Delivering Strategies

Central Lancashire Transport Study

Report for South Ribble Borough Council & Partners

In Association With GVA Grimley

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Summary

MVA was commissioned by South Ribble Borough Council and its partners to develop a transport strategy capable of delivering an efficient transport network, which would accommodate future travel demands generated by the new development throughout the area. Modern day activities generate substantial demands for the movement of both people and goods and thus in order to deliver an efficient transport network capable of supporting the proposed development of the 'city region', it was recognised that a cross-boundary study would be required, incorporating the following districts:

- Chorley;
- Preston; and
- South Ribble.

The objectives of the study as outlined in the brief and agreed at the inception meeting were:

- To outline proposals for future development of a public transport network that will provide for forecast future travel arrangements;
- To identify proposals for the development of a cycle and walking network and other measures to deliver an increase in active travel;
- To review road capacity to identify any forecast pressures on the transport network that cannot be dealt with through increased use of public transport, cycling and walking and to recommend appropriate measures to improve capacity;
- To provide input into the LDF Infrastructure Plan and Community Infrastructure Levy; and
- To provide costings for proposed measures and possible funding measures, with delivery dates and phasing.

Tasks undertaken throughout the course of the study included:

- Baseline reviews of the current transport networks;
- Consultations with relevant parties;
- Identification of key development sites;
- Development of emerging transport schemes for further consideration;
- Preliminary costing of emerging transport schemes; and
- Implementation including delivery and funding mechanisms.

Problems & Issues

The work identified a number of problems and issues that the future transport strategy for Central Lancashire will need to address, the main ones being outlined in the following paragraphs.

In South Ribble and Chorley, car ownership levels are higher indicating a higher dependence on the car for journeys to work and other tips. Whilst car ownership is not necessary a problem in its self, dependency on the car can be a major contributor to congestion and places increased pressure for residential, workplace and town/city centre parking.

The study area is well served by a number of principle roads making driving often easier and more attractive than alternative modes and this is also further compounded with out of town developments that are often easier to access by car. Some of these roads also form barriers to communities, pedestrians and cyclists giving rise to severance. For instance Bamber Bridge feels disconnected from the rest of the Borough as it is bounded by the motorway and the A6.

The approach routes into Preston are already experiencing highway capacity problems during peak periods particularly at pinch points such as river crossings and this is forecast to get worse (Table 4.6). In Chorley and South Ribble, congestion tends to be more localised and is often confined to specific junctions e.g. Chorley Hospital, Tardy Gate. Congestion can have a negative impact on the local economy as it affects the reliability of employees being able to get to work on time, on retail as shoppers may decide to go to alternative retail centres that are easier to access, and congestion can also have a negative impact of the delivery of goods and services.

A pattern of development that tends to focus on developing land around motorway junctions places increased pressure on the strategic trunk road network. The M6 between Broughton and junction 31 is nearing capacity during peak periods and therefore any future developments will need to incorporate mitigation measures in order to minimise the impact on the strategic road network.

Preston has a well developed network of local buses services and some of these have been improved through a program of quality bus partnerships, and DfT Kickstart funding enabled the introduction of the Orbit services. In general, the existing bus network has been developed to serve the local market of Preston, though there are some inter-urban services, which are generally provided by a different operator.

In Chorley, DfT funding has also enabled the introduction of Network Chorley whilst the network has seen increases in patronage it is unlikely that the network will be commercially viable by the end of the DfT funding period. Therefore, the exit strategy will involve some continued financial support from Lancashire County Council in conjunction with a network review to ensure that services are operating within financial constraints.

South Ribble does not have its own local bus network as all the services with the exception of the South Ribble Flexibus pass through South Ribble either on their way to Preston or Chorley. In addition, the east-west connections by public transport within the borough tend to be poor.

There are no network or joint ticketing initiatives currently in operation within the study area, not even on services operated by more than one operator e.g. Service 109 operated via Buckshaw. The north south bus routes between the main urban areas are fairly well established but these are often not the most direct of routes and journey times when compared to car trips are not attractive.

Rail stations suffer from a variety of access issues that range from the lack of parking provision through to poor pedestrian and cycling links between the town/city centres and major employment areas e.g. Bamber Bridge, UCLAN. There are also capacity issues on services to Manchester and the timings between Transpennine and Northern Rail services would benefit from reviewing in order to provide a more attractive offer, as sometimes there is only 5 minutes between successive services.

Cycling and walking will offer more benefits for shorter journeys but if walking and cycling is to be encourage, then the supporting infrastructure needs to reflect this. This will involve making urban centres and residential streets more attractive for walking and cycling. Cyclists and pedestrians natural desire lines are often constrained by the orientation of the road network which creates barriers to such movements.

Within the study area, trips by car have continued to have the advantage to such an extent that other modes of transport have become relatively less attractive by comparison. If the imbalance is to be readdressed then radical improvements to infrastructure, improvements to transport services complemented by a mix of incentives and disincentives, need to be implemented to ensure that the existing congestion issues due not increase and that the residents of Central Lancashire are able to access a range of complimentary transport alternatives and make informed choices about how they choose to travel.

Proposed Package of Measures

The future travel demands of the area can only be satisfied by the introduction of a package of measures and it is not intended to introduce measures aimed at disadvantaging the motorists as the car is an integral component of modern day society. However, the provision of increased highway capacity tends to only deliver short-term gains and can actually generate substantial disadvantages for other modes of transport. Therefore the transport strategy for Central Lancashire proposes a comprehensive package of measures, which considers all modes of transport and aims to provide interventions appropriate to the respective areas and the associated demands for travel. The measures identified include:

- Public transport improvements;
- Highway improvements;
- Cycling and pedestrian measures;
- Travel Plan measures;
- Demand management measures; and
- Assistance for the movement of freight.

The strategy has been designed to provide a mix of short, medium and long term measures to ensure on-going public and political support. The measures also need to consider future travel demands likely to be generated from new developments and the planned phasing of new infra-structure. Therefore, the strategy has considered the following time periods:

- Short term – between 2008 and 2013;
- Medium term – between 2013 and 2018; and
- Long term – between 2018 and 2028.

The measures proposed need to be complimentary and delivered in a holistic manner so as not to promote competition between different modes e.g. rail and bus.

The measures outlined below are initial scheme suggestions for further consideration and are not finalised detailed scheme designs.

Implementation

We have estimated the initial costs in the short, medium and long term to be:

- Short Term (2008-2013) - £59.5 million;
- Medium Term (2013-2018) - £86.6 million; and
- Long Term (2018 – 2028) - £110.5 million.

In order to successfully deliver the proposed initial transport schemes a significant amount of investment will be required. Possible funding mechanisms are likely to include:

- Mainstream public sector funding sources;
- Current private sector funding sources; and
- Alternative funding sources.

In order to deliver the proposed schemes the following will be necessary:

- Sufficient staff resources;
- Political support; and
- Public support.

Therefore it is recommended that a project manager is appointed to drive forward the finalised schemes and strategies for Central Lancashire

Recommendations & Further Work

If no intervention is taken then traffic levels will continue to grow and the existing congestion problems around Preston will continue to get worse.

Given the considerable advantage that the car already has the profiles of public transport services and other modes needs to be raised requiring a step change in the local transport networks.

The schemes presented in this report are emerging schemes for further consideration and are not detailed finalised schemes and will need to be investigated further if a robust business case is to be produced. However, in order to undertake the required level of analyses which will be required to fully evaluate potential interventions and the impact of future traffic movements, then it will be necessary to develop a multimodal land use transport model. The utilisation of such a tool will also be essential in order to produce the required evidence to support any bids for major funding from central government.

1 Study Background

1.1 Introduction

1.1.1 MVA was commissioned by South Ribble Borough Council and the following partners to undertake a transport study:

- Chorley Borough Council;
- Lancashire County Council; and
- Preston City Council.

1.2 Study Area

1.2.1 For the purposes of this study the area incorporated the districts of:

- Chorley;
- Preston; and
- South Ribble.

1.2.2 The area is collectively known as Central Lancashire

1.3 Study Objectives

1.3.1 The objectives of the study as outlined in the brief and agreed at inception were:

- To outline proposals for future development of a public transport network that will provide for forecast future travel arrangements;
- To identify proposals for the development of a cycle and walking network and other measures to deliver an increase in active travel;
- To review road capacity to identify any forecast pressures on the transport network that cannot be dealt with through increased use of public transport, cycling and walking and to recommend appropriate measures to improve capacity;
- To provide input into the LDF Infrastructure Plan and Community Infrastructure Levy; and
- To provide costings for proposed measures and possible funding measures, with delivery dates and phasing.

1.4 Tasks Undertaken

1.4.1 A detailed methodology has been described in the Inception Report. Below is a summary of the key tasks that have been undertaken during the course of this study:

- Baseline reviews of the current situation;
- Consultations;

- Review of key development sites;
- Development of emerging transport schemes for further consideration;
- Preliminary costing of emerging transport schemes; and
- Implementation including delivery and funding mechanisms.

1.5 The Report Structure

1.5.1 Following on from the introduction, the report is structured as follows:

- Chapter 2 Policy Context;
- Chapter 3 Baseline Reviews;
- Chapter 4 Development Sites;
- Chapter 5 Transport Strategy;
- Chapter 6 Implementation;
- Chapter 7 Funding; and
- Chapter 8 Recommendations & Further Work.

2 Policy Context

2.1 Introduction

2.1.1 This section of the report provides an overview of the key regional and local policy documents with transport implications relevant to the Preston, South Ribble and Chorley study area.

2.1.2 The following policy documents are summarised:

- Draft North West Regional Spatial Strategy (RSS);
- North West Regional Economic Strategy;
- Central Lancashire Local Development Framework (LDF) Core Strategy;
- Lancashire Local Transport Plan (LTP);
- Joint Lancashire Structure Plan;
- Draft Preston and South Ribble '2028' Transport Strategy.

2.1.3 Where applicable, policies and measures specifically relating to Preston, South Ribble and Chorley are outlined.

2.2 Draft North West Regional Spatial Strategy (RSS)

2.2.1 The Regional Spatial Strategy (RSS) for the North West of England provides the overarching framework for the planning and development of the region for the next 15 to 20 years. The RSS itself forms part of each local authority's development plan and feeds directly into the Local Development Framework's (see subsequent section). Clearly spatial planning is closely interconnected with transport with the location of houses, places of employment, leisure and retail facilities influencing how people travel.

2.2.2 The Regional Transport Strategy (RTS) is also incorporated within the RSS and aims to:

- Support economic growth and business competitiveness through the introduction of a range of measures to tackle congestion;
- Support regeneration and reduce social inclusion through the development of integrated transport networks and enhancing access to key employment locations;
- Improve public realm through the introduction of a range of measures to manage travel demand;
- Reduce the wider impacts of road transport through the development of a structured framework for managing and improving the region's highway network; and
- Set a framework for a high quality integrated public transport network and safe and attractive routes for cycling and walking.

2.2.3 A key aspect of the RSS, and one which is reflected in most national, regional and local policy documents, is the policy of encouraging major new developments to be located in the most accessible urban centres in the region. This pattern of development, together with measures to improve public transport provision and to manage the demand for car use, can help to encourage

sustainable travel modes in preference to the private car and also to reduce the need to travel in general.

2.2.4 The RSS provides indicative volumes and locations of land to be used for development for employment, housing, retail and other land-uses. Development should be located following a sequential approach whereby previously used land is prioritised for development, followed by the use of infill within existing settlements and finally the development of other land where it is well connected to relevant services and infrastructure.

2.2.5 The RSS sets out a location strategy for developments of major significance, known as 'Regional Investment Sites' (RIS) and 'Knowledge Nuclei Sites' (KNS). Within the Central Lancashire study area, North West Chorley and North of Leyland / Bamber Bridge are identified as broad locations for the RIS's while Central Preston is set aside to be a KNS.

2.2.6 Regional car parking standards are outlined within the document, although these have since been further developed by the North West Regional Assembly in a report produced with consultants Mouchel. The Mouchel report, published in early 2008, advances the parking standards for new developments and attempts to make standards more flexible in order to account for the accessibility of a given location.

2.2.7 Part 4 of the document outlines sub-regional policy frameworks, including the Central Lancashire City Region. Within this region, key economic growth should be focused on Blackpool, Blackburn, Burnley and Preston. Indeed the wider Preston area is seen as having the greatest potential for growth, due in part to its location on major North-South and East-West communication routes. The proposed plans and strategies in the Central Lancashire City Region will:

- Improve the internal and external transport links;
- Develop the role of Preston as the City Region's transport 'gateway' and key public transport interchange;
- Improve the accessibility of key employment locations;
- Improve road safety, manage traffic growth and maintain a high-quality environment through mitigating the impacts of road traffic on air quality, noise and health.

2.3 North West Regional Economic Strategy

2.3.1 The North West Regional Development Agency (NWDA) led the development of the Regional Economic Strategy (RES) for the region, which has the overall objective of continuing the transformation of the regional economy which began in 2000. Also at the heart of the strategy is the aim of achieving development in a sustainable way.

2.3.2 Three major drivers for the growth of the region are identified as being:

- Improving productivity and growth of the market;
- Growing the size and capability of the workforce; and
- Maintaining conditions for sustainable growth.

2.3.3 Part of the vision for the RES identifies Preston, together with Manchester and Liverpool, as being a key driver of city-regional growth.

2.3.4 Transport is also identified as having a key role in maintaining and developing conditions for sustainable growth. The growth objectives are likely to be inhibited by worsening traffic and congestion on the region's highway network.

2.3.5 The Lancashire sub-region, of which Preston, South Ribble and Chorley forms a part, is said to have been characterised by steady growth in employment in recent years. It is also noted that there have been significant differences in growth rates between parts of East Lancashire and the more dynamic area around Preston. Again, Preston is noted as being a key location for knowledge-based employment, with fast growth in high-tech, ICT and new media occupations.

2.4 Central Lancashire Local Development Framework (LDF) Core Strategy

2.4.1 The three Councils of Preston, South Ribble and Chorley, under the title 'Central Lancashire' are working together on the Core Strategy of the Local Development Framework (LDF). An LDF consists of a 'folder' of Development Plan Documents (DPD) that outlines the spatial planning strategy for the local area. The Core Strategy document is one of the required documents in the LDF.

2.4.2 The Core Strategy should play a key part in setting out an area's spatial aspects and providing a long-term spatial vision for the area. Core Strategies should outline a Council's strategy for delivering strategic development needs, including for housing, leisure and retail. A Core Strategy should only indicate broad locations for land use, which will be taken forward in more detail in other development plan documents.

