for example taking account of the expanded Newbridge provision, orientating some Park and Ride services to the hospital (as the Odd Down P&R buses do) or other destination rather than or in addition to the city centre.

The established Park and Ride sites are well used and often full. Data shows that most users use the site nearest to their approach to the city but that some may divert from Lansdown and Odd Down to a new site to the east if available. Users comprise commuters and visitors/shoppers and collectively account for around 1.2 million vehicle trips every year (to and from the city centre). Evidence has been obtained from surveys of current Park and Ride users including identification of their journey origins. Traffic count data has been used to assess the effects of Park and Ride on radial routes. It is suggested that further work is needed to identify how the additional demand can be accommodated.

Recommendation: That further work is required to establish the need for increased Park and Ride capacity as part of a wider parking strategy and to undertake a detailed assessment of sites to the East of the City.

2.1.9 Bus Services – Making Better Use of Services

Bus services in and around the city are numerous and generally of good quality. The new bus station provides a focus for a wide range of services and many buses are accessible to everyone. Improving bus services is about much more than the buses themselves – it is about understanding how, when and why people travel and providing buses to meet those needs. One bus can substitute for many car journeys in the city. Working with bus operators will determine the most appropriate ways to build the market through straightforward ticketing, new information provision and services that meet the needs of local people during the day and into the evenings.

The apparently declining core market for buses is a concern which will need to be addressed given that bus is the most realistic option for many journeys beyond reasonable walking or cycling distance, or for those people who unable or unwilling to walk or cycle. The Greater Bristol Bus Network is a concerted effort to generate growth in bus use through improved services supported by new infrastructure, the principles of which could be applied to Bath.

A number of initiatives have aimed to improve the quality of bus services in terms of journey reliability and punctuality but problems of unpredictable traffic conditions and high fare levels persist alongside negative perceptions of the bus offer which will need to be overcome if demand is to be stimulated. Measures that can help include the widespread availability of real time service information and journey planning tools. Funding from the Department for Transport's Better Bus Areas scheme is enabling the introduction of measures to help bus movements in the London Road corridor. There are also plans to introduce a bus lane on the A36 Lower Bristol Road on its approach to Windsor Bridge Junction. The recent experimental changes in Dorchester Street are designed to ensure that buses are not delayed entering and exiting the Bus Station. The widespread adoption of smartcard and other forms of easy payment will help show how bus travel can be made more attractive and also provides valuable data for operators about users' travel habits.

The number of bus users has remained relatively constant in recent years – based on data for the number of users – but the number of concessionary users has increased. This indicates that the number of regular fare-paying users has declined, despite the improvements to services and infrastructure introduced through the Bath Transport Package.

Specific measures will include:

- Bus network improvements including infrastructure e.g. evening services;
- Better multi-media service information (joint initiative between operators, the Council and users);
- Smart ticketing, as being introduced currently and mobile phone ticketing;
- Revised fares structures, especially for inter-urban services; and
- Scope for additional priority measures e.g. at junctions.

Recommendation: Improved bus services, with ticketing and other improvements and measures to improve reliability, will provide alternative travel options to car use, promoted through travel plans and comprehensive marketing.

2.1.10 Travel Plans

Travel plans can contribute to people understanding their travel options and moving towards sustainable modes. Workplace travel plans for major education and workplaces including those in the Enterprise Area will need to identify sustainable transport options. This may include better travel information to widen choice, changing the opening times of shops, offices and businesses to help spread peak demand and measures to enable the uptake of public transport use.

The impact of travel plans can be demonstrated by lasting changes in travel behaviour, supporting sustainable travel choices and reducing peak time car travel. Information has been obtained regarding existing travel plans and experience from other parts of the country indicates how travel plan initiatives can be successful in reducing car dependency. For example, the University of Bath's travel plans show a reduction of 7.5% in staff sole occupant car trips in two years.

