CITY OF PLYMOUTH

Subject:	Plymouth's Third Local Transport Plan - Consultation Draft
Committee:	Cabinet
Date:	19 October 2010
Cabinet Member:	Councillor Wigens
CMT Member:	Director for Development and Regeneration
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Ref:	SAM / DLTP3
Part:	1

Executive Summary:
This report brings before Cabinet, Plymouth's Third Local Transport Plan seeking approval to commence a full public consultation.

The Council has a statutory duty under the Transport Act 2000 and amended by the Local Transport Act 2008 to have in place a Local Transport Plan that consists of a transport strategy and an implementation plan. Confirmation that this requirement will remain had been received from the Department for Transport.

There have been a number of changes to the requirements since Plymouth's Second Local Transport Plan was published, these changes are detailed in this report.

A short summary of the contents of the draft plan is included within this report.

Plymouth's Second Local Transport Plan is due for replacement on 1st April 2011, this report seeks approval for Plymouth's Second Local Transport Plan to be retained as the transport strategy for the City until 11th April 2011 to coincide with dates of the meeting of the City Council.

Corporate Plan 2010 - 2013:
The Local Transport Plan (LTP) is one of the Council's key strategies for delivering its Corporate Aims, as identified in the Corporate Plan. In particular the LTP is a companion strategy to both the Local Development Framework and Local Economic Strategy. It will help to build Plymouth's future by articulating a transport strategy which directly supports the Sustainable Community Strategy.

It is a cross-cutting strategy, supporting several of the Council's priorities through delivery of transport interventions which enable growth, support aspirations and increase equality as well as providing a contribution to reducing the carbon footprint of the city.

In particular, this report provides the transport framework for delivering the current Corporate Improvement Priority number 11.

Implications for Medium Term Financial Plan and Resource Implications: Including finance, human, IT and land

This consultation stage of the LTP is estimated to cost in the region of £10,000. This will cover meetings, workshops, publication and publicity costs. This will be met from the existing Transport Strategy budget.

Other Implications: e.g. Section 17 Community Safety, Health and Safety, Risk Management, Equalities Impact Assessment, etc.

None

Recommendations & Reasons for recommended action:
It is recommended that the Cabinet –
Approve for consultation purposes Plymouth's Third Local Transport Plan

Reason - To enable the Council to progress the Plan in line with statutory requirements.

Alternative options considered and reasons for recommended action:

Not to progress with Plymouth's Third Local Transport Plan would result in Plymouth's Second Local Transport Plan being rolled forward as the future transport strategy for the city. This would be unacceptable as it does not support new priorities which have emerged since its publication.

Background papers:

Evidence documents are detailed throughout the plan.

Sign off: comment must be sought from those whose area of responsibility may be affected by the decision, as follows (insert initials of Finance and Legal reps, and of HR, Corporate Property, IT and Strat. Proc. as appropriate):

Fin	DevF10110022	Leg	JAR/10/9858	HR		Corp Prop		IT		Strat Proc	
Originating SMT Member: Clive Perkin. Assistant Director of Development and Regeneration											

1. BACKGROUND

1.1 The Local Transport Plan is the framework for management and improvement of the transport networks within Plymouth.

1.2 The statutory requirement for local transport authorities to produce a Local Transport Plan was enacted via the Transport Act 2000. Under the provisions of the act, Plymouth has produced two Local Transport Plans previously in 2001 and 2006. A third plan is required to be in place by 1st April 2011.

1.3 The Local Transport Plan is a companion strategy to the Local Development Framework and Local Economic Strategy. It enables delivery of the growth aspirations of the city by improving connectivity, it supports the aspirations of individuals and a wide range of communities within the city, it reduces the carbon footprint of the city by providing more sustainable travel opportunities and it increases equality by providing transport or alternative to travel options to access essential services and facilities.

2. CHANGES TO THE LOCAL TRANSPORT PLAN PROCESS

2.1 The Local Transport Act 2008 introduced a number of changes to the LTP process.

2.2 The Plan is no longer restricted to 5 years as with the previous two LTPs. The strategy has therefore been developed to cover a 15 year period to closely link with the Local Development Framework and enable long term planning of major transport schemes. The strategy will not stand still over 15 years, it will be reviewed every 5 years to ensure it still fits the needs of the city.

2.3 There is now a formal requirement to include an Implementation Plan as part of the LTP or as a separate document. The implementation plan does not have to cover the same timeframe as the strategy but it must demonstrate how the strategy will be delivered. Included within the draft LTP is a one year implementation plan which covers the period 2011 – 2012. A three year implementation plan will be included within the final Local Transport Plan when there is a clearer understanding of the emerging funding processes.

2.4 The LTP will no longer be formally assessed by the Department for Transport.

2.5 There is no longer a requirement to produce a bus strategy to accompany the LTP.

3. CONTENTS OF THE PLYMOUTH'S THIRD LOCAL TRANSPORT PLAN - CONSULTATION DRAFT

3.1 The Policy Context for the Local Transport Plan

3.1.1 The Plan for Plymouth sets out a vision that "By 2020 Plymouth will be one of the finest, most vibrant waterfront cities where an outstanding quality of life is enjoyed by everyone. The Core Strategy sets out a spatial planning framework for the long term development of the city including the physical expansion of the city from 250,000 to over 300,000 people. Plymouth's role is to become the economic hub for the far south west meeting the needs of the sub-region. Plymouth's superb setting makes the city an attractive and distinctive location for both residents and visitors alike and accommodating the travel demands that this growth will place on the city's transport network is one of the cornerstones of the city's transport strategy set out in this Local Transport Plan.

3.1.2 The city, through its Core Strategy, has identified substantial development opportunities which are well related with the main transport corridors within the built up area. Sustainable development is at the heart of the Council's growth agenda and therefore providing an effective transport system involving the transformation of the public transport network is at the heart of the city's transport strategy.

3.1.3 The Council is now about to go out to public consultation on its third Local Transport Plan (LTP3). This document sets out the transport strategy for the long term development of the city, ensuring that the significant changes arising from substantial development opportunities across the city can be delivered in a sustainable way. Transport must also play its role in achieving equity of access to services for all as a means of eliminating areas of deprivation in the city and aiming for equity regarding how transport impacts upon different communities in the city.

3.1.4 Policies addressing the changes and improvements required from transport infrastructure and services are woven into the Core Strategy and related Local Development Framework (LDF) documents. Therefore the Local Transport Plan includes policies and interventions for improving connectivity between neighbourhoods by public transport, cycling and on foot; and maintaining safe transport networks that are developed in an environmentally sensitive manner.

3.1.5 This Local Transport Plan must also play a positive role in promoting sustainable development and in particular responding to the impact of transport on climate change.

3.1.6 The Local Economic Strategy (2006) set out ten actions that the city needs to achieve if it is to fulfil its economic potential. These include: focusing on key sectors for which Plymouth has competitive advantage; enhancing the tourism offer; transforming Plymouth into a true learning city; achieving well connected complementary growth; and achieving effective and unconstrained participation in the labour market. Local transport investment and policy will play an important role in achieving these.

3.2 The Transport Strategy for Plymouth

3.2.1 The LTP3 sets out a strategy that supports Plymouth's transformation into one of Europe's finest waterfront cities, creating an effective transport network which provides for a growing population with the freedom and flexibility to choose the travel option that works for them everyday giving them a unique quality of life aspired to by other cities.

3.2.2 The requirement for the city is to achieve a fundamental shift in peoples' attitudes and behaviours towards the way they choose to travel. Improving people's journey experience by way of developing an effective transport system incorporating a transformed public transport network is therefore a priority. A new High Quality Public Transport network to provide sustainable transport options will be progressively extended along all the major corridors to serve the Plymouth Travel To Work Area. For the average traveller this means that they will be able to make their journey in the knowledge that services turn up on time, journey times are reduced compared with the equivalent car journeys and that these are guaranteed every day.

3.2.3 However, the Local Transport Plan over the next 15 years will also support the delivery of sustainable linked communities, where access to a full range of local services is available to all, narrowing the gap between the city's affluent and deprived neighbourhoods. Equally, reducing the negative impacts of transport on communities in terms of noise, air quality and severance in those areas where these impacts are disproportionately high, needs also to be a priority

3.2.4 The city has also set itself very ambitious targets to reduce transport related emissions by 80% by 2050 and to reduce the per capita carbon footprint in the city from 5.8tCO_2 per

person (in 2006) to 5.0 tCO_2 per person by 2011. Transport accounts for 25% of Plymouth's current emissions. Accordingly we have set as a local transport objective 'to maximise the transport contribution to Plymouth's carbon reduction target (60 percent reduction by 2020)'

3.2.5 These improvements and the outcomes we seek to achieve through the Local Transport Plan are articulated by way of six local objectives as follows:

1. Link communities together
- Improve access to community amenities, leisure opportunities and our high quality natural environment by increasing the availability of attractive walking, cycling and bus routes and enabling the right mix of land use
- Enable easy access to growth and regeneration areas by walking, cycling and public transport
- Improve the design of residential streets to reduce the fear of crime and antisocial behaviour as well as the dominance of the car.

2. Reduce the negative impacts of transport
- Reduce severance of communities by transport networks and the impact of poor air quality and noise on communities
- Ensure footways and cycleways are well designed and improve physical access.

3. High quality transport standards for a vibrant city
- Make best use of our existing transport networks; manage congestion and improve journey reliability
- Maintain, and where necessary improve the condition and increase the flexibility of our transport network such that it is more adaptable to climate change, severe weather events and incidents
- Improve the quality of public car parks such that they meet the higher standards set by private parking companies
- Set clear priorities for routes to and from main areas / facilities to balance competing demands for highway space across the network.

4. Make walking, cycling and public transport the desirable choice
- Provide more opportunities and encourage increased uptake of travel by active modes, walking and cycling, to promote healthy lifestyles
- Improve the quality, extent, availability of information and physical access of our bus, rail, walking and cycling networks so that they are easy to use
- Increase integration of transport modes to improve the end to end journey experience so providing an attractive range of travel choices for more people.

5. Maximise the transport contribution to Plymouth's carbon reduction target (60% reduction by 2020)
- Increase awareness of ways to reduce personal carbon footprint by walking, cycling and taking the bus
- Reduce energy consumption from non-renewable sources used by our infrastructure and operations
- When building or renewing infrastructure or equipment consider the lifecycle carbon footprint; reuse and recycle where possible
- Encourage use of more efficient and alternative fuelled vehicles by providing infrastructure and information.

6. Use transport to drive the local economy
- Support the delivery of the Local Development Framework and Local Economic Strategy by connecting growth and regeneration areas by all modes with communities and national transport networks

- Work with the development management process to deliver small and large scale improvements in transport networks to enable connectivity
- Develop improved transport networks to open up long term opportunities for growth
- Encourage sustainable tourism
- Improve connections with transport networks which connect Plymouth to the rest of the country
- Improve access to wider road, rail, air and sea networks
- Improve gateways to these networks, prioritising Plymouth railway station and Plymouth coach station when the future of the Civic Centre is known.

The strategy is set out in six areas and are summarised as follows:

3.3 Supporting Growth

3.3.1 The vision set out in Plymouth's Sustainable Community Strategy requires a transformation of the city in terms of urban environment, connectivity, reduction in inequalities and prosperity. The City's Local Economic Strategy and Local Development Framework documents illustrate very clearly the crucial role that transport investment will have to play if the city is to fulfil its economic potential.

3.3.2 This chapter sets out a transport strategy to support growing prosperity and overcome existing economic weaknesses, such as an over-reliance on public sector employment and lack of economic diversity. Among our six local transport objectives the chapter is guided particularly by the objective to 'Use transport to drive the local economy'.

3.3.3 The City's ambitious growth agenda to become the economic hub of the far south west involving population growth will present opportunities and challenges in terms of transport infrastructure and services. Opportunities will include the creation of a larger, denser public transport market, and the ability to make a strong case for essential large scale transport infrastructure investment.

3.3.4 With pressures to deliver greater cost efficiencies and maximise value for money from the investment we make, we will need to be creative in the schemes that are delivered in terms of delivering maximum benefits at a fraction of the costs. This will be a challenge, but the city is well placed to meet it. Traffic flows throughout most of the city's network and throughout most of the day are currently below the capacity available leading to little congestion at present and where it does occur, this being restricted to a few locations for short periods of the day. Therefore, most journeys can be relied upon. This enhances the city's attractiveness to new employers. The limited instances of poor air quality arising from traffic, and relative ease of access to the outstanding natural environment and satellite towns in the Plymouth sub-region are an important part of the quality of life offer that the city can make to potential new employees, and therefore must be protected and enhanced.

3.3.5 However, growth will put additional traffic on the network particularly on the corridors and therefore managing traffic growth on corridors through sustainable transport is a priority for the LTP3 delivery programme. An enhanced park and ride network will contribute to this as will the reallocation of road space towards high occupancy vehicles, such as buses, in order to achieve the step change necessary in quality and reliability of bus services. Whilst major capital investment is targeted at delivering new infrastructure such as building new links and widening existing roads where there is no alternative, this will only be possible once sufficient funds have been secured from new development or through the Council's own capital programme and submitting bids for additional funding to central Government. To complement new infrastructure, LTP3 proposes to maximise the productivity of existing highway assets through more intensive use including the need to reallocate existing highway to high occupancy vehicles where there is a clear overall benefit to road users. Opinion towards this policy will be one of lines of enquiry during the public consultation.

3.3.6 It is vital that we plan appropriately to ensure that growth in prosperity does not lead to significantly increased congestion, pollution and production of greenhouse gases; all of which impact upon economic productivity and competitiveness. Our approach will not involve local congestion charging and the building of additional road capacity will be targeted where there are clear benefits from making that investment decision. It will involve managing our transport assets effectively; improving connections between key economic centres in the city and to the rest of the UK and abroad; and enabling and encouraging the increased use of communication technologies to improve connectivity within and beyond the city, reduce business travel and the effects of Plymouth's peripheral location relative to its markets.

3.3.7 Small and medium scale transport investments focused on improving the performance of existing networks, such as smoothing traffic flow (active traffic management), and measures to encourage and enable travel by public transport, bike or on foot, are more cost effective than large-scale schemes designed to increase transport capacity. This will be a guiding principle throughout LTP3, and is given greater relevance by the difficult national funding environment in which the city now finds itself.

3.3.8 Many investments to improve walking and cycling infrastructure are small or medium scale in cost, deliver high benefit relative to cost ratios, and enable a low carbon transport approach to economic development. Therefore this will receive a significant proportion of our overall investment during LTP3, as will small and medium scale improvements to public transport infrastructure – with a particular emphasis on the city's principle public transport corridors, and the city centre.

3.4 Tackling Climate Change

3.4.1 Climate change is happening now. It is unavoidable and is, to a large extent, a direct result of the greenhouse gases (including carbon dioxide (CO_2) produced by the burning of fossil fuels such as coal, gas and oil. The Government has set a national target to reduce UK greenhouse gas emissions by at least 80% from 1990 levels by 2050. Plymouth's contribution to the national commitment is to reduce the city's CO_2 emissions by 60% by 2020 – just 9 years into this LTP.

3.4.2 The approach to tackling climate change is two-fold. We need to:

- Do everything we can to slow climate change by significantly reducing the carbon outputs of transport (mitigation), and
- Adapt our transport networks, so that they continue to function during extreme weather events that are forecast to become more frequent and more severe (adaptation).

3.4.3 Transport is a major source of CO_2 and is responsible for 25% of the city's emissions. Road transport produces more than 90% of the total domestic transport emissions in the UK and more than half of this comes from cars.

3.4.4 The challenge to transport is therefore to manage CO_2 emissions as the city grows. Whilst new vehicle technology will improve fuel efficiency and bring forward alternative non-fossil burning fuels, projections show that this will not be enough to reduce emissions by the levels required. The transport strategy therefore is about encouraging a fundamental shift in the way we choose to travel, and the way we move goods.

3.4.5 The Local Transport Act 2008 requires the Council to consider how it will act on Government policies and guidance on climate change adaptation. Past emissions are causing climate change now and this is set become more severe.

3.4.6 We know that some of the key roads and rail in Plymouth will be vulnerable to flooding from the sea and that, in other areas, our drainage system will have difficulty coping. Our only

rail link to the rest of the UK already suffers disruption at Dawlish from the effects of the weather.

3.4.7 The city needs to be able to adapt to ensure that our transport networks can cope with the increasing extremes of temperature, the impact of more severe storms on the drainage system and that we have contingency plans in place.

3.5 A Healthy Community

"Currently road transport contributes heavily to the climate change crisis, and low levels of physical activity have created a public health crisis. The two crises share a solution: a fundamental change to transport, especially urban transport, is needed… For a far larger proportion of journeys...cycling and walking need to be more feasible and appealing options than driving." Chief Medical Officer

3.5.1 Transport interventions can significantly improve health by increasing active travel through improving infrastructure, training and awareness. Health will also be improved by reducing noise and air pollution through action plans to tackle these problems where they are at their worst.

3.5.2 Transport can have both positive and negative impacts on the health of Plymouth's residents. An easy way to improve your health is to get more exercise by walking or cycling some journeys. Transport also enables better access health services such as doctors, hospitals as well as leisure and education opportunities, helping people manage positively their health and well-being. Conversely, noise and air pollution from road and air traffic can have very significant impacts on the health of those having to live or work near main roads or the airport.

3.5.3 Plymouth and its partners can use transport to support improvements to the health of our city particularly in the most deprived neighbourhoods where people die 13 years younger than in the wealthiest neighbourhoods.

3.5.4 Many reasons are given for not walking and cycling, but the evidence from the Cycle Demonstration Towns and Sustainable Travel Towns demonstrates that these barriers can be reduced, or removed entirely, by improvements to our transport infrastructure and raising motivation to become more active, both of which represent excellent value for money. For example, in Exeter, a city which has a similar topography to Plymouth, a 40% increase in cycling has been achieved in four years.

3.5.5 Within this LTP, pollution relating to local air quality has been separated from pollution relating to climate change. Local air quality has a direct and immediate impact on quality of life. Understanding of the long-term health effects of exposure to air pollution is currently rather limited, but experts suggest that cutting long-term exposure to the fine particles found in vehicle exhaust emissions by half, could increase life expectancy, on average, by between one and eleven months.

3.5.6 Pollution caused by road transport makes up the vast majority of air quality problems in urban areas. Excessive pollution for even a short period can have a detrimental impact on health. The city already has two Air Quality Management Areas (AQMAs) declared to DEFRA for Mutley Plain and Exeter Street/Embankment Road. The Council is responsible for producing and implementing action plans to manage these areas and reducing the pollution where possible.

3.5.7 Noise is increasingly recognised as a nuisance and the World Health Organisation recognises noise in our communities, including road noise, as a serious public health problem. Noise causes annoyance, and in some instances stress, leading to disrupted sleep patterns, possible heart and mental health problems. Noise can particularly affect children's communication and hence learning. Work, to be carried out in the next two years as part of

the European directive on environmental noise will enable us to better understand any problems and allow us to develop schemes which will help to reduce the impact.

3.6 Promoting Equality of Opportunity

3.6.1 Plymouth's objective to be a city where people choose to live with a healthy, growing population and realising its potential as one of Europe's finest waterfront cities can only really be achieved if its benefits are available to all.

3.6.2 There exist barriers which a significant proportion of people in the city face in order to access work, education, training or healthcare. These include not having access to a car, not being able to take the bus, the service or facility not being available at a suitable time, limited travel horizons and not being able to walk or cycle. 30% of households in Plymouth do not have a car, generally because buying and running one is unaffordable. There is a strong correlation between social deprivation and car ownership.

3.6.3 Those deprived areas with low car ownership tend to be the same areas with high unemployment and poor health. Low car ownership is also associated with high levels of missed hospital appointments.

3.6.4 Getting access to the services and facilities that most of us take for granted can improve quality of life and increase confidence and aspirations. Access to good quality healthcare, fresh food and opportunities for leisure or exercise can increase the health of a community, whilst the ability to get training or a new job can boost an individual's confidence and career opportunities.

3.6.5 Improving access can come in many forms but the most important factor is working with communities and stakeholders to deliver solutions which make the difference. Accessibility planning has been a key part of delivering access improvements for five years and this partnership approach has achieved significant results.

3.6.6 In planning for the future we need to ensure that neighbourhoods are planned so that the access to services is improved, whether that be through bringing new services into neighbourhoods or providing new, more efficient access to existing services.

3.6.7 Buses, taxis, cycle routes and pedestrian routes are vital resources for communities. In many instances the existing transport networks do not fulfil the needs of the communities they should serve.

3.6.8 This chapter looks at solutions which will enable more people to take advantage of the opportunities that the city offers. Partnerships will focus on accessing healthcare, education and training, employment and leisure. Improvements will be achieved through changes to those services themselves where appropriate and improvements to public transport, walking, cycling, community transport, and land use planning.

3.6.9 A partnership arrangement with the bus operators will focus on punctuality. By improving the efficiency of the network we will help reduce operating costs and increase patronage which in turn will help bring down prices. Particular groups will also continue to benefit from concessionary fares. Physical access to the bus network will also continue to be improved along with improved information provision.

3.7 Contributing to better Safety and Security

3.7.1 Plymouth is a safe place for most people with decreasing levels of crime and road traffic accidents. However, many people are still concerned about safety, security and a fear of crime. In particular anti-social behaviour like inconsiderate parking and speeding traffic, crime levels, clean streets and criminal damage to vehicles were all issues regularly expressed by city residents.

3.7.2 The City has an established well-recognised process for protecting people in the city during large scale emergencies.

3.7.3 The number of people killed or seriously injured in 2009 has dropped by 68% from the 1994 -1998 baseline with recorded crime in Plymouth from 2004/05 – 2007/08 falling by 8%. Although road accident numbers have been drastically reduced there are still nearly 900 people injured annually on Plymouth roads with the most commonly injured being car drivers and passengers aged between 17 to 24 years. There is also a high adverse proportion of cyclist casualties with the number of child pedestrians continuing to be of concern.

3.7.4 By addressing concerns about safety and security the Council is directly supporting Plymouth's transport vision and delivering the needs of our communities. Tackling transport-related safety and security concerns will enable greater levels of healthy, sustainable travel to occur.

3.7.5 We will:

- Continue to work towards reducing casualties on our transport networks and systems using enforcement of regulations, road safety education and highway engineering.
- Continue to co-ordinate the appropriate bodies and agencies to safeguard people in Plymouth and the role the transport networks will have in a major emergency
- Maintain and renew transport infrastructure to improve users safety and security
- Design, with help from the local community, more attractive, welcoming residential streets that have increased natural surveillance encouraging a safer environment for all users

3.7.6 Part of this strategy, and as a means of maximising value for money, is to provide safer routes for pedestrians and cyclists by a minimum infrastructure approach in designating residential areas as 20mph zones as a logical extension of our existing policy for school 20mph zones. Opinions will be sought regarding this policy through public consultation and the results of a pilot scheme to be implemented in Whitleigh as part of the LTP3 Implementation Plan.

3.8 Programme and Performance Management

3.8.1 It is essential for every local authority preparing a Local Transport Plan to ensure value for money and efficient delivery. This chapter outlines the way in which Plymouth City Council will be managing its transport investment programme. It examines how the investment programme will be funded, how schemes have been evaluated and prioritised to deliver the goals and objectives of the plan, and how the plan and risks will be managed.

3.8.2 The emphasis of the Local Transport Plan will be effective programming of investment. Transport schemes that are prioritised must address the problems and needs identified enabling the meet of both transport objectives and the objectives of the local authority as a whole.

3.8.3 All transport schemes need to be well thought out, carefully planned, refined through consultation, be cost effective, based on lessons learnt from past experiences and deliver real benefits. The backbone to achieving this is effective programme management that has a series of procedures, gateways and mechanisms to steer projects to success. Both public sector and private sector funding for transport investment will be in short supply during the first few years of LTP3 primarily as a result of public spending cuts as well as the need to use a substantial proportion of tariff on the East End transport scheme. Nevertheless, there will be instances where the need will arise to deliver major but targeted improvements to the network but at a time when there is clearly an identified need arising from development and

benefits can be quantified. The Planning Obligations Supplementary Planning Document has established a development tariff for funding strategic transport infrastructure, which can be topped up through the LTP3 Transport Capital Settlement and any additional funding opportunities secured through separate bids to central Government.

3.8.4 Performance management will enable the Council to measure progress in achieving the outcomes that are important to improving the quality of life of the residents of the city, and to best direct the resources available towards meeting those goals. At the time of producing this draft Local Transport Plan, the national position on performance monitoring is changing - it is therefore not possible to present a detailed picture of this. We will continue to develop the performance monitoring regime in the background and it will be presented in full in the final plan.

3.9 Implementation Plan

3.9.1 The inclusion of an Implementation Plan as part of LTP3 is a new statutory requirement under the provisions of the Local Transport Act (2008). The Implementation Plan sets out the delivery plan for transport in Plymouth and is a companion document to Plymouth's Infrastructure Delivery Plan and Local Investment Plan (LIP).

3.9.2 At the time of writing, the funding for local transport is uncertain. The highways maintenance and Integrated Transport Block funding that is provided by Government are both subject to a review and consultation process.

3.9.3 Not all of the changes to transport will be delivered by the Council. Mechanisms for delivery and funding can take many forms. With an ambitious growth agenda for the city coupled with reduced levels of public funding, for the first few years at least, it is inevitable that developers will play a key role in funding and delivering infrastructure, particularly where developments have an impact on the transport network.

3.9.4 By putting in place priorities for delivery through the Implementation Plan, it sets out clearly what the Council's priorities are to developers and stakeholders in the long term, sets the Council's priorities in terms of allocating funding to prepare schemes beyond feasibility to design and securing necessary approvals and therefore provides the necessary flexibility to bring schemes forward to delivery as opportunities and requirements demand and provide the justification to secure developer funding when it is required.

3.9.5 Experience has shown that there are a number of factors which will affect the delivery of schemes and the plan is designed to be flexible enough to be proactive and take advantage of opportunities whilst still clearly showing that the investment is part of a planned approach. The example of having a scheme for the East End sufficiently worked up, enabled the authority to secure £9.78m of additional funding through the Community Infrastructure Fund and accelerate delivery of part of the Eastern Corridor HQPT network. The forecast programme of development may now suggest that priority is for schemes on the Northern Corridor need to be accelerated ahead of some schemes on the eastern Corridor.

3.9.6 The Implementation Plan has been split into two parts. The first part shows the transport priorities for delivery within the plan period with the anticipated timing for when they would likely to be required including some which may fall just beyond the plan period in the event of a slowing in the rate of development. This can be found on pages 113-125 of the attached document.

3.9.7 The second part to the Implementation Plan shows the schemes for delivery during the first year of the plan including schemes that are committed or are already in the process of delivery. This can be found on pages 126-127 of the attached document. This will inform the 2011/2012 Transport Capital Programme. The draft LTP sets out with the premise that no changes should be made to the Integrated Transport Block for the first year of this LTP. This has provided us with enough certainty to present an Implementation Plan for year

one. In our final submitted LTP3 we will have a three year Implementation Plan with year one in detail and years two and three in outline.

4. NEXT STEPS

4.1 A 12 week consultation and engagement exercise is planned to start on 25th October 2010. This will involve events across the city including exhibitions, workshops and meetings, asking for comments and views on the contents of the Plan. In addition to these events, feedback will be able to be provided electronically using the internet. The draft LTP will be available online and will be accompanied by a series of set questions on a range of issues identified by the plan. There will be a summary document produced which will also be accompanied by a similar set of questions; this will be available in hard copy as well as electronically. The aim of the exercise, however, is not to simply gather views on the issues and direction of travel set out in the document, but to create awareness of the opportunities transport presents for the people of Plymouth.

4.2 Following completion of the consultation and engagement exercise, the feedback will be analysed and appropriate changes made to the strategy and implementation plan before it is brought back to Cabinet and then to the City Council for final approval and adoption.

LOCAL TRANSPORT PLAN 2011-26

City of Plymouth

Transport and Highways
Department of Development and Regeneration
Draft for consultation - October 2010

Strategy

Implementation Plan

Abbreviations

Glossary

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1 Introduction

Welcome to Plymouth's Third Local Transport Plan.

1.1 This third plan sets out transport priorities for delivery over the next 15 years. The aim is to provide the right environment and conditions to deliver real economic growth and prosperity, reduce inequalities, manage climate change and enable the city to flourish through high quality, better value and a wider range of transport options.

1.2 Plymouth has set itself an ambitious growth agenda to increase the wealth of the city by growing the population to such a scale that it is an attractive prospect for investors, major employers and entrepreneurs. Over the last 10 years the city has seen the growth of the University of Plymouth, including the Peninsula College of Medicine & Dentistry, and growth in technical and medical businesses in high quality facilities such as Tamar Science Park and Langage Science Park.

1.3 The city also has a thriving tourism industry with Plymouth being a great base to explore Devon and Cornwall as well having excellent attractions and amenities on offer within the city.

1.4 Plymouth is a focal point for the South West peninsular, being the second largest city in the region. The attraction of the city covers a wide sub-region with people travelling to work, shop, attend colleges or university or for leisure opportunities. The benefits of the growth of the city will be enjoyed far beyond the city boundaries.

1.5 Growth will enable the city to reach its full potential and offer an excellent quality of life to residents and visitors. However, success on this scale must be supported by investment in transport measures, such as communications technology, roads, public transport and travel planning, if people are to continue to enjoy the wealth of opportunities that are available in the city.

1.6 We need to think seriously about the future and the type of city we want to pass on to our children and grandchildren. The legacy of our generation could be the difference we have made to reducing the impacts of climate change. Now is the time that we can make the biggest difference. This strategy will put in place real alternatives which will enable the residents of the city to make an informed choice about how they travel for different journeys. Thus directly focusing activity and resources on issues which are critical to growing enterprise and capturing the opportunities for moving to a low carbon future.

As part of the Local Development Framework the City Centre Area Action Plan consultation, along with other recent consultations generated a number of comments which support a real change in the way we approach development policy, including how we deliver transport in Plymouth, for instance the University of Plymouth wrote:

"…Low carbon alternative approaches to development and prosperity will be increasingly essential, the AAP needs to reflect this much more. Opinions vary on this subject but it is increasingly critical to public health and of course sustainable development in the future."

1.7 The Local Transport Plan is a strategy and so, for the most part, it does not set the specific projects or the detail of the improvements that need to be made. However it does provide details of the types of changes that need to be made over the coming decade and a half which will enable growth to happen. It is supported by a Local Transport Implementation Plan - this will be updated annually and sets out more detail of the specific work areas over a shorter time frame.

1.8 The strategy relies on evidence from a number of sources. Much of this is work that has been carried out within Plymouth to get an intimate understanding of the local issues and develop local solutions.

1.9 Transport, and the infrastructure that supports it, is a key component to the ability of the city to function. When operating correctly it goes unnoticed. The purpose of this strategy is to ensure that the appropriate solutions are in place to support the changing nature of the city.

1.10 The scale of change in the coming years is only part of the story. We need to address the existing problems, including health inequalities. Transport alone cannot 'fix' problems, but it can help to manage them so they have a reduced impact. Enabling people to get to hospitals and doctors quickly and easily, or providing high quality walking and cycling routes are things we can do which will help reduce those inequalities.

Note:

The national picture for funding is uncertain at the time of production of this document. However the evidence base used to prepare this strategy, combined with that for the Local Development Framework and the Local Economic Strategy puts the city in a very strong position to secure the necessary funding for the benefit of the citizens of Plymouth.

2 The Plymouth Context

Plymouth past and present

2.1 Plymouth, with a population of just over 250,000 people, is the largest city in the far south-west of England and the second largest in the South West region after Bristol.

2.2 Residents of the city enjoy a high quality of life, largely as a result of Plymouth's outstanding natural setting between two rivers and at the head of one of the world's largest and most spectacular natural harbours, Plymouth Sound; a setting that has always played a pivotal role in the city's development.

Plymouth Aerial View

2.3 Those that live within the city and its sub-region benefit from the proximity to other nationally recognised areas of natural beauty, including Dartmoor National Park and Cornwall, South Devon and the Tamar Valley Areas of Outstanding Natural Beauty (AONBs).

2.4 The city has its share of problems and, as with many large urban areas in the UK, it suffers from the impacts of social deprivation. As the population of Plymouth continues to grow and diversify, this has also brought with it the added problems of maintaining a sense of togetherness amongst communities.

2.5 Plymouth was heavily bombed during the Second World War and as a result the city centre was completely rebuilt in the 1950s, along with new housing estates built in the 1940s, 1950s and 1960s. The result is that much of the city's infrastructure is reaching the end of its design life and needs repair or replacement. Although Plymouth has made progress in recent years with significant structural and economic changes designed to match the city's performance with its size and standing, the city has yet to realise its full potential.

2.6 Due to its coastal location, Plymouth historically had a largely maritime economy, relying heavily on the Royal Naval Dockyard at Devonport. Since the 1980's employment in the defence sector in Plymouth has decreased substantially forcing the city's economy to diversify.

2.7 Today, although Plymouth's economy is still influenced by maritime engineering, it is more reliant on the service industry and public sector, providing many sub-regional services such as retail, health care, education and leisure facilities. These functions ensure that today the city's influence continues to be far-reaching, contributing to both regional and national prosperity.

2.8 Plymouth has a largely rural hinterland, with the largest settlements within its sub-region being Torpoint and Liskeard in the west, Tavistock in the north, and Ivybidge in the east. Dartmoor National Park, which covers an area of 368 square miles lies just to the north east of Plymouth and is largely uninhabited. Since 1967, the City of Plymouth has included the once independent towns of Plympton and Plymstock, which lie east of the River Plym.

2.9 Whilst Plymouth's sub-region is somewhat dependent upon the city economically, some of Plymouth's residents inevitably work outside the city's boundary. Furthermore, many people seek leisure and relaxation in the surrounding area. Thus the city and its hinterland are socially and economically interdependent.

2.10 The area also attracts many visitors from the rest of the south west region, the rest of the UK and beyond, particularly during the summer months, but also at other times of the year.

Summary of key challenges

2.11 A comprehensive facts and figures document forms part of the evidence base for this Local Transport Plan however the table below provides a summary of the key information.

Table 2.1 Summary of key information and evidence

Theme	Topic area	Challenges
Geographic	Strategic links and peripherality	• Plymouth relies on a few key links by road and rail to other parts of the UK • These links can be unreliable or vulnerable to incidents • There is a lack of fast and direct rail services to core cities other than London and Bristol
	Physical barriers	• The geography of Plymouth (rivers, roads, railways) creates severance and limits movement by certain forms of transport
Socio-economic	Population	• The population of Plymouth has grown at a faster rate than the region or the rest of the UK
	Social inclusion	• Problems of social deprivation exist, mainly in western and southern parts of the city, compounded by low car ownership
	Health, well-being and safety	• Health is generally worse than the UK average • Health and life expectancy is worst in areas of general deprivation
	Employment and economy	• Much of Plymouth's infrastructure is ageing

Theme	Topic area	Challenges
		• Plymouth has struggled in the past to perform in line with its size, which is linked to its peripheral location and remoteness • Plymouth's economy has been forced to change in recent years • Unemployment is higher than the south west regional average • A need has been identified to increase competitiveness, diversify the economy and improve economic performance
Transport and accessibility	Transport trends	• Vehicular traffic in Plymouth has increased by 15% over the last 15 years • In general, bus patronage in Plymouth has followed the national downward trend
	Travel to work	• Over 20% of Plymouth's workforce live outside the city • There is a higher car dependency for work trips from outlying areas • Poor bus patronage to Derriford for work trips (and high car use) indicate a problem with existing bus services and demand management policies
	Journey times	• Bus journey times are longer than those by car generally
	Network constraints	• Network constraints exist at key junctions, most notably are those on the A38, and on routes into and within the city centre
	Network connectivity	• Access by bus to transport interchanges (railway station, ferryport, airport) are poor • Roads can create community severance issues and main roads (particularly the A38) reduce the permeability of the network for pedestrians
	Perceptions and satisfaction	• The public regard road and footway condition as an area in need of improvement
Environmental	Climate change	• Transport in Plymouth contributes 25% of all CO2 emissions (excluding air and sea travel) and the city is a significant generator of long-distance travel • Climate change poses a threat of flooding to areas near the Plym Estuary and other coastal

Theme	Topic area	Challenges
		areas, as well as potential need for extra drainage provision in some areas
	Air quality and noise	• Two declared AQMAs in Plymouth already • Likely that three more AQMAs will be declared in the near future • Noise near the airport is often a problem for residents, particularly at night
	Landscape and biodiversity	• Transport improvements associated with development and other transport schemes pose a threat to landscape and biodiversity within unprotected areas • Threat of land-take and loss of greenspace due to transport schemes • Threat of fragmentation of habitats and disturbance of wildlife due to transport schemes

Views of our communities and stakeholders

2.12 The views of our stakeholders are important to us, and involving and consulting with the wider community plays a key role in helping us to plan, design and deliver transport schemes.

2.13 A considerable amount of public consultation has taken place in Plymouth in recent years. This has given incredible insight into people's views about the different aspects of transport and how we deliver our services.