2.4.3 The **First Issues and Options Paper** for the Central Lancashire Core Strategy was published for consultation in November 2006, with the consultation period running until the following March. This document marked the beginning of the consultation on the Core Strategy and focussed on a range of key 'themes', including 'Locating New Development', 'Meeting Housing Needs' and 'Improving Accessibility'. The responses from this consultation showed that further work was required in order to develop possible options for the development of the area.

2.4.4 The **Second Issues and Options Paper** progresses the Core Strategy and discusses the spatial issues that affect the different 'communities' within the region. The report also includes an outline of existing travel patterns between the communities of Central Lancashire. The importance of Preston City in terms of employment for residents of South Ribble and, to a lesser extent, Chorley is shown within the 2001 Census Travel to Work patterns.

2.4.5 The document culminates in the presentation of three potential 'spatial options' for the area, which are outlined below together with a brief summary of the principles behind them:

- **Focus growth in Preston City and the other main urban areas** – development located in main urban areas that are better served by public transport links and this option also reduces the requirement for Greenfield land. This option, in general, appears to be more closely related to national and other regional policies;
- **Target growth to a few priority urban locations but protect suburban areas** – investment in largest urban areas and in locations with the best growth potential.

Development will also be required on significant areas of Greenfield land as it is proposed suburban areas will be 'protected' from development; and

- **Spread growth between all the main urban areas and identified rural service centres** – growth and provision of services also targeted in certain 'rural centres' which may better serve local communities.

2.4.6 The document summarises the potential outcomes of each of the options for the different areas of Central Lancashire and also discusses the possible social, environmental and economic impacts of the options.

2.4.7 The document presents a balanced argument for and against each option and does not attempt to express a favourite option. It concludes by opening a further consultation exercise on the three options.

2.5 Lancashire Second Local Transport Plan (LTP2)

2.5.1 Lancashire County Council submitted its second Local Transport Plan (LTP2) covering their transport plans for the period between 2006 and 2011. The Plan has the following seven key objectives:

- Reduce road casualties;
- Improve access to jobs and services;
- Improve air quality;
- Improve the condition of transport infrastructure;
- Reduce delays on journeys;
- Increase journeys by bus and rail; and
- Increase active travel.

2.5.2 A key tenant of the LTP relates to the ongoing development of an accessibility strategy for the region. The LTP recognises the importance accessibility can play in modern society and in reducing social exclusion by facilitating access to work, education, healthcare and affordable, healthy food.

2.5.3 The first LTP outlined Lancashire's long-term vision for a Total Transport Network (ttn) for Preston and South Ribble. The ttn is a sustainable integrated transport network that brings together new technology and traditional transport solutions to provide an integrated network. During the first LTP period progress was made toward a ttn with the opening of Park & Ride sites for Preston as well as the introduction of Quality Bus services on three corridors. The LTP2 will take on the development toward the ttn with £4.2million assigned for investment over the LTP2 period. This will include the promotion of sustainable transport modes with new vehicle technologies for buses (including hybrid vehicles), congestion reducing measures and innovative information systems.

2.5.4 There are several other schemes, strategies and policies specifically identified for the areas of Preston, South Ribble and Chorley. These are summarised for each district below:

Preston

2.5.5 Consultation between Lancashire County Council, the Local Strategic Partnership and Preston City Council has resulted in the following key schemes for Preston:

- Preston North Park & Ride schemes including highway improvements at M55 Junction 1;
- CiVITAS Sustainable Transport Project (CiVITAS is a European Union programme aimed at promoting sustainable transport options);
- Preston Guild Wheel Cycle Route and City Centre Cycle Hub;
- Preston Air Quality Junction improvements; and
- Preston Bus Station.

South Ribble

2.5.6 The key schemes for South Ribble have been developed during consultation with South Ribble Borough Council and are shown below:

- Leyland Town Centre Regeneration;
- Tardy Gate AQMA Action Plan;
- Bamber Bridge Public Transport Initiatives;
- Accessibility Improvements to Employment Areas to Hospitals; and
- School Travel Plan Package.

Chorley

2.5.7 The key schemes for Chorley, developed together with Chorley Borough Council, include:

- Eaves Green Link Road;
- Chorley Connect Department for Transport (DfT) Kickstart Bus Project;
- Buckshaw Parkway Park & Ride;
- Chorley Pedestrian Priority, Access and Parking; and
- Accessibility Study of Chorley Borough.

2.5.8 At the time the LTP2 was submitted, potential Major Scheme bids to be considered in the future included the A59 Penwortham Bypass.

2.6 The Replacement Joint Lancashire Structure Plan 2001 – 2016

2.6.1 The Replacement Joint Lancashire Structure Plan (JLSP) outlines strategic policies and proposals for the development, use and conservation of land in Lancashire. It also sets out the anticipated amount, and general location, of development required to meet the future needs of Lancashire's population. When the Regional Spatial Strategy (RSS) is fully adopted the JLSP will be superseded.

2.6.2 A settlement hierarchy is presented within the document with the majority of development to be directed to the 'Principal Urban Areas' of Blackburn, Blackpool and the Fylde Coast, Burnley, Lancaster / Morecambe and **Greater Preston**.

2.6.3 Levels of housing and business land provision are identified for each district up until 2016. The Royal Ordnance site at Euxton near Chorley is also identified as a Strategic Location for Development.

2.6.4 Five broad policies are also discussed within the 'Accessibility and Transport' section of the JLSP. These policies are:

- **Parking** – aim to restrict and gradually reduce long-stay provision in major centres, priority to short-stay provision and bus-based Park & Ride scheme development;
- **Strategic Road Network Proposed Improvements** – including pursuing possibility of Broughton Bypass and Penwortham Bypass;
- **Rapid Transport Systems in Regeneration Priority Areas** – not directly relevant to Central Lancashire study area;
- **Rail and Bus Improvements** – provision to be made for new rail stations Cottam, Midge Hall, Royal Ordnance (Euxton) and Coppull and a new public transport interchange at Preston; and
- **Freight distribution** – development involving requirements for significant distribution to be located in places with good access to the strategic road network and, wherever possible, ports and the rail network.

2.7 Draft Preston and South Ribble 2028 Transport Strategy

2.7.1 The Preston and South Ribble 2028 Transport Strategy document describes a range of policies and proposed measures aimed at improving transport for people in the two areas. The Strategy recognises the need to move journeys away from the private car and toward more sustainable modes of transport. This involves the creation of the Total Transport Network (ttn). The long-term Strategy is based on the example of the integrated transport system in the city of Curitiba, Brazil.

2.7.2 The Strategy has the following overarching objectives:

- Reduce the negative impact we have on our planet;
- Promote economic activity and vitality and improve social inclusion;
- Play its part in improving local environmental quality and quality of life;
- Improve accessibility for all forms of transport and to provide a wider choice of quality transport modes;
- Maintain good accessibility for all, both to and within the city;
- Provide a strong link between land use planning and transport provision;
- Improve personal safety and security;
- Improve accessibility for vulnerable users; and

- Promote the efficient use of scarce resources.

2.7.3 The document sets out the transport strategy in two broad sections with the first focusing on efforts to change attitudes and behaviour. The second section outlines policies and infrastructure improvements for:

- Public transport;
- 'Streets for people';
- Cars;
- Cycling; and
- Freight.

2.7.4 Key developments outlined within the public transport section of the Strategy include the redevelopment of Preston rail and bus stations and improved interchanges between the two, improved cross-city routing patterns, new bus priority measures and the development of new Park and Ride sites to the south of Preston and in South Ribble.

2.7.5 The 'Streets for People' section of the Strategy outlines plans to create safer signed walking routes, to improve crossing facilities for pedestrians, to calm traffic in appropriate places and to generally put pedestrians and cyclists at the top of the street hierarchy, rather than motorised vehicles.

2.7.6 With regards to the highway network, it is viewed in the Strategy that major road building is not a realistic response to the problems facing urban transport, unless this building includes significant improvements for public transport efficiency. However, the Strategy includes a range of policy commitments to better maintain and manage the existing network with focus on improving the efficiency of the Ring Road (Ringway) and in improving signage. The Strategy states that long-stay parking will be restricted in order to limit increase in commuting by car, although short-stay parking will be accommodated to encourage visitors.

2.7.7 It is anticipated that in 2009 this strategy will be adapted to include Chorley, which is currently not included within the 2028 Transport Strategy document.

2.8 Central Lancashire, Blackpool Growth Point Bid

2.8.1 The New Growth Points initiative is designed to provide support to local communities who wish to pursue large scale and sustainable growth, including new housing, through a partnership with Government.

2.8.2 In October 2007 a submission was made on behalf of the councils of Preston, South Ribble, Chorley, Blackpool and Lancashire to the Department for Communities and Local Government outlining an accelerated housing growth programme, which would stimulate further economic growth and regeneration.

2.8.3 The submission proposed to deliver almost 20,000 homes by 2016 offering a mix of types in sustainable locations. The bid was centred on an enhanced public transport provision and a more efficient urban transit system although new highway infrastructure was identified as part of the bid to unlock certain sites, which are currently constrained. The bid also high-lighted the need to develop a multi-modal transport model for the area.

2.8.4 The transport priorities recommended as part of the bid were:

- Enhancing public transport connections between Preston and Blackpool;
- Improvements to Preston Rail Station;
- Urban transit system along more congested routes into Preston;
- New bus station in Preston City Centre;
- New Railway Stations (including Buckshaw Parkway);
- Inter-linked Park & Ride sites;
- Partnership working to promote more sustainable forms of transport; and
- Longer term (beyond 2016) – provision of new highway infrastructure to support developments to the south and west of Preston

2.8.5 The partners are currently working on developing a Programme of Development for the next phase of the Growth Point process following the announcement that the initial expression of interest submitted in 2007 was successful.

2.8.6 The designation of Central Lancashire and Blackpool as a growth point area has also enabled transport infrastructure projects to be put forward as expressions of interest for the Community Infrastructure Fund Round 2. These are outlined in more detail in the chapter on funding (Chapter 7).

2.9 Summary

2.9.1 This section has summarised the most relevant regional and local planning and transport policies relating to the Preston, South Ribble and Chorley Transport Study.

2.9.2 In general regional policies wish to see major development focused on the main urban centres in the region, particularly in the city of Preston. This closely follows key national policies.

2.9.3 Current policy documents recognise the need for transport improvements within the region in order for the forecast economic growth to be successfully managed and maintained. Of key importance, particularly relating to the national sustainability agenda, are improvements to the public transport network in the area. Major improvements to this include the ongoing development of the Total Transport Network (ttn) and improvements to local bus and rail interchange facilities.

2.9.4 Some improvements to the local highway network are proposed within local policies although greater attention is paid to managing demand rather than wholesale capacity improvements. Parking management strategies are one such demand management technique with proposed restrictions on the growth of long-stay parking provision in favour of short-stay, which will favour short based shopping trips to the town and city centres.

3 Baseline Reviews

3.1 Introduction

3.1.1 This section of the report summarises the following current baseline reviews that were undertaken as part of this study:

- Socioeconomic Review;
- Review of Travel to Work;
- Public Transport Services;
- Cycling & Pedestrian Review;
- Road Network Review; and
- Car Parking Review.

3.2 Socioeconomic Review

3.2.1 There are approximately 334,000 people living in the three districts that make up the Central Lancashire study area. Just over half the population are aged between 24 and 64 years old and 35% are either under 15 yrs or over 65 yrs - this group are traditionally more dependent upon public transport services. The 16-24 age group make up 10-14% of the population across the three districts. This population is slightly higher in Preston due to the University of Central Lancashire (UCLAN).

3.2.2 The number of students attending UCLAN is about 35,000 with approximately 3,000 staff. The wards surrounding the university have the highest number of student residents indicating a preference to live within walking distance of the campus. Traditionally student's primary mode of transport tends to be walking or cycling.

3.2.3 In Chorley and South Ribble there are a lower percentage of people living on their own but a greater proportion of households with 2-4 people. In Preston 63% of households consist of 1-2 people. Household composition has important consequences for car ownership and residential parking.

3.2.4 Household forecasts between 2003 and 2006 predict that most of the growth will be in Chorley and South Ribble with a slower rate of growth in Preston.

3.2.5 Areas with the highest levels of car ownership tend to be to the north and the east of the study area. However in rural communities even households with access to one car can experience social exclusion particularly when the primary wage earner needs the car for commuting to work.

3.2.6 Pockets of education and skills deprivation exist in all the boroughs of Central Lancashire, this is particularly evident east of Preston city centre with several wards falling into the 10% of the most deprived in the country.

3.2.7 Areas where there is significant exportation of labour are characterised by high levels of car ownership and travel to work by car. Some of these are rural areas where the public transport alternative may not be a viable option.

3.2.8 Preston city centre exhibits different characteristics to the rest of the study area. The presence of the university means a much larger proportion of the population are students, there are also considerably lower car ownership levels and the centre is a large importer of labour. However these wards also have some of the lowest average household incomes in the study area.

3.2.9 The wards on the periphery of the three districts, particularly to the east and north of the study area e.g. Pennine and Chisnall have much sparser populations than the urban areas, but higher average household incomes and car ownership. These areas are characterised by having few jobs available locally so are high exporters of labour.

3.2.10 Outside of these two groups there are a number of other wards, mainly in the suburbs of Preston and the urban centres of Chorley, Bamber Bridge and Leyland. They typically show some of the economic and social characteristics of Preston city centre, although unemployment rates are lower and household income levels are moderately higher.

3.3 Travel to Work

3.3.1 The journey to work data by mode and district are presented in table 3.1 focuses on the district's resident population – the population that live in the particular district.

Table 3.1 Journey to work modal choice - Resident population (Census 2001)

Method of travel	England and Wales	Chorley	Preston	South Ribble
Work mainly from home	9.2	9.3	7.4	8.1
Drive car	55.2	65.5	55.9	64.6
Car passenger	6.3	7.3	7.5	7.4
Bus	7.4	3.3	11.2	5.8
Train	4.1	1.8	0.7	1.0
Motorcycle	1.1	1.0	0.9	1.3
Bicycle	2.8	1.8	2.6	3.9
Walk	10.0	9.2	12.9	7.2
Other	4.0	0.8	0.9	0.7

3.3.2 Modal choice in Chorley and South Ribble are very similar with around 72-73 percent of the resident population travelling to work by car. In Preston this figure is lower because a smaller percentage of people drive a car to work. This is reflected in higher levels of bus travel and walking to work.

3.3.3 Preston has the highest levels of bus travel at 11.2 percent, more than 3 times the level in Chorley. It has also the highest percentage of people walking to work, but the lowest levels using the train.