Specific measures will include promoting travel plans through a travel forum:

- Workplaces;
- Education establishments;
- Healthcare and Royal United Hospital catchment issues;
- Rail stations/neighbourhoods.

Recommendation: Travel plans should be promoted for all main activities in the city to support a move from car use to other means of travel:

- **Travel plans will be built into the planning process;**
- **Existing plans will be refreshed for workplaces and education establishments;**
- **Travel need for healthcare, particularly the Royal United Hospital will be considered;**
- **Access to rail stations (currently around 100 trains per day serving Oldfield Park and 340 serving Bath Spa) will be reviewed; and**
- **Travel plans will be developed working with transport providers: train and bus operators, cycle shops, etc.**

2.1.11 Taxis

Taxis are important for people who cannot access buses or who are unfamiliar with the area or require specific destinations.

Recommendation: Maintain the taxi network as part of the wider range of transport options.

2.1.12 Rail – New Services and Opportunities

Options for train travel are expected to widen as changes are made to rail infrastructure and services. For journeys to Bristol, the Wiltshire towns and beyond, rail will be a more attractive option. Improved access to the local stations will become more important. Consequently existing provision within Bath will need to be reviewed to determine if it can meet potential future need and is accessible.

Given the scope of the rail network, it is possible that improvements outside the area will support more train travel such as the creation of new stations in Wiltshire (including Corsham and Royal Wootton Bassett) or the Bristol area, enabling people to access rail services more easily.

The timing of changes to the rail network is critical in that electrification of the Great Western Main Line from London to Bristol and beyond presents the opportunity for future options to be included, provision for which will not be possible subsequently. Given the high cost of rail infrastructure, plans need to be fully justified and robust. Changes to routes with two trains per hour diverted from Bristol Temple Meads to London Paddington via Bristol Parkway and two per hour via Bath Spa opens up new capacity. In addition, the proposed MetroWest network envisages the upgrading of services across a wide area with more frequent trains between Bath and the Bristol area. Rail and ride opportunities need to be considered as part of this process

Continued co-operation between local authorities will help maximize the benefits of the substantial changes to the rail network. Improved links with the Bristol area will support the growth of Bath while working with Wiltshire Council and train operators will help to improve services between Bath and Bradford on Avon, Trowbridge, Warminster, Chippenham and Westbury.

The number of rail users is at an all-time high according to station surveys and more people can be expected to use the local network when wider journey options become available, such as the West of England Metro for which some information is available. Business cases including demand and revenue forecasts will be needed to justify proposals on the rail network.

Specific measures will include:

- Improved walk/cycle/bus access to Bath Spa and Oldfield Park, including from the Enterprise Area;
- Service improvements and journey opportunities on electrified main line and MetroWest network;
- Increasing capacity of existing trains e.g. Trowbridge line;
- Further work is required to examine the potential for new stations and rail and ride options or improvements to existing stations; and
- Station capacity management e.g. event days.

Recommendation: The growth in rail capacity and the range of services available as part of the Great Western Main Line electrification scheme and the development of MetroWest will support significantly more rail journeys. Access to local stations will need to be improved and new stations may be appropriate. Better services should be promoted to link Bath with the west Wiltshire towns.

2.1.13 Coaches – Supporting the Economy

Visitor coaches are a strong contributor to the economy. The Roman Baths is a key destination with over 350,000 visitors arriving by coach each year. The need to close the Avon Street coach park requires both a short term solution and a permanent solution. This also needs to consider options for loading/unloading coaches in the city centre. Orange Grove has been altered to create a high quality public realm and accommodates some bus services including tours hence is no longer available for large numbers of coaches

The Bath Christmas Market attracts visitors in considerable numbers, many of whom arrive by coach; the summer season also sees a rise in the number of coaches visiting the city. Over 80 may arrive in a single day and accommodating this number has been difficult. With the relocation of the coach park, ample space needs to be available to accommodate peak demand or other options will need to be considered such as the suspension of on-street car parking bays in some locations to enable overflow coach parking at certain times.