2.14 An LTP3 Consultation report provides a comprehensive analysis of the existing consultation information, including data from other Council services. It also presents the results of an analysis to identify any gaps in the consultation data, either in terms of a topic area or geographic location. This section provides a summary of this information.

Summary of key messages

Theme	Detail
Public Transport	• Positive comments about park and ride and the request for more sites • Improved public transport information and facilities at Derriford Hospital • Better public transport links between communities • Lower cost public transport • Extended service times and direct routes without the need to change buses • Better integration between public transport and other travel modes

	• More frequent services to and from rural areas • Dedicated school transport
Walking	• Better pedestrian links and permeability into and through the city centre to key visitor locations • More pedestrian routes and opening up more public rights of way to enjoy away from heavy traffic • Improved pedestrian signage and information • Pedestrian friendly highway design
Cycling	• Segregated cycle paths which are direct and continuous • Improvements to existing paths, routes and facilities • More access to training and organised cycle rides • Cycle friendly highway design
Access	• Improved network of dropped kerbs linking with bus stops and facilities • Level access to services and facilities and white lining steps for the visually impaired • Better enforcement of inconsiderate parking • Disabled parking where it doesn't currently exist

2.15 People would like to see more investment into sustainable travel modes to make it easier for those, who could be persuaded, to change their travel behaviour and benefit from the long term environmental and health gains.

2.16 The view to improve options for sustainable travel and to better integrate transport modes in Plymouth, also related to issues around better highway design, connectivity between local areas and more coverage of public transport with extended operations.

2.17 However, there is still a large sceptical proportion of the public who do not believe that people will ever use more sustainable transport options. In most part this appears to have developed from a lack of confidence in our existing public transport and cycling networks. Many of the comments reflect the opinion that people will not leave their cars at home until there is a frequent, reliable, cheap and high quality public transport system with good citywide coverage in place.

2.18 Whilst there is good support for the development of an improved sustainable transport system, one of the key issues is about the level of investment that will be required in order to achieve this. A number of comments referred to the level of proposed development for Plymouth and the need to invest in the transport infrastructure before the development potential can be realised. There are people who are worried about how they will efficiently travel around Plymouth once these developments are built, due to the number of cars that will be generated from the housing in particular.

2.19 Finally, although it did not generate a significant number of comments, 'gateways' to the city appeared to be a strong theme, with Bretonside Bus Station and the railway station being the principal areas of interest. Comments mainly talked about each needing to be better connected to key locations by sustainable transport options, and needing to be a clean, safe and welcoming environment to give a sense of arrival for visitors to Plymouth.

Bretonside Bus and Coach Station

Key findings from the consultation gap analysis

2.20 Firstly it was found that stakeholders, service providers, businesses, third sector organisations, environmental bodies and health and education representatives commented the least in the consultations that were analysed.

2.21 It was also found that there was insufficient information from businesses and communities to the west of Plymouth. Although specific consultations have been carried out on some regeneration and enhancement projects and also on Planning's Sustainable Neighbourhoods work, very little transport consultation has been carried out in these areas. Therefore, the consultation information analysed was heavily skewed towards the East and North of Plymouth where consultations about major transport schemes received a very good response.

2.22 Further analysis found that there was a significant gap in consultation comments and data about climate change. Day to day, when responding to consultations, people do not tend to comment about the issue of climate change per se. They do however comment about poor air quality and pollution in relation to congestion.

2.23 We will identify opportunities in future consultations to 'fill' the gaps that have been found in this analysis. The consultation carried out for this local transport plan will contribute to this.

3 Policy Framework

National transport policy context

3.1 The integration of transport and planning at a national, regional and local level, the need for more sustainable transport choices, removing the need to travel and the use of transport to access key services has been on the UK government's agenda for many years. This approach has been revitalised in recent years by the introduction of new international and national policies.

3.2 The UK government is now focusing its transport policy on transport's contribution to economic growth and productivity, its role in slowing climate change and improving air quality standards, its role in, and impact on, society, and how transport affects the environment and communities.

3.3 In recognition of the difficulties in planning for transport over the long-term in the face of uncertain future demand, the government is investing substantially in tackling congestion and crowding on the network.

3.4 Through the introduction of the Local Transport Act 2008 the government has given local authorities more powers, specifically to improve local bus services, to review and propose their own arrangements for local transport governance, and powers to implement local road pricing schemes. A new regulatory framework for bus services has also been introduced.

Local transport policy context

3.5 Transport in Plymouth is currently guided by the second local transport plan. Since its publication, Plymouth's vision has remained the same. However, a large number of new policies have been adopted by the Council and its local strategic partners in the public, private, community and voluntary sectors.

3.6 In 2006 Plymouth set out it's strategic vision, to become:

One of Europe's finest, most vibrant waterfront cities, where an outstanding quality of life is enjoyed by everyone.

3.7 The vision remains valid, but the way this should be achieved has moved forward.

3.8 In order to deliver the city's vision and aims, high level policies and action plans have been developed to provide a framework and direction to how Plymouth's ambitious growth agenda and vision should be realised.

3.9 Overall, Plymouth is seeking to be a place where people of all ages and circumstances choose to live, work and play, but not to the detriment of social, economic and environmental resources. Meeting short-term needs should not compromise the quality of life of future generations.

3.10 In order to achieve these aspirations it is necessary to grow the city to a size that it supports the level of services needed. This aspiration means that the city will eventually grow to a population of over 300,000, with all the homes and jobs needed to support the increase.

3.11 The city has set itself ambitious targets;

- to reduce transport related emissions by 80% by 2050 (transport currently contributes 25% of harmful emissions, and
- to reduce the per capita carbon footprint in the local authority area from 5.8tCO_2 per person (in 2006) to 5.0 tCO_2 per person by 2011.

Plymouth's Waterfront

3.12 Plymouth is already considered a low carbon city, making these reductions harder to achieve.

3.13 To achieve the city vision, amongst other things, access to the waterfront will be improved, local communities will be regenerated, and new schools and leisure amenities will be provided, all with the aim of attracting new firms and jobs to the city and making the city a more vibrant and attractive place.

3.14 Through the delivery of local policy the city will become well connected, with good transport services and communication linking people to jobs, schools, health and other services. We will make the most of Plymouth's existing transport assets, with any new transport infrastructure being well designed and built, reusing materials where practicable, allowing transport within the city to be fair and inclusive for everyone, whilst maintaining a safe network that is developed in an environmentally sensitive manner.

3.15 Area Action Plans (AAPs) have been developed to deliver local priorities. Each one contains location specific transport proposals. The adopted AAPs contain the following that the LTP will enable delivery of:

Area Action Plan	Transport related proposal
North Plymstock	• The creation of an integrated sustainable transport network including High Quality Public Transport (HQPT) serving new urban areas in the eastern corridor and the A38 park and ride, and improvements to existing services in Plymstock • The provision of a new high quality eastern gateway into the city with a strong sense of place and local distinctiveness, particularly on key road and water frontages.
Devonport	• Improved transport and connectivity.

Millbay and Stonehouse	• The creation of an attractive, vibrant and convenient link between Millbay and the city centre • The provision of positive connections throughout the area and to neighbouring areas that are safe and convenient for pedestrians and cyclists and served by high quality public transport services
Sutton Harbour	• The creation of a linked network of attractive public spaces including a vibrant, publicly and visually accessible waterfront • Ensuring the area is easy to walk and cycle to and through–connecting effectively to surrounding neighbourhoods and the City Centre, with excellent access to public transport (including the proposed eastern corridor HQPT link and improved water transport links)
Central Park	• The creation of safe park, well-connected to the surrounding neighbourhoods and the City Centre • The provision of high quality public and sustainable transport facilities serving the park and new facilities
City Centre and University	• The delivery of a regional commercial centre for the South West Peninsula of England; • The creation of a safe and accessible city centre for all transport modes • The improvement of the gateways to the city and the city centre, including the creation of an improved environment and primary spine route between the waterfront and the station
Sherford	• The creation of a sustainable new community designed with a safe, convenient and sustainable movement and transport network for all, within and beyond the new community, favouring the pedestrian, the cyclist and public transport (in that order) • The inclusion of transport links and services including HQPT through the community linking it with Plymouth, Langage and a new strategic park and ride interchange close to the A38

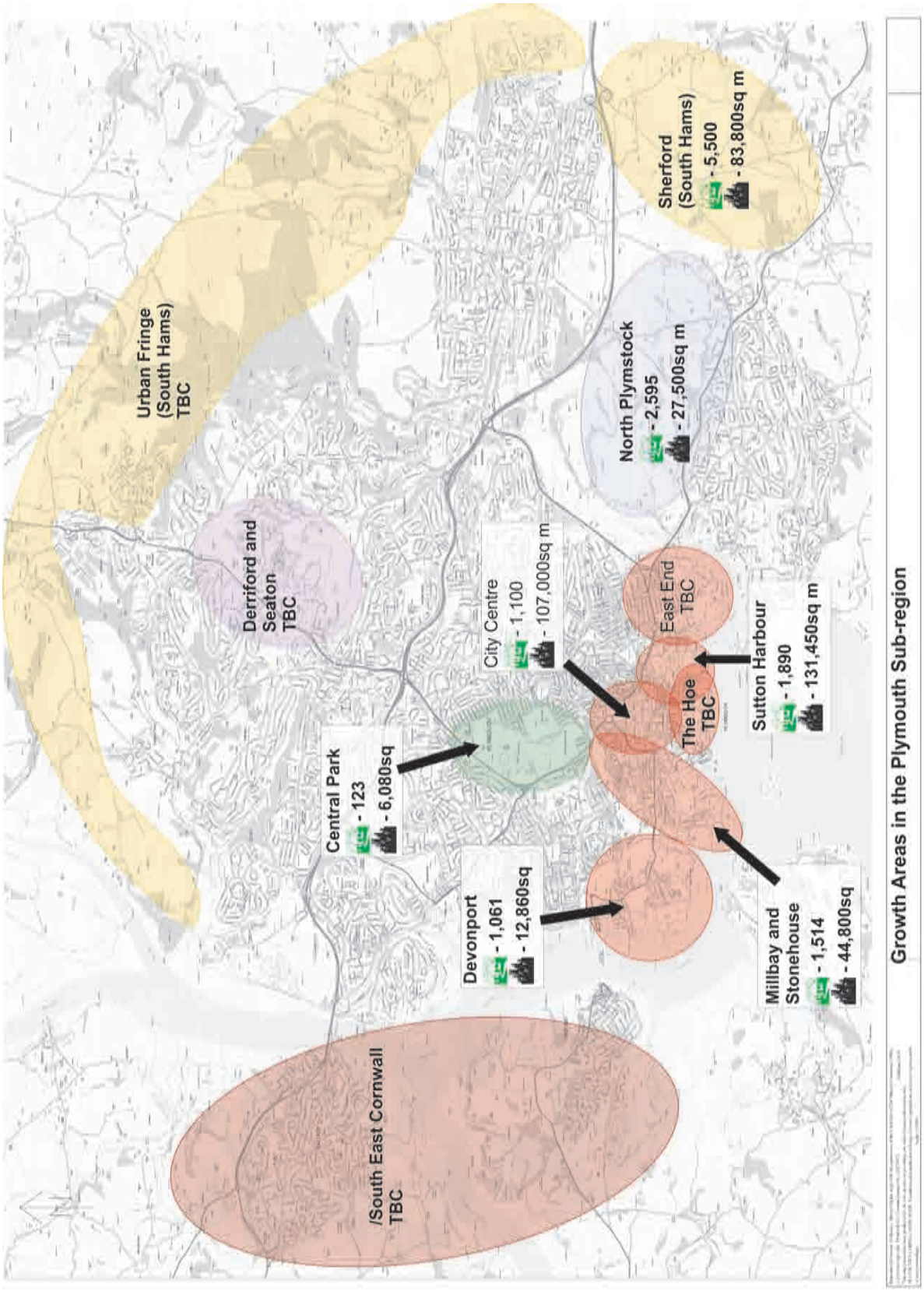


Figure 3.1 Planned growth areas in the Plymouth sub-region

3.16 Three remaining AAPs are yet to be fully developed however. Of particular significance to LTP3 is the Derriford and Seaton AAP. This AAP proposes:

- The creation of a new strategic mixed use centre
- Improvements to the airport
- Enhancements to the northern gateway to the city
- Improvements to public transport connections to the rest of the city
- A substantial new district centre, with access from surrounding neighbourhoods and improved public transport connections to the rest of the city
- Improving accessibility and connectivity for sustainable travel (by foot, bicycle and bus) through networks of streets
- Reducing the carbon footprint, including through reducing the need to travel, and enabling sustainable travel

3.17 In addition South Hams District Council has set out preferred site options for development of the 'Plymouth Urban Fringe', the land within the South Hams boundary on the northern and eastern edges of Plymouth, but not Sherford which already has an AAP. Altogether approximately 500 dwellings and new employment sites are required where they will essentially form an extension to the existing urban area and so access Plymouth's transport network.

3.18 Transport will also encourage a more active and healthy lifestyle enabling people to make informed choices about the way they travel for every journey, whether it be by foot, bike, public transport or private car.

University of Plymouth

3.19 We will coordinate travel demand and the need to travel through the promotion of sustainable land use planning for both new developments and improvements to existing settlements, by considering the mix, location, density, layout and integration of transport.

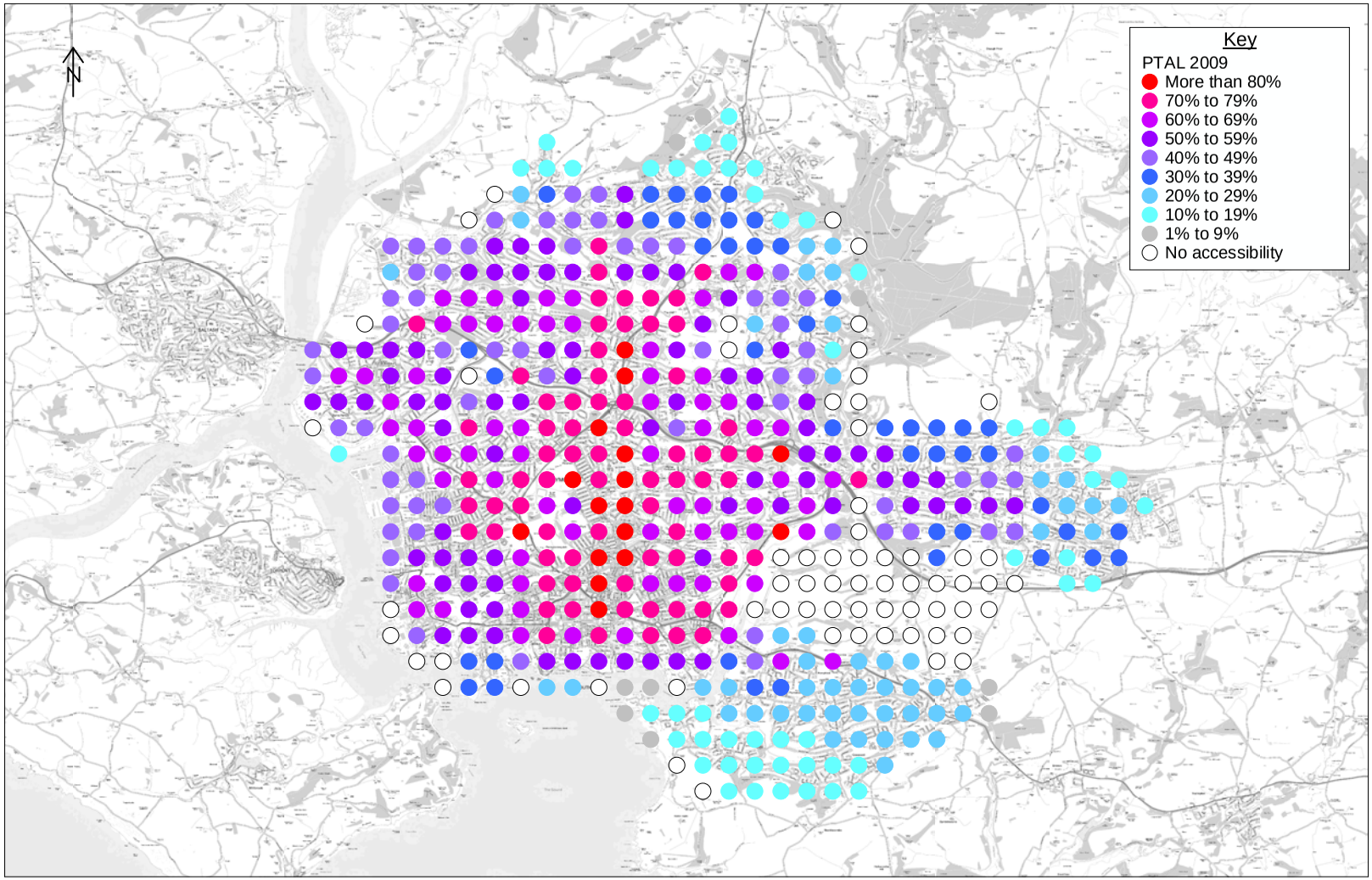
3.20 We will also tackle social deprivation and disadvantaged communities through improved connections to community facilities and other areas of the city, and the removal of transport related barriers, helping to create a sense of place.

3.21 Proposals to improve connectivity to the wider region and beyond will help address the perception of peripherality and improve Plymouth's image.

3.22 Supplementary Planning Documents (SPD) provide user friendly advice in relation to planning guidance and enable applicants to better understand the planning criteria by which applications will be determined. Both the Planning Obligations SPD and Development Guidelines SPD contain information of particular relevance to transport related matters.

3.23 The development guidelines set out the Council's maximum car-parking standards for the number of car-parking spaces for residential and non-residential development. It also includes a methodology whereby maximum car parking standards can be reduced for non-residential development, depending on the accessibility of the site. Minimum cycle parking standards are included. Guidance is provided on the requirements for travel plans. The accessibility map that is the basis for calculating maximum parking levels is an integral part of the Local Transport Plan and is regularly updated. This map is shown as figure 3.2 for illustrative purposes only, the most up to date map can be found at http://www.plymouth.gov.uk/homepage/transportandstreets/policyandplanning/ltp2011-2026.htm.

Figure 3.2 Accessibility by public transport - percentage of Plymouth residents within 30 minutes travel time



Accessibility by Public Transport: % of Plymouth Residents within 30 Minutes (2009)

Plymouth

3.24 The Planning Obligations and Affordable Housing SPD provides clarity to developers, planners, stakeholders and local residents about the basis on which planning obligations and affordable housing will be sought. It seeks to address the impacts of development on the infrastructure needs of the city, both at neighbourhood level and in relation to enabling the city to grow sustainably. The current mechanism for achieve this is through the Plymouth Development Tariff, a standard charge used to secure contributions in a clear, efficient and transparent way. The tariff secures developer contributions for, amongst other things, strategic transport measures. During 2010 and 2011 the Council will consider whether to adopt a Community Infrastructure Levy as its mechanism for securing infrastructure contributions. The Community Infrastructure Levy Regulations 2010 provide that tariff approaches to planning obligations, such as that currently operated by the Council, will only be effective until 2014.

Key references

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- City Centre and University Area Action Plan adopted April 2010, Plymouth City Council
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- Devonport Area Action Plan adopted August 2007, Plymouth City Council
- Devon Structure Plan 2001-2016 (adopted 2004), Devon County Council
- Environmental Policy and Forward Plan 2009-2012, Plymouth City Council
- Local Transport Act 2008
- Millbay and Stonehouse Area Action Plan adopted August 2007, Plymouth City Council
- North Plymstock Area Action Plan adopted August 2007, Plymouth City Council
- Planning Obligations Supplementary Planning Document First Review Adopted Version, adopted August 2010,Plymouth City Council
- Planning Policy Guidance 13: Transport, 2001, Department for Communities and Local Government
- Plymouth Local Development Framework Core Strategy 2006-2021, Plymouth City Council
- Plymouth Local Economic Strategy 2006 - 2021 and Beyond, Plymouth City Council
- Plymouth Urban Fringe Site Specific Allocations - Preferred options, June 2006, South Hams District Council
- Securing the future for generations ahead, Plymouth's Sustainable Community Strategy 2007-2020, Plymouth 2020 Local Strategic Partnership

- Sherford New Community Area Action Plan, adopted August 2007, South Hams District Council
- Sutton Harbour Area Action Plan adopted July 2008, Plymouth City Council
- The Eddington Transport Study 2006, Sir Rod Eddington
- The Stern Review: The Economics of Climate Change 2006, Nicholas Stern
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, 2007, Department of Environment, Food and Rural Affairs
- Towards a Sustainable Transport System (TaSTS), 2007, Department for Transport
- Climate Change: The UK Programme 2006, Department of Energy and Climate Change

4 The Transport Vision for Plymouth

The future

4.1 There are a number of challenges that the travelling public will face in Plymouth over the next 15 years. Adopting an approach that fails to tackle these problems and challenges will mean the city will grind to a halt. Similarly, the antiquated approach of predict and provide for car trips will see the same outcome, with more cars and worse conditions in our communities. When we factor in the need to reduce carbon emissions and ensure a secure future for the economic prosperity of the city in light of peak oil, it is clear then that we must take a different approach.

4.2 We do not know what transport options will be available to us in the future - we can therefore only work on the basis of what we know now and the changes that are on the horizon. In all likelihood, there will still be demand for some form of personal transport like the bicycle or car, there will still be a need for some form of public transport and people will still need to walk. The way we power our vehicles is likely to be very different - with less reliance on fossil fuels and greater use of renewable energy - but, as a direct evolution of the vehicles of today, we would anticipate them exhibiting very similar characteristics in terms of passenger / goods carrying capability, highway requirements, etc.

4.3 It is likely that, over the lifetime of this strategy, there are a number of factors that will change how we go about delivering the vision for transport. We have shown a number of risks to the delivery in Chapter 10, which will be managed as their likelihood / severity increases. In developing and implementing schemes to deliver the vision, it will be critical that we understand these risks and, where possible, include mitigation measures. For example we will adapt the design of new roads to enable them to deal with the increased temperatures and increased rainfall that is a product of climate change.

The development of a vision

4.4 We have a clear view of how the city will look in the long term, which we have set out in Chapter 3, but it doesn't tell us what our transport networks will need to look like in order to deliver it.

4.5 In general terms you only notice transport when it goes wrong, when your bus is late or when the pedestrian crossing fails. Our transport vision therefore seeks to ensure that transport always goes unnoticed, enabling the benefits of living in, working in and visiting a city with an excellent transport system to be realised.

4.6 We have developed a statement which sets out what we think our transport system will 'look' like in the future. It defines the experience of travellers, whether on their regular journey or a one-off trip. Because of the uncertainty of knowing what the vehicles of the future will be like, it does not describe modes of transport.

The Transport Vision

By 2026 people living in, working in and visiting Plymouth will feel good about how they travel because the transport options available work for them everyday, giving them a unique quality of life aspired to by other cities.

What does this mean?

4.7 Throughout this document we'll set out how this vision helps us to deliver the aspirations for Plymouth. The focus on the journey experience enables us to acknowledge which parts of the existing networks do not live up to this vision, thus providing focus for the development and implementation of transport schemes.

4.8 For the average traveller, what this vision means is that you will be able to make your journey based on the knowledge that you will be able to get where you need to go, without trying to understand complicated timetables, negotiate tricky junctions or arrive late even though you left plenty of time.

4.9 For example, on your daily commute you'll have a choice about how you make your journey:

- You'll know that, if you choose to take the bus, it will turn up, it will be on time and it will go where you need it to go
- If you prefer to cycle, there will be an appropriate route for your level of confidence, somewhere to lock up your bike at your destination and, if needed, somewhere to shower and change
- Pedestrians can expect high quality crossing facilities in the right places, with dropped kerbs and other enhancements to make it easy for those who are mobility impaired
- If your journey involves more than one mode of transport, then these modes will be integrated so that there is no time wasted swapping from one to another.

4.10 The Local Transport Plan defines what will be our "business as usual" for the next 15 years - it does not set out a radical, undeliverable programme. The greatest thing that you can aspire to, in terms of transport, is that journeys are reliable and predictable, or go unnoticed. Delivering the type of facilities that will enable this vision to become a reality is incredibly complex - it will require working with many partners; public, private and voluntary. It is a long-term commitment to a fundamental change in how transport is delivered in Plymouth.

How do we achieve this?

4.11 Throughout this document we'll discuss the ways in which we will achieve various parts of this vision.

4.12 We need to set ourselves some realistic objectives in order to achieve this vision. However, these are not fixed for the 15 year period of the LTP - they will be reviewed as we achieve them or as our local priorities change. The objectives are not in any particular order, but have been developed through an understanding of what we need to deliver and then refined by working with the key stakeholders in the city. The text that supports each objective broadly sets out what it could mean in terms of LTP delivery. This is not a commitment to specific schemes, but more an indication of the types of ideas that could be taken forward.

Plymouth's Local Transport Objectives

1. Link communities together

- Improve access to community amenities, leisure opportunities and our high quality natural environment by increasing the availability of attractive walking, cycling and bus routes and enabling the right mix of land use
- Enable easy access to growth and regeneration areas by walking, cycling and public transport
- Improve the design of residential streets to reduce the fear of crime and antisocial behaviour as well as the dominance of the car.

2. Reduce the negative impacts of transport

- Reduce severance of communities by transport networks and the impact of poor air quality and noise on communities
- Ensure footways and cycleways are well designed and improve physical access.

3. High quality transport standards for a vibrant city

- Make best use of our existing transport networks; manage congestion and improve journey reliability
- Maintain, and where necessary improve the condition and increase the flexibility of our transport network such that it is more adaptable to climate change, severe weather events and incidents
- Improve the quality of public car parks such that they meet the higher standards set by private parking companies
- Set clear priorities for routes to and from main areas / facilities to balance competing demands for highway space across the network.

4. Make walking, cycling and public transport the desirable choice

- Provide more opportunities and encourage increased uptake of travel by active modes, walking and cycling, to promote healthy lifestyles
- Improve the quality, extent, availability of information and physical access of our bus, rail, walking and cycling networks so that they are easy to use
- Increase integration of transport modes to improve the end to end journey experience so providing an attractive range of travel choices for more people.

5. Maximise the transport contribution to Plymouth's carbon reduction target (60% reduction by 2020)

- Increase awareness of ways to reduce personal carbon footprint by walking, cycling and taking the bus
- Reduce energy consumption from non-renewable sources used by our infrastructure and operations
- When building or renewing infrastructure or equipment consider the lifecycle carbon footprint; reuse and recycle where possible
- Encourage use of more efficient and alternative fuelled vehicles by providing infrastructure and information.

6. Use transport to drive the local economy

- Support the delivery of the Local Development Framework and Local Economic Strategy by connecting growth and regeneration areas by all modes with communities and national transport networks
- Work with the development management process to deliver small and large scale improvements in transport networks to enable connectivity
- Develop improved transport networks to open up long term opportunities for growth
- Encourage sustainable tourism
- Improve connections with transport networks which connect Plymouth to the rest of the country
- Improve access to wider road, rail, air and sea networks
- Improve gateways to these networks, prioritising Plymouth railway station and Plymouth coach station when the future of the Civic Centre is known.

4.13 It is very difficult to set any priority order for these objectives.

4.14 In 2008, the Department for Transport published the Government's five National Transport Goals as follows:

- to **support** national **economic** competitiveness and **growth**, by delivering reliable and efficient transport networks;
- to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change**;
- to **contribute to better safety, security and health** and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;
- to **promote** greater **equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society;
- to **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**

4.15 We have prioritised the National Transport Goals and will be working towards supporting economic growth and adapting to or mitigating climate change initially in the first five years of the plan. Many, if not all of these objectives support the delivery of these priorities.

Connecting people

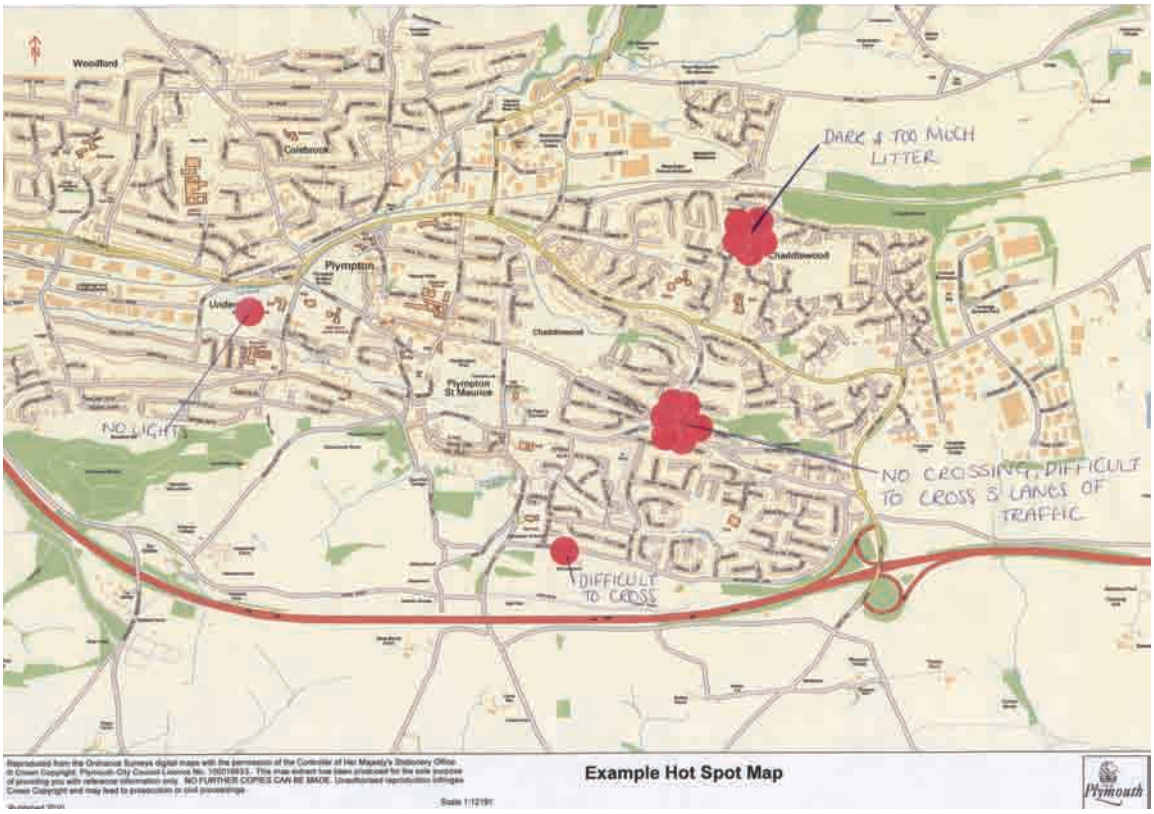
4.16 The fundamental principles of providing people with choice about how they make their trips underpins the LTP. Simply providing for one mode would exclude all those for whom that mode is not available or attractive.

Walking

4.17 During the first two years of this LTP we will develop a network of primary routes for pedestrians. These will be focused on local trips to local facilities such as schools, shopping centres, medical centres and public transport interchanges. We already have much of the evidence to develop this work - we have carried out studies to understand where barriers exist and are working with communities to identify current issues. An example of the identification process, undertaken for an area of Plympton, and the possible issues that could discourage pedestrian activity are shown in Figure 4.1.

This process will enable us to focus on measures which will make walking a practical and desirable option for local journeys and for parts of longer journeys on public transport. In tackling problems we will first seek solutions which need limited new infrastructure.

Figure 4.1 Potential barriers to walking activity



4.18 Public rights of way form a vital part of the pedestrian network. Not only are these paths a valuable part of our history and heritage, they are also a valuable resource. Better integrating the use of rights of way into our network will enable users the choice of walking, rather than taking the car or bus.

Cycling

4.19 A strategic cycling network (SCN) (see Figure 4.2) has been developed and adopted during the course of LTP2 to ensure that cycling infrastructure is developed in a joined-up manner, both geographically and across delivery bodies.

4.20 The network of routes has been developed to meet different levels of experience and confidence. The network has been designed to meet the particular challenges that are faced by cyclists in Plymouth. In order to provide for experienced and non-experienced cyclists, two conceptual networks will exist as follows:

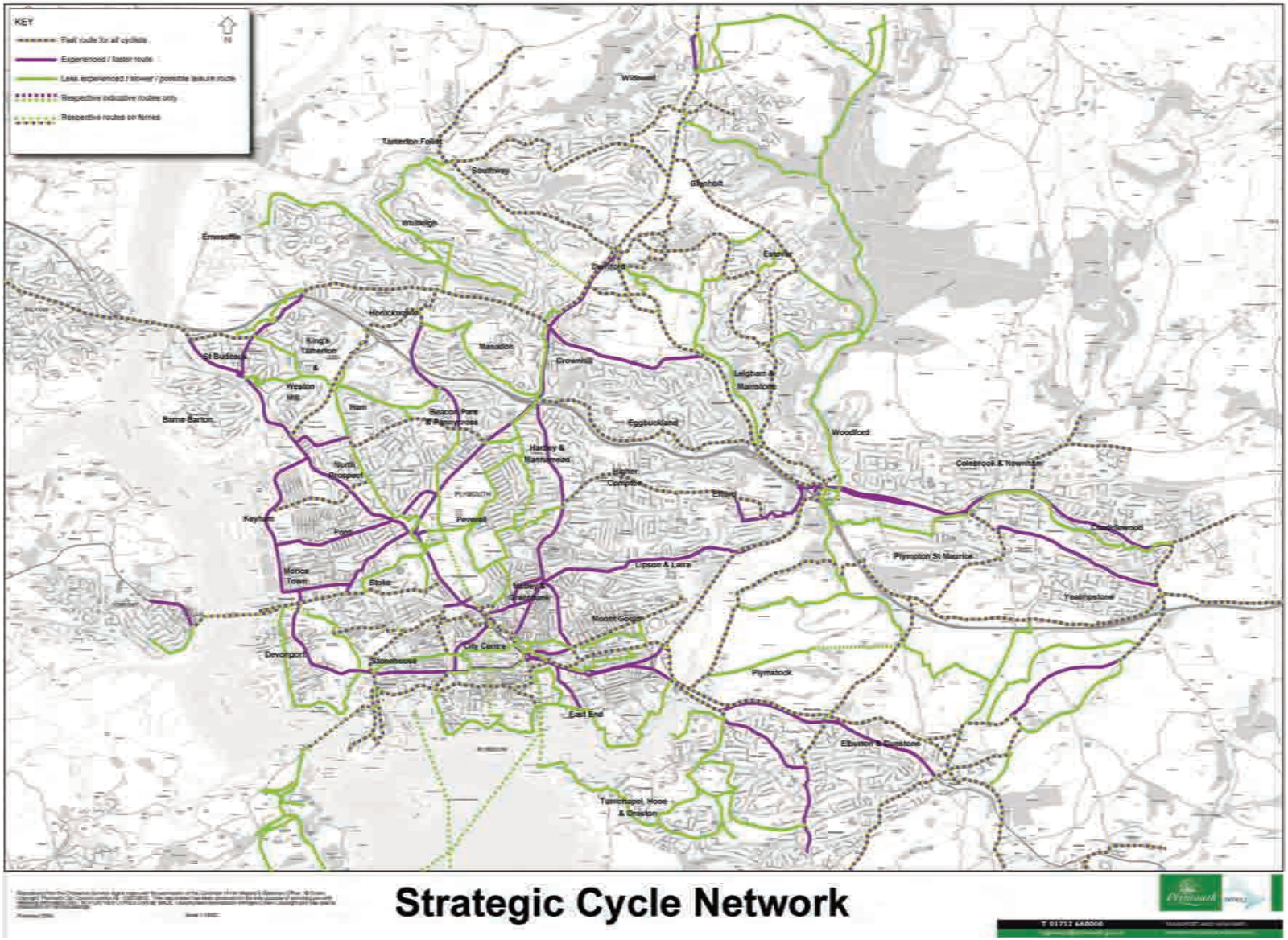
- Purple network: for more experienced cyclists that are generally better able to deal with road traffic. The emphasis on this network is on speed and convenience and may sometimes involve a lower standard of safety/amenity.
- Green network: for less experienced, and possibly leisure cyclists as well as children. The emphasis is on safety and at times amenity which will sometimes be at the expense of convenience and speed
- Combined network: routes where the purple and green networks combine to form a route that is attractive for ALL cyclists.

4.21 The network shows only the strategic routes. The links within communities, particularly to schools, are also important, just like branches off the main trunk of a tree. The aspiration is that the barriers to cycling are reduced so that many more people of all ages feel that they have the choice, to cycle to school, work or their local shops for example.

4.22 The network will be delivered with a range of measures, including 20 mph speed limits and on- and off-road facilities, and will use public rights of way and parks where appropriate. Again, the approach will be to limit the amount of new infrastructure wherever possible.

4.23 Maintenance of the cycle network is fundamental to encouraging use. Potholes, which are uncomfortable for car and bus users, can be dangerous for cyclists, and so ensuring our cycle network, whether on- or off-road, is well maintained is vital.