3.3.4 Table 3.2 summarises the travel to work data for key origins and destinations. From this it is possible to identify the journeys that are contained within the local area and the level of out-commuting.

3.3.5 A number of key points emerge from the data presented in Table 3.2:

- The majority of journeys to work start and end in Preston, suggesting significant retention of labour in Preston district;
- In Chorley approximately half of the population work within Chorley District and the other half commute to the surrounding areas particularly Manchester City Region (16%), Preston (11%) and South Ribble (13%);
- As the major population and economic centre in Central Lancashire, Preston draws in large numbers of workers from the surrounding authorities. This is most notably the case with neighbouring South Ribble with over 14000 journeys a day made to Preston. In contrast only 4149 people travel in the opposite direction;
- Although significant numbers travel from Chorley to Preston and South Ribble to work, the largest destination for workers from Chorley is the Manchester City Region. This is possibly explained by Chorley's closer proximity to Manchester and well developed road and rail links from the town; and
- The three main origins of journeys to Chorley are South Ribble (3,728), Manchester (3,694) and Preston (1,100).

3.3.6 A number of findings can be drawn from the journey to work data:

- The majority of journeys to work in Central Lancashire are made by car (over 70% in Chorley and South Ribble);
- Over 10% of journeys to work are by bus in Preston but figures for Chorley and South Ribble are much lower. This could be accounted for by a range of factors including less comprehensive services, longer more complicated journeys and the availability of free workplace parking;
- Figures for walking and cycling combined are around 10 percent in all three districts;
- Preston, as the largest urban centre in Central Lancashire draws in labour from across the area;
- other employment centres were identified in Leyland, Chorley town centre and at Walton Summit; and
- South Ribble in particular has high levels of out-commuting compared to the other two districts in the study area. Preston is more self sufficient and a large number of residents, particularly in Chorley, commute to Greater Manchester.

Table 3.2 Travel to work Data (Census 2001)

Destination >	Total	Chorley	Preston	South Ribble	Fylde	Ribble Valley	Blackburn	Manchester City Region	Liverpool City Region
Origin \/									
Chorley	47312	24589	5021	6300	660	466	1458	7702	1116
Preston	53279	1100	39067	4149	3592	1630	821	2080	840
South Ribble	49371	3728	14752	23317	1995	1044	1085	2610	840
Fylde	3659	219	2825	615	-	-	-	-	-
Ribble Valley	2990	517	2272	201	-	-	-	-	-
Blackburn	3183	525	1669	989	-	-	-	-	-
Manchester City region	9619	3694	3339	2586	-	-	-	-	-
Liverpool City region	2855	690	1342	823	-	-	-	-	-

3.4 Public Transport Services

Local Bus Services

3.4.1 Preston is well served by a number of frequent local bus services mostly operated within the urban area by Preston Bus. Most of the roads within Preston suffer from congestion to some degree which seems to be attributable to the historic layout of some of the streets but also there are some issues with signalisation and lack of priority for buses.

3.4.2 However as Preston develops there will be a requirement to give greater priority to local bus services along key corridors. We anticipate that service enhancements will involve extra capacity during peak periods, some service diversions or new routes to link employment with residential areas.

3.4.3 Unlike Chorley and Preston South Ribble does not have its own network of services. Bus services tend to pass through the borough on route to Chorley or Preston. The services tend to focus on Chorley – Bamber Bridge – Preston or Leyland – Penwortham – Preston corridors leading to poor connectivity and penetration between urban centres within the Borough.

3.4.4 Network Chorley is currently funded through Kickstart funding and some developer contributions and Kickstart funding is due to end in 2011. Whilst there has been in growth in passenger numbers it is unlikely that the network will be commercially viable by the end of the funding period. Therefore the exit strategy will be to preserve the existing passengers and reduce the service levels to a more economically sustainable network with some ongoing support from Lancashire County Council.

3.4.5 The network consists of core town services of 2-3 buses per hour and hourly services to the nearby rural settlements. Whilst this level of service may be adequate at present it will need to be kept under review as Chorley expands. There are good bus links between Preston and Bolton provided by the 125/126 but at present there is only an hourly service between Chorley and Blackburn. Accessibility in the more rural parts of the Borough is a particular concern raised by officers at Chorley Borough Council and highlighted in a recent accessibility audit.

3.4.6 Local bus operators have reported localised congestion problems at the following locations throughout the area:

- Tardy Gate;
- A6 Sainsbury's, Bamber Bridge;
- A6 Preston Road by the Capitol Centre;
- Chorley Hospital – the junction and access to the hospital grounds; and
- Prison junction, Preston

3.4.7 At present there are no joint or network ticketing initiatives within the area even on services that are jointly operated such at the 109 which currently serves Buckshaw. A stored rights pilot is proposed for the Central Lancashire area using smartcard technology. The pilot will start in November 2008 and will be aimed at 16-23 year olds.

3.4.8 A new bus interchange will be built on Church Street in Preston as part of the Tithe Barn project and is due to open in 2011. There are also developer contributions to develop a bus-rail interchange at Preston Rail Station. A bus –rail interchange is also proposed for Buckshaw Village and it is anticipated that this will open in March 2009 although at present there is a funding shortfall.

3.4.9 A new Park & Ride site is also programmed for junction 31a and is due to be operational in 2009. The site will provide approximately 500 parking spaces and will be served by the Preston Orbit services, which will connect to Preston Royal Hospital as well as the City Centre.

Rail Services

3.4.10 There are eight stations in the study area:

- Preston – west coast mainline services, Blackpool, Manchester, Liverpool, Blackburn
- Lostock Hall – Preston, Blackburn, Blackpool
- Bamber Bridge – Preston, Blackburn, Blackpool
- Leyland – Manchester, Preston, Liverpool, Blackpool
- Croston – Ormskirk, Preston
- Euxton – Preston, Liverpool
- Chorley – Preston, Blackpool, Manchester, Cumbria, Scotland
- Adlington – Preston, Manchester, Blackpool

3.4.11 Preston is the busiest station and has strategic importance as it provides links to the national network as well as the local network. There are also significant numbers of passengers using Chorley rail station which provides links to both Preston and Manchester.

Table 3.3 Rail Station facilities

Station	Staffed	CCTV	Waiting room	Bus/taxi	Car Park	Cycle storage
Preston	Yes	Yes	Yes	Both	475 spaces, £6 per day	30 spaces, sheltered, CCTV
Chorley	Yes	Yes	Yes	Bus	50 free spaces	12 spaces
Bamber Bridge	No	No	Shelters	Bus	Yes	No
Leyland	Yes	No	Shelters	Bus	72 free spaces	12 spaces
Lostock Hall	No	No	Shelters	Bus	20 free spaces	No
Euxton Balshaw Lane	No	No	Shelters	Bus	42 free spaces	5 spaces
Adlington	During AM Peak	No	Yes	Bus	25 free spaces	No
Croston	No	No	Shelter	Bus	30 free spaces	No

3.4.12 Facilities at stations vary from station to station (Table 3.3). At Preston there are issues with congestion and accessibility on the Butler Street footbridge and the structures on platforms 1 and 2 make these platforms feel very cluttered. At Chorley the station car park is often full by 8 am and in Leyland the general standard of passenger facilities are poor.

3.5 Cycling & Pedestrian Review

3.5.1 Many measures for cyclists will also benefit pedestrians as well as cyclists.

3.5.2 Cycling has been identified as a potential area for growth by the Preston and South Ribble Travel Behaviour Research and the Preston Cycling Strategy. Although it is acknowledged in these reports that the cycling infrastructure could and will improve, it was also felt there were "subjective reasons preventing a switch to cycling" based on people's perceptions and lack of experience. If publicity and facilities are improved it may be possible to change these perceptions.

3.5.3 Another way in which cycling could grow is in providing a connecting link to other forms of transport, such as from the home to railway stations or park and ride sites. In order for these

types of schemes to be successful it is important access is good to these sites and storage facilities are provided.

3.5.4 Since 1995 a National Cycle Network (NCN) with routes across the UK has been created. This network is overseen by SUSTRANS and is supplemented by paths designated as regional routes, which are usually promoted by local authorities. Table 3.4 lists the national and regional cycle routes which pass through the boroughs of Central Lancashire.

Table 3.4 National & Regional Cycle Routes

Route number	Proposed Route details
National Route 6	Preston-Lancaster-Kendal
National Route 55	Ironbridge-Stafford-Macclesfield-Stockport-Wigan or Bolton-Preston (proposed)
National Route 62	Selby-Preston-Blackpool
Regional Route 90	Lancashire Northern Loop (Bowland Forest)
Regional Route 91	Lancashire Southern Loop

3.5.5 At the moment many National Routes are still to be completed, although sections in Central Lancashire are open.

3.5.6 A Cycling Strategy is currently being prepared by Mayer Brown for Preston. The study focuses on the district of Preston, but also investigates cycle trip patterns to and from neighbouring South Ribble.

3.5.7 The principal existing cycle routes are:

- NCN route 6 crossing north/south through the city;
- Canal cycle route located to the north west of the city centre to and beyond the Cottam district in the north west of the study area;
- Longridge railway link;
- Preston to Blackpool (route 62) from the city centre;
- Preston to Bamber Bridge cycleway; and
- In addition it is noted there are off and on carriageway sections of cycle route throughout the district.

3.5.8 A number of 'strategic problems' currently affect cyclists. These problems include:

- Isolated facilities with poor route definition;
- Limited route development and cycle restrictions through the city centre;
- Limited cycle exemption from one way street orders;
- Poor cycle access to bus/rail stations;

- Limited defined cycle routes;
- Poor connection between the substantial network of off carriageway cycle routes and the neighbouring urban areas and wider highway network;
- Ringway forming a barrier to cycle movements north of the city centre;
- Poor connectivity of residential areas to key employment sites;
- Lack of long term cycle parking;
- Limited cycle count data for cycle trend analysis;
- Poor knowledge of route locations and signage;
- Perceived danger of cycling; and
- Limited 'recycling' or second hand cycle businesses.

3.5.9 The cycling strategy for South Ribble is currently being developed by Lancashire County Council. The emphasis of the cycling strategy is reinforcing and improving links between Leyland, Preston, Croston (particularly the prison) and Chorley via Buckshaw. There is also opportunity to convert some of the wide pavements around Morrisons in Leyland to shared use.

3.5.10 Historically cycling has been popular with the traditional industries such as the motor car industry and this is evident in the higher proportions of cycling to work in Leyland. However these traditional industries are now in decline.

3.5.11 There are a number of opportunities to integrate cycling more effectively with wider transport networks such as rail stations, bus interchanges and park & ride sites.

3.5.12 There also needs to be an overarching cycling and pedestrian strategy to promote connectivity across the study area.

3.6 Road Network Review

Motorway Network

3.6.1 The study area has a strategic location on key north-south and east-west transport corridors; the country's first stretch of motorway was the M6 close to Preston. The major urban areas of the study area all have excellent connections to the strategic road network, with the M6, M55, M61 and M65 all either starting in the study area or passing through it.

3.6.2 The M6 and M61 provide strong north-south connectivity throughout the extent of the study area. The M6 in particular is of national significance and connects the study area to Cheshire and the Midlands in the south and to Scotland, via Lancaster and Carlisle, in the north.

3.6.3 The M55 runs to the north of Preston and connects M6 to Blackpool in the west. Meanwhile, the M65 connects the study area to the towns of Accrington, Blackburn and Burnley.

3.6.4 Table 3.5 shows the approximate length of each motorway within the Preston, South Ribble and Chorley study area.

Table 3.5: Motorways in Study Area

Motorway	Approximate Length
M6	34 km
M61	18 km
M65	12 km
M55	8 km

3.6.5 There are a total of ten motorway junctions within the study area, with six of these on the M6. All but one junction enables all vehicular movements (i.e. on and off in all directions); the exception is Junction 31a on the M6, which provides limited interchange with the B6242 to the north-east of Preston. Only northbound traffic can exit the M6 while B6242 traffic is limited to joining the motorway in a southbound direction.

3.6.6 In general the motorway network in the study area is three-lane in each direction, although the M6 between the M61 (Junction 30) and the M55 (Junction 32) has been widened to four lanes in each direction.

Principle Routes

3.6.7 The study area also has an extensive non-motorway highway network that connects the communities within the study area and also links the study area to neighbouring areas. Routes of notable significance include:

- A581 – Chorley – Southport;
- A6 – Preston – Chorley – Greater Manchester;
- A59 – Preston – Liverpool;
- A49 – Wigan – Euxton – Preston;
- A583 – Preston – Blackpool;
- A582 – Preston – Penwortham – Lostock Hall;
- A677 – Preston – Blackburn; and
- A674 – Blackburn – Chorley.

3.6.8 There are a range of roads radiating from Preston city centre, which is also bypassed by the Ringway (A6, A59). Blackpool Road (A5085) also provides an orbital route to the north of Preston.

3.6.9 Together with the M6 and M61 motorways, the highway network is dominated by north-south routes such as the A6, A49 and the A59.

3.6.10 Traffic flows on the motorway network are greatest on the four-lane stretch of the M6 between the M55 and M61 junctions. Hourly flows between these junctions reach 6,500 in a single direction in the peak hours with 12-hour flows exceeding 60,000.

3.6.11 Twelve-hour flows on the motorways in the south of the study area connecting to Greater Manchester (M6 and M61) are also high with the M6 in this area exceeding 40,000 vehicles in each direction and the M61 exceeding 31,000 vehicles in each direction.

3.6.12 Flows on the M55 toward Blackpool and on the M65 toward East Lancashire are somewhat lower than on the major north-south routes. Peak hour flows on these east-west routes are typically between 2,500 – 3,000 in each direction with twelve-hour flows between 25,000 and 30,000. The M6 north of the study area, which connects to north Lancashire, Cumbria and Scotland, have flows comparable in volume as the M55 and M65.

Preston City Centre Cordon Counts

3.6.13 Data in the LTP2 showed that, in 2005, up to approximately 7,400 vehicles cross the inbound Preston city centre monitoring cordon in the AM peak hour (08:00 to 09:00). Over 8,000 vehicles cross in the outbound direction in the PM peak hour (17:00 to 18:00). Between 2003 and 2005 there was approximately a 3% increase in traffic crossing the city centre cordons in each peak period (07:00 to 10:00 and 16:00 to 19:00) although, in general, there was a spreading of the peak period with the increases most notable in the early and late part of the peak period.