Many coaches originate in London/South East as shown by survey data and all require access in the city within a short distance of the main attractions. Avon Street coach park has insufficient space for the number of coaches arriving and at least five bays are required in the city centre. Dialogue with visitor attractions indicates that coaches are a major component of their success but that an easily accessible unloading point in the city centre is essential, which is linked to a more remote coach parking facility where coaches will park up after dropping the visitors within a City Centre location.

Specific measures will include:

- Identification of City centre coach set-down/pick-up facilities;
- Identification of replacement coach parking facilities;
- Management of pre-booked arrivals;
- Peak demands for market / festivals / events may need additional capacity.

Recommendation: That coaches continue to be promoted as an important means of bringing visitors to the city. Further work is needed to identify suitable facilities for coach drop off and pick up and replacement coach parking facilities.

2.1.14 Freight Movements – Better Management

Freight movements are essential to keep the economy moving. A consolidation centre has been established for city centre retailers which has reduced vehicle movements dramatically but more businesses could be involved which would enable it to operate without subsidy. From the initial involvement of around 30 businesses, several hundred will be needed to make the scheme a commercial proposition. This could be supported through further dialogue with potential users but also an understanding of possible traffic management and enforcement changes such as restrictions on loading and unloading, emissions standards or vehicle size/weight limits. Electric delivery vehicles and cycle delivery of parcels could be promoted for the city centre.

Loading and unloading restrictions are in place but are contentious – businesses cannot always specify delivery times or incur additional costs to meet the on-streets constraints. While many businesses operate with specific delivery arrangements, problems can result from smaller delivery vehicles, notably the expansion in parcels and courier services and also one-off activities such as builders' vehicles which can cause obstructions. These are difficult to manage but a permit scheme limiting access to pre-defined times and locations may be desirable if the problem becomes widespread.

Food and other retail deliveries are becoming more popular as internet access increases. This has generated delivery van activity but not necessarily a reduction in visits to shops as people view potential purchases before the transaction is made from home, particularly for one-off purchases. However, the timing of retail visits may be changing as internet shopping becomes more widespread.

Although overall the number of heavy vehicles is small, their impact can be considerable so enabling the use of smaller vehicles has significant benefits. Evidence has been sought from city centre management, representing retail activities in particular. However, large vehicles such as those on London Road do not wish to negotiate the city's streets unless they have a particular need to be there.

Specific measures will include:

- More cycle deliveries;
- Consolidation centre used for more businesses;
- Possible out-of-hours deliveries;
- P&R retail collection points;
- Working partnership with businesses and operators;
- Press the Highways Agency to take measures to remove heavy lorries from the city and
- Restricted unloading hours with enforcement (experimental schemes).

Recommendation: That freight movements be considered more fully, working with businesses and operators, particularly to promote consolidation of deliveries and to better manage loading and unloading arrangements.

3. Delivering the Strategy

3.1 Community Engagement

The strategy will be successful only if local people are engaged in its development. This emerging strategy has involved dialogue with a number of interests but a much wider engagement programme will ensure that people understand and support the proposed strategy. This process needs to involve a wide range of stakeholders from transport operators and users, the business community, local residents and interest groups. Local employers will need to be involved as well as those already engaged as development takes place and the economy grows.

The consultation and engagement process will be aligned with the Placemaking Plan that will set out the location and type of developments that are planned for the city.

Neighbouring local authorities will need to be involved, particularly the Greater Bristol authorities and Wiltshire Council, for initiatives involving road traffic and rail options.

The initial phase is to gauge reaction to the principles contained within the strategy prior to putting forward detailed proposals that will result in their implementation.

3.2 Priorities and Programme

The strategy is intended to generate significant changes in travel behaviour and mode share. It also needs to be deliverable. Generating major benefits for the economy, community and environment is achievable in the spirit of the vision and offers the potential to make Bath an exemplar city for sustainable transport.