Figure 4.2 Strategic Cycle Network



Public Transport

4.24 For public transport this means connecting all areas of the sub-region with fast reliable links, ensuring the bus and rail networks are integrated.

4.25 In our previous local transport plan we proposed a strategic high quality public transport network and this still remains at the core of our plans to enable choice and improve connectivity.

4.26 The network of routes has been identified using national and local sources including census data, public transport patronage and future predictions of employment and population. It provides a clear statement of the commitment and intent of the Council to enhance and modernise public transport provision, connecting principal centres of employment, residential areas, retail, leisure and services, as well as enabling sustainable urban expansion to the east and north of the city.

4.27 The Strategic Public Transport Network (shown in Figure 4.3) will increase frequency of services to create 'turn up and go' services on a core 'metro-like' network on the main corridors. Initially bus based, the network seeks to make best use of the existing highway infrastructure coupled with new links where it has been demonstrated that there is a sound business case.

4.28 A sequential approach to developing the Strategic Public Transport Network is being adopted. A number of measures have been implemented over the last 10 years to improve the bus passenger environment and the provision of passenger information.

4.29 The Strategic Public Transport Network demonstrates where investment in the public transport network will need to be targeted in order to achieve a step change in the use of public transport.

4.30 Delivering the network of routes will not, on its own, provide the high quality service needed by a modern city. The supporting infrastructure, including bus stops / stations, information sources, ticketing, vehicles and interchange, all contribute to the quality of the experience for the user. Many of the improvements that are required are to 'back-office' systems which generally go unseen by the user but enhance the service.

4.31 The Council's role is to enable improvements to be made sooner than could be achieved by the private sector alone, by introducing initiatives that enable operators to try something new at lower risk. This includes funding trial services through a local 'kickstart' initiative, or investing in bus priority schemes which improve journey times and bus punctuality.

4.32 Investing in priority measures is one of the ways the Council has to equalise the costs of journeys. Throughout the life of the plan we will continue to seek measures which achieve this, allowing a better understanding for travellers of the cost of their trip, by whichever mode they chose.

4.33 Without a high quality road network, prioritised for bus use, the journey experience will be impaired. Ensuring bus routes are well maintained is key to preserving a good ride quality.

Cars

4.34 The increasing affordability of the car has been a revolution to the way we travel. It undoubtedly offers the most flexible form of transport for complex journeys. We have a society that has been planned around car use and functions well in that respect. We have low levels of congestion and reasonable parking charges that make the car the logical choice for those who have the option available to them. This LTP does not set out to marginalise or demonise car users; cars are a vital part of the transport network that keep our economy going.

4.35 The Council recognises that cars are extremely useful for medium length or complex journeys where other modes are not available.

4.36 There is no doubt that the personal mobility offered by the car will be desired for long into the future, even if there are changes to the way the vehicles look or how they are powered. The Council will support the changes needed to our infrastructure that enables greater uptake of vehicles powered by electricity or other 'green' fuels.

4.37 The city does not have the luxury of space to use to build more roads, so the only way we can improve the experience for car users is to make better use of our existing networks. The best way to do this is to make improvements which smooth the flow of vehicles on designated routes and to prioritise maintenance on those routes.

4.38 The changes to the city centre will enable us to raise the quality of our car parks, to improve their locations and the access arrangements.

4.39 Through the Development Guidelines SPD we have already started to put in place changes which will make residential streets better for all users. However, there is a greater need for personal responsibility, particularly when parking our cars on the highway. Improvements to on-street parking regulations are already underway to rationalise the existing controlled parking zones, on-street pay and display areas, and parking in single yellow lines, limited waiting bays and loading bays .

Water transport

4.40 The city is surrounded on three sides by water. It is a fundamental part of the city's history and a unique selling point as Plymouth aspires to be a vibrant waterfront city.

4.41 Several ferry services are already well established. We have provided the new Barbican Landing Stage to improve access to the waterfront. Increasing numbers of cruise ships

are anticipated, and we will welcome more use of the water for transport for leisure and commuting where feasible. Indeed we are hoping that short sea shipping will be a viable alternative for freight.

Delivery

4.42 In order to deliver our transport vision there will inevitably need to be changes to the transport networks.

4.43 The major changes have been identified: these are shown in Figure 4.4 and set out in more detail in the following chapters. The diagram does not show the more local improvements which are included within this document. As this is a long-term strategy, it is important to point out that these changes will be delivered over the course of the 15 year life of the strategy. In most instances the exact changes have yet to be developed. These will be determined by a variety of issues, including a thorough consultation as they are developed. The future park and ride locations have yet to be specifically determined and are shown for indicative purposes only.

4.44 It is vital that we are flexible and can respond to the emerging situations regarding funding and development. The implementation plan shows improvements coming forward in the short-term. The implementation plan will be revised on a regular basis to take account of the flexible approach and any emerging problems. In future, it will also have a strong relationship with the Plymouth Infrastructure Delivery Plan and the Plymouth Local Investment Plan. The Infrastructure Delivery Plan will show the infrastructure needs that have been identified and justify those needs, and will indicate a broad framework/timetable for its delivery. The Plymouth Local Investment Plan is intended to articulate the priority of the investments which are critical to achieving the city's vision and where it is essential that the public sector takes the lead.

4.45 It is important to note that delivery of infrastructure is just one part of the Implementation Plan, it also sets out the maintenance requirements, the spend on smarter choices and the feasibility work required to develop packages of infrastructure investment.

Figure 4.3 Strategic public transport network

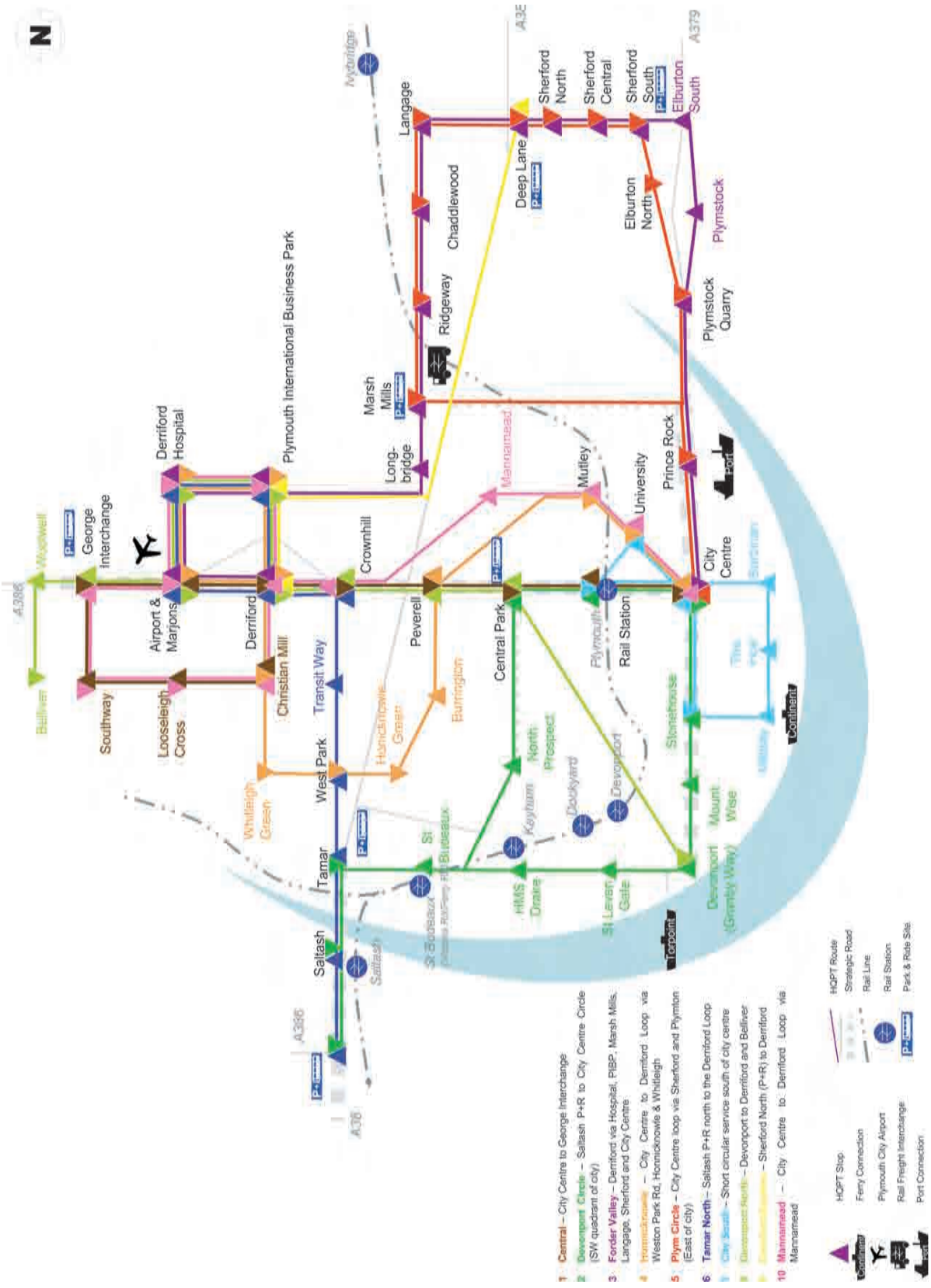
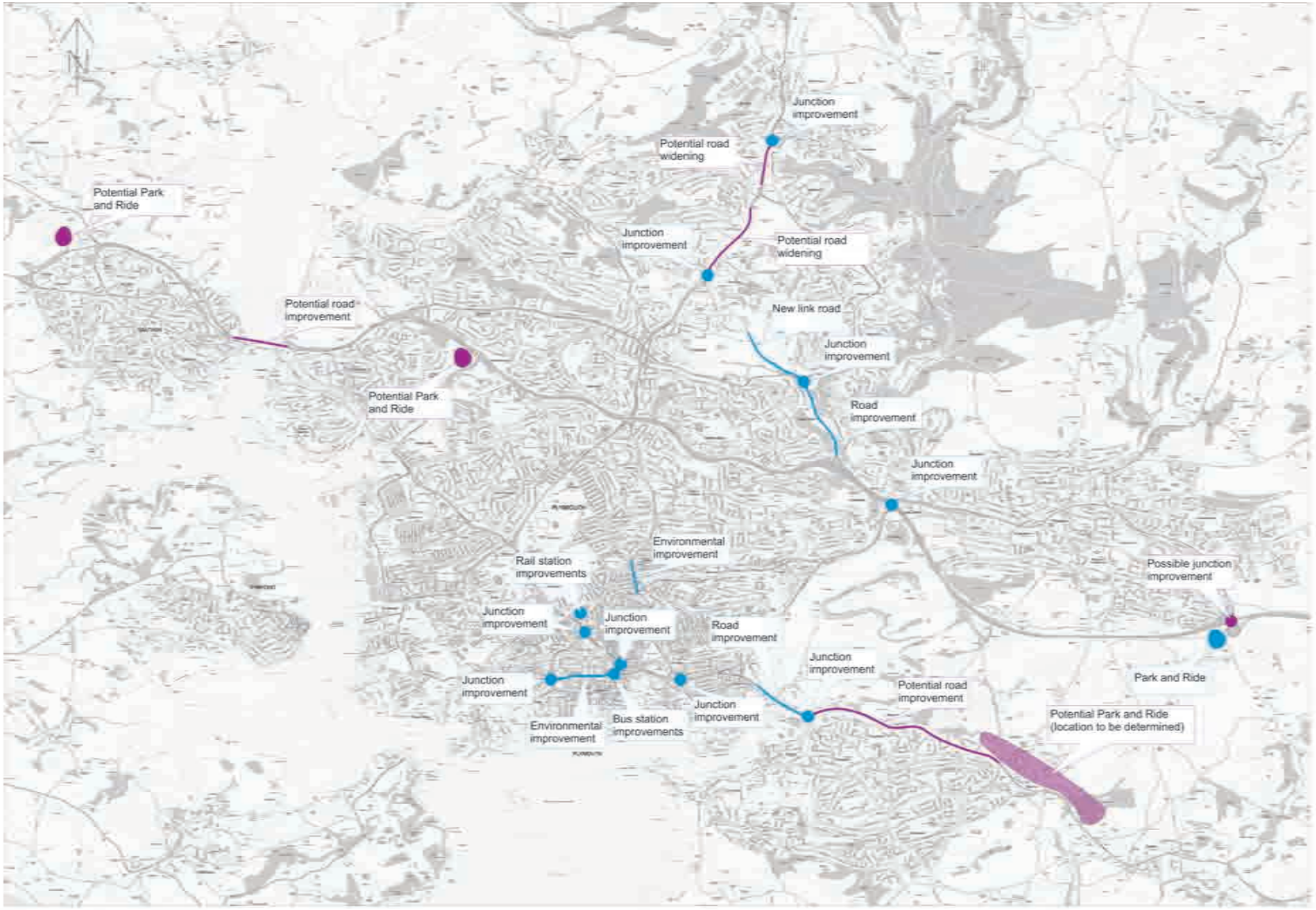


Figure 4.4 Major infrastructure diagram



5 Supporting Growth

Summary

5.1 The movement of goods and people has driven the world economy since the earliest recorded history. From Roman roads, through the canals, tramways and steam locomotives which were in part responsible for the industrial revolution, to the modern trains, planes, ships, buses, cycles, car and lorries: all have played a part in moulding our society and our city.

5.2 The importance of transport to a successful economy is long acknowledged. There is a clear vision set out within Plymouth's Sustainable Community Strategy which requires a transformation of the city in terms of urban environment, connectivity, reduction in inequalities and prosperity. This chapter therefore takes its lead from that vision to put in place a transport strategy that is essential to enabling the growth of the city in terms of wealth.

5.3 We have already set out an ambitious growth agenda for the city to become the economic hub of the far south west. An urban renaissance is envisaged that will involve population growth from 250,000 to 300,000, the building of 32,000 new homes, and the development of 62 hectares of new employment land. Most of the development will take place on previously developed (brown field) land but it is likely to intensify use of land in designated areas. This large-scale expansion will provide both opportunities and challenges in terms of transport infrastructure and services.

5.4 Plymouth is a city that has been devastated by war but the rebuilding process has left a legacy that now puts the city in a fortunate position. Roads through the city were designed with the use of cars in mind, which has meant that traffic growth within the city has been unconstrained by the capacity of the road network until relatively recently. The traffic congestion levels are low when compared to similar cities. Congestion only occurs at a few hotspots, and then just for short periods of the day; this makes the transport networks relatively efficient and reliable. In turn, this serves to improve the attractiveness of the city to new employers. The city has a number of other attractive features, such as the quality of life that can be experienced by employees, or the natural environment that is so close at hand. An unusual physical constraint the city faces is having just a few major routes and crossing points into the city, bordered as it is by the sea, the rivers Tamar and Plym, and the moors. This, as well as the barrier formed through the middle of the city by the A38, will present a challenge as the city grows and increases in density.

5.5 All of the changes need to take place with a commitment to sustainable development. Plymouth recognises that, if not managed appropriately, the growth in prosperity of the city could easily lead to significantly increased congestion, pollution and greenhouse gases; all of which have economic and social costs. It is therefore vital that we plan appropriately for the growth.

5.6 Our approach to supporting economic growth recognises that, although avoiding large scale increase in congestion is very important in terms of maximise the city's economic potential, we cannot achieve this through either local congestion charging or the building of additional road capacity. Instead our approach supporting the city's economic growth will be to:

- Manage our network and other transport assets effectively to reduce congestion
- Improve connections between and access to key economic centres in the city (especially by High Quality Public Transport)
- Improve connectivity to the rest of the UK and abroad by road, rail, sea and air
- Assist and encourage the increased use of communication technologies to reduce business related travel and reduce the effects of remoteness

5.7 In this chapter we primarily focus on those challenges and opportunities which come with economic growth. However it is vital that we don't focus all our efforts on new developments. By working to make well-connected and inclusive communities across the city we can raise the levels of quality of life for all residents. Much of the focus of the other chapters in this LTP is about raising the standards of transport and access across our whole city.

Evidence of the relationship between transport and the economy

5.8 Comprehensive transport networks enable easy movement of goods and provision of services, support labour markets, allow businesses to enjoy the benefits of agglomeration or clustering, and enable people to enjoy leisure activities which add to the quality of their lives.

5.9 The importance of transport to a successful economy has long been acknowledged. The Eddington Transport Study (2006) assessed the long term links between transport and the UK's economic productivity, growth and stability, in the context of a commitment to sustainable development and the need to reduce carbon emissions from transport.

5.10 It concluded that there are seven ways in which transport investment drives economic performance:

- Increasing business efficiency through time savings and improved reliability for business travellers, freight, and logistic operations
- Increasing business investment and innovation by supporting economies of scale or new ways of working
- Supporting clusters and agglomerations of economic activity
- Improving the efficient functioning of labour markets, increasing labour market flexibility and the accessibility of jobs
- Increasing competition by opening up access to new markets
- Increasing domestic and international trade by reducing the costs of trading, and
- Attracting globally mobile activity by providing an attractive business environment and good quality of life

5.11 In terms of supporting economic growth, the emphasis is focused towards ensuring that transport capacity constraints and the various negative economic impacts of congestion do not impair productivity and competitiveness.

5.12 In urban areas, small- and medium-scale transport investments focused on improving the performance of existing networks, and measures to encourage and enable travel by public transport, bike or on foot, are increasingly seen as more appropriate and cost effective than large-scale schemes designed to increase transport capacity.

Plymouth as a sub-regional centre

5.13 The city has historically had a largely maritime economy, relying heavily on the Royal Naval Dockyard at Devonport. Over recent decades employment in the defence sector has declined substantially. Like many British cities Plymouth's economy has evolved into one that is increasingly reliant upon service industries and the relatively heavy reliance on public sector employment is considered a sign of economic weakness.

Figure 5.1 Devonport Dockyard

5.14 However Plymouth has regional importance in the south west. It has rail, air and sea links, is the second largest city in the region after Bristol and is aspiring to become the economic hub of the far south west.

5.15 It is also a regional centre for rail, air and sea transport.

5.16 As a sub-regional centre, Plymouth provides these links as well as healthcare, education, leisure, retail and many other services to residents of the surrounding towns and rural communities, including Ivybridge, Tavistock and Liskeard. However, there is a high interdependency and, in turn, these towns and communities provide an important market for Plymouth. The city's retail catchment has a population of 465,000 and much of Plymouth's workforce comes from outside of the city. Plymouth's Travel to Work Area has a population of around 390,000 people with more than one in five jobs in Plymouth belonging to people who live outside of the city (2001 Census).

5.17 Ensuring and maintaining good connectivity, accessibility and journey time reliability between the city and its hinterland is therefore very important economically.

5.18 While the city's remoteness is undeniable, its road and rail links to the rest of the UK are of good quality but suffer from a perception of being of average quality and vulnerable to disruption. The consultation analysis concluded a real consensus that better connections to the South West region and a strong transport policy is essential to strengthen Plymouth's economic potential and to bring the investment and employment opportunities into the city.

Table 5.1 Known issues with strategic connections to Plymouth

Road (A38, M5 and A303)	Rail	Air	Ship
Closure or long diversion due to accident or extreme weather	Delays / closure due to extreme weather, particularly between Exeter and Newton Abbott	The current runway length can only cater for turboprop aircraft.	Millbay docks unable to berth large cruise ships, and does not present an attractive gateway to the city.
Peak season congestion	Perception of length of journey to London (greater than three hours)	Surface access to Plymouth airport is limited for non-car modes.	Perceived peripherality limits the port to a role serving local and regional markets.
Perception of the quality of the A38	Lack of services arriving in the city to enable a full day of business to be carried out		Local inter-modal rail freight facilities limit opportunities for port trade growth.

5.19 In order to plan the changes to the local economy Plymouth has set out a Local Economic Strategy (LES) - a companion document to the LTP - which focuses on delivering the city's strategic objective 'to develop a prosperous economy' and its overarching aim is 'to achieve an improved competitive position for the city of Plymouth'. The importance of transport is reflected in this document.

5.20 The city has a fragile and under-performing economy and faces a challenge to improve its economic performance, become more competitive and diversify its economic base in order to raise incomes and tackle economic and social exclusion. Transport decisions will play a role in tackling these challenges, and there are a number of competitive weaknesses and threats that transport decisions can contribute directly or indirectly to addressing: the city's remoteness and the perception of poor transport links to other cities and regions; poor internal and external image; examples of poor urban environmental quality; and an unappealing city centre.

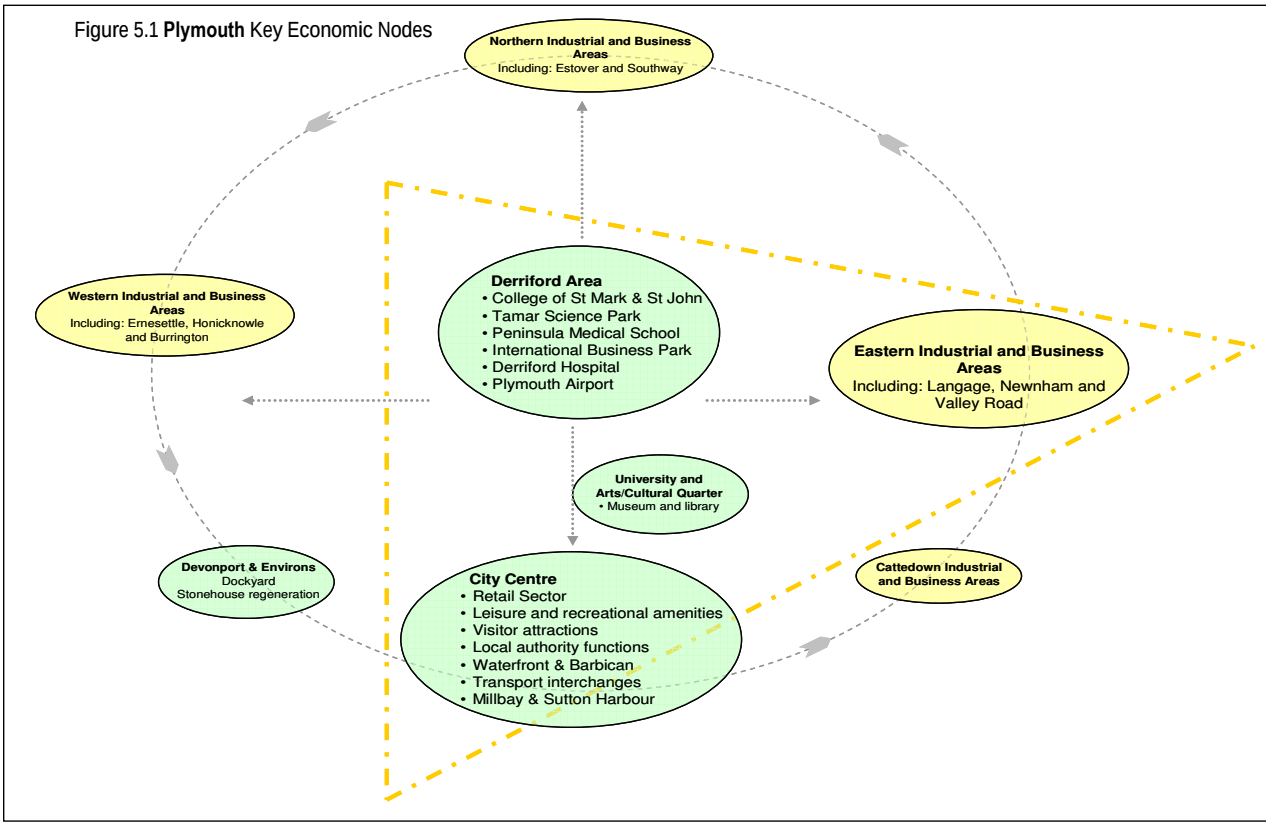
5.21 These issues are substantiated by some recent consultation comments that we have received.

Consultation has highlighted the perception of poor integrated transport links and some recent improvements to the city centre have received a mixed response. The consultation information suggests that public realm standards play a key role in making Plymouth an attractive place to visit which drives the local economy. For instance, good, clean, accessible public space with an integrated transport system represents the views of

many. However, the use of shared space in public areas is not necessarily supported, particularly by those with visual impairments who would like to see the physical separation of pedestrians from vehicles.

5.22 The city has a number of competitive strengths which transport decisions can help to preserve, enhance or exploit such as its outstanding natural setting, environment and quality of life; its size and sub-regional presence; the availability of sites and premises for development. Economic opportunities that transport decisions can help to exploit include capitalising on the city's high quality of life and outstanding local environment, and using communications technology effectively to overcome locational disadvantages.

Figure 5.1 **Plymouth** Key Economic Nodes



5.23 The LTP3 is a companion document to Plymouth's Local Development Framework (LDF), which through its Core Strategy and Area Action Plans, sets out large scale expansion which will provide both opportunities and challenges in terms of transport infrastructure and services. Among the challenges, will be ensuring adequate connectivity by all modes of travel between existing and growing employment and population centres and achieving this growth without generating excessive levels of traffic and congestion.

5.24 This balance is something that the public seems to be grappling with. There is a lot of support for improving sustainable travel, with many believing it is essential for the future of Plymouth. But there are also many others who state that the majority of people will never

choose a sustainable travel mode over the private car. It is the latter group people who are concerned about how easily they will be able to travel around Plymouth due to increased congestion once the growth occurs.

5.25 Among the opportunities will be the creation of a larger denser market for public transport operators to exploit, and the ability to make a strong case for funding for essential large scale transport infrastructure investment to cater for this planned growth.

5.26 Plymouth does not currently experience high levels of congestion compared to many other cities. However traffic modelling work has demonstrated that, unless effective measures are taken, the economic and the physical growth aspirations will lead to significant worsening of traffic conditions. Congestion has direct and indirect economic impacts. Plymouth's economy is not currently as vulnerable to these impacts as cities that rely heavily on road haulage and intensive manufacturing industries. However, the industries which the city aspires to develop are generally more vulnerable to the economic impacts of congestion than low skills industries where labour can be substituted more easily.

5.27 Improving access to work, health, shopping and leisure opportunities and services in order to tackle social exclusion is also a vital factor in enabling growth in urban areas. This area of work was a priority during Plymouth's Second Local Transport Plan, and the importance of barriers to participation is well reflected in Plymouth's new Local Transport Objectives to 'link communities together', 'reduce the negative impacts of transport' and 'make walking, cycling and public transport the desirable choice', and is a key theme in Chapter 8 'Promoting Equality of Opportunity'.

5.28 Doubling the size of a city's labour market generates agglomeration benefits that have been shown to lead on average to an increase in business productivity of 6.5%. However, these benefits can be reduced by traffic congestion. It is therefore very important that Plymouth does not allow growth in traffic congestion to reduce the potential benefits arising from its long term plan to grow its population.

5.29 As already stated Plymouth relies in part on labour that comes from outside of its boundaries. People are known to travel from surrounding towns across a wide area but the majority tend to travel from Tavistock, Ivybridge, Kingsbridge, Saltash and Callington as well as the villages in South East Cornwall, West Devon and the South Hams. This sub-region is important socially and economically for Devon and Cornwall and it is vital that there are good quality transport links between the city and these locations.

Plymouth's vision for park and ride

5.30 We recognise that there are areas outside of the city that are not able to support a viable local bus or rail service into the city, and that often the easiest choice, or the only choice, to travel into the city centre is by car. For those who drive into the city because of an inadequate or absent public transport alternative, park and ride offers the opportunity to switch to an advantageous public transport mode for at least part of their journey.

5.31 Plymouth has developed several park and ride sites since the early 1990s. We will build on the success of these by ensuring that there is one or more park and ride site on each main corridor into the city. Each park and ride site will link into the city's HQPT network (See Chapter 4, Figure 4.3.) to become an interchange providing bus connections to other destinations in the city, not just the city centre.

5.32 The more cars that are intercepted at park and ride sites, the greater the benefits to the city in terms of reductions in traffic levels, congestion, pollution and reduced parking pressure. Those using park and ride services benefit from a fast, convenient and cheap alternative to driving into the city centre to park. The economic importance of quick and efficient links between the city and its sub-region has already been outlined in section 5.16.

5.33 However use of a local bus service, where available, should be encouraged over driving to a park and ride site, and park and ride services should not undermine local bus services. Park and ride sites will be carefully located with this in mind.

5.34 City centre parking charges will need to be consistent with park and ride charges to ensure that the latter maintains a competitive advantage. Charging will aim to achieve the optimum balance between long- and short-stay parking, and the needs of the city centre. Parking charges in other parts of the city may need to be similarly balanced.

5.35 The congestion reducing effect of park and ride services is important for the local economy because air pollution, travel time delay, and traffic noise pollution all have economic costs for the city. The presence of high quality park and ride facilities enhances the image of the city to potential investors.

5.36 In order to maximise the potential benefits of park and ride services to the city and its economy, and in response to the planned growth the Council and partners plan to create a ring of high patronage park and ride interchange sites on the outskirts of the city. This will involve:

- Introducing a park and ride site to the south side of the Deep Lane junction of the A38, in association with the Sherford New Community, to serve motorists travelling into the city centre and to the Derriford area from east of the city
- Introducing a park and ride site on the city's western corridor (location to be established) to serve motorists travelling from west of the city (Cornwall) to the city centre and to the Derriford area
- Introducing a park and ride site on the A379 for motorists travelling from south east of the city.

- Improving the attractiveness of all bus services, including park and ride services by improving their journey times relative to car journey times
- Supporting park and ride patronage growth by seeking to ensure that it is more attractive than driving into the city centre and parking all day
- Ensuring that using a park and ride services do not undermine regular bus services, by locating them and pricing them appropriately
- Working towards a situation where park and ride services operate without or with minimal public subsidy.

How can transport make a contribution to delivering economic growth in Plymouth?

5.37 In Plymouth, as elsewhere in Britain, economic growth throughout the 20th century has generated and enabled steadily increasing levels of personal and business travel and levels of traffic which have been growing until recently where higher fuel prices and the economic downturn have caused these levels to stabilise. It is therefore reasonable to assume that growth in Plymouth will lead to increased demand for travel.

5.38 Congestion charging is not at attractive option for Plymouth at present. The city simply does not suffer from the levels of congestion that would warrant it. Inevitably the growth in the city will increase the levels of congestion but this is an accepted part of living in a city with a vibrant economy. The introduction of a charge may stifle the fragile economy undermining the growth that we aspire to. However we do need to manage the growth; it is not possible to build our way out of the congestion that may occur. We do not have enough space in the city to build wider roads or new roads, and the environmental impacts would be unacceptable. Many of our residential streets are already full of parked cars, and between January and July of 2010 parking issues were the third most common reason for residents to complain to Plymouth Transport and Highways.

5.39 Our determination to support and enable the successful delivery of the city's growth agenda and to boost the competitive position of the city is reflected in the adoption of the local transport objective to 'Use transport to drive the local economy'. However, direct and indirect economic benefits will also arise from success in achieving all of the city's local transport objectives. These benefits are described briefly below.

6. Use transport to drive the local economy

- Support the delivery of the Local Development Framework and Local Economic Strategy by connecting growth and regeneration areas by all modes with communities and national transport networks
- Work with the development management process to deliver small and large scale improvements in transport networks to enable connectivity
- Develop improved transport networks to open up long term opportunities for growth.
- Encourage sustainable tourism
- Improve connections with transport networks which connect Plymouth to the rest of the country

- Improve access to wider road, rail, air and sea networks
- Improve gateways to these networks, prioritising Plymouth Railway Station and Plymouth Coach Station when the future of the Civic Centre is known

5.40 It is also reinforced by the other transport objectives in the following ways:

Other Local Transport Objectives	Examples of crossover with the objective to 'use transport to drive the local economy'
1. Link communities together	Enabling high levels of economic participation through ease of access to the high quality natural environment surrounding the city is important in terms of the quality of life that the city can offer.
2. Reduce the negative impacts of transport	The estimated annual national costs to the economy of delay from congestion (£12 billion), road accidents (£9.3 billion), poor air quality (£4.5 to £10.6 billion), physical inactivity & growing obesity (£10.8 billion), greenhouse gas emissions (£1.2 to £3.7 billion), and noise pollution (£2.7 billion) total between £40.5 and £49.1 billion.
3. High quality transport for a vibrant city	High quality transport infrastructure and services will improve the image and reputation of the city, and make it easier for the city to attract investors and new employees.
4. Make walking, cycling and public transport the desirable choice.	Increased levels of walking and cycling will improve the health and reduce the health care costs and employee absenteeism of Plymouth's population.
5. Maximise the transport contribution to Plymouth's carbon reduction target (60% reduction by 2020)	The long term economic costs of taking the action necessary to tackle climate change would probably account for less than 1% of global GDP, whilst the consequences of failing to act might cost 5% of global GDP.

5.41 The city has set out a range of ten actions which, if achieved, will enable the city to realise its economic potential. The links between some of these actions and transport are illustrated in Table 5.2 below.

5.42

Table 5.2 LES actions and their links to transport	
LES Actions (selected)	**Links to transport**
1. Focus on key sectors for which Plymouth has competitive advantage	The proposed growth sectors are knowledge and information dependant rather than heavily reliant upon physical resource inputs, which reduces the transport freight cost burden of peripherality. However these still require connections to major centres of business such as London, Bristol, Birmingham and Manchester.
5. Enhance the tourism offer	Efforts to grow Plymouth's leisure and tourism industry will be hampered if the city's physical and economic growth leads to high levels of congestion, poor air quality and noise pollution and makes getting around the city more time consuming and less pleasant.
7. Transform Plymouth into a true 'learning city'	Improving access to education of all levels for all communities will enable an increase in attainment levels. Removing transport related barriers to participation in learning and considering the way education is delivered will both be important to ensuring success.
8. Achieving well connected complementary growth	Ensuring growth areas are well connected by a variety of modes of transport or communications technology will enable more people to enjoy the benefits.
9. Achieving effective and unconstrained participation in the labour market	Improving access to the employment opportunities for which people have the skills will reduce the barriers to participation.

Making better use of our existing assets

The Council has a wealth of assets that make up the transport networks we manage, as do the transport operators. If we are to effectively support economic growth in the city then we need to be getting the maximum benefit out of the assets we manage. There is evidence from the consultation analysis that this approach is supported. This is particularly in reference to better management and enforcement of highway restrictions.

Our two main tools for doing this are the Network Management Plan (NMP) and Transport Asset Management Plan (TAMP). Both plans are currently being developed. Details of how these plans will better enable us to support growth are set out below.

Network Management Plan

The Traffic Management Act 2004 (TMA) imposes a Network Management Duty on all local traffic authorities (LTAs) to secure the efficient movement of traffic on their road networks, and to facilitate the expeditious movement of traffic on other authorities' networks. LTAs are required to plan and carry out appropriate actions to perform the duty - which must include the appointment of a Traffic Manager to coordinate all network management activities and to be a 'champion' within the authority.

Department for Transport (DfT) guidance and good practice advice on fulfilling the duty recommends a 'whole authority approach' to ensure that all departments are aware of the duty not just the highways department and that LTAs should embed desired outcomes and appropriate policies and plans under the network management duty within Local Transport Plans. The Secretary of State for Transport has powers to intervene and appoint a Traffic Director for an LTA if it is failing to properly perform the Network Management Duty.

We have developed a Network Management Plan (NMP) to demonstrate how our policies, procedures and structures support the delivery of the Network Management Duty. It also draws together all of the tools that we currently use to demonstrate how we manage the highway network. Whilst there is no legislative duty to develop a NMP, it provides the DfT, stakeholders and the public with the confidence that the authority has integrated its thinking and planning in order to discharge its Network Management Duty.

Transport Asset Management Plan

Transport infrastructure - such as roads, pavements, traffic lights, street lights, and drains - makes a vital contribution to the economic health of the city, as well as providing a range of social and recreational benefits. Our highway network and streetscape infrastructure is the city's most valuable publicly owned asset, and also carries a vast amount of the city's utilities infrastructure within it and beneath it. Despite this, the management of these assets has historically not received the attention nor funding required to maintain it in an optimal state of repair and operation.

Our recently updated Transport Asset Management Plan (TAMP) provides a comprehensive audit of the city's transport assets. It enables the amount and cost of work required to maintain and periodically replace these assets to be quantified, planned for, and prioritised efficiently

in the long term. It also enables informed decisions to be made about the removal of unnecessary or unused infrastructure, which reduces maintenance costs and reduces streetscape 'clutter'.

Efficient management of our transport supports our economy in a number of ways. For example:

- It reduces the frequency of traffic light failure and the congestion that these incidents cause
- It results in better maintained and more attractive streetscapes, which makes the city a more attractive place for tourists and investors
- It is an important resource in the development of a well prioritised Network Management Plan
- Efficient maintenance saves money, which frees council resources to invest in other transport infrastructure.

Improve connections between key areas of the city

5.43 The growth of the city is planned for a number of key areas of the city, as set out the Area Action Plans and shown in Figure 3.1.

5.44 Enabling the physical growth and intensification of the city by improving connectivity by all modes to key economic development areas underpins the approach to delivering economic growth.