Penwortham Bypass

3.6.14 Proposals to complete a bypass of Penwortham have been the subject of discussion for a significant length of time. The scheme would see the A59 connected to the existing Broad Oak Roundabout on the A582 via a new dual-carriageway with sections of the A582 also to be upgraded to a dual-carriageway.

3.6.15 Following a review of the regional transport priorities by the Government Office for the North West (GONW) and the North West Regional Assembly (NWRA) a number of schemes were put forward to the Department for Transport (DfT) as priorities for the region. Following the review of schemes by GONW and NWRA, the list of schemes were split into four priority categories, (known as Priority Quartiles). The three schemes in the top priority quartile were included as major scheme bids within the Second Lancashire Local Transport Plan (LTP2). The Penwortham Bypass scheme was allocated in the third priority quartile and has been included as a potential future major scheme bid in the LTP2. The precise position of the Penwortham Bypass scheme will be subject to further review in the light of the GONW and NWRA prioritisation process.

Broughton Bypass

3.6.16 Provision of the bypass and reduction of traffic within Broughton will enable a package of measures to improve the environment of the A6 within the village and provide better conditions for pedestrians, cyclists and public transport.

3.6.17 Although the need for the bypass is justified by the level of existing and forecast traffic flows through Broughton, the bypass is also required before the potential strategic growth at Goosnargh/Whittingham, can be fully developed.

3.6.18 Lancashire County Council approved a planning application for the bypass in July 2001. The Whittingham Hospital development will contribute to the cost of constructing the bypass. The planning permission for the redevelopment of the hospital site is subject to a condition which limits the amount of development that can take place before construction of the bypass commences.

South Ribble Cross Borough Link

3.6.19 Policy T3 in the South Ribble Local Plan states that a road will be constructed from the roundabout on Carrwood Road to Leyland Road in the vicinity of Bee Lane in order to open up land for development and to serve as a local through route. Traffic management measures will be undertaken on Leyland Road in order to limit any increase in road space for cars.

3.6.20 The proposed length of road will connect Carrwood Roundabout to Leyland Road. This road will serve a dual function by opening up land for development and providing a local through route from Penwortham to Walton-le-Dale/Bamber Bridge; in its latter role the proposal will supersede Leyland Road for through traffic.

3.6.21 The construction of the road is identified as necessary by the Local Plan to enable the residential and mixed use developments on land to the east of Leyland Road and on the former Gasworks site to go ahead. The land around the Gasworks and the Gasworks site itself cannot be developed without a new access on to Leyland Road and a connection to the A6 Bamber Bridge Bypass.

3.7 Car Parking Review

3.7.1 The information for this section is based on a report produced by Faber Maunsell which did not include Chorley and summarises the key conclusions and recommendations from the Faber Maunsell parking study of Preston and Leyland.

Impact of Future Developments

3.7.2 The Faber Maunsell report states that the Leyland Masterplan will drive regeneration and development of the town centre and that this does not propose significant increases in parking stock levels. Instead the Masterplan is to focus on rationalisation of parking areas and also improved quality of parking provision.

3.7.3 It is noted that the considerable amount of redevelopment and regeneration planned for Preston will include substantial increases in car parking supply. The Faber Maunsell report states that a net increase in excess of 4,500 car parking spaces will result if all planning application and future regeneration schemes in Preston proceed as planned. This represents an increase of approximately 35% of total parking stock.

3.7.4 Leyland Conclusions and Recommendations

3.7.5 The Faber Maunsell report concludes with the following recommendations for Leyland:

- In line with the Leyland Masterplan, consider improvements to public car parks and improve links between public car parks and Hough Lane;
- Consider the removal of charges at the Station Approach car park to encourage greater use of rail commuting; and
- Consider the introduction of half hour limited parking on Hough Lane.

Preston Conclusions and Recommendations

3.7.6 The Faber Maunsell report concludes with the following recommendations for Preston:

- Consider introduction of a signage strategy to include intelligent and responsive car parking signage;
- Ensure disabled parking provision for new developments is meeting recommended levels;
- Monitor occupancy levels at existing Park & Ride sites and continue to develop existing capacities in line with demand where possible;
- Monitor the development of Workplace Parking Levy policies from the Department for Transport and keep this policy option under review; and
- Ensure implementation of the cap on long stay parking provision and review on an annual basis for reporting in the Local Transport Plan.

4 Development Sites

4.1 Introduction

4.1.1 The derivation of a transport strategy for the study area was based on two potential development scenarios:

- 2018 – which represented a rapid growth in development and assumed a successful growth point bid; and
- 2028 – provides a longer term view and consist of the larger potential sites, emerging from the site suggestion process

4.1.2 The sites that have been identified for the 2018 assessment are those currently considered the most likely to be developed within the initial time frame. However, the sites identified for the 2028 assessment are less certain and subsequently the potential development proposals for these areas should be treated with caution.

4.1.3 It is likely that some of the sites included in the 2028 scenario may not be included within the Local Development Framework as they may not conform to current planning policy or the overall spatial strategy. In addition, some sites may be brought forward and delivered sooner than 2028 but it is not possible at this stage to determine an accurate delivery schedule given uncertainties regarding future economic policies, demands etc. Therefore the scenario for 2028 represents a 'best guess' based on current available information but it should be noted that the scenario is very likely to change.

4.1.4 Traffic generation assessments for developments included in the 2018 scenario have been undertaken using PENELOPE, which is a tool that has been developed for the Highways Agency to help in their assessment of the potential impact the developments could have in relation to the trunk road network.

4.1.5 Given the uncertainties, timescales and lack of detailed land use data, PENELOPE was not used for the 2028 scenario, but trip estimates were obtained using the TRICS database, based on land use predictions as agreed with the client.

4.1.6 There are limitations to the actual level of analysis that can be undertaken as part of this study, given the lack of available data and a comprehensive transport model of the area. Below we have included analyses of the development sites and their likely impact on the network as a whole. However these analyses are only indicative and need to be supported by more detailed assessment work.

4.2 PENELOPE

4.2.1 "PENELOPE embodies the principle of 'gravity-modeling". This is a methodology for proportioning the total trips associated with a site among the surrounding wards according to their relative attractions, hence the name 'gravity-modeling". For example, if a new housing estate were proposed, the total number of trips would be predicted based on the number of houses to be built, and in the AM peak the bulk of those trips will be people traveling to work.

4.2.2 In the absence of any more detailed information (which by definition is unavailable before the estate has been constructed); the assumption is that these people will go to work primarily within the existing centres of employment surrounding the site. Some major concentrations of employment (such as city centres) may be further away than smaller concentrations nearby, but the extra distance or time required to travel there is outweighed by the extent of commercial activity. The 'gravity function" is used to calculate a relative weighting for each ward, based on the appropriate demographic value associated with each ward and the general 'cost" of traveling between the site and that ward."[1]

4.2.3 Trip rates from the new developments are based on the inputs detailed in table 4.1. The traffic generation from each of the sites is calculated using 'appropriate standard trip rates'.

4.2.4 One of the advantages of PENELOPE is that it allows sites to 'interact' with each other and recognizes that there will be a relationship between new housing and employment sites and the existing workplace and resident populations. This is achieved by a temporary manipulation of the census data when multiple sites in PENELOPE are being assessed. As a consequence of this feature, the sites in each PENELOPE run in the Central Lancashire will display a level of interaction.

4.2.5 When the model has been run PENLOPE generates two digital map data layers. The first layer details trips at a ward level and is therefore useful in assessing which wards will generate additional traffic when the developments are complete. The second layer assigns these trips to specific links within the highway network, which can be used for identifying hotspots and development constraints in the network.

4.3 Limitations of PENELOPE

4.3.1 PENELOPE does not take into account modal changes to public transport that could arise as a result of a planning condition placed on a site. As a consequence, the forecast numbers of trips on the Strategic Highway Network as identified from the PENELOPE output are likely to be lower in practice, due to the use of public transport as well as other sustainable modes.

4.3.2 PENELOPE analysis is limited to the classified road network and certain essential non-classified links. At the same time each ward and each site only has a single connector link to the network. In reality, a large development might have several access/egress points. This means that site access links can have very high levels of additional traffic in PENELOPE because traffic is effectively channeled onto these links, though in reality this traffic would be dispersed over several access points e.g. Buckshaw.

4.3.3 It is only possible to model eight sites in one run of PENELOPE. This meant in order to assess all of the sites, two runs were required – one for the sites in Preston and a second for the site in Chorley and South Ribble. This means that only sites in the same run will interact with each other. Runs were also only carried out for the AM peak. Despite these limitations, PENELOPE is still useful as a broad indicator of future highway constraints and to identify potential pinch points/hotspots on the existing road network.

[1] *Taken from PENELOPE Summary Specifications, User Guide, and Performance Report 2008*

4.4 Baseline Traffic Conditions – Highway Stress Maps (2007)

4.4.1 Highway network stress maps are designed to show capacity issues or 'stresses' on select links of the highway network, which is important particularly as PENELOPE does not include baseline flow data.

4.4.2 As part of this study highway stress maps have been compiled based on information taken from 58 sites around Central Lancashire.

4.4.3 The highway stress is calculated using the following method:

$$\frac{flow}{capacity}$$

4.4.4 Where flow is the traffic flow along the selected link and capacity is the highway capacity for that link.

4.4.5 The traffic flow inputs for the calculation came from traffic count data carried out mainly in 2007 and provided by Lancashire County Council and the Highways Agency (for the motorway network). The Highway capacity for each of the sites was based on guidelines taken from TD20/85 (DoT, 1985).

Table 4.1 Highway capacity

Road Type	Lanes	Capacity (per hour)
Motorway	8	16000
Motorway	6	12000
Motorway	4	8000
Dual Carriageway	4	6400
Single Carriageway	4	5600
Wide Single Carriageway	2	2500
Standard Single Carriageway	2	2000

4.4.6 Traffic flows in peaks periods, particularly around urban centres, tend to be tidal in nature i.e. higher in one direction than the other, and hence inbound lanes can be subject to capacity issues whilst the outbound lanes show no capacity issues. PENELOPE does not make this distinction and therefore for consistency, we have presented traffic flows in both directions.

4.4.7 The stress maps are useful in giving broad indications of highway capacity issues. However, as road capacity is determined by junction and link capacity, much more detailed analysis incorporating junction assessments would be required to say with certainty where road capacity is being reached or exceeded.

4.4.8 The maps are presented in Appendix A Figure A.1.

4.5 Future Traffic Growth with no Development Scenario - (2018 and 2028)

4.5.1 The maps were created using a similar method to the one outlined above, the only difference being traffic flows were factored up from the base year of 2007 to reflect traffic growth by 2018 and 2028. This growth was calculated using TEMPRO forecasting.

4.5.2 TEMPRO factors presents benefits over other traffic forecasting methods such as National Road Traffic Forecasts (NRTF) and the new National Traffic Model (NTM) because it provides factors for different times of the day and for different local authorities.

4.5.3 The location of the traffic survey site determined the TEMPRO factor used. For A, B roads and unclassified roads the local authority TEMPRO factor was used, traffic counts on the motorway network were factored by the North West region figure, as these routes are much less affected by local differences.

4.5.4 The TEMPRO factors used are detailed in the table 4.2.

Table 4.2 TEMPRO factors (base year 2007)

Area	Year	Growth factor (time period)
Chorley	2018	1.053 (AM)
		1.065 (PM)
	2028	1.094 (AM)
		1.113 (PM)
Preston	2018	1.052 (AM)
		1.063 (PM)
	2028	1.093 (AM)
		1.111 (PM)
South Ribble	2018	1.057 (AM)
		1.073 (PM)
	2028	1.103 (AM)
		1.130 (PM)
North West Region	2018	1.070 (AM)
		1.074 (PM)
	2028	1.114 (AM)
		1.120 (PM)

4.5.5 The maps showing link capacity issues for future traffic in the absence of any development are presented in Appendix B Figures B.1 – B.2

4.6 Development Scenario - 2018

4.6.1 The development sites provided for inclusion in the model runs were those agreed with the client and it was assumed that the sites will all be fully developed by 2018 (Appendix C Figures C.1 – C.4). The site type, location, area and dwellings were the base data inputted into the PENELOPE runs. Details of the sites and associated land-uses are shown in table 4.3.

Table 4.3 Development Sites – 2018 Scenario

Site Name (Model Run)	Site Type (land use class)	Location	Area (hectares)	Dwellings
Buckshaw Village (Ch/SR)	Mixed (mixed res. and B2)	Edge-of-town	29*	2785
South of Wade Hall (Ch/SR)	Housing (mixed residential)	Edge-of-town	-	900
Moss Side (Ch/SR)	Housing (mixed residential)	Edge-of-town	-	639
Farington (Ch/SR)	Housing (mixed residential)	Edge-of-town	-	2101
Cuerden Regional Business Park (Ch/SR)	Employment (B2)	Edge-of-town	65*	-
Adj Scepture Point (Ch/SR)	Employment (B1)	Edge-of-town	4.8*	-
Pickerings Farm (Ch/SR)	Housing (mixed housing)	Suburban	-	1000
Lostock Hall Gasworks (Ch/SR)	Housing (mixed housing)	Suburban	-	940
Samlesbury BAE development (Pr)	Employment (B1 and B2)	Edge-of-town	Gross floor area 39048 sq m (B1) 57884 sq m (B2)	-
Preston East (Pr)	Employment (B2)	Edge-of-town	35*	-
Whittingham (Pr)	Housing (mixed housing)	Edge-of-town	-	650
Broughton Business Park (Pr)	Mixed (mixed housing, B1 and B2)	Suburban	Gross floor area 25500 sq m (B1) 6600 sq m (B2)	70
Cottam Hall (Pr)	Housing (mixed housing)	Suburban	-	1464
Preston CBD (Pr)	Employment (B1)	Town centre	Gross floor area 135700 sq m	-

Tithebarn (Pr)	Mixed (mixed residential, B1, non-food retail, sports centre)	Town centre	Gross Floor Area 9300 sq m (B1) 60000 sq m (non-food retail) 14000 sq m (sports centre)	1380

* indicates this is overall site area, not floor space

4.6.2 For some employment sites an estimate of total floorspace was not available, for these sites a figure for the total site area in hectares was provided. For these sites PENELOPE automatically performs a calculation to give an estimate of the gross floor area. These sites are indicated in table 4.3 with an asterisk (*).