Walking is a major component of the strategy with widespread benefits and requires an extensive programme of works including signing, lighting, footpath and footway improvements, better lighting and improved crossings. Parking and traffic management measures will require a phased approach while development sites may take many years to complete.

Ideally all proposed measures should be progressed together. However, some proposals are easier to deliver than others and will involve more procedures such as Traffic Regulation Orders or planning consent. Some proposals may have long lead times which require extensive planning. However, some have been given a high rating for priority, reflecting their extent of their expected benefits. Detailed costings are unavailable at this stage but some schemes will have wide coverage even if the component schemes are relatively small; for example, a programme of walking route improvements may involve a large number of small schemes throughout the city.

3.3 Monitoring and Key Performance Indicators

A comprehensive set of base data will need to be collected prior to any measures being put in place in order to allow detailed before and after studies to be undertaken. The impacts of the strategy will need to be measured on a regular basis and assessed for their contribution towards the objectives. A comprehensive series of data will need to be collected on a regular basis that will indicate changes over time, although more specific assessments may be needed in response to particular measures.

Specific KPIs will include:

- Number of vehicles/delays/traffic growth;
- User satisfaction;
- Air quality;
- Modal share: shift to walk/cycle/bus/train/car share;
- Parking demand and distribution;
- Accessibility indices; and
- Successful delivery of development sites.

A Delivery Plan will be produced with a five year profile against which continuous improvement can be demonstrated. This will be subject to annual review and the complementarity of measures will also be considered.

3.4 Outcomes

Delivering this strategy will address the defined objectives through improved travel choice to reduce the number of car journeys, hence reducing the impact of traffic and improving air quality. The local economy will be enhanced through easier access on foot and cycle and to improve the visitor experience. Quality of life will be improved with a more attractive city, supporting a culture of sustainable travel enabled by a comprehensive programme of community engagement. This will enable investment and development to take place, building on sustainable travel throughout the city.

All the measures outlined above need to be delivered in combination to address the strategy objectives – there are no individual or simple solutions.

If delivered effectively, it will achieve the following:

- Improved travel choices;
- More business opportunities and higher productivity;
- Fewer car journeys, healthier lifestyles;
- Reduced carbon emissions, addressing climate change;
- Better air quality, improved safety and health;
- Sustainable development and delivery of Core Strategy – Placemaking Plan; and
- Improved experience for residents and visitors

The implementation of the measures proposed will influence Bath in a positive way over a number of years – changing the culture of the city to be a leading proponent of walking and sustainable transport is a shift requiring behavioural change. However, the effects could be transformational with a new emphasis on the historic fabric and layout of the city, enabled by a strong walking tradition supported more cycling and better use of trains and buses. The city pre-dates cars but vehicles have gradually come to dominate the streets to the detriment of the environment and the economy. Bath should be Europe's prime example of a sustainable transport culture.

3.5 Targets

Setting targets requires confidence that the measures planned will be delivered and that they are realistic ambitions. Given the apparent mode share currently, it is reasonable to assume that the mode share of walking can be increased from the 2001 recorded level of 35% for people living and working in the city to at least 40% by the target date. This will require a commensurate reduction in car driver trips to less than 30% of the total compared with the current 39%. Similarly, the proportion of rail users can be expected to increase along with cycling trips.

3.6 Next Steps

To be successful, the strategy will need to be the subject of a public engagement programme so that as many people as possible feel they have a stake in the outcomes. The emerging principles for the Enterprise Area will need to be formed around sustainable transport to ensure that it can be accommodated in an integrated way appropriate to its context in the city. Other sites included in the Core Strategy will also need to be considered with transport as a central consideration.

For the measures adopted in the strategy, refinement will be necessary both to define the technical requirements and to programme the necessary processes and approvals.