5.45 Whilst these developments are designed to be mostly self-sufficient, it is inevitable that people will need to travel from one area to another for business, shopping or leisure. It is vital then that we improve the existing connections between these areas to enable excellent transport around the city and to help the areas support each other in terms of their offer. This will not only benefit those who live in these developing areas but also those who live on or close to the corridors of improvement.

5.46 In urban areas small and medium scale transport investments, focused on improving the performance of existing networks, and measures to encourage and enable travel by public transport, cycle or on foot, are more cost effective than large scale schemes designed to increase transport capacity. Although this approach is not supported by everyone, in the current financial climate the need to make cost effective transport investment decisions will be greater than ever.

Case Study - Better Integrated Transport System

Devonport Station

Devonport Station is the most well used of Plymouth's four local railway stations providing access to the city centre, Cornwall and the Tamar Valley. The station is located within a residential area and is 5 minutes walking time from the facilities, services and shops found at the Stoke Village district centre. The adjacent residential and shopping areas are well-served by bus with routes to the city centre and Derriford, in the north of the city.

To create better integration between the train and bus in this area, leading to increased patronage of both modes, a programme of bus and pedestrian infrastructure and information measures were delivered, improving people's travel choice and their access to services.

5.47 As discussed in this chapter, the growth of the city could come at a cost if not managed appropriately. The implementation of improved walking, cycling and public transport routes can enable a low carbon transport approach to economic development. Therefore the majority of improvements will be dedicated to reducing the carbon footprint of the city by enabling journeys by bus, cycle or on foot.

5.48 We know this decision may be controversial for many people. From the consultation analysis there appears to be three camps of opinion when it comes to the issue of sustainable transport. Whilst people do not seem to be averse to using the train for long distance travel, there are people who simply won't entertain the idea of walking, cycling or using the bus. From a recent travel survey that was carried out, we know that there are also people who would actually like to travel more sustainably, but are unable to due to family or work commitments. And there are those people, who wholly support sustainable travel and would fully support improvements and further investment.

Eastern Corridor

One of the city's largest areas of planned growth is to the east of the city, along what is termed the 'Eastern Corridor', which extends from the city centre through Cattedown, then through Plymstock and Sherford, and ends at Langage Business Park, north of the A38. By 2026 this corridor will accommodate in excess of 7,000 new homes and a number of new employment sites and facilities including a park and ride site and service at Deep Lane junction on the A38.

The main sites for development include Plymstock Quarry (including 1,650 homes and 21,000 sq. m of offices), Sherford (including 5,500 homes and 67,000 sq m of business and commercial space), and Langage Business Park (an existing strategic employment site, with a further 20,000 sq m expansion planned).

An Eastern Corridor High Quality Public Transport (HQPT) Major Scheme is under development. It will be a package of public transport infrastructure supported by small scale highway improvements. This ambitious scheme is essential to secure the economic opportunities that exist on the Eastern Corridor in a sustainable way, and will require financial contributions from developers and a bid for funding to the Department for Transport. A limited stop Bus Rapid Transit (BRT) type system (including a range of bus segregation measures), will serve all the new developments along the Eastern Corridor, and will deliver one of the main links on the city's planned strategic HQPT network and Strategic Cycle Network.

Following a Strategic Park & Ride Study undertaken for the city we will investigate in more detail the viability of a park and ride site for the A379 corridor into the city.

The early phases of this project are already under way with the East End Transport Improvement Scheme which is due to be completed in November 2011. This will be followed by improvements to Cattedown roundabout and then the phased delivery of the scheme working eastwards from the East End.

Construction of the EETS

For further information about our transport plans for the Eastern Corridor, visit our website at:

http://www.plymouth.gov.uk/easterncorridormajorscheme

Northern Corridor

The Northern Corridor, the A386 and B3250, is one of main routes into Plymouth for public and private transport with 30,000 vehicles per day using this part of the highway network. The importance of the Northern Corridor as a main route is reflected in its transport assets which include; two of the city's park and ride sites, the airport, central train station, two public car parks, supported bus services, cycle routes and numerous workplace and school travel plans.

However, the Northern Corridor is set to grow significantly in the future. Extensive development (retail, business, residential and leisure) is planned and exciting projects such as the Life Centre are being developed. In order to accommodate this growth and support the economic prosperity of the Northern Corridor, and the city as a whole, significant changes in the transport provision will be required.

Work to improve public transport and walking and cycling infrastructure serving this corridor has been under way for a number of years - most notably the George Junction Park and Ride facility and service - and many smaller scale improvements. Ongoing investment will need to take place along this corridor to secure the economic benefits of this development and avoid the impacts of unchecked traffic growth and congestion.

In 2007 the Council sought the views of the public and transport providers on what they felt could be done to improve the overall experience of people travelling by public transport on the Northern Corridor. In response to your comments a targeted programme of works was delivered between May 2009 and March 2010, investing £2 million on transport improvements on the A386 and B3250, including a £750,000 upgrade of the George Junction Park & Ride site, new bus and cycle lanes (largely delivered through road widening on Tavistock Road and Derriford Hospital), Real Time Passenger Information (RTPI) displays at strategic bus stops, bus boarders to increase the accessibility of buses on the corridor, and pedestrian crossing improvements and resurfacing works.

Further improvements will be delivered this year and in future years, including the upgrading of the traffic signals at Manadon junction (Summer 2010) to improve the capacity of the junction and stop queueing both on the A38 slip roads and on the Northern Corridor. In the longer term the city plans to develop a Northern Corridor Major Transport Scheme to deliver major transport infrastructure improvements that have been identified as necessary to cater for the large scale growth planned in the city centre and along the Northern Corridor. These improvements will focus on improving connectivity in the Derriford area, and between the Derriford Area and the Eastern Corridor developments, especially for HQPT and for active modes of travel. This may include the building of a link road through the Forder Valley.

Western Corridor

A key issue for the Council during the lifetime of this strategy will be how to manage the capacity constraints and increasing demand for crossing the River Tamar. The levels of development anticipated within the city will act as a significant attractor for residents of South East Cornwall. However, the routes into Plymouth are restricted by the need to cross the river.

The primary routes between Plymouth and Cornwall are A38 Tamar Bridge and A374 Torpoint Ferry, both tolled, for road traffic, the Cremyll Ferry for foot / cycle traffic and the Royal Albert Bridge for the railway network. All of these routes have limited capacity.

The Strategic Park & Ride Study for the city investigated the potential for the delivery of a park & ride facility to serve the city's Western Corridor and assessed a number of potential locations for a park & ride site. The assessment concluded that there is significant potential to operate a commercial park and ride service on this corridor, but that operating from a site to the West of the Tamar Bridge alone would likely require subsidy from the local authority. The study did not specify sites on the corridor to the East of the Tamar Bridge, but did put forward three options and the deliverability these needs to be further investigated. Delivering park and ride services on the Western Corridor may affect the viability of operating commercial services on the Northern Corridor, in particular the existing site at Milehouse, and this impact needs to be carefully considered before the decision is made to invest in new infrastructure.

Tamar and Royal Albert bridges

Other options to better manage the limited capacity need to be developed in order to establish a long term strategy for improvements to the corridor which would likely be required beyond the life of this Local Transport Plan. These options need to consider ways to make the most out of all of the crossing opportunities available and not simply focus on road crossings.

In addition to the connections between Plymouth and Cornwall there are a number of improvements required on the Western Corridor to significantly enhance the quality and variety of the transport offer to residents. Due to the nature of the existing infrastructure these measures do not need the major changes that are needed on other corridors and are therefore not shown on the strategic infrastructure map.

City Centre

Dramatic changes are planned that will enable Plymouth's city centre to become a sustainable city centre neighbourhood which is a vibrant and thriving regional destination, which will be the natural destination for people from Devon and Cornwall who want high quality and varied shopping, cultural, leisure and recreational facilities, a unique environment anchored in its heritage, and a top class learning area focused on the University and Plymouth College of Art and Design.

In order to achieve this, the way in which the transport network operates will need to change. Based on evidence for the city centre and University Area Action Plan the following key principles for changes have been adopted:

- Maintain the role of the Strategic Road Network to efficiently distribute movements by all transport modes around the city centre.
- Support and improve access by public transport to the city centre, and particularly the development of the High Quality Public Transport system.
- Provide city centre car parking in fewer, larger, strategically located, high quality car parks with easy access from the Strategic Road Network.
- Address the need for better facilities for cyclists and pedestrians within and into the city centre.
- Ensure safe movement for all users of the road network.
- Ensure safe movement between the city centre and surrounding neighbourhoods.
- Support development of Plymouth Railway Station and the adjacent area securing improved access from the city centre road system and better connections to the HQPT and local bus networks, the SCN and city centre walking networks

This will require some major changes to the existing transport networks, including junction improvements, enhancements for walking and cycling infrastructure and increased priority measures for buses. All of this needs to be balanced with the management of a worsening air quality situation in the parts of the city centre for which the Council has a statutory responsibility. Air quality is specifically dealt with in chapter 7 of this Local Transport Plan.

Communications technology

5.49 The growth of high speed and mobile broadband networks and an increasingly knowledge-based economy is reducing the economic costs of remoteness, and indeed some people argue that the city's remoteness is part of its attraction as a place to live and therefore an economic advantage as well as a disadvantage. To reduce both remoteness and the need to travel for work, the Council will support improvements in communications technology by:

- Working with potential private sector providers of new fibre networks for high speed (100 megabits per second) internet access to accelerate roll out whilst minimising highway and pavement disruption. These networks will enable businesses to enjoy next generation internet services, including internet based television, video on demand, enhanced social networking, home working and video conferencing.

- Promoting the economic and carbon reduction benefits to businesses of increased home working and video conferencing through workplace travel planning process.

The movement of goods

5.50 As the city grows the demand for goods and services will also increase with the provision of safe, direct transport routes for the delivery of freight and goods essential to maintain a stable and growing economy.

5.51 Goods are brought to the city and delivered to other markets by road, rail, sea and air making it necessary that the need to move freight and goods by these transport networks is an inclusive part of any improvements planned and delivered to them. However, the movement of freight also has negative environmental impacts such as poor air quality, transport noise and climate change implications and with road freight contributes to traffic congestion.

5.52 The Council will work with freight bodies and organisations like the Freight Transport Association and the Road Haulage Association, the airport, port and rail authorities and the city's significant freight traffic generators to identify where improvements to the city's transport networks could be made, in relation to maintaining goods delivery timescale, providing for increased freight volume, reducing the negative impacts of freight transportation and identifying potential opportunities to transfer freight and goods movement from road to rail.

5.53 Amongst the measures to be considered will be the establishing of a Freight Quality Partnership (FQP) to facilitate improved co-ordination between the appropriate parties, continued working at a regional level on freight issues and routes, the identification of potential freight consolidation and distribution centres for the city, and safeguarding and developing the existing rail freight infrastructure along the Cattewater branch line, Friary Yard and Tavistock Junction to support increased transfer from road to rail freight.

Improve access to road, rail, air and sea networks which connect to locations beyond Plymouth

5.54 The Council does not control any of the transport networks that connect the city to the rest of the country.

5.55 The A38 Parkway is managed by the Highways Agency, the rail network by First Great Western and Network Rail, the airport by its owner, Sutton Harbour Holdings plc, the coach networks by Megabus, National Express and the ports by Associated British Ports (ABP).The council already has a close working relationship with the Highways Agency about matters that impact both our highway networks.

5.56 This means that the Council has limited influence over changes made to these networks, and the biggest role we can play is to act as a voice for residents as users of their services. In this context we will be lobbying the relevant bodies for improvements to the services they provide.

Rail

Plymouth Railway Station

5.57 The rail network is a crucial element of the city's transport systems providing access to the rest of the country and Europe. However, the rail network in the far south-west has suffered historically from significant under-investment, resulting in much of the rail infrastructure being below standard and in need of urgent renewal with low line speeds, high signalling headway requirements and loading gauge below the standard needed to facilitate the movement of larger freight containers.

5.58 The significant role of the rail network in enabling the city to reach other markets and for people wishing to travel long distances will only grow as the city's population increases and its economic position improves. New infrastructure and improvements are needed to not only maintain existing services but deliver better rail services for the city. The Council will continue to promote and support increased rail use and lobby the rail authorities for improvements to the rail network and the services that serve the city and the far south-west.

5.59 The main rail issues for Plymouth are:

- The need to increase the number of services with reduced journey times to other major cities and particularly between Plymouth and London timetabled to take no more than 3 hours
- Greater commitment from Network Rail to the extension of electrification of the GWML through to Plymouth and Cornwall in order to fully maximise the benefits

- Extension of the 7-Day Railway concept through to Plymouth and Cornwall
- The need to improve rail infrastructure so as to enable a greater volume of freight to be transported by rail including port-related freight and to safeguard freight interchange facilities
- To properly recognise the status of Plymouth Station on the rail network in respect of its essential role in providing long-distance connections and its unmatched GWRUS demand forecasts with it reclassified as a Category B - Regional Hub station
- To improve weather and flood protection to maintain operating capability across the Somerset Levels, through the Exe Valley and at Dawlish
- To reinstate alternative mainline routes viaTavistock and Okehampton or via Heathfield and Teign Valley
- The development of a 'metro' system with improved frequency of service on the local rail network from Liskeard through to Exeter, including re-opening the Tamar Valley branch line between Bere Alston and Tavistock so as to provide a complete Plymouth-Tavistock rail service

Trunk Roads (A38 / M5 / A303)

- To provide motorists and hauliers with better Real time information about journey times between Plymouth and Exeter / Bodmin.
- The second strategic route to the south west along the A303 and A30 comprises mixed lengths of single and dual carriageway. Congestion is frequently reported on the route's single carriageway sections in the summer tourist season and we will support improvements to this route to enhance connectivity and journey time reliability between Plymouth and the south east.

Plymouth Airport

- Through the planning process, safeguard land to enable airport expansion
- Improve surface access by sustainable modes
- Bring a wider range of destinations

Ports

5.60 Plymouth's ports are a valuable asset, the passenger ferries to France and Spain bring over half a million people through the city every year and the cargo handled through the Port of Plymouth exceeded 2.3 million tonnes in 2008.

- Encourage increased use by cruise ships
- Increase freight handled through ports
- Support the development of a Port of Plymouth Master Plan
- Encourage port-related freight movement by rail

5.61 A comprehensive review of the consultation data found very few strategic comments about how improving connections by air, road, rail and sea could be achieved, but it was evident that improvements would be fully supported, particularly by the local business community.

5.62 A comprehensive review of the consultation data found very few strategic comments about how improving connections by air, road, rail and sea could be achieved, but it was evident that improvements would be fully supported, particularly by the local business community.

Cross boundary working

5.63 With Plymouth's TTWA and sub-region extending into Devon and Cornwall, it is important that we work with our neighbours on both strategic and local cross-boundary issues.

Cornwall

5.64 Whilst the A38 is a trunk road operated by the Highways Agency the Tamar Bridge and Torpoint Ferries are managed jointly by Cornwall Council and Plymouth City Council. These crossings have undergone considerable change in the last 10 years or so. The strengthening and widening of the Tamar Bridge between 1999 and 2001 at a cost of approximately £35 million, the replacement of the three Torpoint Ferries in 2005 and 2006 and associated shore works at a cost of approximately £19 million and the Tamar Bridge toll plaza refurbishment and the introduction of electronic toll collection in 2006, together costing approximately £4.5 million are notable investments in keeping the services operating efficiently and to modern standards. However, if growth in traffic associated with development on both sides of the Tamar is to continue then the capacity and efficiency will be seriously challenged. The decision will need to be made how to best manage this increased demand for crossing the river so that it still remains efficient for all users. A number of options could be considered:

- Park and ride in Cornwall to serve Plymouth city centre and Derriford areas
- More efficient use of the rail network
- Different toll levels at different times of the day to encourage more efficient use of the existing crossings
- A new crossing
- More efficient use of the bus network
- 'Smarter choices' programmes
- A combination of any of these or something completely different.

5.65 Plymouth City Council and Cornwall Council are agreed that we need to be taking steps today to work out the best way of going forward. We know we need to look at the opportunities available from all the Tamar crossings, not just the road crossings, in order to determine a comprehensive package of measures to manage the demand for crossing in the long term.

Cremyll Ferry

5.66 The Cremyll Ferry service forms a vital connection for South East Cornwall providing efficient access to Plymouth as well as providing access from Plymouth to Mount Edgcumbe House and Country Park and beyond. It also forms part of the National Cycle Network.

5.67 The aim is to ensure good links for all modes of transport across the river with the aim of connecting cycling and walking routes where necessary and working with Cornwall Council and the transport operators to improve access to all parts of the city.

Devon

5.68 Plymouth, as the largest city west of Bristol, is naturally a focal point for south and west Devon in terms of employment, and many commercial services. Thousands of journeys are made every day between Plymouth and Devon by car, bus, rail, cycle and on foot, and maintaining and improving the ease of travel between the city and Devon is economically important to both the city and the county.

5.69 Plymouth and Devon are linked in the north by the A386, and in the east by the A38 and A379, by many sub-regional bus services, by rail services to Ivybridge and other destinations in Devon, and two National Cycle Routes. Plymouth City Council and Devon County Council are agreed that we need to work closely together to successfully achieve our own transport objectives, and in particular to ensure that growth in traffic associated with planned Eastern Corridor developments does not challenge the capacity and efficiency of routes from Devon into Plymouth .

5.70 In order to make best use of our existing assets, improve connections between key areas of the city (including the growth areas along the Eastern Corridor), exploit communication technology to tackle remoteness, and improve access to networks to beyond Plymouth, work with Devon County Council, South Hams District Council and West Devon Council might include:

- Connect cycling and walking routes between Devon and our Northern and Eastern Corridors, include National Cycle Network Routes and routes on Plymouth's Strategic Cycle Network.
- Seek to improve the sustainable travel options from sub-regional towns and villages – especially Ivybridge and Tavistock, which are significant commuter towns for Plymouth
- Develop transport options for major new developments in the sub-region, in particular for the Sherford New Community (this will include a park and ride in Devon at Deep Lane Junction which will also reduce traffic into Plymouth from the east along the A38).
- Press rail operators for more frequent rail services between Ivybridge and Plymouth
- Coordinate network management activities at or near our boundaries to avoid network disruption.

- Joint negotiations with potential private sector providers of new fibre networks for high speed (100 megabits per second) internet access to the Sherford New Community.
- Joint submission of the planned Eastern Corridor Major Scheme Bid to provide HQPT and improved cycle infrastructure from the city centre to the Sherford New Community

Monitoring and review

5.71 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes but also where we need to do things differently in the future. In light of the recent removal of the National Indicator Set the Council is currently considering how best to monitor transport and non-transport outcomes. Plymouth's final Local Transport Plan 2011 - 2026 will include a completed framework.

Key references:

- Bus Station Feasibility and Option Development Study, 2009, Plymouth City Council
- City Centre & University AAP - City Centre Transport Strategy Summary Document, 2010, Plymouth City Council
- Draft Derriford AAP Transport Strategy, 2010, Plymouth City Council
- Eastern Corridor Study 2005, Plymouth City Council
- Eastern Gateway Framework Study 2004, Plymouth City Council
- East of Plymouth Infrastructure Study 2007, Plymouth City Council
- Electrification - Network RUS, 2009, Network Rail
- Great Western Route Utilisation Strategy, 2010, Network Rail
- Park and Ride Strategy Final Report, 2008, Plymouth City Council
- Plymouth Local Economic Strategy 2006 - 2021 and Beyond, Plymouth City Council
- Plymouth Local Development Framework Core Strategy 2006-2021, Plymouth City Council
- Securing the future for generations ahead, Plymouth's Sustainable Community Strategy 2007-2020, Plymouth 2020 Local Strategic Partnership
- The Eddington Transport Study 2006, Sir Rod Eddington
- The Stern Review: The Economics of Climate Change 2006, Nicholas Stern
- Western Corridor Park and Ride Study Final Report, 2009, Plymouth City Council

6 Tackling Climate Change

Summary

What is climate change?

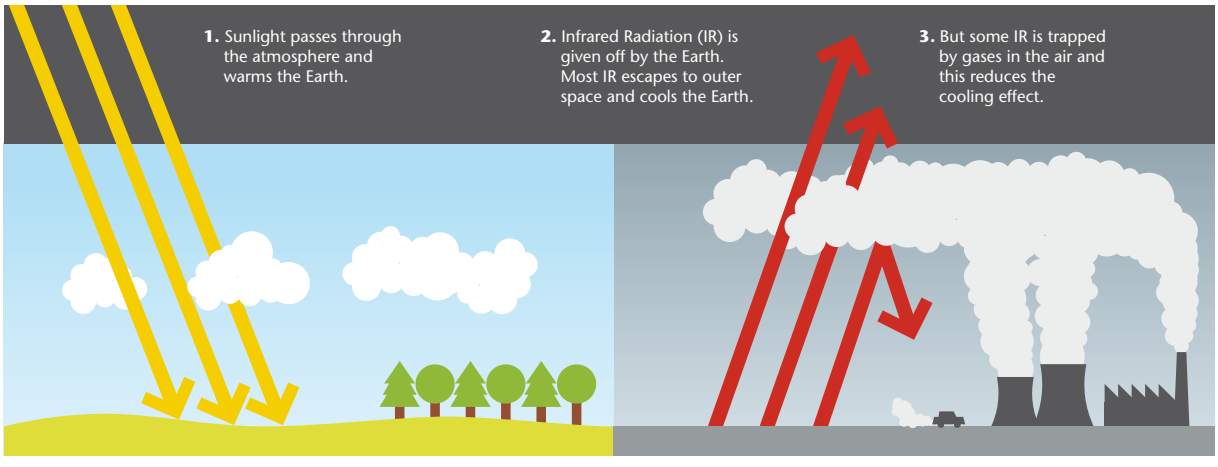
6.1 From the Met Office guide, "Climate change - the facts" (2009):

"The Earth's climate has changed many times in response to natural causes. The term climate change usually refers to man-made changes that have occurred since the early 1900s.

To understand climate change, it's important to recognise the difference between weather and climate. Weather is the temperature, precipitation (rain, hail, sleet and snow) and wind, which change hour by hour and day by day. Climate is the average weather and the nature of its variations that we experience over time.

The greenhouse effect is the natural process of the atmosphere letting in some of the energy we receive from the Sun (ultraviolet and visible light) and stopping it being transmitted back out into space (infrared radiation or heat). This makes the Earth warm enough for life.

Figure 6.1 Greenhouse Effect



For several thousands of years the atmosphere has been delicately balanced, with relatively stable levels of greenhouse gases. Human influence has now upset that balance and, as a result, we are seeing climate change.

Human activities like burning coal, oil and gas have led to an increase in greenhouse gases in the atmosphere causing an enhanced greenhouse effect and extra warming. As a result, over the past century there has been an underlying increase in average temperatures which is continuing. Globally, the ten hottest years on record have all been since 1997.

If emissions continue to grow at present rates, CO_2 concentration in the atmosphere is likely to reach twice pre-industrial levels by around 2050. Unless we limit emissions, global temperature could rise as much as 7 °C above pre-industrial temperature by the end of the century and push many of the world's great ecosystems (such as coral reefs and rainforests) to irreversible decline.

Even if global temperatures rise by only 2 °C it would mean that 20–30% of species could face extinction. We can expect to see serious effects on our environment, food and water supplies, and health.

The main greenhouse gas responsible for recent climate change is carbon dioxide (CO_2). This has been released in huge quantities by our modern way of life. Levels have also increased due to the destruction of rainforests, which play an important role in absorbing CO_2."

6.2 Climate change is happening now. It is unavoidable and is, to a large extent, a direct result of the greenhouse gases (including carbon dioxide (CO_2)) produced by the burning of fossil fuels such as coal, gas and oil.

6.3 We understand that we need to play our part and work with the Government to meet the target to reduce UK greenhouse gas emissions by at least 80% from 1990 levels by 2050. Plymouth's contribution to the national commitment is to reduce the city's CO_2 emissions by 60% by 2020, just nine years into this LTP. This huge challenge will need to include a contribution from the transport networks in Plymouth, it is not made any easier by the plans for the city to grow in population and prosperity.

6.4 Transport is a major source of CO_2 with more than 90% of the total domestic transport emissions in the UK being produced by road transport. Future projections show that we won't even achieve reductions which take us back to the levels of 1990 by using technology that improves the efficiency of our vehicles or by switching to vehicles that are powered by different fuels, such as electricity. So, in order to have a long-term impact, we need to think differently about the role transport plays in moving people and goods around.

6.5 It is possible for us to act today in order to improve the future situation, but past emissions are causing climate change now and we need to be in a position to manage the effects of those changes.

6.6 We have to adapt to the extremes of weather that climate change is bringing. We need to ensure that our transport infrastructure can cope with the coming heatwaves, floods and more severe storms. And we need to build, maintain and operate our transport networks with minimal carbon dioxide emissions.

6.7 The challenge of climate change requires us to reduce our reliance on fossil fuels - but this can be seen as an opportunity. At a time when oil is becoming more difficult to locate and to extract, as illustrated by the 2010 Gulf of Mexico oil leak, and with prices at petrol pumps set only to increase further, it makes sense to look to a lower carbon future.

What's happening? How big is the problem?

6.8 The general consensus is that if we carry on producing the level of carbon dioxide that we are today, then the average global temperatures could rise by up to 6°C by the end of this century. This would make extreme weather events, like floods and drought, more frequent and increase global instability, conflict, public health-related deaths and migration of people to levels beyond any of our recent experience. Heat waves, droughts and floods would affect the UK too. If we want to avoid the most dangerous impacts of climate change, average global temperatures must rise no more than 2°C.

6.9 Transport in Plymouth is responsible for 25% of the city's annual CO_2 emissions, which means there is a huge challenge if we are going to achieve the target that has been set.

The effect of climate change on transport

6.10 The Local Transport Act 2008 requires the Council to consider how it will act on Government policies and guidance on climate change adaptation. We are already experiencing the effects of climate change. In the last century the world's surface air temperature has increased an average of 0.6°C, which across the world is causing;

- Sea levels to rise
- Arctic sea ice to melt
- Glaciers and permafrost to melt
- Sea-surface temperatures to warm
- Heavier rainfall to cause flooding in many regions
- Extreme drought to increase
- Ecosystems to change
- Hurricanes to change in frequency and strength
- More frequent heat waves
- Warmer temperatures to affect human health, and
- Seawater to become more acidic.

6.11 These outcomes leave transport networks, whether they are road, rail, sea or air, extremely vulnerable.

6.12 At a local level, these changes are causing more severe weather events over recent years, such as heavy rainfall causing flooding or colder spells with more snow and ice, which has tested our transport network and resilience to respond to these events. It is likely that these events will become more frequent, and it is therefore vital that we understand the impact on the networks and then look at how we can manage them. The cold weather that affected Plymouth during the winter of 2009/10 had a dramatic impact on the surface of our roads and footways, as well as structures.

6.13 The Transport Planning Society has produced a useful checklist of issues to consider for network vulnerability to climate change, which is a first step to us looking at the local network and being able to keep our city moving when the events occur. (See Figure 6.2 below.)

Figure 6.2 Network Vulnerability Checklist

CHECKLIST OF ISSUES TO CONSIDER FOR NETWORK VULNERABILITY TO CLIMATE CHANGE				
Weather / Climate and its Impacts	**Roads / Pavements**	**Cycling / Walking**	**Buses / Trains / Trams**	**Structures**
Coastal Erosion and Storm Surges	• Realignment of routes • Collapse of cliffs staking down infrastructure • Temporary or permanent inundation of infrastructure • Communities and/or services cut off e.g. homes, hotels, roads, beach access routes, ports and harbours			
Heatwaves – Increase in extreme temperatures	• Surface damage such as melting tarmac • Subsidence and leaves	• Surface damage such as melting tarmac • Overheating of paths and discomfort • Modal shift away from walking and cycling due to discomfort	• Buckling rails, speed restrictions and emergency timetables • Overheating and discomfort / health risks for passengers (especially underground) • Modal shift to cars due to discomfort	• Surface and structural damage
Increase in Average Daily Temperatures	• Longer growing seasons and increased verge / embankment maintenance • Drought and lower water tables causing ground shrinkage, unstable ground, subsidence, landslides etc			
Heavy Rainfall and Flooding	• Network failures due to flooding including flash flooding • Landslides • Damage to pavements	• Pedestrian subways more likely to flood and take longer to clear	• Higher risk for underground networks • Flooding of train / tram power sources	• Embankments unsafe or collapse • Landslides bringing down structures • Bridge damaged or washed away
High Winds and Storms	• Unsafe buildings and consequent transport diversions • Fallen trees and associated debris – blocking routes / safety risk	• Modal shift to cars and public transport	• Damage to overhead power lines	• Vulnerability of / danger from movement of lightweight structures (traffic signs, lighting, street furniture) • Vulnerability of exposed structures / bridges
Severe Weather generally	• Disruption to normal traffic flows with people unable to travel, confused about what networks are running, or marooned on route • Risks to passenger safety • Impact on outdoor workforce and public transport staff • Failures of "just in time" supply chains, most importantly food supplies			
Indirect Impacts	• Increase in tourist visitors from overseas and UK visitors staying in the UK • Changes in visitor travel patterns – especially to coastal locations • Population movements away from urban heat islands and locations that suffer frequent floods • Changes in economic sectors / employment patterns • Inward migration countries that are suffering more severe climate change			

6.14 We know that we have areas within Plymouth that will be at an increased risk of flooding as climate change advances. Flooding may be tidal or from surface water run-off.

6.15 Work on the Strategic Flood Risk Assessment (SFRA) has identified:

- Key threats to strategic road & rail transport assets at Embankment Road, and
- Capacity constraints of the surface water drainage network to deal with rising sea levels, causing tide locking at key locations such as Sutton Road, Union Street and Gdynia Way.

6.16 The SFRA also identified that the existing highway drainage system will not be able to cope in future years with the forecast increase in rainfall intensity and quantity.

Figure 6.3 Rail Line at Dawlish

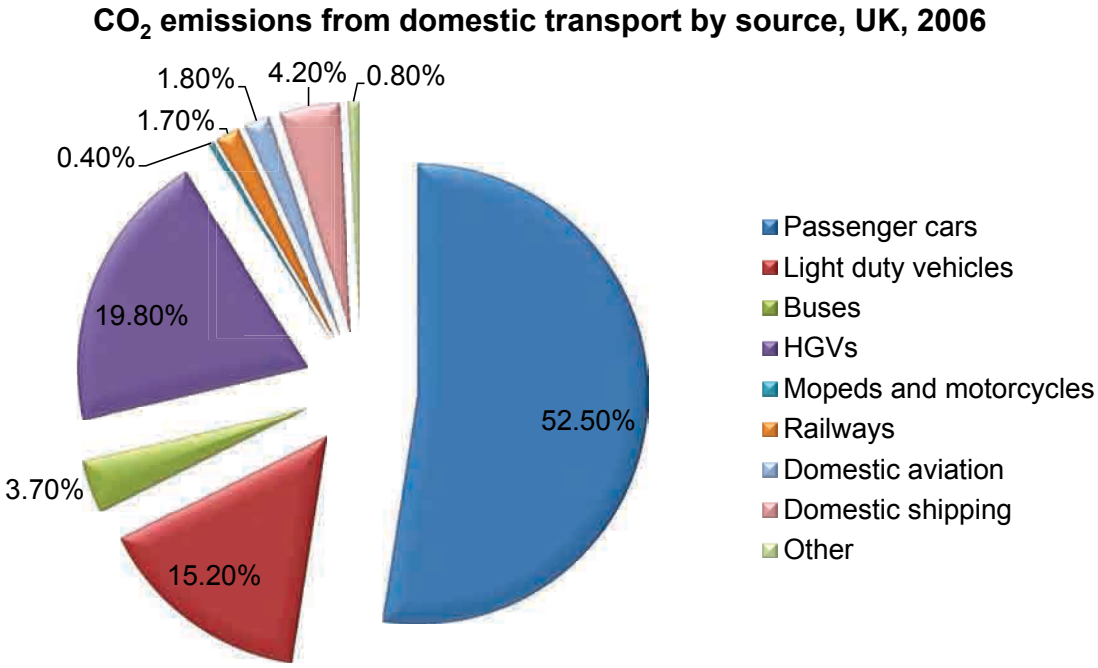
6.17 A flood risk map for Plymouth has been presented in Chapter 2 (The Plymouth Context).

6.18 Also of importance to the city are our connections to the rest of the country. The effect of the weather is well known on the Plymouth to Exeter rail route where disruption is regularly caused at Dawlish. This is the only rail connection to the rest of the country for communities and businesses west of Exeter, which includes Torbay, Newton Abbot, Plymouth and the whole of Cornwall. As we have demonstrated in Chapter 5 (Supporting Economic Growth), the rail network is vital to the prosperity of the region and the disruption caused by extreme weather has already had a detrimental impact.

The effect of transport on climate change

6.19 As stated above, transport is a major contributor to carbon dioxide emissions. Figure 6.2 below illustrates the sources of the UK's domestic CO_2 emissions from transport:

Figure 6.4 CO2 emissions by source

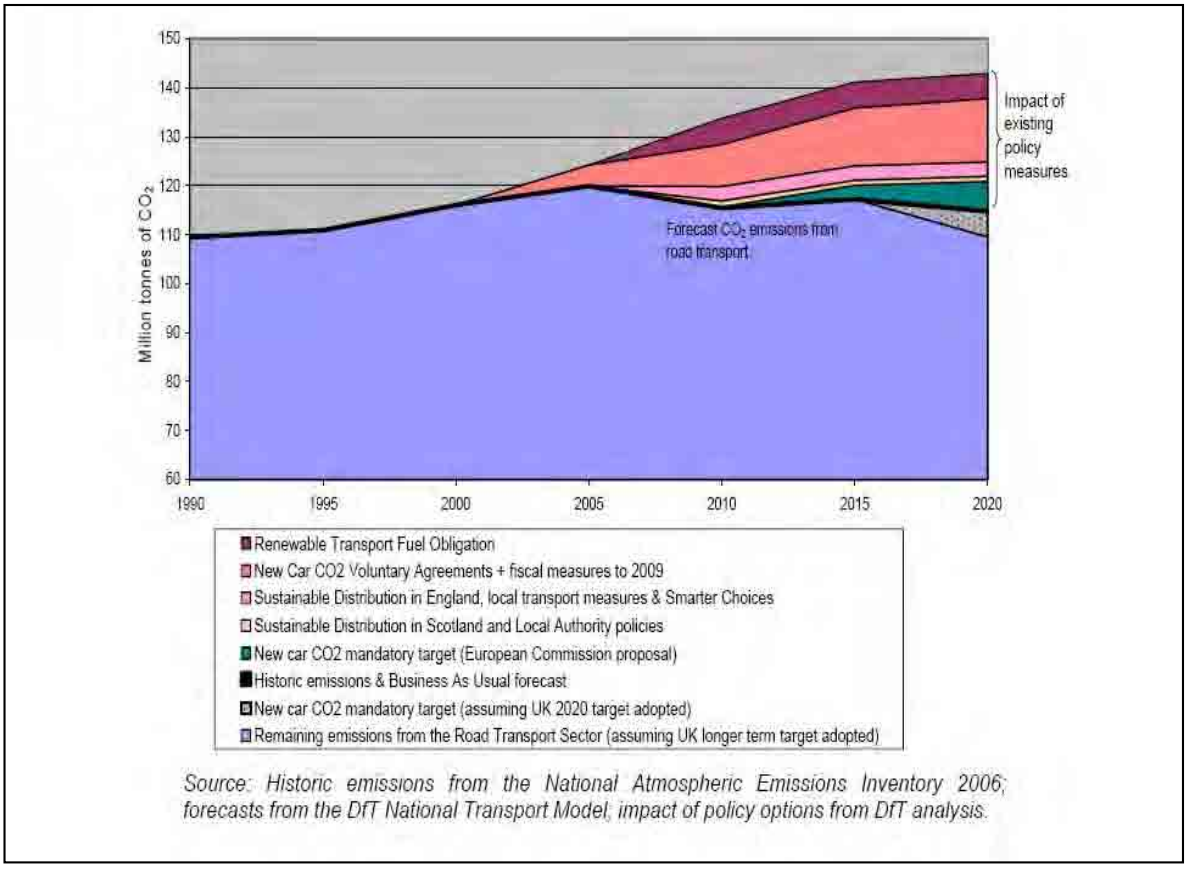


6.20 This data demonstrates that over 90 percent of the emissions from domestic transport come from road transport, and more than half of it comes from passenger cars.

6.21 Whilst we know that there is a great drive towards improving the fuel efficiency of cars, we are still not using them as efficiently as we can. When we consider the average occupancy of different vehicle types, cars are still half as fuel efficient as a bus and one quarter as efficient as a train. (Defra (2010) Greenhouse gas conversion factors)

We know from consultation that there is a general call for more investment into sustainable travel modes to make it easier for those who could be persuaded to use the lower carbon modes. But we also know that there are many who have stated that the majority of people will never choose a sustainable travel mode over the private car.