4.6.3 When inputting development site information, the following assumptions were made about the characteristics of each site:

- For housing sites, the 'mixed residential' option was used. Due to the scale of the housing schemes being promoted, and paying attention to government policy regarding large scale housing schemes, it was prudent to assume that a mix of units and residents would be prevalent in any housing sites being developed;
- Where B1, B2 or B8 use-classes were identified, these were replicated within PENELOPE;
- Where no fixed quantum of development was stated, the higher generating use class was used (i.e. if a combination of B2 / B8 for a certain numbers of hectares was stated but no percentage spilt of the two use classes, 100% B2 would be assumed as this is the higher generator of traffic in the peak periods);
- Where a retail allocation was identified, the non-food retail category in PENELOPE was selected;
- Only the AM Peak was assessed in terms of trip generation;
- The Lancashire Waste Technology Park was not assessed in PENELOPE as the characteristics of this type of development could not be replicated accurately within the parameters of PENELOPE. However, due to the relative amount of floorspace / jobs to be provided at this site compared to the other employment sites coming forward, it was felt acceptable to omit it from the analysis as it would be unlikely to generate substantial volumes of traffic during morning and evening peak hours; and
- A 30 minute travel time was used for each site. It was decided to use such a travel time to allow the sites to be accessible by car from the entire CLCR. This drive time zone also allowed people living in neighbouring authorities to be included in the catchment area, as well as allowing the flow of people to key regional centres such as Liverpool and Manchester. It is accepted that people will not just be confined to their local authority boundaries when looking for employment opportunities or housing.

4.7 Development Scenario -2028

4.7.1 The development sites agreed for inclusion in the 2028 scenario are presented in table 4.4. It should be noted that these sites are based on information that was currently available at the time

of this study and it is highly likely that given the time period that some these sites may not be developed because they are not compliant with the emerging spatial strategy or other planning policy.

Table 4.4 Development Scenario – 2028

Name	Area (HA)	Dwellings	Landuse	TripsArr	TripsDep	TripsTotal
North of Lancaster Lane	44.6	676	Housing	59	166	226
Whittle-le-Woods	30.6	504	Housing	44	124	168
Euxton	37	345	Housing	30	85	115
North of Chorley	16.15	294	Housing	26	72	98
Camelot		1030	Housing	91	253	344
	10.2		D2	158	161	319
Camelot	10.2	1030	Mixed	248	415	663
Junction 8 M61	19.87	N/A	B2	297	214	511
Great Knowley/Botany Bay	17.92	N/A	B2	268	193	461
M61/M65	54.99	N/A	B2	823	591	1414
East of M61	13.89	N/A	B2	208	149	357
Leyland South	23.6	N/A	B2	353	254	607
South Rings	8.4	N/A	B1	285	62	347
Dunbia	3.4	N/A	B2	51	37	87
Lime Kiln Farm	N/A	204	Housing	18	50	68
R/o Church Lane	N/A	317	Housing	28	78	106
Arla Foods	N/A	165	Housing	15	41	55
Brindle Road	N/A	650	Housing	57	160	217
Lightfoot	194.5	2917	Housing	257	718	974
Broughton	52.2	825	Housing	73	203	276
Goonsnargh	43.5	725	Housing	64	178	242

Name	Area (HA)	Dwellings	Landuse	TripsArr	TripsDep	TripsTotal
Longridge	18.9	284	Housing	25	70	95
Grimsargh	13.9	208	Housing	18	51	69
Lea	12	181	Housing	16	45	60

4.8 Summary of Outputs

4.8.1 The final stress maps have been created in an attempt to give a best estimate of traffic levels in 2018 and 2028 if the current proposals for development are implemented (see Appendix D Figures D.1-D.4).

4.8.2 For 2018, flows from the PENELOPE runs were combined with the TEMPRO factored base flows to create an overall flow. Unfortunately only a maximum of eight development sites can be included in any one PENELOPE run preventing any interaction between development sites in Preston and those in Chorley/South Ribble. This also means separate maps have been produced for the Chorley/South Ribble PENELOPE run and the Preston run.

4.8.3 The two PENELOPE runs carried out for 2018, show large increases in traffic on the following links:

- A59 and other routes around Samlesbury development;
- Preston ring road (B6241), north of Preston;
- M6 between J29 and J32;
- A6 from central Preston southwards to Bamber Bridge and Chorley;
- A582/B5253 Flensburg Way/Penwortham Way show large traffic increases acting as a north-south link in the west of Central Lancashire and an east-west link across South Ribble; and
- Buckshaw Village is a large generator of extra traffic on both the local network and the strategic network although this may represent a worst case scenario due to the uncertainties of the extent (in terms of gross floor space) of the employment development.

4.8.4 By 2018 the following pinch points have been identified on the highway network

- Preston ring road (B6241);
- M6 J30-J32;
- Preston radial routes, particularly those close to motorway junctions;
- Penwortham Way/Flensburg Way (A582/B5253); and
- A6 between Chorley and Bamber Bridge.

4.8.5 Due to the turnaround time needed to complete a run of PENELOPE it was not possible to complete PENELOPE runs for the 2028 development scenarios. However it was still felt important to examine the 2028 development scenarios and from this derive a best estimate of highway stresses in 2028.

4.8.6 The method for creating the best estimate utilises the 2007 traffic data, data from the 2018 PENELOPE run and traffic generation figures for the 2028 developments calculated using the TRICS database.

4.8.7 TEMPRO factored base flows were added to the 2018 PENELOPE flows to give a total background flow for 2028.

4.8.8 Traffic generation for each of the 2028 sites has been calculated using the TRICS database. Unfortunately it was not possible to distribute traffic to the highway network from the 2028 developments in any sort of meaningful way, so instead each site has been labelled with arrival, departure and total traffic generation figures.

4.8.9 The nature of this method and the timescale being considered mean forecasts can only be taken as a broad indicator of future traffic levels.

4.8.10 Background traffic flows for 2028 show the same hotspots as 2018, although traffic levels will be higher in 2028. Taking into account the location of the 2028 developments and their traffic generation, the following links are likely to face capacity issues:

- A6 and B6241 (Lightfoot Lane) will act as the main access roads for the Lightfoot and Broughton development sites which between them will generate more than 1,000 vehicle trips in the AM peak, even without these developments these roads would be at or close to capacity;
- B5253 – capacity issues have already been identified to the north of Leyland on Flensburg Way, with the South Leyland development generating in the region of 600-700 additional trips in the AM peak the southern section of the route may also become more congested; and
- Most of the Chorley and South Ribble 2028 developments are located next to motorway junctions. This presents obvious advantages to developers who have convenient access to the national trunk road network, but it can make predicting traffic growth more difficult as national trends have a greater bearing. Despite this uncertainty it is important to ensure locally that spare capacity exits in the network to allow easy and fast access to the motorways.

4.9 Summary of Issues on Key Corridors

4.9.1 An overview of each of the key corridors in the study area is presented below with some commentary to identify congestion issues which are likely to emerge over the next decade due to increased volumes of traffic, generated from proposed new development and growth in existing background traffic flows.

4.9.2 Traffic counts and average traffic speeds come from survey data collected by Lancashire County Council in 2007. Traffic forecasts were calculated using TEMPRO factors and the data output from the PENELOPE gravity modelling software.

A59 Eastern corridor

- Congestion problems arise when the A59 reduces in width from a 2-lane dual carriageway to a 3-lane (2 lanes towards Preston on the incline from the Ribble) single carriageway at the River Ribble Bridge;
- Although a considerable amount of traffic approaching from the east leaves the A59 at the M6 junction, a large volume (1175 vehicles in AM peak hour) of traffic continues towards Preston City Centre. This section of the A59 is the main gateway in to Preston for traffic from the M6;
- Average speed decreases to 0-8 mph in the AM peak between junction 31 of the M6 and the A5085 (Blackpool Road) junction; and
- As the A59 approaches Preston, the carriageway becomes narrower and there are an increasing number of side roads, frontage activity and pedestrian conflicts. These factors contribute to further reduce road capacity and subsequently contribute to the levels of congestion which occur in peak hours.

B6243

- The route links the communities of Longridge and Grimsargh with Preston;
- At a traffic count location just inside the M6, 692 vehicles were recorded heading in a south-westerly direction in the AM peak. Average speeds for this section are currently 15-20 mph in the AM peak. Forecasts which include PENELOPE flows suggest traffic could increase to over 1,200 vehicles by 2018. Such an increase would take the road above its design capacity, significantly impacting on average speeds and creating considerable delays and congestion; and
- By the time the B6243 has reached the A6 at Preston Prison average traffic speeds have decreased to between 8 and 15 mph, effecting traffic in both directions. This junction was identified by bus operators as a congestion 'hotspot'.

B6242/A6063

- Serves as the main link between M6 J31a and Preston City Centre. Also gives good access from the M6 to the north east of Preston;
- During the AM peak, average speeds are already less than 20mph; and
- The A6063 joins the B6243 at Preston Prison which means vehicles are affected by the congestion hotspot.

A6 North (Garstang Road)

- Serves as the arterial corridor linking Preston city centre to the various districts to the north of the city, as well as Junction 1 of the M55;
- Average traffic speeds on large sections of the route between Broughton and Preston City Centre are between 8 and 15 mph in the AM and PM Peaks. This suggests congestion is already an issue on the road during peak periods. These low average speeds effect traffic in both directions;
- The road is expected to see an increase in traffic, particularly when taking into consideration new developments in Preston City Centre, Broughton and Lightfoot. This

is likely to have the greatest impact at the M55 roundabout and the junction of the B6241 (Eastway); and

- The impacts of congestion are exacerbated by the fact there are a large number of features on the southern section of the corridor which slow traffic such as side roads, residential frontages and pedestrian crossings.

A583

- Unlike most of the other major corridors into Preston city centre, the A583 is dual carriageway until it reaches the edge of the city centre, lessening the impact of congestion on the highway. As a result, average speeds are generally higher than other radial routes; and
- Congestion worsens at the edge of the city centre in the same way it does for all radial routes from the city centre.

A59 West

- The route is a 2 lane dual carriageway except the section through Higher Penwortham, where it narrows to single carriageway. On this section there are also side roads, significant frontage activity and pedestrian crossings, all combining to reduce capacity significantly and create a pinch point on the network. This is reflected by an average speed of 8-15 mph through Penwortham towards Preston in the AM peak;
- By 2018 an additional 133 vehicles are forecast to travel through Higher Penwortham towards Preston in the AM peak, without some form of mitigating measures average journey times will increase as average speeds decrease;
- The second potential pinch point on the route is at the River Ribble crossings. Additional traffic from the A582 (Penwortham Way) and the B5254 (Leyland Road) also use these bridges to access Preston;
- In the next decade an additional 900 vehicles are forecast to use the Penwortham Bridges to cross the River Ribble to Preston in the AM peak. Such an increase could lead to major delays to traffic and queuing is likely to extend back on to roads the road network, south of the river; and
- The building of a bypass at Penwortham is likely to have a huge bearing on future traffic flows in this area.

A6 South

- The A6 to the south of Preston acts as an important north-south corridor linking Chorley, Bamber Bridge and Preston;
- Several points on the corridor were identified by bus operators as congestion hotspots – at the Chorley and South Ribble General Hospital roundabout, the junction of the A6 with the A582 and at Walton Bridge;
- Traffic on this corridor is forecast to increase significantly in the next decade, particularly between Junction 1A of the M65 and Preston. This is also the location of the proposed Cuerden Regional Business Park, creating nearly 7,000 jobs and associated vehicle traffic; and

- Walton Bridge which crosses the River Ribble is expected to be carrying over 200 vehicles above its capacity towards Preston in the AM peak by 2018, leading to increasingly worse congestion and increased journey times.

B6241 (Tom Benson Way)

- Cottam to the north-west of Preston City Centre has been earmarked as the location of several new housing development sites;
- The B6241 ring road also acts as a link in this area of Preston to the city centre and the motorway network. At the present time there are no major concerns over highway capacity; and
- Significant amounts of additional traffic are expected to be using the road by 2018 when new housing developments at Cottam Hall and Broughton are completed. This increase is forecast to push the existing road to the limit of its capacity. Further developments are planned for 2028 including the Lightfoot site which could provide around 1,000 dwellings. Such a development would be expected to generate around 1,000 vehicle trips in the peak hours. It is therefore imperative that action is taken to encourage the use of more sustainable modes of transport to reduce the impact of these new developments on the local highway network. Even with these mitigating measures it is likely that highway improvements will be needed, particularly to junctions and there may be a need to increase capacity.

(A582/B5253)

- At the present time this link acts as a north-south corridor to the west of South Ribble. Over the next decade its importance to the area will increase with at least 4 major development sites in close proximity to the link;
- The sites at Farington, Pickering's Farm, Moss Side and South of Wade Hall could include over 4,500 additional dwellings, which subsequently will generate a large amount of additional traffic. Data taken from the PENELOPE runs forecasts an additional 1,000 vehicle trips between 0800 and 0900 on the B5253 and A582 outside the Farington and Pickering's Farm sites;
- Considering the capacity of the existing highway infrastructure, this increase in traffic volumes is unsustainable. Therefore, either major highway works are needed including road widening, and/or a range of mitigating measures are needed to minimise the impacts;
- At the moment public transport links are relatively poor in this part of the study area. To meet the expected needs of the corridor regular north-south and east-west bus services are required. Options for walking and cycling routes should also be considered in all the new developments; and
- Highway improvements such as increasing junction capacity are also required to avoid gridlock on the corridor.

A6/B5248 (Dawson Lane)/A49/A582/B5254 (Leyland Road)

- This corridor serves some of the main population centres in the study area, as well as several of the proposed development sites, and thus is an important local link;
- At the moment the corridor is relatively free flowing even at peak times, although average traffic speeds do drop on Leyland Road;

- Two of the biggest 2018 development sites are close to the corridor. Buckshaw Village which will be a mixed development incorporating nearly 3,000 houses and employment for 7,000 people and the Cuerden Regional Business Park which will create another 6,800 jobs;
- Developments of this scale will have major impacts on the highway network. The PENELOPE runs indicate traffic generation of over 4,000[2] vehicles in the AM peak from Buckshaw Village and 3,000 vehicles at Cuerden. Although the proximity of these sites to the motorway network will limit the impact on the wider network, it is very important that the local network and particularly junctions can cope with this additional traffic, thus ensuring a quick passage from the development sites to the motorways and trunk road network; and
- Although a lot of traffic will get to and from the sites on the motorways, a significant amount of additional traffic will use local routes. Routes to Preston including the A6 and B5254 may face capacity issues, the A6 to the north of Chorley is also forecast to carry an additional 650 vehicles in the AM.

4.10 Modal Shift

4.10.1 In the next 20 years if Central Lancashire is to deliver its planned increases in population and economic growth it will be necessary to ensure that the required transport infra-structure is provided in order to meet the resulting demands for travel. Satisfying this increased demand will present a major challenge to create a sustainable transport policy, which complies with current DfT guidelines. It is no longer acceptable to seek to simply increase highway capacity in order to accommodate the forecast growth in car use, as it is necessary to introduce measures which provide real, efficient alternatives to the private car and which will encourage a substantial level of modal shift away from the car. The following paragraphs present a summary of the traffic increases which are forecast for Central Lancashire and the modal shift which needs to take place in order to avoid future congestion and highway capacity problems.

Evidence of modal shift

4.10.2 In December 2004 the Department for Transport produced a document entitled *Bus Priority: The Way Ahead* which looked at the evidence produced from a range of measures aimed at reducing traffic flows and journey times and identified details of the recorded modal shift away from the car. A similar exercise was also conducted by South Yorkshire Passenger Transport Authority (SYPTA). Table 4.5 gives a summary of the key findings from these reports.

Table 4.5 Modal shift

Scheme (location)	**% reduction in vehicle flow**	**Modal Shift from car**	**Reduction in journey time**
Bus lanes (A47 Hinckley Road, Leicester)	17% (AM peak) 15 % (PM Peak)	N/A	22-23%

[2] At the time of the assessment the extent of the employment developments were uncertain for Buckshaw and Cuerden therefore the trip estimates were based on site areas and not gross floor space. Therefore, the trip estimates represent a worst case scenario.

Showcase routes (various West Midlands)	N/A	6-13%	N/A
Greenway bus lanes inc. bus priority (Edinburgh)	Up to 10%	4% (increase in bus patronage)	N/A
Guided Busway (Bradford)	13-14%	N/A	7-10% in peak times
Town Centre Traffic Management (West Bromwich)	12-16%	N/A	5%
High Occupancy Lanes (A647, Leeds)	Initial reductions in flows, although this was put down to people avoiding the road, traffic levels have returned to old levels.	Average car occupancy rose from 1.35 people to 1.51 people	
Park and Ride (Leicester)	Over 20%	N/A	Same for cars Bus journey times reduced

4.10.3 A study commissioned by South Yorkshire Passenger Transport Executive (SYPTE) found that based on existing Quality Bus Corridors (QBCs) a combination of bus lane provision, new vehicles and integrated smart card ticketing could see a 24% increase in bus patronage. A further 3% growth could be achieved with dedicated high quality routes through the city centre.

4.10.4 It becomes evident from the table above that different types of schemes and local conditions lead to variations in the success of bus priority measures. However the common feature is that schemes in the vast majority of cases lead to some reduction in traffic flows and a modal shift from cars.

4.10.5 Further to the evidence of modal shift in the case studies above, Lancashire County Council have drawn up a number of targets which appear in the Joint Lancashire Structure Plan and the Draft Lancashire Walking Strategy, namely;

- Construction of 8 new park and rides in Lancashire by 2016;
- 90% of new development to be within 400 metres of an existing or proposed bus stop or within 800m of an existing or proposed railway station, 2001-2016;
- Rail patronage from stations in Lancashire to increase by 75% from 2001 levels by 2016;

- Bus journeys within Lancashire to increase by 20% from 2001 levels by 2016;
- Maintain or increase the percentage of the working population walking to work and to decrease the modal share of schoolchildren being taken to school by car; and
- A 25% increase in cycle flows from 2002 levels by 2011.

Central Lancashire

4.10.6 This section looks at data from the highway stress maps which include background traffic flows factored up to 2018 levels and traffic from the PENELOPE runs. The aim is to assess which parts of the network will come under particular stress in the future and whether capacity issues may develop. The locations of the survey sites can be seen in figure 4.1 which are sites that are continuously monitored by Lancashire County Council, traffic flows for each site are summarised in table 4.6. All of the sites in figure 4.1 are on the outskirts of Preston based on the assumption that Preston will be the main destination for employment within the sub-region.

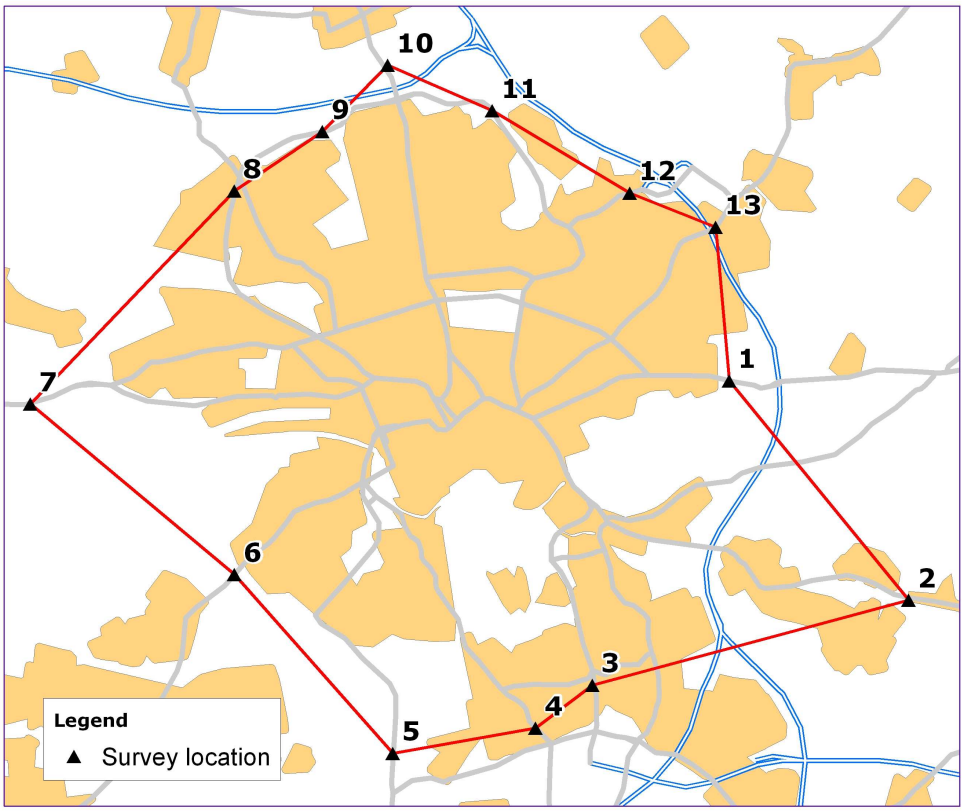

Figure 4.1 Location of traffic surveys

4.10.7 When examining this data it is important to remember road capacities are indicative only and based on estimated link capacity. PENELOPE forecasts are based on the planned 2018 development sites.

Table 4.6 Summary of 2018 traffic

Road (traffic survey reference number)	Difference in traffic between 2007 and 2018 (peak direction flow)	Percentage link is under (-)/over (+) capacity	Under (-)/over (+) capacity with 10% modal shift from car
A59 (1)	+98	+6%	-11%
A675 (2)	+31	-66%	-71%
A6 (3)	+880	-24%	-37%
B5254 (4)	+196	-19%	-44%
A582 (5)	+694	+48%	+24%
A59 (6)	+133	-27%	-39%
A583 (7)	+168	-39%	-49%
B6241 (8)	+355	-14%	-28%
B6241 (9)	+359	-30%	-41%
A6 (10)	+412	-1%	-17%
B6241 (11)	+520	+44%	+21%
B6242 (12)	+662	+35%	+13%
B6243 (13)	+572	+5%	-12%

4.10.8 In addition to the sites in table 4.6, a number of other links have been identified during the course of the study which could present capacity issues in the future. These tend to be around new development sites such as Buckshaw Village and on the B5253.

4.10.9 It is therefore important that these developments are taken forward with this in mind. Provision for walking and cycling should be incorporated in the planning of the site and public transport provision should be considered.

4.10.10 When the site opens it is important to try and get residents or employees to use sustainable modes from day one, which should be easier than trying to affect a modal shift at a later date. At the development stage this means undertaking travel planning and publicising modes of transport other than car.

4.11 Modal shift away from car travel

4.11.1 Based on 2001 journey to work Census data, the current modal share for car drivers is 61%. For this study we have assumed this modal split applies to all journeys types.

4.11.2 A modal shift away from the car of 20% would bring all the roads in this survey back down under capacity. However to achieve such a shift in 10 years is unrealistic. Instead a shift of 10 percent should be targeted.

4.11.3 A shift of 10 percent would require a 20 percent increase from each of the other modes a figure which is broadly in line with Lancashire County Council's targets for increasing bus and cycle travel for the total transport network.

4.11.4 In order to achieve this modal shift, an increase in bus use, car sharing and walking will be of great importance, as these three modes make up a large proportion of journeys to work that are not by car.

4.11.5 For shorter journeys of under 2km, walking and cycling need to be made as attractive as possible. Paths need to be well maintained, safe, direct and where possible separated from vehicle traffic. Walking to school also needs to be encouraged, which will take vehicles of the road in the peak hours, particularly in the morning and has the added benefit of improving children's health.

4.11.6 Car sharing, particularly on the journey to work can be encouraged in a number of ways including guaranteed lifts, priority parking, incentives and high occupancy vehicle (HOV) lanes. However with the exception of HOV lanes, car sharing initiatives require co-operation with local businesses to ensure they encourage their staff to car share.

4.11.7 If a 10 percent modal shift is achieved it would go some way to alleviating congestion hotspots and speeding up journey times on the highway network.

4.11.8 On some routes traffic will increase in the next 10 years due to large new developments and population increases, meaning congestion problems may still exist in the peak hours, although it is likely these would be for shorter periods and less severe.

4.11.9 The routes that are likely to see the greatest increase in traffic and potentially highway capacity problems are:

- The A582 Penwortham Way and B5253 Flensburg Way as a result of developments around Moss Side, Pickerings Farm and Farrington;
- B5248 Dawson Lane and A49 Wigan Road resulting from Buckshaw Village;
- A6 Garstang Road and B6241 to the north and west of Preston as a results of developments a Whittingham, Cottam and some longer term potential development sites emerging from the LDF site suggestion process;
- A6 London Way to the south of Preston resulting from city centre developments; and
- Links to the east of Preston including the B6242 Bluebell Way, B6243 Longridge Road and the A59 Brockholes Brow as a result of development to the east of Preston.

4.11.10 It is these corridors where the most emphasis needs to be placed. It might be necessary to undertake highway modifications and improvements to increase capacity but is also important that alternatives to the car are available and their use encouraged.

4.11.11 As already explained it is important that new developments are accessible by modes other than the car from day one and that users of the sites are aware of these alternatives. To achieve this co-operation with developers, local transport operators and the actual users of a site, whether they are residents or businesses, is of paramount importance.

Additional Buses Required

4.11.12 Bus use needs to be seen as a viable alternative to the car. This means services need to be reliable, frequent, direct and serve areas that people need to travel to. Measures such as high quality corridors and park and ride schemes would help in the delivery of bus user targets.

4.11.13 Table E.1 in Appendix E shows the estimated modal splits based on the additional traffic generated by both development sites and also factored to allow for natural traffic growth in the am peak. The difference between the 2018 and 2007 flows has then been distributed across the modes according to census data splits.

4.11.14 The additional number of bus passengers that are likely to travel has then been divided by 80 (the capacity of a double decker bus) to give a broad indication of the extra numbers of buses required during the am peak:

3 Additional Buses

- A6 London Way

2 Additional Buses

- A582 Penwortham Way;
- B6241 Eastway;
- B6242 Andertons Way/Longsands Lane; and
- B6243 Longridge Road.

1 Additional Bus

- B5254 Watkin Lane;
- A583 Blackpool Road;
- B6241 Tom Benson Way;
- B6241 Lightfoot Lane; and
- A6 Garstang Road.

4.12 Buckshaw Village

4.12.1 Data provided by English Partnerships suggest that Buckshaw could potentially see the creation of 7000 jobs in addition to the 3000 dwelling proposed for this site, which would result in the generation of a significant amount of new trips. Based on trip forecasts as provided by Penelope this could be in the region of an additional 4000 trips. For these trips to be accommodated by public transport an additional 18 buses would be required based on the modal splits as shown in Table 4.7

Table 4.7 Estimated Modal Splits for Buckshaw Village (based on Census 2001)

Generated Trips	Work from home	Bus	Train	M/C	Cycle	Walk	Other	Additional Buses
4370	755	1457	270	162	324	1295	108	18

4.12.2 Buckshaw is currently being served by 2 buses per hour with the potential of this being increased to 4 buses per hour.

5 Transport Strategy

5.1 Introduction

5.1.1 This chapter of the report describes the policies, strategies and measures that we are recommending should be implemented to support the future development and planned economic growth across the study area.

5.1.2 The strategy is based upon the following hierarchy of users:

- Vulnerable users e.g. Pedestrians, cyclists, people with disabilities;
- Public Transport;
- Freight;
- Motorcycles; and
- Cars.

5.1.3 The strategy presented below represents an overarching high level strategy for Central Lancashire as a single entity.

5.2 Transport Vision

5.2.1 If Central Lancashire is to fulfil its aspirations for economic growth and development, accessibility needs to be improved across all modes. This will involve both optimising the use of the car and providing alternatives to single occupancy car travel.

5.2.2 Specifically the transport vision seeks to:

- Provide high quality and flexible transport networks that can respond to changes in development and the local economy;
- Integrate land use and transport policy through a partnership that involves local planning authorities and the transport authority;
- Make travel within Central Lancashire safer for all;
- Promote choice to local residents by providing alternatives, particularly for those without access to a car; and
- Reduce the impact that transport has on the environment by maximising technological advances and making better use of resources.

5.3 Problems and Issues

5.3.1 There are a number of problem and issues that the transport strategy for Central Lancashire will need to address.

5.3.2 In South Ribble and Chorley car ownership levels are higher indicating a higher dependence on the car for journeys to work and other trips. Whilst car ownership is not necessarily a problem in its self, dependency on the car can be a major contributor to congestion and subsequently places increased pressure on residential, workplace and town/city centre parking.

5.3.3 The study area is also well served by a number of principle roads making driving easier and more attractive than alternative modes and this is also further compounded with out- of -town developments that are easier to access by car. Some of these roads also form barriers to communities, pedestrians and cyclists, giving rise to severance. For instance Bamber Bridge feels disconnected from the rest of the Borough as it is bounded by the motorway and the A6.

5.3.4 The approach routes into Preston are already experiencing capacity problems during peak periods, particularly at pinch points such as river crossings and this is forecast to get worse (See Table 4.6). In Chorley and South Ribble congestion tends to be more localised and often associated at specific junctions e.g. Chorley Hospital, Tardy Gate. Congestion can have a negative impact on the local economy as it affects the reliability of employees being able to get to work on time, it can have a negative impact on retail as visitors may decide to go to alternative retail centres that are easier to access and congestion can also have a negative impact of the delivery of goods and services.