Figure 6.5 CO2 emissions and impact of policy options (From A Low Carbon Strategy for Transport - Keith Buchan)



Source: Historic emissions from the National Atmospheric Emissions Inventory 2006; forecasts from the DfT National Transport Model; impact of policy options from DfT analysis.

Peak oil

6.22 Oil extraction has become increasingly difficult. The explosion of the Deepwater Horizon drilling rig in the Gulf of Mexico in April 2010 is a clear demonstration of the challenges posed by new oil fields. The rig was drilling in about 5,000ft (1,525m) of water, pushing the boundaries of deep-water drilling technology. The resulting oil spill has had profound effects on the communities that live around and depend upon the sea, causing the worst environmental disaster in the history of the USA.

6.23 Hand in hand with lower carbon transport is the issue of peak oil. We have known for some time that oil, as a finite resource, will not be as readily available in the future. It is also now becoming increasingly apparent that we have passed the point of 'peak oil' - we have extracted much of the easy to reach oil and from now on oil will be harder to find and more expensive to extract.

6.24 So climate change aside, with fuel being in shorter supply in the future and becoming ever more expensive, we have to look at the way we travel and ask ourselves if we can afford to remain reliant on oil-intensive modes of transport.

Approach

6.25 The approach that we need to take in managing climate change is two-fold. Firstly, we need to adapt the transport networks, so that they keep moving during the extreme weather events that are set to become more frequent and more severe (adaptation). Secondly, we need to do everything we can to slow climate change by significantly reducing the carbon outputs of transport (mitigation).

How do we adapt to be better prepared for effects of climate change?

6.26 The adaptation agenda is primarily supported by the third transport objective;

Objective Three

High quality transport standards for a vibrant city

- Make best use of our existing transport networks; manage congestion and improve journey reliability.
- Maintain and where necessary improve the condition and increase the flexibility of our transport network such that it is more adaptable to climate change, severe weather events and incidents.
- Improve the quality of public car parks such that they meet the higher standards set by private parking companies.
- Set clear priorities for routes to and from main areas / facilities to balance competing demands for highway space across the network.

6.27 Plymouth 2020, the Local Strategic Partnership, has acknowledged this. It recognises that we have a collective responsibility to current and future generations to acknowledge and minimise the impacts of climate change that are caused by, and affect, the communities of Plymouth.

From Plymouth 2020 Local Strategic Partnership - Acting on Climate Change - Plymouth's Climate Change Action Plan 2009-2011):

> "Time is of the essence in this respect. We know from scientific evidence that we are now counting the climate change costs of the last 50 years and that slowing, reducing or eliminating the impacts will take a further 50 years."
>
> "We cannot afford to wait. We need to take action now and to build on what we learn"

6.28 How we act now will affect the severity of what we will have to contend with in the future. We have to ensure that transport systems are resilient to the unavoidable climate change. What the exact extent of climate change will be we do not know – we can work towards a slowing down of change globally, but climate change is happening now and will continue as the effects of past emissions take their toll.

6.29 We will assess our transport networks and systems to identify the weak points - those most at risk from flooding, extremes of temperature and high winds, for example. We will then prioritise adaptation work on those areas of severe risk and strategic importance; it is prohibitively expensive and unrealistic to expect the whole of the network to be made totally resilient to all extremes of weather. We will work with the emergency planning team to put plans in place in the case of disruption by weather, which might include contingency planning such as diversionary routes and dissemination of information and advice We will need to be sure that forecasts of severe weather are received and understood where they are needed to enable this.

6.30 This is not just a role of the Council. When we approve the building of new developments, for example, we need to ensure the drainage systems are suitable for the expected changes to weather in the next 30 to 50 years.

6.31 From UK Climate Impacts Programme (UKCIP): Climate Change and Local Communities – How Prepared are You? (2003):

Local Authority Service	**Potential Impacts of Climate Change**	**Adaptation Responses**
Transport Planning	Increased risk of flood disruption due to wetter winters and severe weather	Plan to flood-proof or re-site infrastructure and plan routes to minimise disruption
	Increased temperature causing service disruption and heat stress to travelling public	Avoid exposed places and provide shade or cooled waiting areas

Highway Maintenance	Increased rainfall intensity affecting embankments and bridge piers and washing more debris into gullies	Increase monitoring and maintenance of embankments and bridge piers, and increase gully emptying activity
	Drier summers increase risk of road subsidence and higher temperatures increase risk of surface damage	Re-examine road structural design. Implement remedial work for existing roads.
	Higher risk to roads located in floodplain or coastal areas	Aim to flood-proof or re-site strategically important roads
	Increase in rate of growth and length of growing season of road verges	Use slower growing plants in landscape schemes. Revise mowing / weed control schedule
	Warmer winters with reduced risk of frost	Reduced need for road salting

How do we do help to address the causes of climate change?

6.32 The mitigation agenda is primarily supported by the fifth transport objective:

Objective Five

Maximise the transport contribution to Plymouth's carbon reduction target (60 percent reduction by 2020)

- Increase awareness of ways to reduce personal carbon footprint by walking, cycling and taking the bus.
- Reduce energy consumption from non-renewable sources used by our infrastructure and operations.
- When building or renewing infrastructure or equipment consider the lifecycle carbon footprint; reuse and recycle where possible.
- Encourage use of more efficient and alternative fuelled vehicles by providing infrastructure and information.

6.33 It is also reinforced by the other transport objectives in the following ways:

- Link communities together in supporting lower carbon modes
- Reduce the negative impacts of transport in ensuring footways and cycleways are well designed and improve physical access.
- High quality transport standards for vibrant city in increasing the flexibility of our transport network such that it is more adaptable to climate change and severe weather events and incidents.
- Make walking, cycling and public transport the desirable choice by encouraging these no or low carbon modes.
- Use transport to drive the local economy in encouraging sustainable tourism and improving the local gateways to bus and rail networks.

6.34 The DfT carries out an annual survey of public attitudes towards the policies to reduce transport emissions. The latest survey, in 2009, found that:

- Just 37 percent of respondents thought people should be allowed to use their cars as much as they like irrespective of environmental impacts, and
- More than half (58 percent) thought people should try to limit their car use for the sake of the environment.

6.35 It is clear that we need to think more about how and why we travel.

6.36 There is no easy way to do this because of the complexity of travel; everyone makes different journeys of different lengths for different purposes at different times of the day.

6.37 Although the majority of car journeys in the UK are under five miles in length, longer journeys are responsible for more emissions. Hence, although only seven percent of trips are more than 25 miles in length, they cause 38 percent of all CO_2 emissions.

6.38 For shorter trips within Plymouth, it is more effective to contemplate measures which are aimed at reducing the emissions of each trip, rather than reducing the number of trips. These include:

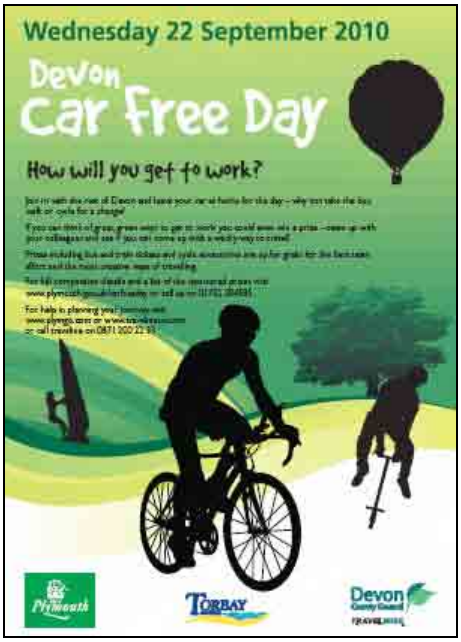
- encouraging more fuel-efficient driving
- increasing up-take of more efficient vehicles
- replacing car trips with low carbon alternatives such as walking, cycling or public transport.

6.39 Together these modes could provide a comprehensive alternative that is both practical and achievable for the trips within the urban/suburban area.

6.40 In order to achieve the bigger gains to be made from targeting longer distance trips we will:

- improve interchanges between rail and other modes
- provide incentives for travellers to consider using the train

Devon Car Free Day Poster



6.41 Commuting trips are the largest single source of transport emissions in the UK, accounting for 24 percent of CO_2. Whilst this means that 76 percent of emissions are from trips for other purposes, thecommuting trips are generally peak hour regular trips that are more likely to be single occupancy. These trips are also often to a location where there will be a large number of people making similar trips, such as the city centre, Derriford or Langage. This makes it easier to provide alternatives and encourage users to change the way they travel.

6.42 The main type of vehicle responsible for growth in emissions is the light goods vehicle. Although they account for only 15 percent of emissions nationally, the CO_2 produced by vans is increasing due to an increase in mileage and a relative lack of control over the vehicle standards. These vehicles are vitally important for many

businesses. It is therefore proposed that, to reduce van emissions, we need to work very closely with businesses to help them to make changes that also enable them to achieve cost savings but don't restrict their ability to grow.

6.43 Another large source category is heavy goods vehicles (HGVs), which is the second largest source of the UK's domestic transport's carbon emissions (19.8 percent). There will be greater opportunities in the future to encourage better use of rail and sea freight, making the most of lower carbon options, such as short sea shipping. Current recommendations from the Port of Plymouth Evidence Base Study (Atkins 2010) include the preparation of a port of Plymouth masterplan for growth and development, and safeguarding the Cattewater branch line track bed.

Analysis of consultation comments provided some ideas of how to reduce carbon emissions - the main suggestion being to increase the use of electric vehicles.

6.44 However, in transport, whilst there will be efficiency gains due to improved vehicle technology or driver behaviour, the required scale of reductions is likely to involve significant changes in travel behaviour.

6.45 The effects of carbon emissions are global and long-term, hence do not in themselves present a tangible incentive to change travel behaviour. Such incentives must therefore be created or demonstrated, either by linking emissions directly to some form of financial advantage (for example saving money on fuel by driving more efficiently) or by encouraging behaviour which changes mode of travel, trip frequency or length.

6.46 Plymouth needs a transport system based on the lower carbon options of walking, cycling and public transport which enables people to make a choice about how they travel.

"People will never leave their cars at home and reduce CO_2 emissions if you don't provide a reliable bus service."

6.47 In short, in order to reduce the impact of climate change in the future we need to change the way we travel such that we:

- Encourage walking for the shorter local trips in neighbourhoods. For longer distances cycling may be more practicable - this will be facilitated by delivery of the Strategic Cycle Network
- Ensure public transport is a realistic and desirable option for almost all journeys
- Maximise use of the investment made in public transport infrastructure
- Look to the rail network as a lower carbon option to road transport - for links to the rest of the country and also for its potential to link the city locally through a new station at Tavistock and more use of the station at Ivybridge

- Encourage those that do drive, be they car drivers, bus drivers or HGV drivers, to drive carefully to increase fuel efficiency – thereby benefiting both the driver/operator and the environment
- Provide information to drivers to allow them to make informed decisions at the right time. Providing up-to-date information on the routes, car parking and the options to change to another mode, such as to bus at a park and ride site, could save on unnecessary private vehicle miles and carbon emissions
- Make the most of new technologies to increase fuel efficiency and reduce greenhouse gas emissions, and to look at alternative fuels
- Look at the transport infrastructure of the city – to minimise where possible the carbon cost of building, maintaining or operating it. (Is the power we use from a renewable source? Does the infrastructure require power – is that set of traffic lights really necessary?)
- Increased use of communications technology will enable remote working and teleconferencing to become more commonplace so we will facilitate the development of these communications networks
- Ensure land use planning continues to locate and design new developments with sustainable travel in mind, and
- Enable and encourage the low carbon alternatives with travel planning and information

6.48 We need to significantly reduce the emissions from transport whilst growing the city, and we need to do this in a time of economic recovery and constrained budgets.

Monitoring and review

6.49 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes, but highlights where we need to do things differently in the future. In light of the recent removal of the National Indicator Set the Council is currently considering how best to monitor transport and non-transport outcomes. Plymouth's Local Transport Plan 2011 - 2026 will include a completed monitoring framework.

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- Public attitudes towards climate change and the impact of transport (January 2010 report), Department for Transport

7 A Healthy Community

Summary

7.1 *"Currently road transport contributes heavily to the climate change crisis, and low levels of physical activity have created a public health crisis. The two crises share a solution: a fundamental change to transport, especially urban transport, is needed. The United Kingdom has one of the lowest rates of cycling in Europe. For a far larger proportion of journeys...cycling and walking need to be more feasible and appealing options than driving. Most streets in most cities in England are currently designed around cars. This situation cannot continue."* Chief Medical Officer

7.2 Transport can have both positive and negative impacts on the health of Plymouth's residents. An easy way to improve your health is to take more exercise, and travelling by foot or bicycle can significantly contribute to a more active lifestyle. Transport also enables greater and better access to doctors, hospitals, leisure and education opportunities, contributing to people being able to manage their health and well-being positively. Conversely, noise and air pollution from road and air traffic can have very significant impacts on the health of those having to live or work near main roads or the airport.

7.3 In this chapter we will consider ways in which Plymouth's third local transport plan will be used to support improvements to the health of our city. As with many of the subjects in the LTP, it is impossible for the council to work on its own to achieve everything, and it will therefore take joint working, with communities and partner organisations, as well as motivation.

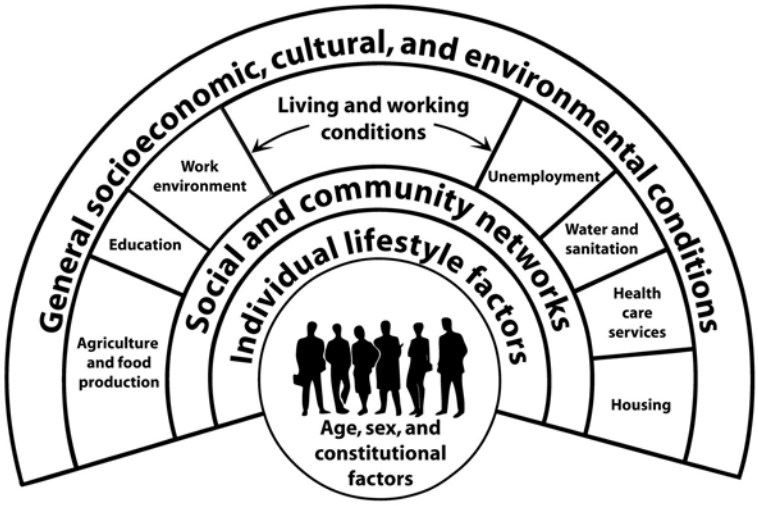
7.4 Plymouth is a city divided by health. The difference in life expectancy between some neighbourhoods of the city is as much 13 years. There are many reasons for this difference - the health of an individual is made up of many factors, such as lifestyle, living conditions, the community in which they live, and more broad cultural or environmental conditions as are shown in the figure 7.1. As the reasons for these differences are complex, so are the actions we can take to help reduce these inequalities.

7.5 Just 18.6% of the adult population of Plymouth exercises for 30 minutes, three times a week. This makes the city one of the lowest exercising local authority areas in the south west (source: Healthy Plymouth). The Chief Medical Officer recommends that we increase the amount of exercise we take in order to have a healthy lifestyle. Taking more exercise doesn't have to involve going to the gym or buying expensive trainers - an easy way to increase the amount of exercise we take is to walk or cycle more often.

7.6 By walking or cycling instead of driving you do not just reduce air pollution in the city's environment. Travelling in your car you are exposed to much higher levels of pollution two to three times higher than those outside.

7.7 Many reasons are given for not walking and cycling, but these barriers can be reduced, or removed, by some simple improvements to our transport infrastructure and raising motivation, and this is explored later in this chapter.

Figure 7.1 Factors that affect an individuals' health



7.8 Within this LTP, pollution relating to local air quality has been separated from pollution relating to climate change. Local air quality has a direct and immediate impact on quality of life. In the short-term, exposure to certain air pollutants can affect the respiratory system and lungs, and causes irritation of the eyes. The inflammation of the respiratory tract causes coughing, mucus secretion, aggravation of asthma and chronic bronchitis, and makes people more prone to infections. Air pollution is also likely to affect health over the longer term. Understanding of the long-term health effects of exposure to air pollution is currently rather limited, but experts suggest that cutting long-term exposure to the fine particles found in vehicle exhaust emissions by half, could increase life expectancy, on average, by between one and eleven months.

7.9 Pollution caused by road transport makes up the vast majority of air quality problems in urban areas. Whilst the city only suffers from congestion during the rush hour, excessive pollution for even a short period can have a detrimental impact on health. The city already has two Air Quality Management Areas (AQMAs) declared to DEFRA for Mutley Plain and Exeter Street/Embankment Road. The Council is responsible for producing and implementing action plans to manage these areas and reducing the pollution where possible.

7.10 We are now in the process of having to declare three additional AQMAs within the City, at Royal Parade, Stoke Village and Tavistock Road, although these may be wrapped up within one new, larger AQMA which will also cover the existing AQMAs. Work to manage these areas will be defined within an action plan and partially delivered through the Local Transport Plan.

7.11 Noise is increasingly recognised as a nuisance and the World Health Organisation recognises noise in our communities, including road noise, as a serious public health problem. The noise will cause annoyance, and in some instances stress, leading to disrupted sleep patterns, possible heart problems and, sometimes, mental health problems. Noise can particularly affect children where it interferes with communication and hence learning. At the current time, there is not a good understanding of the noise levels within our city and of where

we need to act to reduce noise from transport. Work, to be carried out by DEFRA in the next two years, will enable us to better understand any problems and allow us to develop schemes which will help to reduce the impact.

7.12 Transport interventions can significantly improve health by increasing active travel, and by reducing noise and air pollution.

7.13 Furthermore, access to health care and other services and opportunities improve health. This issue is dealt with in the Equality of Opportunity chapter and not duplicated here.

Why is transport an important factor affecting the health of our communities?

7.14 In Plymouth, overall levels of health are improving, but the gap in life expectancy between the most affluent and the most deprived neighbourhoods is still widening. There is considerable variation in life expectancy across the city and the pattern tends to follow the pattern of material deprivation. For example, residents of Glenholt can expect to live the longest in Plymouth (86.1 years), whilst those in Devonport can expect to live the least (73.1 years), a 13 year difference in 2005-2007.

Cumberland Gardens Regeneration Scheme

7.15 A number of factors are contributing to this widening gap, with most deaths being caused by heart disease, strokes and cancer. Obesity and mental health problems are increasing with significant numbers of people describing themselves as long-term unwell and unable to work.

7.16 The scale and cost of major public health problems can be seen in Table 7.1 below. The interrelated problems of obesity and inactivity are a significant public health issue. Furthermore, these two problems are growing year on year.

Table 7.1 Costs of health problems

	Alcohol misuse	Smoking	Obesity	Inactivity
Percentage of adult population affected in England	6 - 9%	20%	24%	61 - 71%
Estimated cost to the Plymouth economy per year	£89 million	£23.2 million	£70.5 million	£37 million
Estimated cost to the PCT per year	£12 million	£12 million	£18.8 million	£4.4 - 8 million

7.17 Consultation undertaken by the Healthy Theme Group of the Plymouth 2020 partnership indicates a number of recurring issues which have been set as key priorities for action between 2009 and 2020. These priority areas (in order) are:

1. To explicitly address inequalities in all plans through target setting, re-focusing investment and rigorous use of equality impact assessments

2. To shift the focus of investment to address prevention and health promotion, particularly in specified areas
3. Mental health promotion
4. To directly address identified issues of access and take-up of specified services
5. To further develop services to promote independence.

7.18 Our lifestyles have changed dramatically over the last 20-30 years; our work is more frequently office based than manual labour, we spend more of our leisure time watching television or playing computer games, and we shop for food less frequently because we have fridges and freezers. Many walking and cycling journeys have been replaced by car travel. All of this means that we are generally less active in our daily lives than we used to be. Our city now has fewer local shops; most of our shopping is done at supermarkets which are generally in out of town locations, as are our DIY, furniture and electrical stores.

7.19 This change in our lifestyles has had a damaging effect on our health, leading to concerns from the medical community that a continuation of this downward spiral will have severe impacts on our ability have a good quality of life. The Chief Medical Officer recommends the following minimum levels of activity:

Children and young people	60 minutes of at least moderate intensity physical activity each day
Adults	30 minutes a day of at least moderate intensity physical activity on five or more days of the week for general health whilst older people should also take special care to keep moving and retain their mobility through daily activity

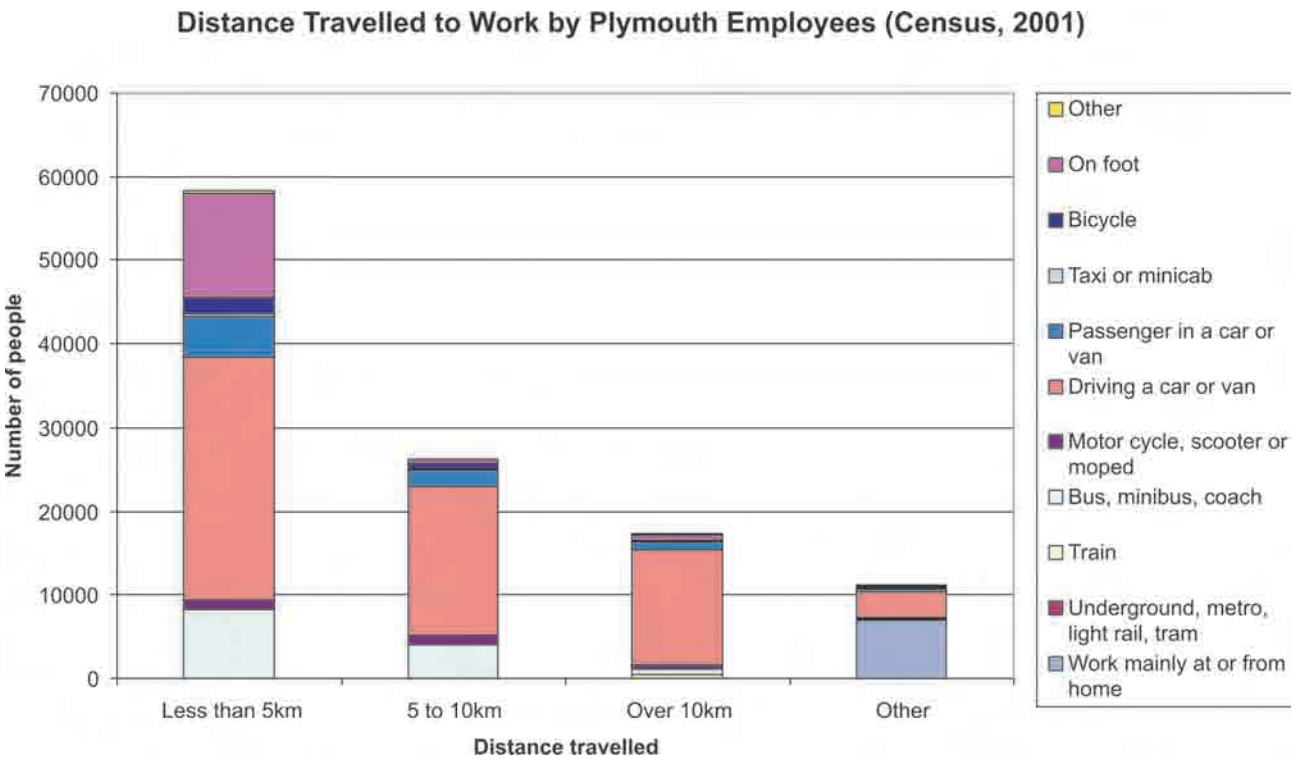
7.20 The change in our lifestyles also means we are trying to fit much more into each day and so, for some people, it is always going to be very difficult to fit in an exercise session of 30 minutes. However, the recommended levels of activity do not have to be achieved in one session; it could be through several shorter bouts of activity of 10 minutes or more. Walking or cycling journeys or even just climbing stairs, are an excellent means of fitting exercise into busy routines.

"I have managed to overcome mild asthma and lose two stone by walking to and from work. I feel much better, and my family, friends and colleagues have all remarked on how well I look. I feel it is good for me, for the environment and for my purse!"

7.21 Most of the journeys we make are of a relatively short distance, but our perception of distance has been distorted by travelling by car because, firstly, the route we take by car is often not the most direct route and, secondly, we believe that in a car or on a bus we are travelling at a much greater speed for most of the time when this is not necessarily the case, particularly when travelling in the city.

7.22 When we look at the distances that Plymouth's residents travel to work we can see that most trips are less than 3 miles, but also most trips are by car. It is never going to be possible to make every trip using a more active mode; our lifestyles require us to go to multiple destinations, carry heavy shopping or take tools / work equipment with us. However, there will be opportunities for many people to swap one or more trips every week to walking or cycling.

Figure 7.2 Distance travelled to work by Plymouth employees



7.23 In Plymouth it has been calculated that there are at least 75 million walking trips every year. This level of walking represents 31% of all trips and is higher than the national average. At least 83% of Plymouth residents walk at least once per week, which represents a massive contribution to public health.

7.24 Levels of cycling in the city have been calculated at approximately 4 million cycling trips in Plymouth per annum, which is roughly in line with the national average. Again this represents a significant public health and economic benefit of around £3.5 million per annum.

"I enjoy having the flexibility of being able to walk or cycle to work ... mainly for fitness but also I think it helps me unwind after a day in the office"

7.25 The Department for Transport's Active Travel Strategy sets out an ambitious approach to increasing the amount of travel by foot and cycle.

Table 7.2 DfT Active Travel Strategy approach to greater travel by foot and cycle

Cycling	Walking
Introduce 20 mph zones and limits into more residential streets	Introduce 20 mph zones and limits into more residential streets
Access to Bikeability training for every child who wants it	Use the Rights of Way Improvement Plans to improve access for cyclists and pedestrians.
Every major public sector employer signed up to the Cycle to Work Guarantee	Make the built environment more pedestrian friendly
Cycle parking at or within easy reach of every public building	Encouraging people of all ages to walk
Sufficient secure bike parking at every rail station	

7.26 Two major programmes that have been carried out in several towns across the country are the Sustainable Travel Towns Smarter Choices Programme and Cycle Demonstration Towns initiatives. The focus of the Sustainable Travel Towns programme is on marketing and information provision to encourage increased walking, cycling and public transport use. The programme demonstrates, emphatically, that such measures are effective in increasing sustainable and active travel and in reducing car use. In particular, 6% more residents reported that they walked or cycled "almost daily".

7.27 As the title suggests, the Cycle Demonstration Towns focused on increasing levels of cycling in towns which, like Plymouth, lacked a cycling culture. Measures included cycle training, lower speed limits, improved infrastructure and awareness raising campaigns. On average, the towns achieved a 26% increase in cycling over three years, which has been associated with a 10% reduction in those classed as physically inactive. At a total cost of just £100 per newly active resident, this represents an excellent public health investment.

7.28 The experiences of the Cycle Demonstration Towns and Sustainable Travel Towns demonstrate the effectiveness and value for money of a range of measures to increase walking and cycling and to reduce car use in towns that are comparable to Plymouth. In particular, it is clear that awareness raising and marketing can play a significant role.

"I don't like driving, I would love not to do it, but there is no bus shelter near me and I get soaking, as I do walking from where I get off the bus to walk to the workplace. I often walk or cycle but I arrive at work looking rather dishevelled - it is a long way - and I have no shower or locked facilities at work to store towels, spare clothes etc".

7.29 Consultation shows that there are many barriers to cycling, whether actual or perceived. However, there is a lot of support for promoting and investing in cycling infrastructure, to remove some of these barriers and thereby increase the number of people who cycle in Plymouth. Conversely, recent consultations have also found people calling for a halt in spending on cycling improvements.

7.30 Plymouth has a number of plans which support the increased uptake of walking and cycling.

7.31 The Green Infrastructure (GI) Delivery Plan has been produced by a partnership consisting of Natural England, Plymouth City Council, South Hams District Council, the Forestry Commission and the Woodland Trust and covers an area which stretches beyond the edge of the city. Green infrastructure is a planned network of green spaces and inter-connecting links designed, developed and managed to meet the environmental, social and economic needs of the surrounding area. Our green spaces are an important resource for Plymouth residents and are an opportunity for everyone to take part in physical activity in a pleasant environment. Some of these green spaces also perform an important transport function, with the GI Delivery Plan set to deliver key elements of the Strategic cycle Network.

7.32 Public rights of way represent both a significant leisure and transport resource with 54% of use a means of getting somewhere.(Rights of Way Improvement Plan, Plymouth City Council, 2010). With only half of the population and visitors actually using public rights of way, it is clear that there are significant opportunities for increased use.

7.33 This issue is addressed in The Public Rights of Way Improvement Plan (PROWIP) which identifies how we can protect and develop this vital network.

7.34 79% of all users on the public rights of way network primarily walk, whilst 16% cycle. The plan focuses on improving awareness amongst the half of residents and visitors that do not use the PROW network in Plymouth; targeted infrastructure improvements to contribute to the city's priorities; and putting the network on a more secure legal footing.

7.35 Generally, people would like to see more consideration given to pedestrians and walking in the city, whether this is in the city centre or within neighbourhoods. Recent consultations have requested more public rights of way around the waterfront. Issues of access, particularly for people with a disability, have also been raised.

7.36 Increasing healthy and sustainable journeys to school must play a significant part in our approach. This is detailed in the Sustainable Modes of Travel Strategy which encompasses the radical changes that have been made to the way in which education is delivered to 14 to 19 year olds in the city. Significant challenges are presented by the freedom which students have to choose subjects at a range of institutions across the city. This is in addition to the travel across the city that will continue to occur as a result of school specialisms and parental choice. It is vital that we work with schools to meet this challenge to minimise the financial and environmental costs.

Air quality

7.37 Poor air quality accounts for approximately 2 million premature deaths worldwide per year (World Health Organisation). In the UK air pollution causes annual health costs of around £15bn and reduces life expectancy by an average of 6 months. Table 7.3 below shows the key pollutants, their sources and effects. We have only provided a summary of the information, much more is available at www.airquality.co.uk.

Table 7.3 Pollutants of immediate concern in Plymouth - adapted from The Air Quality Strategy for England, Scotland, Wales and Northern Ireland volume 1, DEFRA, 2007

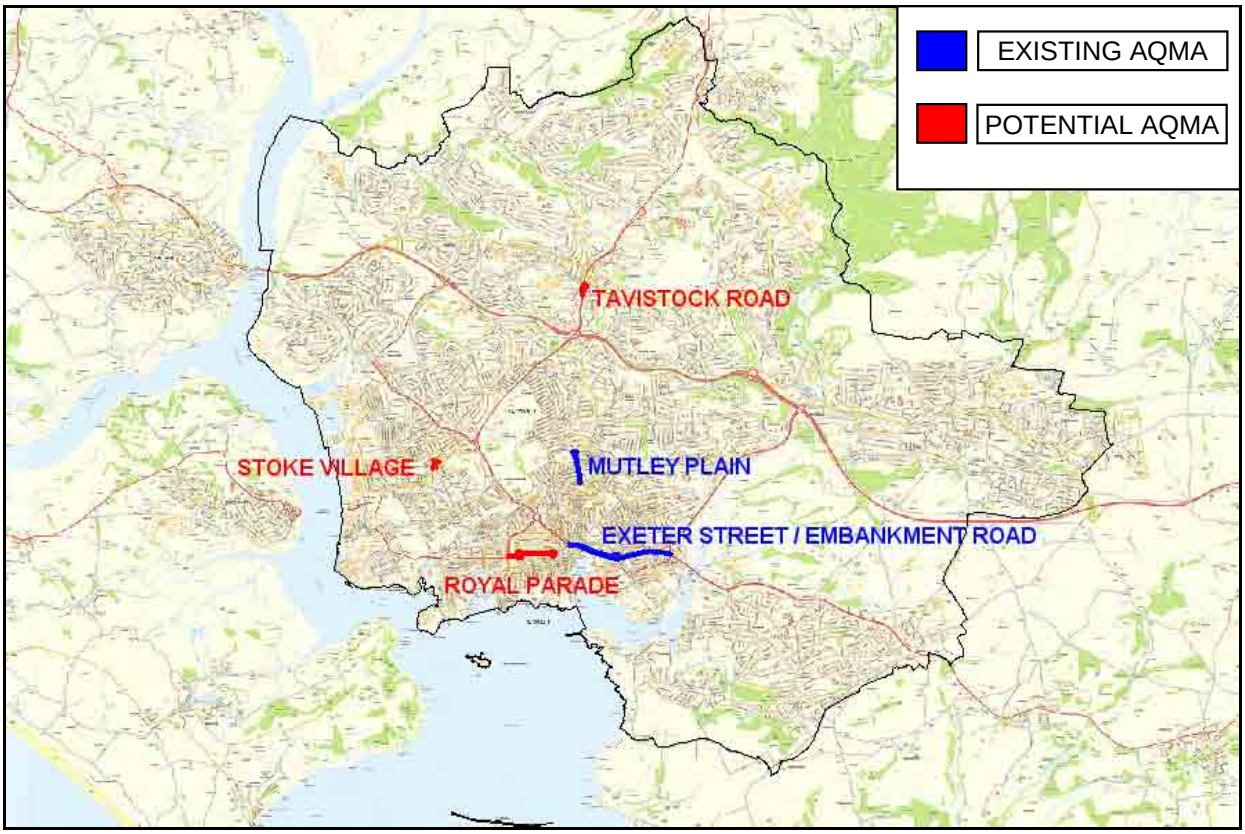
Pollutant	Sources	Effects
Particulate Matter (PM - PM_{10} and $PM_{2.5}$)	Road transport gives rise to primary particles from engine emissions, tyre and brake wear and other non-exhaust emissions.	Both short-term and long-term exposure to ambient levels of PM are associated with respiratory and cardiovascular illness and mortality as well as other ill-health effects.
Oxides of nitrogen (NO_x)	Road transport is the main source, followed by the electricity supply industry and other industrial and commercial sectors.	At high levels NO_2 causes inflammation of the airways. Long term exposure may affect lung function and respiratory symptoms. High levels of NO_x can have an adverse effect on vegetation.

7.38 The effects on health and the environment from these pollutants need to be dealt with, either by the health service or by cleaning up the environment, both of which have a cost. It would obviously be better to not let the problems reach a scale whereby action is needed. A number of factors influence the levels of pollution within our city but there is legislation which sets maximum levels of exposure to pollutants at which point a local authority has to intervene. The exposure levels or exceedances vary according to the pollutant. Regular monitoring takes place across the city to identify potential problems, from which more detailed assessment is carried out. When problems are identified they are declared to DEFRA as an Air Quality Management Area (AQMA) and an Air Quality Action Plan (AQAP) is drawn up.

7.39 Air quality in Plymouth is generally good, however a number of factors combine to cause exceedances of some pollutants. We have declared AQMAs in two locations within Plymouth at the current time. These are Mutley Plain and Exeter Street / Embankment Road. Additionally the most recent monitoring indicates the need to declare new AQMAs at Royal Parade, Tavistock Road and Stoke Village. We are currently considering the best approach

to tackling these problems but it is likely that the AQMAs within the city centre will be combined into one larger AQMA which will enable better management. All of the AQMAs have been declared on the basis of Nitrogen dioxide (NO_2) for which the main source is road traffic.

Figure 7.2 Existing and Potential AQMAs



7.40 We know that pollution and noise is fast becoming a key concern within existing communities, and is particularly referenced when plans of new development come forward. It is cited as an existing problem that will only get worse from increased traffic once the new developments are introduced.