5.3.5 A pattern of development that tends to focus on developing land around motorway junctions places increased pressure on the local motorways. The M6 between Broughton and junction 31 is nearing capacity and therefore any future developments will need to consider mitigation measures to minimise the impact on the strategic road network.

5.3.6 Preston has a well developed network of local bus services and some of these have been improved through a program of quality bus partnerships, and DfT Kickstart funding enabled the introduction of the Orbit services. Primarily, the network has been developed to serve the local market of Preston though there are some inter-urban services, which are generally operated by a different operator.

5.3.7 In Chorley DfT funding has also enabled the introduction of Network Chorley. Whilst the network has seen increases in patronage it is unlikely that it will be commercially viable by the end of the DfT funding period, so the exit strategy will involve continued financial support from Lancashire County Council in conjunction with a network review to ensure that services are operating within financial constraints.

5.3.8 South Ribble does not have its own local bus network as all the services with the exception of the South Ribble Flexibus, pass through South Ribble either on their way to Preston or Chorley. The east-west connections by public transport within the borough tend to be poor.

5.3.9 There is no network or joint ticketing initiatives currently in operation within the study area (not even on services operated by more than one operator e.g. Service 109 operated via Buckshaw). The north south bus routes between the main urban areas are fairly well established but these are often not the most direct routes and journey times when compared to car trips are not attractive.

5.3.10 The key bus issues and the existing high frequency routes are summarised on Figure F.1 in Appendix F.

5.3.11 Rail stations suffer from varying degrees of access issues that range from lack of associated car parking to poor pedestrian and cycling links between the town/city centres and employment area e.g. Bamber Bridge, UCLAN. There are also capacity issues on rail services to Manchester and the timings between Transpennine and Northern Rail services would benefit from reviewing in order to provide a more attractive offer for users as sometimes there are only 5 minutes between services.

5.3.12 Cycling and walking will offer more benefits for shorter journeys, but if such modes are to be encouraged then the respective infrastructure needs to reflect this. This will involve making urban centres and residential streets more attractive for walking and cycling. Cyclists and pedestrian natural desire lines are often constrained by the orientation of the road network creating barriers and it will be important to introduce measures to overcome such obstacles.

5.4 The Package of Measures

5.4.1 Within the study area trips by car have continued to have the advantage to such an extent that other modes of transport have become relatively less attractive by comparison. If the imbalance is to be readdressed then radical improvements to infrastructure, improvements to transport services complemented by a mix of incentives and disincentives need to be implemented to ensure that the existing congestion issues do not get worse and that the residents of Central Lancashire are able to access a range of complimentary transport alternatives and make informed choices about how they choose to travel.

5.4.2 Therefore, the proposed transport strategy for Central Lancashire comprises of a package of measures aimed at addressing the problems and issues that have been identified during the course of this study. The measures will include:

- Public transport improvements;
- Highway improvements;
- Cycling and pedestrian measures;
- Travel Plan measures;
- Demand management measures; and
- Improvements for freight.

5.4.3 The strategy will need to present a mix of short, medium and long term measures to ensure on-going public and political support. In order to give some sense of priority schemes have been identified that could be delivered in the:

- Short term – between 2008 and 2013;
- Medium term – between 2013 and 2018; and
- Long term – between 2018 and 2028.

5.4.4 The measures proposed need to be complimentary and delivered in a holistic manner so as not to promote competition between different modes e.g. rail and bus.

5.4.5 The measures outlined below are initial scheme suggestions for further consideration and are not finalised detailed scheme designs.

5.5 Rail Improvements

5.5.1 There are a number of common access issues occurring at most rail stations within the study area and measures to be introduced include:

- Increased parking supply at stations;

- Greater priority/provision for pedestrians and cyclists; and
- Better integration with bus services.

5.5.2 The issues and suggested improvements for individual rail stations within the study area are presented in Table 5.1.

Table 5.1 Rail Stations – Suggestions for Improvement

Station	Problems/Issues	Potential Solution	Comment
Preston	Parking capacity	Virgin are progressing a scheme to provide a new multi-storey car park	Getting to Preston Station by car can be difficult due to congestion on the wider network
	Poor image	Image of Preston Station needs to reflect High Tech aspirations of the CBD	Preston Rail Station is a major gateway to the sub-region
	Accessibility - Heavy pedestrian traffic and the stairs on the Butler Street Footbridge is a particular problem	Preston station needs to be accessible by cyclists and pedestrians particularly the mobility impaired.	Network rail are developing proposals to upgrade passenger operated lifts and subways
	Platforms 1 & 2 which connect Blackpool and the Airport are cluttered with cafes and portacabins	Relocate temporary structures to create more space on the platform	This has been identified in the Lancashire & Cumbria RUS
Leyland	Large gaps between the train and platforms	Reduce gap between platform and train	This is currently being investigated
	General low standard of facilities, lack of real time information, poor quality shelters etc	Improve the standard of facilities to give the station a high quality appearance	
	Poor connectivity between the station and the town	Improved pedestrian signage	
	No disabled access. Only access between	Provide access for the disabled	

Station	Problems/Issues	Potential Solution	Comment
	platforms is via a footbridge with steps		
	Lack of secure parking for cyclists	Provide cycle lockers	
	Lack of parking provision	Increase parking capacity	SRBC are in discussions with Northern Rail regarding using the council owned car park on Golden Hill for rail users
	Poor frequency of services	Improve frequency to 3 or 4 trains per hour	
Chorley	Limited parking – car park is full by 08:00	Increase parking capacity by decking car park	It is anticipated that the new rail station at Buckshaw Village will alleviate some of the parking pressures at Chorley
	Rail services are overcrowded during peak periods going to Manchester	Improve capacity during peak periods	The new rail station at Buckshaw may exacerbate overcrowding on the train when it reaches Chorley. Although there are proposals to mitigate potential overcrowding
	Timing of Services – sometimes there are two services within 5 mins of each other	Review of service timings particularly Buxton service	
	Shepherds Way is a barrier to pedestrians and cyclists	The phasing of the pelican crossing needs reviewing as it now takes longer for pedestrians to cross the road. Should also consider some cycle crossing in this location	
	Lack of secure parking for cyclists	Provide cycle lockers	

Station	Problems/Issues	Potential Solution	Comment
	No provision for taxis	Taxi rank or freephone to local taxi company	
	Poor disabled access	To access platform 2 from the main entrance need to walk down steps to subway	There is a second entrance on the other side of the station but need to go out of the station and long way round on footway
Adlington	Lack of parking provision	Increase parking capacity	There is some land allocated in the Local Plan for parking to serve the station
Bamber Bridge	Poor connectivity for cyclists and pedestrians with employment area at Walton Summit	Improve pedestrian and cycling links between Bamber Bridge and Walton Summit	There is an existing sub-way under the motorway
Lostock Hall	Poor access and currently under used	Improve access and promote as local transport link	

5.5.3 All of the above issues need addressing now and should be prioritised for the short to medium term. We suggest that stations should be dealt with in the following order of priority:

- Preston as this is a major gateway to the sub-region;
- Leyland as the facilities for passengers are very poor;
- Chorley as this provides as important link to Manchester;
- Adlington also provides an important link to Manchester;
- Bamber Bridge potential links with Walton Summit; and
- Lostock Hall serves as a local station.

5.6 Potential New Rail Stations

5.6.1 The following locations have been identified as having potential for new rail stations. The rail network is perceived as being important for both local and strategic rail networks and it is likely that these stations will be delivered in the longer term and in response to the introduction of major developments within the respective areas:

- Cottam – this is a long standing aspiration within the Preston Local Plan and would also complement the proposed increase in residential development in the area. An alternative option is to have a rail station further out that could provide park & ride opportunities for both Blackpool and Preston, though likely patronage volumes may not justify such a facility;
- Broughton – Might be required to serve future (2028) development planned in the area. However, it is only a 2 line track and thus it may not prove feasible to have cross country services stopping at this station.
- Coppull – there is a site that is currently safeguarded in the Chorley Local Plan. The proposed line upgrades along the west coast mainline in this vicinity make the probability of a new station in this location more feasible than other suggested locations.
- Midge Hall – would effectively be a 'local' station and could only be justified by future development in the area.

5.7 Local Bus Services

Core Strategic Network

5.7.1 The initial suggestions propose the implementation of a strategic core bus network to promote connectivity across Central Lancashire which should be linked to the future pattern of development and could be delivered in phases. The network consists of (Appendix G: Figure G.1 Core Strategic Routes

- Primary routes providing a minimum 10 minute frequency (these would be high quality public transport routes)
- Secondary routes providing a minimum 15 minute frequency
- Tertiary routes providing a minimum 30 minute frequency

5.7.2 The primary routes or high quality public transport routes are described in Table 5.2.

Table 5.2 High Quality Public Transport Routes – Likely Transport Issues Arising from Future Traffic Growth and Developments

Corridor Description	Issues	Dependant Developments	Delivery
Longridge – Preston (guided busway along Longridge line)	Average speeds for the B6243 are currently 15-20 mph in the AM peak. Traffic forecasts which suggest traffic could increase to over 1,200 vehicles by 2018 taking the road above its capacity. Along the B6242/A6063 during the AM peak average speeds are already less than 20mph. This is further	Longridge Grimsargh Preston East	Medium-term

Corridor Description	Issues	Dependant Developments	Delivery
	compounded congestion at the Prison junction		
Broughton - Preston	Average traffic speeds on large sections of the route between Broughton and Preston City Centre are between 8 and 15 mph in the AM and PM Peaks. The road is expected to see an increase in traffic, particularly when taking into consideration new developments in Preston City Centre, Broughton and Lightfoot	Whittingham Broughton Lightfoot Cottam	Short-term
Cottam - Preston	Significant amounts of additional traffic are expected to be using the road by 2018 when new housing developments at Cottam Hall and Broughton are completed. This increase is forecast to take the existing road to capacity and this is forecast to get worse by 2028 if the developments at Lightfoot proceed	Cottam Lightfoot	Long-term
Lea – Preston (with potential scope to extend to Blackpool)	Unlike most of the other major corridors into Preston city centre, the A583 is dual carriageway until it reaches the edge of the city centre, lessening the impact of congestion on the highway. As a result, average speeds are generally higher than other radial routes.	Lea	Long-term
Preston – Samlesbury (with potential scope to extend to Blackburn)	Although a considerable amount of traffic approaching from the east leaves the A59 at the M6 junction, a large volume (1175 vehicles in AM peak hour) of traffic continues towards Preston City Centre. Average speed decreases to 0-8 mph in the AM peak between junction 31 of the M6 and the A5085 (Blackpool Road) junction. As the road approaches Preston the carriageway becomes narrower and there an increasing number of side roads. These factors contribute to a	Samlesbury	Medium-term

Corridor Description	Issues	Dependant Developments	Delivery
	decrease in road capacity and the congestion which can form in peak hours.		
Chorley-Buckshaw-Leyland-Preston	Traffic generation of over 4,000 vehicles in the AM peak from Buckshaw Village and 3,000 vehicles at Cuerden will have a significant impact on this corridor[3]	Buckshaw North of Chorley Euxton	Medium-term
Wade Hall-Broad Oak- Preston	Traffic forecasts indicate additional 1,000 vehicle trips in the AM peak on the B5253 and A582 outside the Farington and Pickering's Farm sites	Leyland South South of Wade Hall Farrington Pickerings Farm	Long-term
Moss Side – Tardy Gate - Preston	The B5254 Watkin Lane/Leyland Road is an important existing bus route linking Leyland to Preston. Additional traffic generated along B5253 and A582 is likely to be displaced along this route exacerbating existing problems at Tardy Gate	Moss Side Farrington Cuerden Pickerings Farm Lostock Hall Gasworks Lime Kiln	Short-term
Chorley-Bamber Bridge-start of guided busway along old railway corridor Chorley-Bamber Bridge-Preston via B6258 (this would be the alternative route)	Traffic on this corridor is forecast to increase significantly in the next decade, particularly between Junction 1A of the M65 and Preston, this is also the location of the Cuerden Regional Business Park, creating nearly 7,000 jobs and associated vehicle traffic. Walton Bridge which crosses the River Ribble, is expected to be carrying over 200 vehicles above its capacity towards Preston in the AM peak by 2018, leading to increasingly worse congestion and increased journey times.	Whittle-le-Woods Dunbia South Rings Lostock Hall Gasworks Lime Kiln Whittle-le-Woods Arla Foods	Medium-term

[3] At the time of the assessment the extent of the employment developments were uncertain for Buckshaw and Cuerden and therefore the assessment were based on site areas and not gross floor space. The trip estimates represent a worst case scenario and it is anticipated that the actual impact will be much lower

Corridor Description	Issues	Dependant Developments	Delivery
Much Hoole – Preston (with potential scope to extend to Southport)	Average speed of 8-15 mph through Penwortham towards Preston in the AM peak. By 2018 an additional 133 vehicles are forecast to travel through Higher Penwortham towards Preston in the AM peak, without some form of mitigating measures average journey times will increase as average speeds decrease. An additional 900 vehicles are forecast to use the Penwortham Bridges to cross the River Ribble to Preston in the AM peak. Such an increase could lead to major delays to traffic and queuing through Higher Penwortham.	N/A	Long-term

5.7.3 The high quality public transport routes could be developed as bus rapid transit style services and would be complimented by showcase measures such as bus priority, high quality bus shelters and real time information. Network ticketing is strongly recommended to make travel and interchange easier for passengers. Interchange points also need to be clearly distinguishable from other stops and shelters and could incorporate some journey time information.

5.7.4 It is anticipated that the network would be franchised under new powers emerging from the Transport Bill. The current Quality Partnership Scheme model introduced by the Transport Act 2000 is a means by which a local authority agrees to invest in improved facilities at specific locations along bus routes (e.g. bus stops or bus lanes) and operators who wish to use those facilities agree to provide services of a particular standard (e.g. new buses, or driver training standards).

5.7.5 Under proposals in the Local Transport Bill quality partnership schemes would be able, for the first time, to specify frequencies, timings and maximum fares as standards of service. This could only be done where there were no "admissible objections" from "relevant operators".

5.7.6 The Strategic Core Network focuses on the emerging development sites and the commuter market. Commuters prefer fast and direct services as well as high quality vehicles and if aspirations to achieve modal switch from single occupancy car travel and mitigation against increased congestion are to be realised this market will need to be catered for.