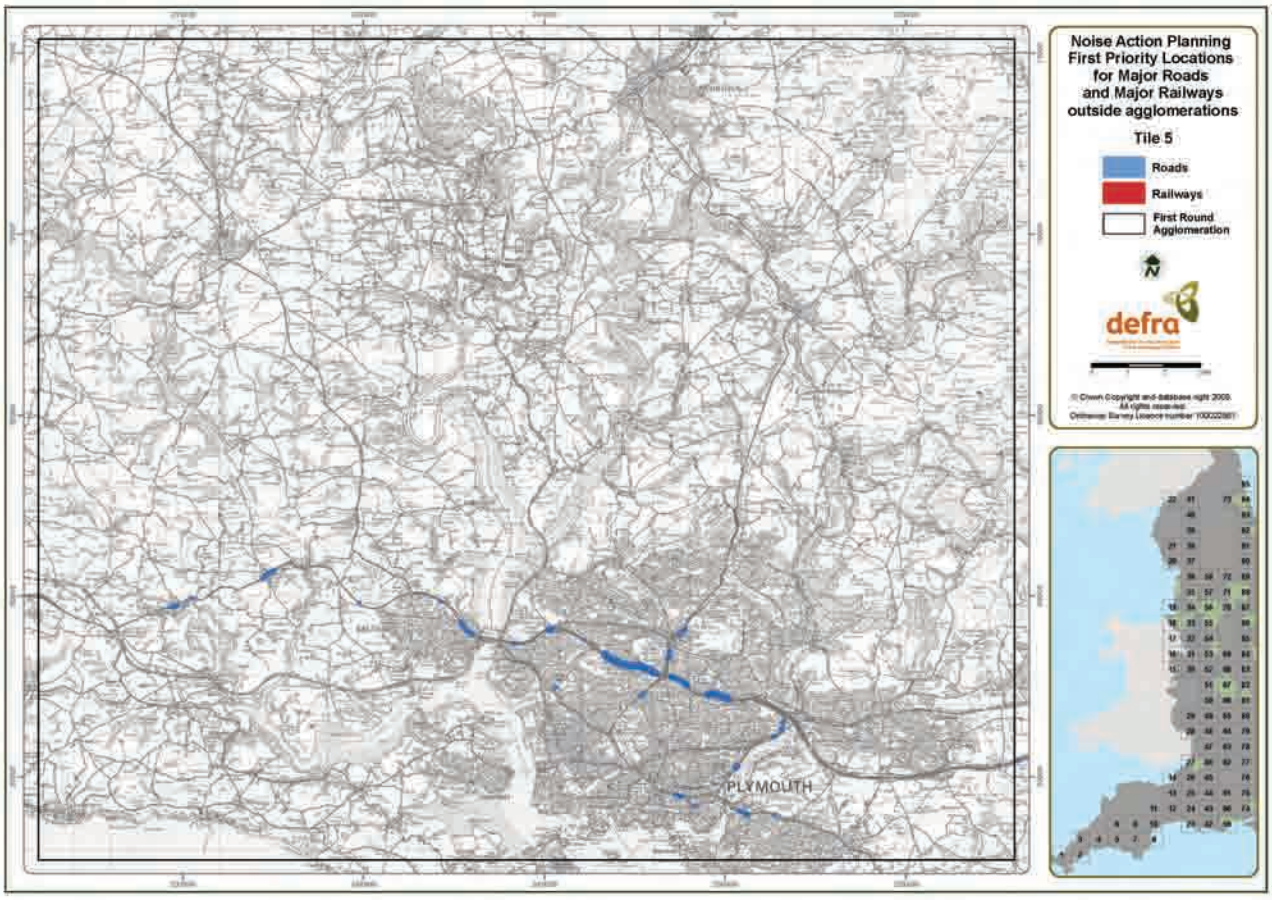
"Traffic congestion, parking problems, traffic risk and resulting air pollution will increase in adjacent neighbourhoods. The plans [Central Park Area Action Plan] *should be scaled down and delayed until improved public transport provisions are implemented."*

Noise

7.41 Our society is getting louder. Noise comes in many forms, from neighbourhood noise, such as burglar alarms, dogs barking and licensed premises, to noise experienced in the workplace. Transport noise is caused by the movement of the vehicles through the air, the contact of wheels with the road, the engine, exhaust and brakes. New aircraft and road vehicles have to comply with levels of noise emissions that have been reducing since the 1960's however there has been no significant decrease in road noise.

7.42 The European Noise Directive requires noise maps to be produced which show the noise levels outside of buildings. These maps are produced using computer modelling software as the cost of monitoring noise on a large scale is prohibitively expensive. Plymouth is being included within the second round of development of strategic noise maps by DEFRA, which should give us an understanding of average noise conditions within the city. DEFRA have already produced some major roads mapping that indicates a number of roads in the city where road traffic noise is a problem (figure 7.3). Further guidance from DEFRA will enable us to develop and implement specific action plans but consideration of identifiable road traffic noise issues will be afforded greater consideration in this Local Transport Plan where appropriate.

Figure 7.3 DEFRA Noise Action Planning Map for Plymouth



Approach

Active travel

7.43 People need to be encouraged and reassured that walking or cycling is possible for some journeys. Our approach to enabling this is to work with communities on making the small changes needed that enable them to access facilities. For example, working with a community to develop a network of routes focused on journeys to and from the local shopping centre, or with a school to develop routes to and from their site. This doesn't mean we need to put in cycle lanes everywhere, but make sure the best route is well defined and

known to local people. In order to make a difference we need to work in one area, delivering packages of measures rather than individual schemes spread across the city which don't connect together.

7.44 By walking or cycling instead of driving you do not just reduce air pollution in the city's environment. Travelling in your car you are exposed to much higher levels of pollution, two to three times higher than if you walked or cycled instead.

Barriers to cycling

7.45 Wide ranges of towns and cities have demonstrated that it is possible to significantly increase levels of cycling. Exeter, with similar "hilliness" and weather to Plymouth, was one of the top performing cycle demonstration towns with a 40% increase in cycling over four years. Plymouth is learning from such experience elsewhere.

7.46 Evidence from different sources, including consultation, indicates that the following areas are all likely to be barriers:

Table 7.4 Barriers to cycling

Safety	The risk of accidents is often cited as the major barrier - See Chapter 9 (Safety and Security)
Lack of cycling culture	Cycling is something that is simply not considered because it is seen as an activity for leisure or sport. Many people consider themselves too unfit for cycling not realising that cycling at moderate speeds can be fairly leisurely.
Secure cycle parking	Concern over theft and lack of cycle parking
Lack of facilities at destination	Many employers no longer provide facilities for showering, changing or lockers for their staff. It is unlikely that staff will want to cycle to work without these facilities being available. The quality of facilities is as important as their availability.
Plymouth is too hilly	Cycling is popular in many places just as hilly as Plymouth; most cycles have a vast range of gears which make a big difference when cycling up hills.
Too far	Most trips are less than three miles; these distances are easily travelled by cycle, and it is often the quickest means of getting door to door.

“I would cycle to work if it were safe to do so. Plymouth has cycle lanes that stop without reason, then start half a mile away. It's shocking to think that so many people would cycle if only there were basic cycle lanes available.”

“Dedicated cycle routes are a waste of money as hardly any cyclists use the current routes.”

“Better, secure, dry and clean cycle storage facilities, lockers and showers for cyclists. The present facilities are a disincentive for cyclists - particularly those who have to travel a long distance, as there is nowhere to store suits, work clothes and other valuables.”

"Cycle lanes a waste of time - Plymouth too hilly, roads too narrow."

"A cycle path is a daft idea if you live in Elburton, you'd be soaked and tired out from cycling from town."

Barriers to walking

7.47 The changes in society and travel patterns over many years have contributed to there being fewer local shops and services, these having been centralised, sometimes to out of town locations. Most people would walk short distances to the local shop if they are available but it is less likely that many of those people will decide to walk a longer distance. There are a number of reasons for this which are summarised in Table 7.5 below.

Table 7.5 Barriers to walking

Safety	Fear of accidents or fear of crime can be major barriers to walking. The safety and personal security aspects are covered in more detail in Chapter 9 (Safety and Security).
Lack of infrastructure	Lack of pedestrian crossings on busy roads or simply the lack of dropped kerbs can deter people from even considering walking. Rivers or railway lines also act as barriers with detours to reach the nearest crossing point.
Too far	Perceptions of distance have been skewed over time by our increasing use of cars and buses. Where once we would have considered walking two or three miles to be the norm, today this is seen as a distance that could only be travelled by car or public transport.
Don't know the way	Many people don't know the best way to get to places on foot. Our "mental maps" have developed by travelling around by car or bus but it can often be much quicker to walk somewhere within a neighbourhood if people know the best route.

"Would prefer to walk more but find the walking route (Mannamead Road/Mutley Plain) hazardous as have to cross many busy junctions without pedestrian priority."

"Walking is unsuitable due to the distance and/or weather".

7.48 As recommended by the Department for Transports Active Travel Strategy (table 7.2), providing safer routes in residential areas by reducing speed limits to 20mph can break down some of these barriers and encourage greater uptake of walking and cycling.

7.49 People who are mobility impaired may be less able, or not able, to walk or cycle long distances. This may include those who are temporarily impaired, either because they are carrying lots of shopping or pushing a pushchair, as well as those who are permanently impaired. We can however make small changes that will enable people who are mobility impaired to travel the short distances that they are able to.

Air quality and noise

7.50 The best way to reduce the problems caused by noise or air quality is to reduce or remove the vehicles that cause the problem, but it is simply not possible to do this in most situations.

7.51 Measures which enable people to switch from using a car to walking and cycling will also support the reduction in pollution. However this will not solve the problems. If a problem becomes more severe, then it may be necessary to consider how the vehicles travel through an area, how they wait or park in an area, or possibly as a last resort, which vehicles should be allowed to travel through an area.

7.52 The increasing density of the buildings in our urban areas can exacerbate air quality problems. Tall buildings next to main roads can cause an urban canyon effect where locally stagnant air concentrates pollutants near ground level; this is not just a phenomenon to be concerned about in very big cities it can happen in any city. The growth agenda that has been set out in Chapter 5 could cause this effect to happen in Plymouth, particularly in the city centre or Derriford areas. We will need to be careful to manage developments to avoid this.

7.53 In terms of reducing noise, until we have a clear understanding of the impacts of transport-related noise then it is very difficult to define an approach which will tackle this. However, through the DEFRA Noise Action Planning process we will identify the transport infrastructure responsible for significant noise problems and produce Action Plans to reduce the identifiable noise impacts as appropriate, working with relevant bodies where noise from transport infrastructure is not the responsibility of the City Council, such as the trunk road network, railway, sea port and airport infrastructure.

7.54 Ahead of the more detailed DEFRA Noise Action Planning guidance we will ensure low-noise road surfacing is considered for all carriageway reconstruction and maintenance schemes but afforded greater priority for those roads identified in the DEFRA Noise Action

Planning major transport infrastructure map (figure 7.3). New development assessed as generating such traffic to require mitigation and that will need to use the roads identified in figure 7.3, must contribute to reducing the cumulative noise impact.

Case Study: Managing road traffic noise

The scale of the East End Transport Scheme (EETS) made it necessary that road traffic noise levels were assessedand considered as part of the scheme design.

Noise monitoring was undertaken at locations in the area to determine the existing noise level and to enable a noise model to be built. The results from this model were used to identify the number of properties that would experience an increase in noise level due to the scheme and the extent of this increase.

Gdynia Way

The scheme was subsequently designed to mitigate this noise increase by lowering the speed limit of the road from 40mph to 30mph and through the use of a low-noise road surface.

Monitoring and review

7.55 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes, but also to highlight where we need to do things differently in the future. In light of the recent removal of the National Indicator Set the Council is currently considering how best to monitor transport and non-transport outcomes. The final version of Plymouth's Local Transport Plan 2011 - 2026 will include a completed framework.

Key References

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- National Census 2001, Office of National Statistics
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- Priorities for Action on Health - Plymouth Health, Social Care and Well-Being Strategy 2008-2020, Plymouth Health Development Unit
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- The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Summary Report, February 2010, Department for Transport

8 Promoting Equality of Opportunity

Summary

8.1 Plymouth is a great place to live, but some of our city's residents can enjoy its benefits more than others.

8.2 One of the biggest barriers to opportunity is cost. 30% of households in Plymouth do not have a car mainly because buying and running one is simply unaffordable. Furthermore, bus fares are a large expense for some people which means that choices may need to be made on how the money is spent. For example, this may be a reason for not attending a hospital appointment.

8.3 Having the knowledge about the available transport may not seem like a barrier for many people, but for those who don't have access to the internet or don't understand a timetable this means the difference between getting to college and not.

8.4 Getting access to the services and facilities that most of us take for granted can one's improve quality of life and increase confidence and aspirations. Access to good quality healthcare, fresh food and opportunities for leisure or exercise can increase the health of a community, whilst the ability to get training or a new job can boost an individual's confidence and career opportunities.

8.5 Improvements to access can come in many forms, but it is most important to work with communities and stakeholders to deliver the solutions that make the difference. Accessibility planning has been a key part of delivering access improvements for five years and this partnership approach has achieved significant results.

8.6 In planning for the future, we need to ensure that neighbourhoods are planned, so that the access to services is improved, whether that be through bringing new services into neighbourhoods or providing new, more efficient access to existing services.

8.7 Buses, taxis, cycle routes and pedestrian routes are vital resources for communities where access to essential services is not possible without travelling. In many instances, the existing transport networks do not fulfil the needs of the communities they should serve.

8.8 This chapter looks at solutions which will enable more people to take advantage of the opportunities that the city offers. It will focus on accessing healthcare, education and training, employment and leisure, as well as improving connections by public transport and making more innovative use of transport options.

Why is transport an important factor in increasing equality?

8.9 Plymouth is set in an outstanding location. It is close to Dartmoor, adjacent to the sea and has wonderful river estuaries. The city is large enough to have a wide range of shops and services provided within its boundaries. Education at all levels is available in the city.

Job options are becoming increasingly varied in the city, with advanced technology becoming a growing segment. Plymouth is also lucky not to experience some of the problems of other major cities, such as severe congestion or very high unemployment.

8.10 However, some of our residents are not able to benefit from the wealth of jobs, shopping, leisure, education and healthcare facilities that are available because they cannot get access to them. This is bad news for their wealth, health and quality of life.

8.11 It is easy to assume that everyone has the same option which is available to most of us; to just jump in the car. The reasons for the lack of access are complex. In Table 8.1 (below) we show some of the reasons we have found for people having difficulty accessing the services that fulfil even their basic needs.

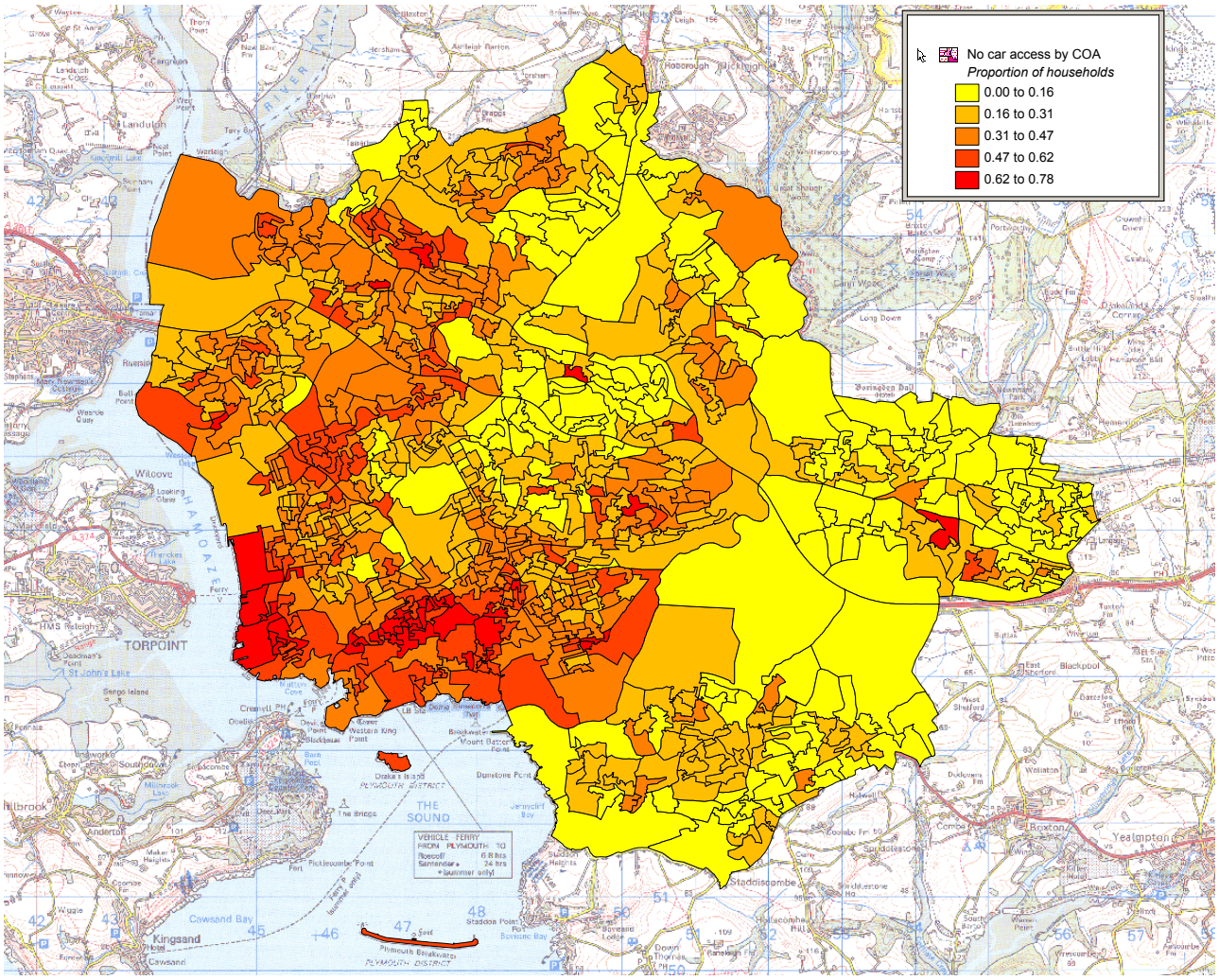
Table 8.1 Barriers to access

Barrier to access	Reason(s)
Do not own or have access to a car	• Can't afford to buy and run a car • Unable to drive (too old, too young, not physically able, can't afford lessons)
Can't take the bus	• Bus doesn't go to the right places • Can't afford the fare • Don't have information about the bus (times, destination, cost etc) • Don't know how to use the bus • Bus doesn't run at the right time
Service / facility not open when people are able to access it	• Opening times are the same as the times people are at work or unable to get childcare • If they open outside of normal working hours there may not be a bus
Limited travel horizons	• Unwilling to travel outside of neighbourhood - long journey times or distances a problem • Do not trust transport services.
Can't walk	• Too far • Disabled • Too much to carry • Fear of crime
Can't cycle	• No facilities to lock up cycle • No changing facilities • Too hilly • Too much to carry

8.12 Looking at the data available, it is clear to see that the neighbourhoods in the city where car ownership is at its lowest are the same communities that are affected by poor health, higher unemployment and lower educational attainment.

8.13 In our city about a third of households don't have a car and, in some areas, this is as high as two thirds of households. (See Figure 8.1).

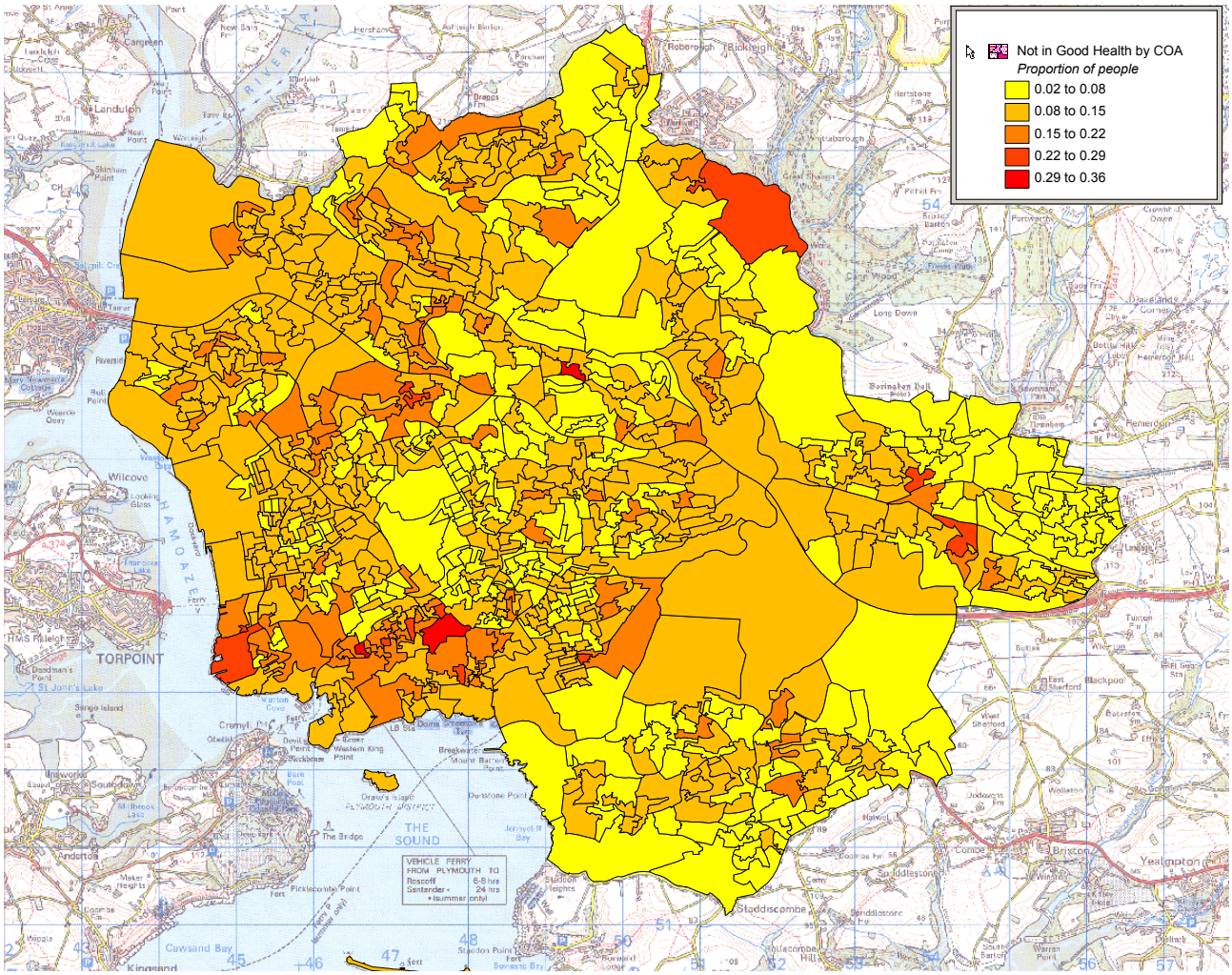
Figure 8.1 Map of car ownership levels in Plymouth



Health

8.14 When we also look at the proportion of people in each area of the city who consider themselves not to be in good health (see Figure 8.2), the pattern is very similar to that of lower car ownership.

Figure 8.2 Map of Plymouth showing the proportions of people not in good health



8.15 There are many factors which affect people's health. Access to health care is one factor, but also being able to access fresh food, taking regular exercise, drinking too much alcohol or smoking cigarettes all make a contribution. In terms of transport, there are many factors that cannot be changed, so here we focus on the ones where improved access can make a positive contribution, namely access to health care and to fresh food. In Chapter 7 (A Healthy Community) we have demonstrated the positive impact that transport can have on health by enabling increases in exercise levels - this is not duplicated in this chapter.

8.16 A major concern of health care professionals in the city is the number of missed hospital appointments. In general, people have a doctors surgery in their neighbourhood, which is relatively easy to access. However, people can find referrals for treatment or tests at the hospital much more difficult to get to. Table 8.2 (below) shows the level of missed hospital appointments and car ownership in different areas of the city compared with the citywide averages. The correlation between car ownership and missed appointments is noticeable.

Table 8.2 Car availability and key health and social statistics in the most and least deprived neighbourhoods

	% of households with no car	% of hospital appointments missed
Most deprived neighbourhood	58.0	19.2
Wealthiest neighbourhood	9.6	7.7
Citywide average	30.0	10.1*

8.17 Changes to the healthcare systems in coming years will present new challenges.

8.18 Obviously one of the biggest factors for improving our health is healthy eating and making sure we eat fresh fruit and vegetables. Many of the main supermarkets in the city are not in the most accessible locations, even during peak travel hours when bus routes are at their optimum. The main market, being located in the city centre, has good accessibility for most areas of the city by bus, but the opening hours are restricted. This makes access to fresh food difficult for those without a car, particularly if they work a daytime shift. Additionally, carrying large quantities of shopping on the bus, particularly if there is a need to change buses to get home, can be difficult (or impossible) for some.

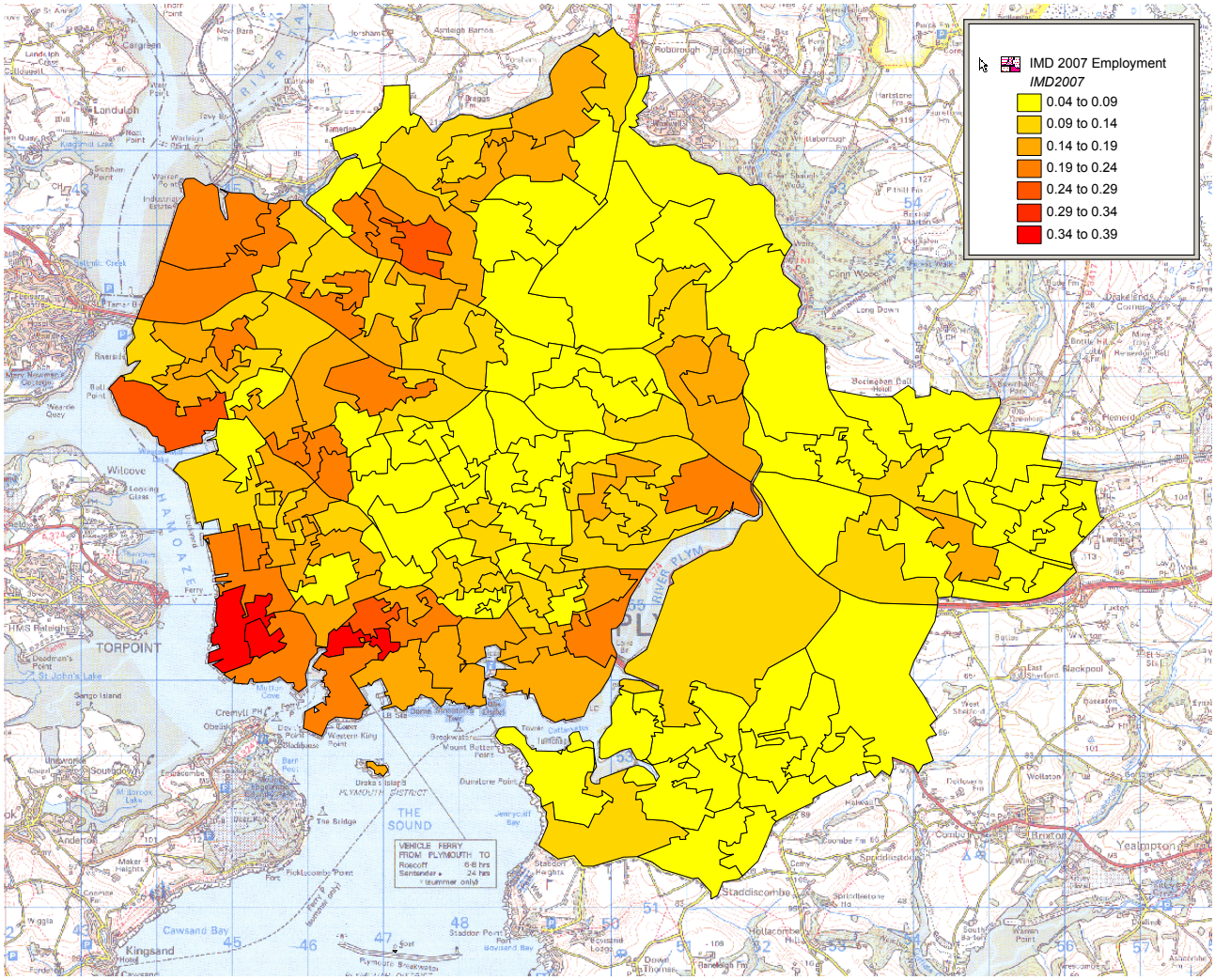
8.19 If access to supermarkets is limited to those without a car, then the likelihood is that they will rely on local shops, which can be expensive and only carry a limited range of fresh food. The recent development of small supermarkets in some areas is helping the supply of fresh food, but there are still a number of communities who have very limited access to a supermarket.

8.20 Recent consultation generated a number of comments about the health of the city, the main one being about access to health facilities, particularly public transport services to and from Derriford Hospital. Generally it was felt that there were plenty of buses servicing the hospital from the city centre, but a shortage of frequent and direct buses from other areas of Plymouth.

Work

Comparing the car ownership map of Figure 8.1 with the employment map below, Figure 8.3, shows that there is also a correlation between employment and car ownership. One of the factors that is considered when starting a new job is whether it is possible to get to work, on time, every day. If you don't have access to a car, then you are reliant on public transport, walking or cycling. Half of all work trips are three miles or less in length, which isn't a great distance, but the design of the bus network and the location of employment sites mean that it could take considerable time, and more than one bus, to get to work. This distance can be cycled, but only if the facilities exist at the destination to store a cycle and the individual is equipped to make the journey.

Figure 8.3 IMD Employment



8.21 Getting to work by bus can be problematic for those who work shifts or nights; bus timetables generally schedule most services to fit well with a nine-to-five working day and it can be difficult to travel to work during other times.

8.22 The cost of public transport can also be prohibitively expensive; the cost of a weekly ticket can be a substantial proportion of the income of a person on a low wage.

8.23 There was a significant amount of consultation information found about access to employment. The comments were mainly in relation to poor public transport services or connections; buses not going to where people need to go and at the time they need to travel.

Education and training

8.24 Enabling easier access to education and training will allow people to aspire to improve their career prospects and quality of life.

8.25 Plymouth has a wealth of opportunities available for education or training. The city is well served by institutions, catering for every ability across a vast range of subject areas. These places of learning are located across the city. Whilst the University of Plymouth and Plymouth College of Art and Design are both within the city centre, and therefore relatively easy to access, many other facilities are located within neighbourhoods and are much more difficult to get to. The courses provided by these places of education are attractive to many people and not necessarily those who live within walking or cycling distance. The catchments can stretch beyond the Plymouth sub-region with people commuting long distances on a regular basis.

8.26 The cost and availability of transport can be key factors in the decision to take a course. It is vital, therefore, that opportunities are not unduly restricted by transport.

8.27 The consultation information supports this, with many people saying that public transport is too expensive, and not really an affordable option, when both parents and children are using it on a daily basis.

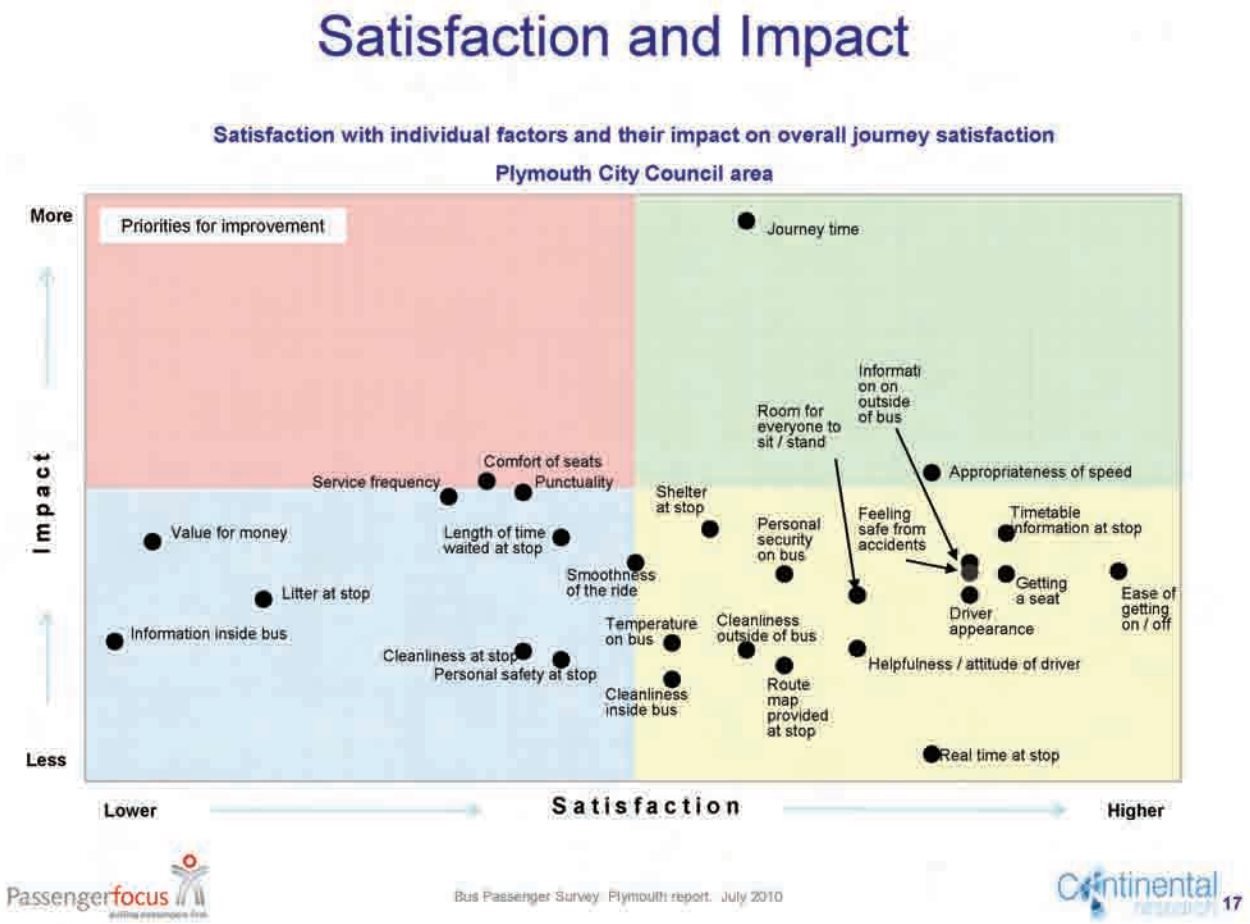
8.28 Improved walking and cycling links, with better signposting, were also requested for routes to school, particularly between local communities and also between the University and city centre. With these issues being expressed by the community, it is vital that transport more actively promotes opportunities for learning.

Buses

8.29 Plymouth has good bus provision in many areas during the weekday daytime, but provision in the evenings and weekends is worsening. Many services dramatically reduce in frequency after 7pm and on Sundays. For those without another way to travel this can severely restrict travel options and act as a barrier to many opportunities, such as social or leisure activities which may only be available during these times.

8.30 As we have experienced in consultations, public transport in Plymouth has historically received a lot of negative comments. However, recent surveys by the independent body, Passenger Focus, have indicated that passengers are generally satisfied with the service provided in the city and so this highlights an area where more innovative solutions to marketing and promotion need to take place. Figure 8.4 (below) illustrates some findings from these recent surveys.

Figure 8.4 Bus satisfaction factors



8.31 Feedback shows that, for those who do use it, the bus network serves their needs reasonably efficiently and effectively but when feedback comes from non-bus users the satisfaction levels decrease. There can be a number of reasons for this It may be that the perception of non-users does not match the reality of service because they have not tried the service, or they are unable to use the bus network because it does not go to the place they want to go to, at the time they want to go there.

8.32 This evidence provides a number of opportunities for improvements that can improve access to a wide range of services, as well as social and leisure opportunities.

Approach

8.33 The main objective that supports reductions in inequalities is:

Objective One

Link communities together

- Improve access to community amenities, leisure opportunities and our high quality natural environment by increasing the availability of attractive walking, cycling and bus routes and enabling the right mix of land use.
- Enable easy access to growth and regeneration areas by walking, cycling and public transport.
- Improve the design of residential streets to reduce the fear of crime and antisocial behaviour as well as the dominance of the car.

8.34 This is supported by the following other local transport objectives, as follows:

Other local transport objective	Examples of support for Equality of Opportunity agenda
2. Reduce the negative impacts of transport	By ensuring footways and cycleways are well designed and maintained to enable access to local facilities.
4. Make walking, cycling and public transport the desirable choice.	Improving the uptake of those modes will better enable people to make a choice about how they travel and provide more opportunities to get to key locations.
6. Use transport to drive the local economy	Enabling economic growth will benefit all residents of the city but it will allow improvements in connections to key locations to be made.

Accessibility Action Plans

8.35 Partnership is at the heart of the approach to tackling barriers to services and facilities. In essence, a logical, evidence based approach to understanding problems and identifying solutions is the best way to achieve results. For the duration of Plymouth's second Local Transport Plan we have been developing and implementing accessibility action plans.

8.36 These are plans which, depending on their nature, are developed in partnership with communities, community groups, service providers and other stakeholders. The process of developing an accessibility action plan includes the collation of an evidence base that clearly defines the key problems which will be tackled by the plan. The partners then seek solutions that are deliverable within the allocated budgets. The solutions are likely be a range of ideas to be delivered by different partners.

8.37 The plans can be developed from a number of different perspectives. We have developed many different partnerships which have come together to develop and deliver the plans and then disbanded when work is complete. These partnerships have taken either the approach of delivering for a particular neighbourhood of the city or improving access to a particular service. The plans consist of:

- Well-planned packages of measures to enable more people to walk, cycle or catch the bus, to get to the services they need.
- Bringing the services to those who need them.

8.38 Fundamentally, the partnership approach allows the work to be focused on people and on solving their problems. In developing ideas to improve equality of opportunity across the city, we need to take a more creative approach that allows for more sophisticated use of all the options available. There are under-used resources available, such as taxis or not-for-profit car clubs, such as the Moorcar scheme, which have been successful in other places

Public transport

8.39 Enabling use of the bus network is an essential part of developing Accessibility Action Plans. Not understanding public transport can be a major barrier to access, as can not being able to afford it, and so it is vital that we include activities within the implementation plan for the LTP that better enable bus use for those groups who otherwise find it difficult. We need to get the fundamentals right. We need to provide good quality information about how to use buses, such as when and where they run and how much they cost. We need to work with the bus operators, to make sure the bus routes adapt to the changing nature of the city as it grows, so that all communities are able to take advantage of the new opportunities as they become available. The operation of the bus network is largely out of the control of the Council, but we have a strong working relationship with the operators which allows us to work together to deliver solutions.

8.40 The Local Transport Act (2008) included a number of provisions designed to enable more effective partnership working between local authorities and bus operators to improve quality and punctuality of services provided. These provisions include voluntary agreements, voluntary partnership agreements and Quality Contract Schemes.

8.41 A priority for this LTP will be the creation of a Voluntary Bus Partnership (VBP) to offer a framework for future improvements to the bus network. This will be an overarching voluntary agreement to start with, leading to specific voluntary partnership agreements for individual routes or corridors. Under the terms of the VBP, we will undertake to provide particular facilities or commit to bringing benefits to local bus passengers in the area, while local bus operators will undertake to provide services of a particular standard. We are already committed to entering into a Bus Punctuality Improvement Partnership (BPIP) with all the local bus operators in Plymouth.

8.42 Both the Council and bus operators agree on the overriding need for reliability and good timekeeping in delivering a quality public transport service to the people of the city. The evidence shows that parts of the network suffer from congestion, giving rise to difficulties in

delivering service reliability. Both the Council and the bus operators also believe that improved punctuality is best achieved through closer joint working through a BPIP. By signing up to such an agreement, we are committing ourselves to work together to deliver bus punctuality.

8.43 The Council has an important role to play in helping to provide information about the bus network and promoting its use from our unique position in a competitive market. The range of ways of accessing information has dramatically changed in recent years. The traditional approach of producing a paper timetable is still valid and the best format for some people, but other forms of media are preferred by different groups and it is vital that everyone is able to access the information when, where and how they prefer it. This includes ensuring that information provided at bus stops can be used by people who are visually impaired.

8.44 Physical access to public transport can be a significant barrier, but the provision of simple infrastructure can make dramatic improvements. Ensuring that bus stops are suitable for all users and that routes to bus stops are similarly accessible is a fundamental part of increasing equality. The vehicles themselves will need to be completely compliant with the Disabilities Discrimination Act, by 2016 for single deckers and by 2017 for double deckers.

Bus stop at Oreston Road

8.45 As we have already stated, the cost of transport can be a massive barrier to people on low incomes. In most instances the Council does not control the cost. However, the efficiency of the network, which the buses run on, impacts on the cost of running the buses and patronage, and therefore the price to use the service.

8.46 It is essential that steps are taken to equalise the cost of transport to reduce inequalities. We currently subsidise travel on a number of bus services to ensure that they keep providing the vital links for communities. However, this is not a long term solution to providing transport that meets the needs of our residents.

8.47 We also provide concessionary fares for certain user groups, such as older people or those with disabilities. We will endeavour to maintain this offer because we know it improves the quality of life of many of the people who are eligible.

8.48 Ensuring buses are reliable and have optimum journey times enables bus operators to keep their prices as low as possible. Providing bus priority measures at times and locations where buses are delayed by general traffic will enable operators to make more efficient use of their staff and vehicles, as well as reducing the quantity of fuel they use, and this should reduce operating costs.

Community transport

8.49 The integration between the different community transport services needs to be improved to develop services in the short, medium and long term, that meets the needs of the users.

8.50 Enabling Plymouth Shopmobility and Community Transport (PSCT) to become more self sufficient will enable it to promote greater use of services and better meet the needs of users. PSCT will consider how best to do this but it could include charging for services, a robust marketing programme, increasing the volunteer pool, improving the IT system and working with the stakeholder group to continuously improve the service provided. In the longer term PSCT may consider merging all available services into a single 'demand responsive' service, carrying more people to more places.

Walking and cycling

8.51 Walking and cycling are cheap, flexible forms of transport which can be used by many people. Many of the measures that will improve accessibility have been included within Chapters 6 and 7 and are therefore not repeated here. However, it is essential that we equip people with the skills and the confidence to use a cycle. Therefore providing proper training for those who would benefit from it is an important part of our approach.

Land use planning

8.52 A fundamental aspiration of our land use planning policy is to develop sustainable linked communities. The specifics are set out in the Core Strategy to the Local Development Framework (LDF) and a number of Area Action Plans (AAPs) which provide more detail on the main growth areas. The Core Strategy and each AAP have been put together with this fundamental aspiration in mind and are supported by detailed transport planning work, much of which also forms the evidence base to this LTP. Also in development is the Sustainable Neighbourhoods Development Plan Document which is part of the suite of LDF Documents. It will set out the approach for development in the areas of the city that are not covered by AAPs and will indicate local transport improvements which contribute towards delivering the aspiration for sustainable linked communities. This process will ensure the balance of services within each neighbourhood and enable improvements to transport infrastructure and services.

Monitoring and review

8.53 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes but also where we need to do things differently in the future. In light of the recent removal of the National Indicator Set the Council is currently considering how best to monitor transport and non-transport outcomes. Plymouth's final Local Transport Plan 2011 - 2026 will include a completed framework.

Key References

- 2009 Benchmarking Indicators
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9 Contributing to better Safety and Security

Introduction

9.1 In its most recent Comprehensive Area Assessment, the Audit Commission awarded Plymouth a Green Flag for its exceptional performance in protecting local people. The Green Flag, indicating exceptional performance and innovation that other public services could learn from, was awarded for the way in which partners in Plymouth plan ahead to protect people in the city during large scale emergencies. It also noted that: “The Council, Police, Primary Care Trust, Fire and Rescue Service and other public services, voluntary groups and businesses work extremely well together to plan ahead and respond to emergencies to keep the city safe.”

9.2 Plymouth is a safe place for most people. Devon and Cornwall Constabulary statistics show that most types of crime and road traffic accidents in the city are falling. Despite the continual decline in crime, public confidence in the Police and Council in dealing with crime that matters in this area has fallen significantly, from 53.2% in September 2008 to 47.1% in December 2009 (British Crime Survey).

9.3 Working with our partners, we have made excellent progress in reducing road related injuries. In 2009 the number of people killed or seriously injured (KSI) on Plymouth roads had dropped by 68% (45 KSIs) from the baseline average of 1994-98, putting the Council ahead of meeting the target of a 60% reduction by 2010/11.

9.4 Changes to the highway, road safety education and local enforcement have each contributed to the reduction in road casualties achieved to date in Plymouth. However, nearly 900 people are injured on Plymouth's roads each year, clearly showing that there remains a great deal to do to improve road safety further.

9.5 Through studying the occurrence of collisions, taking preventative measures, reducing the possibility of casualties on new roads (i.e. collision investigation, prevention and safety audit) and by promoting of ways of travelling that are beneficial to people's health, we will help to reduce the risk of death, injury or illnesses arising from transport.

9.6 As well as setting out how Plymouth intends to deal with security and safety issues, this chapter also sets out the Council's Local Road Safety Strategy demonstrating our commitment to achieving the duties set out in the Road Traffic Act 1988.

Safety and security in Plymouth

Responding to major incidents and terrorism

9.7 The Council has taken significant steps to protect the city, its population, environment and local economy against major emergencies. Major emergencies are defined within the Civil Contingencies Act 2004 as those that threaten serious damage to human welfare, including disruption to facilities for transport.

9.8 The Act sets out the framework for civil protection on a local level in the UK. Duties include the requirement to assess the risk of an emergency occurring, and to review and maintain emergency response plans.

9.9 Recent events have led to a number of potential major emergencies being brought to the public's attention and the production of a number of risk assessments and emergency action plans for Plymouth. Most recently, the threat of bird flu, swine flu and pandemic flu has been widely publicised, as has the collapse of Northside Bridge, Cumbria, during flooding. In addition, recent terrorist threats and attacks have taken place in Bristol and Exeter.

9.10 The threat to the UK from International Terrorism is currently rated as severe, meaning that an attack is highly likely. The threat to mainland UK from Irish-related terrorism is currently rated as moderate, meaning that an attack is possible, but not likely. There is no intelligence or information to suggest that Plymouth is a specific target at this time.

9.11 As described in the Government strategy, 'Prevent', exposure to extreme right wing views can fuel terrorist activity; activists target those in a community who are most vulnerable to persuasion to carry out terrorist activity. Plymouth benefits, on the whole, from encouraging levels of community cohesion, recognised with a Government Office for the South West community tension rating of low.

Road safety

9.12 The Road Traffic Act 1988 placed a duty on local highway authorities to prepare and carry out a programme of measuresdesigned to promote road safety. This includes studying the occurrence of collisions, taking preventative measures and reducing the possibility of casualties on new roads (i.e. collision investigation, prevention and safety audit).

9.13 Public satisfaction surveys show that the city's residents are satisfied with our approach to road safety with 60% of respondents satisfied, ranking Plymouth City Council fourth out of the 15 south west authorities (National Highways Best Value Benchmarking Club Survey 2009). However, Plymouth's residents remain very concerned about anti-social behaviour, namely inappropriate parking, speeding traffic

(anti-social driving), and rubbish and litter (Police public survey 2007/08). The Place Survey from 2008/09 also cited anti-social behaviour, the level of crime and street cleanliness as key priorities for addressing by people in Plymouth.

Crime whilst out and about

9.14 The British Crime Survey 2004/05-2007/08 notes that all recorded crime in Plymouth fell by nearly 8%. Crime types such as violent crime, vehicle crime and burglary have all decreased in this period and the risk of being a victim of crime is lower than at any time since the survey began in 1981. Despite the encouraging fall in levels of crime, fear of crime remains high.

9.15 People living in deprived areas tend to experience more crime, perceive more crime and anti-social behaviour, and have lower confidence in local criminal justice (Plymouth Community Safety Partnership Strategic Assessment Crime and Disorder 2009/10).

9.16 According to the Quality of Life Survey 2006, two thirds of Plymouth's residents feel unsafe outside after dark, with people under 35 and people over 75 more likely to experience this feeling. These age groups are also most concerned about being victims of burglary, car crime and mugging. Women were more concerned about safety after dark than men. Residents of North Prospect and Barne Barton expressed the highest concerns about being a victim of street crime while Barne Barton residents also concerned about criminal damage and car crime.

What does this mean for transport?

Road safety and crime

9.17 The fear of being injured in a traffic-related collision is a real concern for residents and the perceived danger acts as a barrier to travel for many, often deterring people from choosing to walk or cycle. Fear for safety is particularly prevalent when choosing how to travel to school, for example. Parents who drive to school often cite safety as the main reason for choosing to drive their child every day rather than walk or cycle. However, Plymouth school travel plan surveys clearly demonstrate that the majority of children would much prefer to walk or cycle.

"Make it safe to cycle -would love to cycle to work but am not stupid enough to risk it!"

"If I felt I could cycle in safely I would. However the roads do not particularly lend themselves to cycling, especially in winter".

9.18 For a number of years the police have been running the Police And Communities Together (PACT) initiative. PACT is aimed at giving local residents a voice in how their local neighbourhood and community are managed. On an annual basis the police consult local residents about what the top priorities for their neighbourhoods should be over the following

months. Most neighbourhood surveys cited anti-social vehicle use as their top priority, including parking, speeding, criminal damage to vehicles and the need for more enforcement of vehicle related anti-social behaviour.

"Better enforcement to prevent parking on pavements."

9.19 The Council manages a large number of complaints about parking and serves in excess of 35,000 parking enforcement notices every year. This is one way to manage the situation, but this is not the ideal solution. Improving the neighbourhoods that we live in is a responsibility we all have to play a part in. Residents and businesses have a social responsibility for appropriate parking and driver behaviour. The standards to which our roads have been designed in the past have been on the basis of getting cars to move along them as quickly and efficiently as possible, but this is not really necessary in a residential area and can lead to the road becoming a barrier for people who live in that area. Greater car ownership has increased the number of cars parked on our streets and many streets are now overcrowded, with cars lining either side. An additional pressure is the change in working practices with an increasing number of works vehicles being taken home overnight, allowing businesses to be more flexible about their work, but putting spaces in residential areas at a premium.

"Oreston streets are choked with vehicles parked on the road and it anything, the waste ground areas could be used to provide residents with off road parking. Many families have two cars these days and no allocated parking; these tiny fishing village streets can't accommodate them".

9.20 It is the responsibility of car and van drivers to park their vehicles in a way that does not adversely impact others. Parking on pavements or blocking dropped kerbs, so that pedestrians have difficulty passing, is anti-social. Parking in bus stops or close to junctions can restrict the bus movement through a neighbourhood. Many of our homes and streets were built when levels of car ownership were much lower and are not wide enough or do not have off-street parking to accommodate the demands of 2010. In many instances it will not be possible to retrofit parking to these areas.

9.21 To try and ensure the scenario that has been described above doesn't happen within our new developments, we have put in place policies for parking in residential areas which increase the number of spaces to be provided for new houses and have adopted the Manual for Streets (MfS) as a guide for designing these areas. The MfS sets in place principles to be used when designing streets with the aim of reducing the dominance of the car and making our streets more friendly and welcoming to use. These principles make our residential streets a different type of space to our high streets or main roads and reinforce that they should not be used in the same way.

9.22 Annually, criminal damage in Plymouth is estimated to cost £7m (Plymouth Community Safety Partnership, Partnership Plan 2008-2011), the most prevalent being vehicle damage and, more recently, emerging acquisitive crime such as theft of vehicles, theft from vehicles, theft of fuel and theft of metal (such as drain covers), and damage to bus shelters. Criminal damage is strongly linked to young people, anti-social behaviour and substance misuse. Vehicle crime accounts for 14% of all crime in the city (Plymouth Community Safety Partnership, Partnership Plan 2008-2011).

9.23 Anecdotal evidence from the Police suggests that those who are likely to flout general motoring laws are also those who are most inclined to knowingly commit other offences, such as driving without insurance, road tax or a valid MOT certificate.

9.24 The last two road safety strategies, contained in LTP1 and LTP2, have been very successful. Targets were achieved and in some instances exceeded, cutting deaths and serious injuries on the roads by 68% to the end of 2009. It is apparent that some measures underpinning the success have been particularly effective.

9.25 Road safety engineering projects and speed management initiatives have played a significant role in reducing casualties:

> "Research shows a strong link between speed and road casualties. Reducing the average speed of traffic by 1 mph leads to an expected reduction of 5 per cent in the number of collisions on that road, while reducing the speed of the fastest drivers has the largest effect on collisions.

There is a well understood relationship between the speed of a crash and the impact – and therefore the likely severity of any injuries."

"Breaking the speed limit is recorded as a factor in 14 per cent of fatalities (and may be responsible for many more)."

Source: Making Britain's Roads Safer, DfT.

9.26 Enforcement measures have been key in reducing the number of traffic related offences, with programmes of driver and rider education helping to reduce the numbers of motorcyclist and new and inexperienced driver/rider injuries.

9.27 Every injury has a physical, emotional, social and financial cost to the victim, family, community and the country as a whole. One slight injury costs, on average, over £12,000, a serious injury costs over £160,000 and a fatal injury costs over £1.4million. During 2009 the reduction in casualties on Plymouth's roads, as a result of various interventions, has saved the UK economy over £23m.

Table 9.1 Saving to UK economy from the reduction in casualties in Plymouth

	1994/98 baseline average	2009 casualties	Reduction in casualties	Cost per casualty	Savings
All fatalities	8	4	4	£1,400,000	£5,600,000
All serious injuries	131	40	91	£160,000	£14,560,000
All slight injuries	1098	840	258	£12,000	£3,096,000

9.28 Whilst the most recent casualty data is encouraging, it is clear that in some areas there is opportunity for further accident reductions.

9.29 A study of the causes of collisions in the city revealed that the majority of injuries came about as a consequence of user error, with car drivers and passengers aged 17 to 24 years being the most commonly injured. Accidents are most likely to happen during evening traffic, with a high number occurring on Fridays.

9.30 The national picture is that speed is the biggest contributory factor in fatal road casualties and that inappropriate speed increases the severity of injury. In addition, the police are still recording a high proportion of drivers and riders who continue to flout laws about mobile phone use, seat belt use and driving whilst under the influence of alcohol and drugs.

9.31 Road user education, particularly for those aged 17-24, is needed, alongside engineering and enforcement.

Cycling and walking

9.32 Cyclists remain a concern for our area. Whereas cyclists represent only 3% of road users, they make up, based on 2009 casualty figures, 6% of casualties. Likewise child pedestrians are a continuing concern.

9.33 As discussed within Chapter 7 (A Healthy Community), we now have an adopted Strategic Cycle Network. We have been working towards, and will continue to work towards, providing a safe cycle network that meets the needs of all cyclists, whether provision be on- or off-road priority measures.

9.34 The Plymouth Children and Young People's Plan 2008-11 recognises that more needs to be done to improve the safety of children. It sets a priority for partners across the city to reduce children and young people's accidents and injuries. Road casualty statistics for the city reinforce this view as the number of children and young people injured in road traffic accidents, particularly as pedestrians, remains comparatively high compared with the rest of the population.

9.35 Whatever the mode, the vast majority of journeys at least start and end on foot, so it is unsurprising that a large percentage of the injuries in Plymouth involve pedestrians. Encouragingly the number of pedestrians that are killed or seriously injured (KSI) is declining. However a high number of slight pedestrian injuries continue to occur, the majority involving people aged 17 to 24 years.

9.36 Whilst Plymouth's pedestrian network is comprehensive, it is currently poorly signed and a few gaps still remain. In addition, further upgrades, such as introducing dropped kerbs, are needed to remove potential barriers. There are also a large number of undeclared rights of way across the city and a lack of awareness of the existence of public rights of way will inhibit some journeys that could be undertaken on foot. Furthermore, those who do not walk regularly are less able to judge how long a journey would really take on foot.

9.37 Large traffic junctions act as barriers to pedestrian movement and quite often people on foot will choose to take a short cut to avoid such diversions caused by traffic junctions, sometimes putting themselves in danger from traffic.

"Where there are bus stops there should be safe places for pedestrians to cross."

Approach

9.38 By addressing concerns about safety and security the Council is directly supporting Plymouth's transport vision and delivering the needs of our communities.

9.39 We can begin to breakdown the barriers to travelling more sustainably within Plymouth whilst having the knock on effect of improving the health of Plymouth residents by tackling transport related safety and security concerns.

9.40 "Our roads are vital in providing us with access to work and leisure as well as to the goods and services we want and need. They are essential to our economy and our communities. But we must balance the need for efficient mobility with the obligation to maintain public safety." A Safer Way, Department for Transport, April 2009.

9.41 We are developing, and will continue to develop during LTP3, a Network Management Plan (NMP) and a Transport Asset Management Plan (TAMP) to put in place processes for managing the network in different situations.

9.42 We will ensure that the design and materials used in transport infrastructure are selected to reduce the severity of injury from collisions and attacks. For example, the bus shelters in Plymouth are fitted with High Impact Safety Glass (BS6206), deliberately designed to crumble into small square pieces and thereby eliminate the risk of injury that could be caused by glass shards.

Case study - bus stop infrastructure

During LTP2 the Council invested in upgrading bus stop infrastructure across the city. Particular attention was paid to the security and safety benefits of the chosen infrastructure so that the safety and security of the public were not compromised.

The glass in all shelters is a safety glass manufactured to British standards so that when damaged it shatters into small pieces, rather than shards of glass.

Glass panels were chosen for the back and sides of shelters to provide protection from the elements but also to allow waiting passengers to be visible from all directions, and with the addition of solar or mains powered lighting, visible at night too, reducing the perceived risk of being a victim of crime.

The new bus stop flags provide an SMS code that you can text in order to receive real time information about when the next bus is due, eliminating any uncertainties. This is also supplemented by printed timetable information.

9.43 In the event of a major emergency, Plymouth's transport network would play a vital role during and after the event. During an event the transport network will enable access to affected areas by the emergency services and utility providers, however parts of the network could also be affected by long periods of closure or damage. Public transport providers have been aided by the Council in the production of business continuity plans and emergency transport agreements have been negotiated to deal with such issues.

9.44 In the case of potentially environmentally damaging collisions, such as an oil tanker spillage, emergency planning procedures would need to be followed, as outlined in the Network Management Plan, to ensure that pollutants do not enter our water system. The role of the Surface Water Action Management Plan (SWAMP) is shown in chapter 6 - Tackling Climate Change.

9.45 After an incident occurs the first response of those involved is to make contact with family and to try to get home. Evidence suggests that the sooner people get back home the faster their recovery from the event and the quicker things can return to normal. However as a result of an occurrence people are unlikely to have personal belongings on them such as money, mobile phones and keys to enable them to make contact with family or to pay the fare to return home. This is where the emergency transport agreements come into effect.

9.46 Our main objectives with regard to road safety will continue to be casualty reduction and the reduction of injuries, particularly death and serious injuries. They will be continually monitored utilising the targets set out in the DfT publication 'A Safer Way', thereby informing delivery of road safety engineering, enforcement and encouragement interventions. To further reduce road casualties, road safety will be integrated with other objectives, such as the Sustainable Communities Strategy.

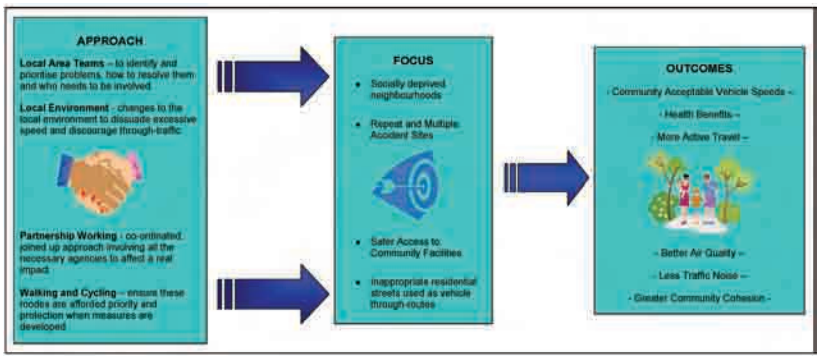
9.47 We will strive to achieve "buy in" of key partners and delivery agents, such as the Local Strategic Partnership, to help deliver the transport vision for Plymouth. Whilst the Council owns the transport vision, we recognise that the vision covers much wider issues than transport alone; we acknowledge that we have a duty to coordinate and lead the efforts of the emergency services, other public agencies and the private and voluntary sectors to enable the most to be made of the resources available to further improve and safeguard people in Plymouth. Robust partnership working will enable delivery of the vision and associated objectives whilst complementing action being taken nationally.

9.48 Whilst we can impose and enforce traffic regulations this is not the best way to improve our community spaces. Some areas are lucky to have been developed as homezones. The changes in these areas have been worked out by the people who live in them with support and advice from experienced professionals. However these types of improvements are not appropriate for many areas and can be very expensive. It is often the small improvements that can make the difference between having the confidence to move round your neighbourhood or not.

9.49 We need to encourage greater social responsibility. For example, our first response to anti-social parking shouldn't be to put in new signs or yellow lines or call in the parking attendants; it should be to get car owners to be more considerate about their parking. We can support locality working groups to provide education and empowerment in these situations.

9.50 The second part of our approach is to enforce the regulations which currently exist. Working with the community through the locality working groups we can get a good understanding of where best to target the limited resource we have. We would work with a focus on education, giving warnings before issuing tickets and providing explanations. We are well aware that the problems caused happen out of working hours so we would ensure resource is available at these times.

Figure 9.1 PCC Approach to Road Safety



Monitoring and review

9.51 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes but also where we need to do things differently in the future. In light of the recent removal of the National Indicator Set the Council is currently considering how best to monitor transport and non-transport outcomes. Plymouth's final Local Transport Plan 2011 - 2026 will include a completed framework.

Key references

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10 Programme and Performance Management

Summary

10.1 The transport schemes that we deliver must address the problems and needs identified, and enable the Council to meet both its transport objectives and the objectives of the local authority as a whole.

10.2 With pressures to deliver greater cost efficiencies, we will need to be clever and creative to seek ways of driving down costs whilst still delivering benefits. This will be a big challenge, but we are well placed to meet it.

10.3 All transport schemes need to be well thought out, carefully planned, refined through consultation, cost effective, learn from past experiences and deliver real benefits. The backbone to achieving this is effective programme management that has a series of procedures, gateways and mechanisms to steer projects to success.

10.4 Performance management will enable the Council to measure progress in achieving the outcomes that are important to improving the quality of life of the residents of the city, and to best direct the resources available towards meeting those goals.

10.5 It is essential for every local authority preparing a Local Transport Plan to ensure value for money and efficient delivery. This chapter outlines the way in which Plymouth City Council will be managing it's transport investment programme. It examines how the investment programme will be funded, how schemes have been evaluated and prioritised to deliver the goals and objectives of the plan, and how the plan and risks will be managed.

10.6 At the time of producing this draft Local Transport Plan, the national position on performance monitoring is changing - it is therefore not possible to present a detailed picture of this. We will continue to develop the performance monitoring regime and it will be presented in full in the final plan.

At the time of writing, the funding for local transport is uncertain. The highways maintenance and integrated transport blocks funding that is provided by Government is subject to a review and consultation process.

The consultation sets out with the premise that no changes will be made to the Integrated Transport Block for the first year of this LTP. This has provided us with enough certainty to present an Implementation Plan for Year One.

Available funding for the Implementation Plan

10.7 The transport investment programme has been developed in outline for the life of the 15 year plan and in detail for the first three years of the plan. The investment programme is challenging, but also realistic to be mindful of available funding. This will enable elements of the programme to be fast-tracked, if additional funding opportunities become available, or to be delivered in smaller packages over a longer period of time if less money is available.

10.8 Currently funding for transport programmes is made up from a number of areas:

- **Central Government Support.** This funding is issued in a number of ways, from needs based allocations to bid-based grants.
- **Integrated Transport Block** is capital funding for small transport improvement schemes costing less than £5 million. Allocations have been paid annually, since the year 2000 when local transport plans were first introduced. The funding, which is not ring fenced, combines capital grant with supported borrowing.
- **Highway Maintenance Block** is capital funding for managing the road networks. This includes resurfacing of roads and pavements, and maintenance or replacement of assets, such as street lights, bridges, culverts and other structures. This is funded from supported borrowing as part of the local transport funding process.
- **Revenue funding** for transport is received through DCLG's Local Government Revenue Support Grant (RSG), and from revenue generated from Parking within Plymouth and invested in Transport. The revenue support grant funding is not ring-fenced to transport and local authorities can spend it, as they see fit, to support local, regional and national priorities in their area. Some transport measures cannot be funded by capital as they leave no asset for the local authority. Examples of these include travel planning work, cycle training and promotion, and developing and using transport models for developing and securing capital funding for transport improvements.
- **Developer Contributions.** For many years, Plymouth City Council has delivered transport improvements through securing contributions from developers. These come in a variety of ways, and may include the developers building transport improvements themselves as agreed and delivered in partnership with the council officers, or through direct financial contributions to the local authority for delivery of agreed schemes. This second process has recently been modified through the introduction of the Plymouth Development Tariff. The main change introduced by the tariff is that the council can secure a fixed amount of funding per dwelling (or per square metre for commercial developments) for investment in the transport network. Full details of the Plymouth Development Tariff are set out in chapters 3 and 4 of the Planning Obligations Supplementary Planning Document, which is available to view on the Plymouth City Council website at: www.plymouth.gov.uk/adopted_spd_planning_obligations.pdf.

Case Study - Funding

The East End Transport Scheme will provide improved transport infrastructure in the East End of Plymouth that will boost the area's local economy and support the future growth of the city. At the heart of the scheme is a new public transport corridor, which will help improve the reliability of existing local bus services as well as provide for the

future Eastern Corridor HQPT service. It is a good example of how the city council pulls together funding from a range of sources in order to successfully deliver transformative transport projects. Its total cost of £19.1m was met with:

£1.17m of Local Transport Plan Capital Funding

£9.78m form the Department of Communities and Local Government's Community Infrastructure Fund (CIF)

£7.0m from the Regional Infrastructure Fund (RIF)*

£0.3m from New Growth Point (NGP) funding

£0.78m from PCC capital receipts

£0.07m from Local Transport Plan Revenue Funding

*RIF funding will be repaid over a number of years using future transport infrastructure contributions from developers

Scheme prioritisation

10.9 Plymouth City Council will always strive to deliver a quality transport service and achieve good value for money. As has been demonstrated so far in this plan, the service that is provided is broad and delivering this to a finite budget requires identifying the most important areas for investment for the city.

10.10 Plymouth's Third Local Transport Plan has been developed in a different economic climate to the previous two LTPs. There is also uncertainty in future available funding for transport across most funding streams. The challenge will be to continue to support transport users to make choices that will help tackle climate change, support economic growth and deliver value for money.

10.11 For LTP2 we prioritised schemes by splitting the integrated block funding allocations to themed priority areas and then assessed and prioritised schemes to deliver within those themed blocks. This process, built on existing accepted techniques used nationally, regionally and locally, included measuring the transport policy context, impact, value for money / cost:benefit, deliverability, risk and delivery of wider corporate objectives. This process gave an annual focus to delivering packages of measures, bringing more efficiency to delivery.

10.12 The scheme prioritisation process will continue to be developed and refined as part of the work to reach the final LTP3. A key action is to consult on the theme areas before the individual schemes can be assessed. It is hoped that the evolution of the scheme prioritisation process will ensure its outcomes stand up to both internal and external scrutiny and challenge. However, in its current form it can be used as a basis on which a delivery programme for LTP3 can be established.

10.13 In our final LTP3 we will have a three year Implementation Plan, with year one in detail and years two and three in outline.

10.14 Plymouth Highway Services Contract

10.15 In December 2008, Plymouth City Council entered in to a highways services contract with Amey LG Limited. This seven-year contract includes for the provision of design, construction, operations and maintenance functions relating to highways services as operated by Amey LG Limited. The contract can be extended by up to a further three years subject to performance. It is anticipated that the total value of the contract over the full ten-year term could be approximately £150m.

10.16 The purpose of the Partnership is to deliver improved and more efficient services by adopting collaborative and integrated working methods, incorporating 'Rethinking Construction' and 'Lean Thinking' principles.

10.17 Financial benefits will be realised through -

- Economies of scale of the provider - the Council will benefit from the provider's buying power.
- Streamlining of procurement practices - costs and time spent procuring and managing the supply chain will be saved as well as contingent pricing would be reduced.
- Savings in the costs, risks and time of IT implementation - the Council will largely be implementing proven systems, which, in turn, have already been through the time consuming testing and evaluation process.
- Standing charges from non-utilisation of staff will not be incurred.
- Maximising staff efficiency, and
- Shared back office systems and common research and development costs with other public sector clients of the provider.

Programme management

10.18 The Council set up management systems which better enabled planning, monitoring and control of the transport programme during the last 5 years. These are complimented by improved corporate management systems which continue to support wider business improvement and effective delivery.

10.19 Plymouth Transport and Highways has learnt a lot through the management systems implemented in LTP2 and is keen to improve these further, particularly in the context of tightening environmental and financial constraints.

10.20 The detail of structures, processes and responsibilities has been omitted from this draft document. However, they have been developed and may be contained in an annex or supporting documentation for the final LTP3.

Risk Management

10.21 Risk can be defined as uncertainty of outcome from actions or events. The impact of a risk can be positive or negative.

10.22 Risk can be looked at in two main ways: firstly, the likelihood of a risk happening and secondly, the potential impact on the project if the risk did occur.

10.23 Good project management always includes risk management. This is a systematic process of managing this uncertainty by identifying, assessing, communicating and controlling risks. Risk management should ensure that a project's exposure to risk is kept at an acceptable level in a cost effective way.

10.24 We have experience of managing risks in relation to undertaking transport projects. We regularly undertake risk management by identifying and assessing new risks, reviewing and monitoring existing risks, and taking action to mitigate against risks. It is an area that is well understood, particularly the need to ensure that risks are managed within acceptable levels, neither compromising nor unduly delaying the programme. Risks are identified and managed, from scheme concept through to delivery.

10.25 Through the highways services contract, all schemes of value in excess of £50,000 are implemented under the target cost payment mechanism. This is a well-established process within the construction industry that incentivises all parties to work together towards common goals and to apply collaborative foresight to shrink risks to the successful delivery of schemes to programme, to specified quality and within budget.

10.26 Under this arrangement, risks are identified and allocated to the party which can best manage them. It is not commercially appropriate to pass risks to the contractor which cannot be reasonably pre-estimated as the contractor would apply very large risk premiums within his target price; this would not provide value for money (indeed, these events may never occur) and may render the scheme unaffordable.

10.27 An initial target cost is agreed based upon the defined scope of work to be undertaken together with any risks allocated to the contractor. The risks allocated to the employer remain outside, and are additional to, this agreed target cost. As construction works progress, any such risks which do occur are assessed to determine their financial and programme impact, and the target cost is adjusted accordingly.

Performance Monitoring

10.28 Establishing a framework for monitoring the outcomes of the activities undertaken through the Local Transport Plan is not only vital to understanding successes but also highlights where we need to do things differently in the future. In light of the recent removal of the National Indicator Set, the Council is currently considering how best to monitor transport and non-transport outcomes. Plymouth's final Local Transport Plan 2011 - 2026 will include a completed framework.

Implementation Plan

The Implementation Plan sets out the delivery plan for transport in Plymouth.

There are a number of factors which will affect the delivery of schemes and this plan is designed to be flexible enough to be proactive and take advantage of opportunities whilst still clearly showing that the investment is part of a planned approach.

This implementation plan is a companion document to Plymouth's Infrastructure Delivery Plan (IDP) and Local Investment Plan (LIP). Together these plans will provide a co-ordinated investment programme intended to better coordinate and deliver strategic outcomes for the city. Whilst the IDP will show the infrastructure that has been identified as needed to meet the city's growth agenda, and will address infrastructure delivery, the LIP is intended to highlight and prioritise public sector investments.

It does include the strategic transport projects, generally those where funding through the LTP integrated transport block is not feasible, that are also shown within this plan. PLIP is not designed to show the more local schemes. These schemes, as a whole, contribute significantly to achieving strategic outcomes but are too detailed to be shown in a strategic plan.

Set out in Chapter 10 of the Local Transport Plan is information on the types of funding and risk factors that influence scheme delivery. It is vital that Plymouth's transport networks are improved to support new developments and manage their impacts. By putting in place a long term plan for the delivery of these improvements, and developing them to a stage which enables their delivery, the Council puts itself in an excellent position to take action. This approach requires feasibility work to take place, using revenue funding as well as the capital funding to deliver the scheme.

Not all of the changes will be delivered by the Council. The LTP sets out the changes that are required in order to achieve the aspirations put forward by the strategy but delivery can take many forms. Developers will play a key role in funding and delivering infrastructure, particularly where developments have an impact on the transport network.

The plan below shows the anticipated timing of the delivery of the interventions set out within the LTP strategy. This allows for the planning of the feasibility work, as well as setting out the intentions of the Council to deliver or support the delivery of measures within time frame specified. Inevitably this will change over the life of the strategy and it will be regularly revised to reflect where changes have occurred and provide explanations for these changes.

Implementation Plan - Long Term Interventions

LTP Interventions 2011 - 2026

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
Supporting Growth - Chapter 5 -	**Making better use of our existing assets**	Network management including co-ordination of street works, incident management and priority route management					PT&H / Emergency Services / Bus Operators	
	Preventative rather than reactive maintenance of assets	TAMP to ensure existing and new infrastructure is well-maintained including bridges, structures, roads, cycleways and footways					PT&H	LTP
	Improve connections between key areas of the city (Delivering HQPT)	Northern Corridor ● Improvements to the HQPT corridor connecting the city centre to the Derriford area, the George Junction Park and Ride site and Woolwell. ● Maintain and improve the quality of the existing Park and Ride service on the corridor, including maintaining the Milehouse Park and Ride facility. ● Build a road linking the Derriford area to the Langage and Sherford developments via Forder Valley. ● Provide a new bus link through the approved residential development at the Airport ● Provide a new bus link through the site of the University College Plymouth St Mark and St John ● Widen A386 southbound between The George Junction and Derriford Roundabout to provide a bus / high occupancy vehicle lane ● Reconfiguration of Derriford Roundabout with extensive bus priority ● Completion of continuous bus lane along the A386 between Derriford Roundabout and Manadon Roundabout in both directions (within physical / cost constraints) ● Improvements to Mutley Plain to manage air quality ● Provide bus or bus and high occupancy vehicle lane on Outland Road and / or Alma Road ● Reconfiguration of North Cross Roundabout with extensive bus priority ● Improvements to North Hill outside Plymouth University / museum and library to improve pedestrian / cyclist environment					PT&H / Bus Operators / PCC Planning and Economic Dev / HA / DCC / Derriford Hospital / Airport / UCP Marjon / Major Development / LEP	LTP/Council/Major Scheme Funding/Tariff/Third Party

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Eastern Corridor ● East End Transport Scheme (EETS) improvements ● New eastbound traffic lane along Gdynia Way ● Enhanced public realm in the East End ● New link road through Embankment Lane ● Improved bus priority through Embankment Road ● Improved cycle links ● Possible reconfiguration of Deep Lane junction ● New Langage access road ● New Park and Ride at Deep Lane as part of the Sherford new community ● Consideration of new Park and Ride on the A379 ● Reconfiguration of Stanborough Cross, Pomphlett Roundabout , Laira Bridge Road and Cattedown Roundabout with extensive bus priority ● Improve bus lanes on Exeter Street					PT&H / Bus Operators / PCC Planning and Economic Dev/ HA / DCC / Major Development / LEP	LTP/Council/Major Scheme Funding/Tariff/Third Party
		Western Corridor ● Starting to develop the HQPT corridor from the city centre to Saltash ● Western Corridor Park and Ride site(s) linking to City Centre and Derriford areas ● Determining options for long term Tamar crossings. ● Connecting cycle routes across the Tamar.					PT&H / Bus Operators / PCC Planning and Economic Dev / HA / CCC / TB&TFJC / Major Development / LEP	LTP/Council/Major Scheme Funding/Tariff/Third Party
		City Centre ● Prioritise city centre bus routes for delivery of HQPT standard infrastructure ● Improve Royal Parade to enhance its role as the city's principal bus interchange ● Improve and modernise the city's railway station and coach station with better connections to the HQPT and local bus network, the SCN and city centre walking routes ● Safeguard and improve the operational efficiency of the city centre strategic road network including the major junctions at North Cross, Charles Cross, Drakes Circus and Western Approach / Union Street ● Improve pedestrian routes and permeability in the city centre and between the city centre and neighbouring areas					PT&H / Bus Operators / PCC Planning, Economic Dev & City Centre Company / HA / Major Development / University / LEP	LTP/Council/Major Scheme Funding/Tariff/Third Party

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		• Delivery and upgrading of cycle routes in the city centre, prioritising routes set out in the city's Strategic Cycle Network • Car parks to be modern, secure and clean with a choice of customer-friendly payment methods, well-signed pedestrian routes to sites of interest and easily accessible from the strategic road network • Manage city centre parking availability for optimum balance between long and short stay provision with charges consistent with Park and Ride and local bus charges to maintain competitive advantage						
		City-wide and non-corridor • Work with bus operators to develop bus routes that cross the city rather than all terminating in the city centre, that link non-city centre economic nodes better and that link deprived areas to key economic nodes better • Prioritise investment in the SCN and walking networks on links between key economic nodes and between deprived areas and key economic nodes • Take opportunities provided by new developments to improve public transport infrastructure, pedestrian and cycle access and cycle infrastructure such as parking or changing facilities • Investigate parking charges which vary based on arrival time or vehicle emissions • Intensive Smarter Choices measures across the city, but especially in the key development areas • Investigate potential for Smarter Choices measures for Tavistock, Ivybridge, Saltash and Torpoint to increase sustainable travel					PT&H / Bus Operators / PCC Planning and Economic Dev / HA	LTP/Council/Major Scheme Funding/Tariff/Third Party
	Improve access to road, rail, air and sea networks which connect to locations beyond Plymouth	Support improvements to Plymouth Airport					PT&H / Bus Operators / PCC Planning and Economic Dev / HA	
		Improving opportunities to increase traffic through Port of Plymouth					PT&H / LEP / Port Authorities / ABP	LTP/Third Party
		Seek rail network improvements by working with D&C Rail Partnership and the rail operators to increase service frequency and reliability, reduce journey times to major cities, extend community rail line coverage and secure new rolling stock					PT&H / Network Rail / TOC / DRCP / DCC / CCC / PCC Planning and Economic Dev	LTP/Grant Funding/Third Party/Network Rail Funding
		Seek greater commitment from Network Rail to extending electrification of the GWML through to Plymouth and Cornwall to maximise the benefits					PT&H / Network Rail / TOC / DCC / CCC	Network Rail Funding

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Seek an extension to the 7-Day Railway initiative to Plymouth and Cornwall	■				PT&H / Network Rail / TOC / CCC	Third Party
		Seek reclassification of Plymouth Station to Category B - Regional Hub in recognition of its status in the rail network and its unmatched GWRUS demand forecasts		■	■	■	PT&H / Network Rail / TOC	
		Seek improvements to the rail loading gauge up to Exeter to the W10 standard employed elsewhere in the country to enable the transportation of greater freight volumes and support greater port-related freight movement by rail as part of the Trans European Network		■	■	■	PT&H / Network Rail / TOC / DCC	Third Party
		Safeguard rail freight infrastructure at Tavistock Junction, the Cattewater branch line and Friary Yard	■	■	■	■	PT&H / Network Rail / PCC Planning	
		Develop local network of rail services into a 'metro' system. Infrastructure enhancements will be required along the Tamar Valley line from Plymouth to Gunnislake to deliver the hourly service desired, signalling enhancements between Liskeard and Ivybridge/Totnes or Newton Abbot and line speed improvements west of Exeter		■	■	■	PT&H / Network Rail / TOC / DCC / CCC / DCRP	LTP/Tariff/Council/Third Party/Network Rail Funding
		Support the re-opening of the Tamar Valley branch line between Bere Alston and Tavistock	■				PT&H / Network Rail / TOC / DCC / DCRP / Major Development	Third Party/Network Rail Funding
		Seek better weather and flood protection for the line on the Somerset Levels, the Exe Valley and Dawlish between Exeter and Newton Abbot to maintain operating capability		■	■	■	PT&H / Network Rail / TOC / DCC	Network Rail Funding
		Encourage and support the reinstatement of alternative mainline routes via Tavistock and Okehampton or via Heathfield and Teign Valley		■	■	■	PT&H / Network Rail / TOC / DCC	Network Rail Funding
		Trunk road connections	■	■	■	■	PT&H / HA	LTP/Tariff/Council/Third Party/HA
		Strategic Cycle Network - better cyclist links for the airport, railway station, coach station, sea port, Cremyll, Mount Batten and Torpoint ferries and Tamar Bridge	■	■			PT&H / PROW / DCC / CCC / Major Development / PCC Planning and Economic Dev / TB&TFJC	LTP/Tariff/Third Party
		Improving gateways to those networks to encourage and enable use		■	■	■	PT&H / PCC Planning and Economic Dev / Network Rail / TOC / Airport / Port Authorities / TB&TFJC	LTP/Council/Third Party

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Supporting sustainable tourism	■	■	■	■	PT&H / PCC Planning and Economic Dev / PCC Culture, Sport & Leisure / TOC	Council/Third Party
	Movement of goods	Establish Freight Quality Partnership		■			PT&H / PCC Planning and Economic Dev / Port Authorities / Network Rail / FTA / Rail Freight Operating Company / HA / Major Freight Generators	
		Continued working with partners on freight issues at a regional level	■	■	■	■	PT&H / LEP	
		Identification of potential freight consolidation and distribution centres and overnight lorry parking sites			■	■	PT&H / PCC Planning / DCC / CCC / HA / LEP / Major Freight Generators	LTP/Council/Third Party
		Consideration of freight transportation on highway network to key areas of the city (city centre / Derriford)	■	■	■	■	PT&H / PCC Planning / HA	LTP/Third Party

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
Tackling Climate Change - Chapter 6 -	**Climate Change Impacts**							
	Sea Level Rises / Higher Temperatures / Severe Weather Events	Provide measures to protect the waterfront	■	■	■	■	PT&H / PCC Planning / ABP / Port Authorities	LTP/Grant Funding
		Implement SWAMP actions including measures to protect the Plymouth Sound & Estuaries European Marine Site as appropriate	■	■	■	■	PT&H / SWW	LTP/Grant Funding/Third Party
		Consider revising specifications for construction and maintenance of transport assets as appropriate			■	■	PT&H	LTP
		Improve drainage and protection at known vulnerable points	■	■	■	■	PT&H / SWW	LTP/Grant Funding
		Identify and plan alternative routes	■				PT&H / Emergency Services / Bus Operators	LTP
	Indirect Impacts	Monitor changes and evaluate long-term need for alternative transport provision	■	■	■	■	PT&H	LTP
		Support appropriate development through LDF process	■	■	■	■	PT&H / PCC Planning and Economic Dev	
	Transport Options Available							
	Reduce the number of motorised trips	Encourage walking through journey planning, infrastructure and promotion	■	■			PT&H	LTP/Council/Tariff/Third Party
		Encourage cycling through journey planning, SCN and promotion	■	■			PT&H	LTP/Council/Tariff/Third Party
		Reducing the demand for travel through the use of new technology	■	■	■	■	PT&H /	Third Party
	Reduce trip lengths	Transport considerations to continue to be prime consideration in land-use planning through the LDF	■	■	■	■	PT&H / PCC Planning and Economic Dev	Tariff/Third Party
	Reduce carbon emissions per passenger (tonne) km	Encouraging use of bus services through journey planning, infrastructure and promotion	■	■			PT&H / Bus Operators	LTP/Third Party
		Alternative means of propulsion through promotion and the provision of necessary infrastructure in appropriate locations	■	■			PT&H	LTP/Grant Funding/Third Party
		More fuel efficient vehicles through taxi licensing controls		■	■	■	PT&H / PCC Environmental Services	Council

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Making more efficient use of existing vehicles through driver training, traffic management and engine-off policy					PT&H / Bus and Taxi Operators	
	Reducing the carbon footprint of infrastructure	Greater energy efficiency through low-energy light bulb use					PT&H	LTP/Third Party
		Using alternative power sources such as solar power and designing infrastructure to maximise alternative power sources					PT&H / PCC Planning	LTP / Third Party
		Use of recycled materials in infrastructure					PT&H / PCC Planning	LTP / Third Party
		Review need for signalised junctions					PT&H	

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
A Healthy Community - Chapter 7 -	Managing and maintaining walking and cycling networks	Network Management Plan to prioritise all routes including cycling and pedestrian routes	■				PT&H	
		Strategic Cycle Network which will, alongside working with local people, guide the development of those priority routes	■	■			PT&H	LTP
		Provide safer routes by minimum infrastructure approach in designating residential areas as zones, an extension of the popular school 20mph zone policy	■	■			PT&H	LTP/Tariff/Third Party
		TAMP to ensure existing and new infrastructure is well-maintained	■	■	■	■	PT&H	LTP
		Greater publicity of rights of way network, formalise network's legal status and deliver targeted improvements.	■	■			PT&H	LTP
		Change to Park bylaws to enable inclusion of Parks as part of cycling routes		■			PT&H / PCC Park Services	LTP/Council
	New infrastructure	Delivery of SCN providing high quality, safe, continuous and convenient cycle routes	■	■			PT&H / PCC Planning and Economic Dev / Major Developments / DCC / CCC	LTP/Tariff/Third Party/Council
		Walking and cycling direction signs including mode journey time information	■	■			PT&H	LTP
		Ensure needs of pedestrians and cyclists are considered in new schemes and developments and that no new infrastructure has an adverse impact on opportunities to walk or cycle	■	■	■	■	PT&H / PCC Planning	Council/Third Party
		Safer Routes To School programme identified and prioritised through STP process	■	■	■	■	PT&H / Plymouth Schools / PCC Childrens Services	LTP/Third Party
		Increase pedestrian - cyclist shared use facility provision	■	■	■	■	PT&H	LTP/Third Party
		Deliver infrastructure for the mobility impaired	■				PT&H / DAN	LTP/Tariff/Third Party
		Improve lighting on pedestrian / cyclist routes	■				PT&H	LTP/Third Party
		Provide most appropriate crossing type dependent on pedestrian need and road classification / use	■	■	■	■	PT&H	
		Promote and provide enhanced use of public transport measures for cyclists to provide opportunities for interchange	■	■			PT&H	LTP

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Provide links between and within communities or other developed areas specifically for walking and cycling					PT&H / PCC Planning	LTP/Tariff/Third Party
		Require fully protected cycle storage at residential developments and cycle parking provided at prominent locations with natural surveillance					PT&H / PCC Planning	LTP/Tariff/Third Party
	Partnership working	Establish 'Walking & Cycling Partnership' to promote active sustainable travel, influence potential schemes, work with the community to personalise schemes to meet neighbourhood needs, engage with other partnerships, bodies and authorities to deliver connected routes across boundaries and support cycling and walking organisations to deliver walking and cycling events for leisure and health purposes					PT&H	
		Deliver free cycle training for adults and children through the DfT Bikeability programme					PT&H / PCC Childrens Services / DWP	Grant Funding
		Greater promotion and information provision of walking and cycling with a focus on school and work journeys					PT&H	LTP/Grant Funding/Third Party
		Deliver Sustainable Modes of Travel to School strategy working in partnership with the NHS					PT&H / PCC Childrens Services / Plymouth Schools / NHS	LTP/Grant Funding
		Ensure employers and residential developments include walking and cycling provision in workplace travel plans and personalised journey planning providing support where needed					PT&H / PCC Planning	Third Party
		Greater promotion of www.plymgo.com to enable people more informed travel choice and health benefit information					PT&H	LTP/Third Party
	Managing air quality	Review and produce AQAPs for AQMAs identifying measures to improve air quality both specific to an area and city-wide					PT&H / PCC Environmental Services	LTP
		Contribute to the development of an Air Quality Strategy for the city					PT&H / PCC Environmental Services / PCC Planning	
		Continue the monitor, assess, review and action plan process and the partnership approach to the air quality issue between the transport and environmental departments in particular					PT&H / PCC Environmental Services	LTP
		Support the use of cleaner-fuel and more emission-efficient vehicles by all sectors: private and public sector organisations, individual members of the public, bus and taxi operators, and the City Council itself					PT&H	

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
		Consider Low Emission Zone principals for Plymouth AQMAs			■	■	PT&H	
		Promote eco-driving	■	■	■	■	PT&H	
		Identify and use new technology to deliver air quality benefits through improved and steady traffic flow, dynamic pollution-responsive traffic management systems and priority for cyclists, pedestrians and public transport		■			PT&H	LTP/Tariff/Third Party
		Provide increased information on journey times for different transport modes and pollution levels through various media and VMS to enable people to make more informed choices about the time, route and mode of travel available	■	■	■	■	PT&H	LTP/Third Party
		Recognise impact of design and scale of development on air quality and manage, reduce and mitigate this impact through environmentally-friendly design and the land-use planning system	■	■	■	■	PT&H / PCC Environmental Services / PCC Planning / Major Development	Tariff/Third Party
		Promote the bus, train, cycle and walking as alternatives to the private motor car	■	■	■	■	PT&H	LTP/Third Party
	Managing noise from transport	Identify transport infrastructure creating significant noise problems in relation to DEFRA Noise Action Planning guidance	■				PT&H	
		Develop Noise Action Plans to reduce noise impacts if necessary	■	■			PT&H / PCC Environmental Services	
		Ensure low-noise road surfacing is considered for all carriageway reconstruction and maintenance schemes but afforded greater priority for those roads identified by the DEFRA Noise Action Planning process	■	■	■	■	PT&H	LTP/Grant Funding
		New significant development to contribute towards mitigation for cumulative noise impact for roads identified in DEFRA Noise Action Planning process	■	■	■	■	PT&H / PCC Environmental Services / PCC Planning / Major Development	Tariff/Third Party
		Work with appropriate bodies where noise from transport infrastructure not the responsibility of the City Council is identified	■	■	■	■	PT&H / PCC Planning / Network Rail / TOC / Airport / Port Authorities	

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
Promoting Equality of Opportunity - Chapter 8 -	Accessibility planning	Improving access to health care through delivery of the Derriford Hospital Accessibility Action Plan and identifying improvements to help the end user	■				PT&H / Derriford Hospital	LTP/Grant Funding/Third Party
		Improving access to employment, education and training through continued delivery of the Young People's Accessibility Action Plan 2010-2013 and school and local community partnership working	■	■			PT&H / DWP	LTP/Grant Funding/Third Party
		Development of Accessibility Action Plans which will contain various measures such as re-timing bus services, IT training, local health services and car clubs.	■	■	■	■	PT&H / Bus and Taxi Operators / DoH agencies	LTP/Grant Funding/Third Party
	Walking and cycling	Support for the BikeLinks scheme, that provides a cycle and training for unemployed people for whom transport is a barrier to employment or training	■	■	■	■	PT&H	Grant Funding
	Land use planning	Safeguard and enhance transport infrastructure by securing the availability of land through the land planning system	■	■	■	■	PT&H / PCC Planning	
		Provision of access improvements associated with new developments, services or facilities	■	■	■	■	PT&H / PCC Planning	LTP/Tariff/Third Party
	Public transport	Deliver the Bus Punctuality Improvement Partnership through partnership working between the Council and bus operators, working towards a Voluntary Bus Partnership	■				PT&H / Bus Operators	LTP/Third Party
		More targeted marketing of public transport services with simpler information, such as diagrammatic bus maps, use of electronic media and harmonisation of timetable style, and making the most of the PlymGo brand	■	■			PT&H / Bus Operators	LTP
		Deliver public transport infrastructure, such as smart ticketing, to improve access to services and experience of using it	■	■	■	■	PT&H / Bus Operators / Network Rail / TOC	LTP/Tariff/Third Party
		Improved bus network with good services to key services, higher bus frequencies, less need to interchange and cross-city services		■	■	■	PT&H / Bus Operators	LTP/Tariff/Third Party
		Improve efficiency of citywide community transport provision and work to integrate it within overall public transport network	■				PT&H	

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
Contributing to Better Safety and Security - Chapter 9 -	Partnership working and encouragement	Continue to work with other road safety organisations including the police to deliver road safety education, training and publicity	■	■	■	■	PT&H / Emergency Services / DoH / Derriford Hospital	
		Active travel promotion	■	■	■	■	PT&H	
		Continued support for the school travel and workplace travel planning initiatives	■	■	■	■	PT&H / PCC Childrens Services / PCC Planning	
		Greater information provision on reasoning for measures	■	■	■	■	PT&H	
	Enforcement	Investigate and use greater flexibility in enforcing traffic regulations and anti-social vehicle use by the operation of mobile safety enforcement vehicles	■				PT&H	LTP/Grant Funding
		Investigate extension of council parking enforcement powers to the Police		■			PT&H / Police	LTP
	Infrastructure and engineering	Safety and security incorporated into infrastructure design with the auditing procedure extended to check for resilience to weather conditions and security issues	■				PT&H / Police	LTP
		Provide safer routes by minimum infrastructure approach in designating residential areas as zones, an extension of the popular school 20mph zone policy	■	■			PT&H	LTP/Tarif/Third Party
		Safer streets by providing natural traffic calming effects with priority on school routes, known 'rat runs', socially deprived neighbourhoods, known accident sites and other community facilities		■			PT&H / Police	LTP/Third Party
		Delivery of appropriate safety measures identified through the route hierarchy, (residential, strategic emergency service, public transport or abnormal load route or a combination) established by the Network Management Plan . Measures for strategic routes will not slow emergency vehicle response rates, hinder public transport or cause increased congestion	■				PT&H	LTP
		Continue delivery of Advanced Stop Lines for pedal cyclists along SCN. Maintain motorcyclist use of bus lanes. Investigate motorcyclist use of ASLs or provision of motorcyclist-specific ASLs.	■	■			PT&H	LTP/Tariff/Third Party
		Continue annual review of accident cluster sites and implement appropriate measures both capital and revenue	■	■	■	■	PT&H / Police	LTP

National Transport Goal and LTP Objective	Approach / Issue	Measure	Delivery Timescale				Body Responsible for Delivery	Delivery Mechanism
			2011 - 2016	2016 - 2021	2021 - 2026	Beyond 2026		
	Technology	Use new technology to provide dynamic and issue-responsive traffic management systems to deliver improved safer transport network					PT&H	LTP/Tariff/Third Party
		Investigate enhanced use of vehicle-tagging technology to to provide greater travel information, identification of poor road conditions and driver behaviour					PT&H / Bus and Taxi Operators	LTP/Third Party
		Investigate greater use of surveillance cameras by transport operatives for identifying suspicious and abnormal behaviour					PT&H	
		Encourage and provide greater availability of real-time travel information for different transport modes to enhance journey-planning and reduce situations of perceived risk					PT&H	LTP/Tariff/Third Party

Implementation Plan - Year One

The implementation plan for the first year of the LTP has been developed by considering those schemes which need to be continued from LTP2 and those schemes which need to be commenced in for delivery of LTP3. As there is not a fundamental shift in direction of the strategy those schemes which are carried over also represent a contribution to achieving LTP3 objectives.

The table below shows the schemes that have been prioritised for the first year of the Local Transport Plan.

Implementation Plan 2011 - 2012

National Transport Goal / LTP Objective	Approach / Issue	Measure	Delivery Timescale 2011 - 2012	Body Responsible for Delivery	Delivery Mechanism
Capitalised Maintenance					
Supporting Growth	Preventative rather than reactive maintenance of assets	Bridges and Structures		PT&H	LTP
		Surfacing (roads, footways, cycleways)		PT&H	LTP
		Street Lighting		PT&H	LTP
		Traffic Signals		PT&H	LTP
Contributing to Better Safety and Security	Infrastructure and engineering	Health and Safety improvements - Removing potential hazards and improving safety on the network		PT&H	LTP
Integrated Block					
Supporting Growth	Improve connections between key areas of the city (Delivering HQPT)	Cattedown Junction Improvement - Design year 1, delivery years 2 and 3		PT&H	LTP / Third Party / Tariff
		East End Transport Scheme planned funding		PT&H	LTP / Third Party / Tariff
	Improve access to road, rail, air and sea networks which connect to locations beyond Plymouth	Plymouth Railway Station - integrated access package		PT&H / Network Rail / TOC	LTP / Third Party
A Healthy Community	Managing air quality	Improving Air Quality - Stoke / Mutley Plain / Royal Parade		PT&H	LTP
	Managing and maintaining walking and cycling networks	Improved Pedestrian and Cycle Access to Life Centre		PT&H / PCC Parks / PCC Planning	LTP / Council / Third Party

National Transport Goal / LTP Objective	Approach / Issue	Measure	Delivery Timescale 2011 - 2012	Body Responsible for Delivery	Delivery Mechanism
	New infrastructure	Equality of Access Programme - Focused on improving access for disabled people		PT&H	LTP
		Strategic Cycle Network - Phased delivery		PT&H	LTP / Third Party / Tariff
		Neighbourhood Walking and Cycling Infrastructure		PT&H	LTP / Third Party
Promoting Equality of Opportunity	Public transport	Public Transport Information - Contribution to Traveline		PT&H / SW local authorities	LTP
		Public Transport Innovation - smart ticketing		PT&H / Bus Operators	LTP
Contributing to Better Safety and Security	Infrastructure and engineering	Neighbourhoods Safety and Minor Works		PT&H	LTP / Third Party
		Neighbourhood 20mph Zone - Trial neighbourhood in Whitleigh with potential citywide roll out		PT&H	LTP
Revenue					
Supporting Growth	Improve access to road, rail, air and sea networks which connect to locations beyond Plymouth	Tamar Crossings Study - Continuation of study to understand the future requirements of the Tamar crossings		PT&H / TB&TFJC / CCC / HA	Council / Third Party
All	Identification of projects for delivery between 2012 and 2014	Feasibility Studies - Development of schemes for delivery in years 2 and 3		PT&H	Council
Tackling Climate Change	Reduce the number of motorised trips	Smarter Choices - Development of packages of non-infrastructure measures which improve travel options and encourage sustainable choices		PT&H	Council
Promoting Equality of Opportunity	Accessibility planning	Continuation of accessibility planning work to increase equality of opportunity		PT&H	Council

Abbreviations

Abbreviations

AAP – Area Action Plan

ABP – Associated British Ports

AONB – Area of Outstanding Natural Beauty

AQAP – Air Quality Action Plan

AQMA – Air Quality Management Area

ASL – Advanced Stop Line for Cyclists

BVPI – Best Value Performance Indicators

CAA – Comprehensive Area Assessment

CCTV – Closed Circuit Television

CEO – Civil Enforcement Officer

CIF – Community Infrastructure Fund

CIL – Community Infrastructure Levy

CIP – Corporate Improvement Priority

CO_2 – Carbon dioxide

DAN – Disability Action Network

DCLG – Department of Communities and Local Government

DEFRA – Department for Environment, Food and Rural Affairs

DfT – Department for Transport

EETS – East End Transport Scheme

EU – European Union

GDP – Gross Domestic Product

GPS – Global Positioning System

GWML - Great Western Main Line

GWRUS - Great Western Route Utilisation Strategy

HA – Highways Agency

HGV – Heavy Goods Vehicle

HM – Her Majesty's

HMS – Her Majesty's Ship

HQPT – High Quality Public Transport

IDP - Infrastructure Delivery Plan

ITS – Intelligent Transport Systems

KSI – Killed or Seriously Injured

LDD – Local Development Documents

LDF – Local Development Framework

LES – Local Economic Strategy

LIP - Local Investment Plan

LTP – Local Transport Plan

LSOA - Lower Super Output Area

MfS – Manual for Streets

MOD – Ministry of Defence

MOT – Ministry of Transport

MOVA - Microprocessor Optimised Vehicle Actuation

NaCTSO - National Counter Terrorism Security Office

NGP – New Growth Point

NHT – National Highways and Transport customer satisfaction survey

NI – National Indicator

NMP – Network Management Plan

NO_2 – Nitrogen dioxide

ONS – Office of National Statistics

PACT - Police And Communities Together

PCC – Plymouth City Council

PCT – Primary Care Trust

Pm10 – Particulate matter of less than 10 millionths of a metre in diameter.

PPOV – Plymouth Points Of View survey

PROWIP – Public Rights Of Way Improvement Plan

RIF – Regional Infrastructure Fund

RSG – Revenue Support Grant

SCN – Strategic Cycle Network

SFRA – Strategic Flood Risk Assessment

SPD – Supplementary Planning Document

SSSI – Site of Special Scientific Interest

SW – South West

SWAMP – Surface Water Action Management Plan

TAMP – Transport Asset Management Plan

TPS – Transport Planning Society

TTWA – Plymouth Travel To Work Area

UKCIP – UK Climate Impacts Programme

VMS – Variable Message Signing

WHO – World Health Organisation

Glossary

Glossary

AAP - AAPs are development plan documents within the Local Development Framework (LDF) that focus upon a specific location or area subject to conservation or significant change. This could include a major regeneration project or a growth area. They provide an important mechanism for ensuring development of an appropriate scale, mix and quality. They also serve to protect areas sensitive to change, and aim to resolve conflicting objectives in areas subject to development pressures.

Accessibility Action Plan – Plan produced to improve peoples access to jobs and services

AQAP Air Quality Action Plan - Once an Air Quality Management Area has been declared, the council must develop an action plan which sets out how the air quality objectives will be met.

AQMA Air Quality Management Area - An AQMA must be designated under the Environment Act 1995, when, as a result of an air quality review, it is identified that any air quality standards or objectives are not being achieved in a particular area.

Barne Barton Accessibility Action Plan – Accessibility action plan focussing on the Barne Barton area of the city

Bikeability – Bikeability is the Cycling Proficiency Test for the 21st century, designed to give the next generation the skills and confidence to ride their bikes on today's roads. There are three Bikeability levels and children will be encouraged and inspired to achieve all three levels, recognising that there is always more to learn and to enjoy on a bike. http://www.bikeability.org.uk

Bike2Work – Government initiative enabling purchasers of new cycles to be tax exempt. http://www.bike2workscheme.co.uk

CAA – Comprehensive Area Assessments were set up as a more complete assessment process of local services after Comprehensive Performance Assessments (CPA), which only assessed local councils, were abolished in 2008. CAAs have now also been abolished.

Core Strategy –The LDF Core Strategy is required to set out the key elements of the LDF - its vision and strategic objectives, its spatial strategy, the core policies that apply to the whole area, and a monitoring and implementation framework. The time horizon will be at least ten years. It is one of the first Development Plan Documents to be prepared and other documents must be in conformity with it.http://www.plymouth.gov.uk/ldfcorestrategy

Development Guidelines SPD – provides a detailed set of guidance notes and considerations to assist with negotiations on planning applications covering a wide range of development issues.http://www.plymouth.gov.uk/ldfdevelopmentguidelines

Derriford Hospital Accessibility Action Plan (2010-2013) - This Plan deals not just with access to health care, but also promotes 'healthier' transport choices. It contains various targets including reducing the city's carbon footprint, increasing use of public transport, walking and cycling, and reducing gaps in life expectancy between neighbourhoods.

Eastern Corridor – relates to the area of the city from the City Centre to Langage including Plympton, Plymstock, Sherford New Community and Deep Lane / A38 interchange

Eddington Transport Study (2006) – Sir Rod Eddington was commissioned by the Treasury and the Department for Transport to look at a long term strategy for the UK's transport infrastructure, tied into the UK's productivity. http://collections.europarchive.org/tna/20100408160254/http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/

First Devon and Cornwall– Public Transport operator

First Great Western – Train Operating Company for Plymouth Railway Station and the suburban stations

Green Infrastructure Delivery Plan – developed and produced by the stakeholders involved in the protection and promotion of natural spaces including the City Council, National Trust, Natural England, Environment Agency and neighbouring authorities. It identifies the strategic interventions that need to be delivered by 2021 that will allow the city to grow sustainably, by creating new, enhancing existing and linking successfully existing Green Infrastructure assets. http://www.plymouth.gov.uk/gideliveryplan

Index of Multiple Deprivation –a measure of multiple deprivation at the small area level.The factors taken into consideration are income, employment, health and disability, education, skills and training, barriers to housing and services, crime and living environment.

Infrastructure Delivery Plan - a plan (currently under development) showing the infrastructure that is needed to meet the city's growth agenda and addressing the requirements for delivery.

ITS - comprises hardware and software information systems technologies used to tackle transport congestion and other problems.

Local Development Framework (LDF) - is the portfolio of documents that will replace the current Local Plan by 2007. It will include Local Development Documents such as a Core Strategy, Specific Allocations of Land, Area Action Plans (if needed), Proposals Maps, General Development Control Policies and Supplementary Planning Documents.

Local Economic Strategy 2006-2021 - This identifies the city as having a fragile and under-performing economy, and highlights that Plymouth must improve its economic performance, become more competitive and diversify its economic base in order to raise incomes and tackle economic and social exclusion. The report also states that Plymouth must change its perception of peripherality through better connectivity with other core cities and regional centres in Cornwall and Devon, and improve its image by promoting its cultural drivers and the city's attraction as a place to live, work and play.

Local Investment Plan - a plan highlighting and prioritising public sector investments to better coordinate delivery of strategic outcomes.

Lower Layer Super Output Area - SOAs are a new geographic hierarchy designed to improve the reporting of small area statistics in England and

Wales. Until now the standard unit for presenting local statistical information has been the electoral ward / division. However, this had drawbacks, such as the size of wards varying from less than 100 to over 30,000 residents and their boundaries being subject to regular changes. It was therefore decided to develop a range of areas that would be of consistent size and whose boundaries would not change. These were built from groups of the Output Areas (OAs) used for the 2001 Census, and were named Super Output Areas.

Major Schemes – Transport schemes costing greater than £5 million. Need to demonstrate positive benefits to cost ratios In transport planning terms a major scheme a transport scheme with a gross projected cost of greater than £5m.

MOVA – Microprocessor Optimised Vehicle Actuation developed to enable more efficient and responsive traffic signal control.

National Transport Goals – The DfT identified 5 key areas that LTP's should contribute towards. These being: supporting economic growth, tackling climate change, promoting equality of opportunity, better safety, security and health and improving peoples quality of life.

Network Rail – Body with ownership and responsibility for the UK railways

NMP – Network Management Plan

Northern Corridor – relates to the area of the city from the City Centre to Woolwell including Manadon interchange, Crownhill and Derriford

Passenger Focus – Independent body that assesses satisfaction with public transport http://www.passengerfocus.org.uk/

Peak Oil – this is the point of maximum oil production, after which extraction

permanently declines

Planning Obligations and Affordable Housing SPD – This SPD sets out the City Council's approach to planning obligations and affordable housing when considering planning applications for development in Plymouth. The objective of the SPD is to provide clarity regarding the basis on which planning obligations and affordable housing will be sought and provides details as to the type of obligations that may be required, sets out formulae and thresholds where appropriate and indicates the relative importance that the Council might place on the varying types of obligation in different parts of Plymouth.http://www.plymouth.gov.uk/planningobligations2008

Plymouth Development Tariff – The Planning Obligations and Affordable Housing SPD established the use of a tariff to charge for planning obligations. The tariff provides a clear and predictable system for applying planning obligations to each planning application. The tariff is based on the net increase in housing or commercial floor space created by a development.

The tariff identifies costs as a result of increased demand on local infrastructure and services created by new housing and commercial developments.

Plymouth 2020 Local Strategic Partnership (LSP) – A local strategic partnership brings together at a local level the different parts of the public sector (such as the local council, the police and health service) the private sector (local businesses) and third sector (community and voluntary organisations) so that common issues such as health and well-being can be tackled together.Plymouth's LSP is called the Plymouth 2020 LSP because of the commitment to achieve its vision by the year 2020. http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020

Plymouth Metro – Increase use of the local rail network

Plymouth Neighbourhood Renewal Floor Target Action Plan - Health (2006) recommends a focus on neighbourhood health inequality with an emphasis on primary and secondary prevention and the treatment of cancers and circulatory disease in Stonehouse, North Prospect, Keyham, Devonport, Barne Barton, Efford, Honicknowle and St Budeaux in particular.

Public Rights of Way – A public rights of way (PRoW) is a way over which all members of the public have a right of passage. Public rights of way are legally highways and are afforded the same provisions under the Highways Act 1980 as any highway maintainable at public expense. There are 4 types of public rights of way: footpath, bridleway, byways open to all traffic (boats) and roads used as public paths. http://www.plymouth.gov.uk/prow

Quality Contract Schemes (QCS) -The approach of implementing a QCS represents a radical departure from the current deregulated framework under which bus services are currently provided in the UK (except London). The creation of a QCS is a statutory process where a local authority, or two or more authorities acting jointly, determine what local bus services should be provided in the area to which the scheme relates and any additional facilities and services which should be provided in the area. QCS can have a substantial effect on the operators of existing services within the area of the scheme and therefore require the preparation of a demonstrable, evidence-based case involving extensive consultation, a fact which alone has contributed to no local authority so far actually exercising these powers. The Council is currently unable to demonstrate that a QCS would be in the public interest the implementation could have adverse impacts on operators which will have to be duly taken into consideration by the local authority.

Quality Partnership Schemes (QPS) - Introduced by the Transport Act (2000) as means by which a local authority could agree to invest in improved facilities at specific locations along bus routes, such as bus stops and bus priority lanes and that bus operators who wish to use these facilities must agree to provide services of a particular standard including new

buses or enhanced driver training standards. Now included within QPS since the Transport Act (2008) as part of giving local authorities wider and stronger powers, is the ability to include the specification of service frequencies, timings and maximum fares as long as those requirements are not deemed unreasonable and where there are no admissible objections from other relevant bus operators.

Section 106 – Section 106 agreements are legal agreements between a planning authority and a developer, or undertakings offered unilaterally by a developer, that ensure that certain extra works related to a development are undertaken e.g. junction improvements or contributions are collected to cope with increased traffic movements caused by the development.

Smarter Choices (DfT) - techniques for influencing people's travel behaviour towards more sustainable options such as encouraging school, workplace and individualised travel planning. They also seek to improve public transport and marketing services such as travel awareness campaigns, setting up websites for car share schemes, supporting car clubs and encouraging teleworking.http://www.dft.gov.uk/pgr/sustainable/smarterchoices/

Sustainable Community Strategy – This strategy focuses on the long-term sustainability of our city and our plans for future generations. It sets out how Plymouth will fulfil its potential to become one of Europe's most vibrant cities and how, by working closely together, we can achieve greater things for the people who live, work or visit us in Plymouth. http://www.plymouth.gov.uk/sustainablecommunitystrategy

Sustainable Neighbourhoods Development Plan Document - These plans will show all the major sites not included in the Area Action Plans that might be required to meet Plymouth's needs for homes, jobs, shopping and recreation – as outlined in the LDF Core Strategy.http://www.plymouth.gov.uk/ldfsiteproposals

Sustainable Travel Towns (DfT) –5 year project aiming to demonstrate the effect a sustained package of *'Smarter Choice'* measures can have when coupled with infrastructure improvements. Darlington, Peterborough and Worcester were the towns selected for the project.http://www.dft.gov.uk/pgr/sustainable/demonstrationtowns/sustainabletraveldemonstrati5772

TamarValley Line – Plymouth to Gunnislake railway line

TAMP – Transport Asset Management Plan

Trans-European Network(TENS) – Construction of the trans-European transport network (including road, rail and sea links) aims to improve the

interconnection and interoperability of national transport networks. It is regarded as contributing to the implementation and development of the EU Internal Market, the re-enforcement of economic and social cohesion, increased economic competitiveness and more balanced and sustainable development of the European Union.

Travel To Work Area – A broadly self-contained labour market area usually focused on an urban employment centre. Plymouth's TTWA broadly covers the area from Liskeard in the west, Tavistock in the north and Kingsbridge, Ivybridge and Totnes in the east.

Western Corridor – relates to the area of the city from the City Centre to south-east Cornwall

www.plymgo.com – jouney planning and healthy lifestyle website

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