5.7.7 However there are a number of traditional markets e.g. senior citizens who are traditionally more dependant upon local bus services and to whom journey time is not so important but may not be able to walk too far to their nearest stop. It is anticipated that the core strategic network will be complemented by more local services fulfilling more of a social need and these may be a mix of commercial and subsidised services.

5.7.8 The strategy also presents opportunities for potential localised schemes and these could include:

South Ribble

- Leyland transport hub – Hough Lane and/or Tesco (Short Term);
- South Ribble Rider – local bus services improving connectivity within South Ribble between urban centres and rail links (Medium Term);
- South Ribble Flexibus – expansion of the existing service to focus on more remote and rural parts of the Borough (Medium Term); and
- Mini interchanges: Tardy Gate, Bamber Bridge, Lostock Hall (Medium Term).

Preston

- Bus Interchange – Preston Railway Station (Medium Term);
- New bus station as part of Tithe barn development (Short term);
- Free Shuttle Service – between rail station, CBD, UCLAN, city car parks and bus station (Medium Term); and
- Mini interchange: Royal Preston Hospital (Short Term).

Chorley

- Network Chorley – step change to increase core town services to 4 buses per hour and extensions/ new services e.g. Botany Bay particularly as Chorley grows and develops to ensure new development sites are served by public transport. Increases services to surrounding rural villages to 2 buses (Long Term);
- Croston – rural transport hub with some DRT with the proposed improvements to the Preston – Ormskirk service and proposed improvements to the bus service to Chorley this could be a potential option (Long Term);
- Increase the frequency of the service between Blackburn and Chorley to 2 buses per hour potential to link with DRT/Flexible transport to server rural areas to North East of Chorley. (Medium Term);
- The current links between Chorley and Bolton and Chorley and Wigan should be retained and developed as required (Short to Longer Term); and
- Mini interchanges: Chorley Hospital, ASDA/Clayton Green (Short Term).

5.7.9 To support the proposed improvements to local bus services the following bus priority measures are being suggested for further consideration:

- High Occupancy Vehicles (HOV)/Bus Lanes on approaches to Preston e.g. A6, A59, A582, A583 (Short term);
- Some junction remodelling to incorporate greater bus priority e.g. Tardy Gate, Seaview (A6), Chorley Hospital, Prison Junction in Preston (Short Term); and
- Primary routes form showcase corridors and would incorporate bus priority measures (see table 5.1).

5.8 Potential Park & Ride Sites

5.8.1 The following sites are initially being recommended for further consideration as bus based Park & Ride:

- Tickled Trout – Preston with potential to serve Samlesbury (Medium Term);
- Broughton –next site to be developed after junction 31a (Short Term);
- Junction 31a – already a committed scheme and due to go in 2008/2009 (Short Term);
- Cuerden Green (Medium Term); and
- Penwortham Way (Long Term).

5.8.2 The Park & Ride sites are located on the primary/high quality public transport routes and will be served by the buses operating along these routes (i.e. not a dedicated Park & Ride service). There is a risk that if a dedicated service is not provided that the bus service could be delayed else where on the network or that it could be full by the time it reaches the site so this will need to be compensated for by provision of a high frequency service. Routes should also be complimented with bus priority measures.

5.8.3 The following sites are initially being recommended as rail based Park & Ride sites (see section 5.6). With the exception of Buckshaw these would all be delivered over the longer-term:

- Cottam – this could be equally served as a bus based Park & Ride;
- Broughton;
- Riversway – possibly to incorporate Preston's City Vision of some form of light rail;
- Midge Hall,
- Coppull; and
- Buckshaw due to open 2010.

5.8.4 Park & Ride sites also have potential to be developed as transport hubs linking in with local services and also have potential for park & cycle as well park & share (car sharing) schemes. As the sites will be gateways to Preston and should reflect the aspirations for Preston city centre therefore these will need to be high quality sites reflecting current best practice in Park & Ride design.

5.9 Potential Highway Improvements

5.9.1 Initial recommendations for further consideration include:

- Improving east to west highway connections. This would be done on an incremental basis, and would be driven by the delivery of development in areas which the proposed highway would serve. The proposals would incorporate some dualling of the A582, provision of the Penwortham By-pass, a new crossing of the River Ribble and a northern extension to the M55 (though DfT approval will be required for the provision of a new junction on the M55). Provision of such a route will provide an alternative river crossing and could also provide some relief for the M6/M55 corridor (Long Term);

- Broughton Bypass including link to Eastway – this is a combined LCC/developer funded scheme and would provide relief to Eastway which is showing increased pressure as a result of the developments at Broughton and Whittingham (Short Term);
- Improvements to the junction between the A6 and the M55 Junction 1- this junction is operating at capacity and further development to the north of Preston cannot be delivered without increased delays and queues forming on the M55 motorway and extending into the adjacent M6 Junction 32;
- South Ribble Cross Borough Link Road – this could help to open up sites at Pickerings Farm and Lostock Hall Gasworks and could provide relief to the A582 Flensburg Way/Farrington Road which is showing increased pressure as a result of developments at Pickerings Farm and Farington. The completion of the Cross Borough link road would require some costly infrastructure across the West Coast Main Line involving a lengthy planning process (Long Term); and
- Bus priority measures along the main approaches into Preston (Short Term).

5.10 Walking and Cycling

5.10.1 Approx 10% of people walk to work[4] in Central Lancashire and approx 80% of all trips under a mile[5] are undertaken on foot. Therefore it is not unreasonable to expect people to walk to work if they live within a mile of their work place – assuming no major barriers the anticipated journey time would be 15-20 mins.

5.10.2 Measures to encourage walking include:

- Improved street lighting to promote personal security;
- Good streetscape design (Manual for Streets) to make the walking environment more attractive e.g. service/town centres, residential areas;
- Pedestrian crossings at points where pedestrians want to cross;
- Travel planning – school, work, travelsmart;
- Improved connectivity between residential areas, transport hubs, town/service centres, employment area; and
- Development sites also need to consider movement within the site as well as to/from sites.

5.10.3 It is recommended that consideration is given to developing a design guide in the form of a supplementary planning document to cover streetscape design for residential, town/city centres, retail centres and places where there are likely to be areas of high pedestrian activity. This could be delivered in the shorter term.

5.10.4 Walking is also an important part of longer journeys as people often have to walk to transport interchanges/stations, bus stops, car parks. Normally these trips should be within 5-10 mins otherwise the overall journey takes too long.

[4] Census 2001

[5] www.dft.gov.uk

5.10.5 Transport interchanges/stations need to be fully accessible for all pedestrians particularly people with special needs (this can also include parents) and this also needs to include links between transport hubs and other areas of pedestrian activity. Provision also needs to be made for adequate and secure cycle storage.

5.10.6 Many measures proposed for pedestrians will also be applicable to cyclists and vice versa. Cyclists will often want to take the most direct route through town centres and do not often feel safe cycling on ring roads. Sometimes as an alternative to building expensive segregated cycle ways, quieter side/back roads can often be promoted as safe routes for cyclists; also reducing the speed within urbanised areas to 20 mph can be an effective means of promoting cycling.

5.10.7 Measures to promote cycling could include:

- Dedicated cycleways;
- Secure cycle parking within apartment blocks and at employment sites;
- Shower/wash facilities at work places;
- Promotion of quieter side/back roads;
- Reduced speed limits e.g. 20 mph;
- Cycle crossing particularly on busy roads; and
- Ensuring transport interchanges are accessible for cyclists.

5.10.8 A potential short term scheme that warrants further investigation is the creation of a pedestrian and cycle link between Bamber Bridge and Walton Summit Industrial Park. There is an existing footpath that runs along the rail track and passes under the motorway. At present it is difficult to find if you are unfamiliar with the area and would need some widening and landscaping to make it safe and attractive enough to be promoted as a cycling and pedestrian link. If a direct route could be created along the railway line from the station then this would be a real opportunity.

5.10.9 Through a desk top study of existing cycle maps, previous studies and strategies and information available on the Lancashire and Sustrans website, we have identified national and local cycle routes. General improvements and additions to the network are recommended for further consideration in the long term and it is also recommended that development sites are linked to the wider cycling network (Annex H Figure H.1).

5.11 Travel Plans

5.11.1 Travel plans are a package of measures aimed at reducing single occupancy car travel. In a development context they are used to reduce the forecast traffic volume generated by the development site and can be imposed by a condition at the planning approval stage. The main objectives of a travel plan are to:

- Reduce the need to travel;
- Reduce the number of vehicles on site;
- Provide a 'safe' minimum number of parking spaces;
- Reduce the impact of the traffic on the site and the surrounding areas;
- Improve the safety and security of people who travel to the site;

- Promote sustainable transport modes and healthier living; and
- Inform employees of the social, environmental and economic costs of their travel choices.

5.11.2 Travel Plan recommendations for further consideration includes:

- Specifications for minimum standard for secure cycle parking e.g. basement cycle parking for apartment blocks (Short Term);
- Modal split targets – need to be challenging but deliverable (Short Term);
- Central Lancashire car parking standards (Short Term);
- Supplementary Planning Document on Travel Plans (Short Term);
- Umbrella or area wide travel plans for larger development sites including a pick and mix of measures that can be tailored to suit individual sites (Short Term);
- Residential Travel Plans including new residential developments and personalised travel planning (Short Term);
- Effective travel plan monitoring resources to cover each of the Districts – there is currently insufficient resource to undertake this and therefore developer travel plans are not being enforced (Short Term);
- Travel Plan Champions based at development sites – travel plans are always more effective when there are local 'champions' or co-ordinators to drive the measures (Short Term); and
- Travel Plan Forum for sharing resources and best practice (Short Term).

5.12 Demand Management Measures

5.12.1 To encourage modal switch from the single occupancy car travel to more sustainable modes will require a mix of incentives and disincentives as the car currently has a huge advantage and therefore radical measures are required readdress the imbalance. Disincentives for further consideration would include:

- Decrease long stay parking in Preston City Centre and increase short stay parking (Short Term);
- Increase long-stay parking charges to encourage more Park & Ride/Public Transport (Short Term); and
- Private non-residential parking (Preston City Centre) – work place parking levy which could be used to cross-subside public transport improvements (Long Term).

5.12.2 Measures aimed specifically at demand management and suitable for further consideration would include:

- More effective use of Urban Traffic Control (UTC) and possible expansion e.g. queue management (Short Term);
- Route management strategies linked with implementation of primary bus routes and incorporating improvements for pedestrians and cyclists to provide a holistic approach (Medium to Long Term);

- Variable Message Signing (VMS) on approaches to Preston, which could be linked to real time journey planning (Short Term);
- Active traffic management on the motorway (Long Term); and
- Ramp metering on slips roads i.e. controls flows off slip roads onto motorways via traffic signals (Long Term).

5.13 Freight

5.13.1 The following measures are being suggested for further consideration:

- Quality Freight Partnership – partnership self regulating approach to the management of the freight industry (Short Term);
- Freight Map – identifies suitable routes for HGVs and is particularly useful for drivers that are unfamiliar with the area (Short Term);
- Signage – compliments the freight map (Short Term); and
- Localised Servicing – restricted access times, weight restrictions particularly in urban centres (Short to Medium Term).

5.14 Summary

5.14.1 The table blow summarises the initial scheme suggestions for further consideration and their priority in terms of delivery in the short, medium or longer term.

Table 5.3 Summary of Scheme Suggestions

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
Rail Schemes				
Existing station improvements (see table 5.1)	Preston city centre developments Developments around Leyland	√		
Potential new rail stations (except Buckshaw)	Cottam Broughton Lightfoot Moss Side South of Wade Hall South Leyland			√
Buckshaw Parkway	Buckshaw Euxton North of Chorley North of Lancaster Lane Whittle-le-Woods	√		
High Quality Public Transport Routes				
Longridge – Preston (guided busway along Longridge line)	Longridge Grimsargh Preston East			√
Broughton - Preston	Whittingham Broughton Lightfoot Cottam	√		
Cottam - Preston	Cottam Lightfoot			√

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
Lea - Preston	Lea			√
Preston - Samlesbury	Samlesbury		√	
Chorley-Buckshaw-Leyland-Preston	Buckshaw North of Chorley Euxton		√	
Wade Hall-Broad Oak - Preston	Leyland South South of Wade Hall Farrington Pickerings Farm			√
Moss Side – Tardy Gate -Preston	Moss Side Farrington Cuerden Pickerings Farm Lostock Hall Gasworks Lime Kiln	√		
Chorley-Bamber Bridge-start of guided busway along old railway corridor	Whittle-le-Woods Dunbia South Rings Lostock Hall Gasworks Lime Kiln		√	
Chorley-Bamber Bridge-Preston via B6258 (as an alternative option to guided busway)	Whittle-le-Woods Arla Foods		√	
Much Hoole - Preston	N/A			√
Local Bus Schemes				
Leyland transport hub	Moss Side Leyland South	√		

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
	Wade Hall Farrington			
South Ribble Rider	Providing a link between developments in the west to developments in the east of the Borough		√	
South Ribble Flexibus expansion	Could be linked to new development sites		√	
Mini interchanges: Tardy Gate, Bamber Bridge, Lostock Hall	Moss Side Pickerings Farm Lostock Hall Gasworks Lime Kiln Farrington	√	√	
Bus Interchange – Preston Railway Station	Central Business District Tithe Barn Queen Street		√	
New bus station as part of Tithe barn development	Tithe Barn Queen Street	√		
Free Shuttle Service – between rail station, CBD, UCLAN, city car parks and bus station	Central Business District Tithe Barn		√	
Mini interchange: Royal Preston Hospital	Broughton Whittingham Cottam Lightfoot	√		
Network Chorley step change	All developments within Chorley			√

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
Croston rural transport hub	N/A			√
Increase the frequency of the service between Blackburn and Chorley	Great Knowley/Botany Bay M61 Junction 8		√	
Retain the current links between Bolton and Wigan	N/A	√	√	√
Mini interchanges: Chorley Hospital, ASDA/Clayton Green (Short Term)	North of Lancaster Lane	√		
Bus Priority/HOV Lanes				
High Occupancy Vehicles (HOV)/Bus Lanes on approaches to Preston e.g. A6, A59, A582, A583	All city centre developments	√		
Some junction remodelling to incorporate greater bus priority e.g. Tardy Gate, Seaview (A6), Chorley Hospital, Prison Junction in Preston	Moss Side Farrington Pickerings Farm Lostock Hall Gasworks Lime Kiln Buckshaw Tithe Barn CBD	√		
Park & Ride Sites				
Tickled Trout	Samlesbury City Centre Developments		√	
Broughton	Broughton Whittingham Cottam Lightfoot	√		

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
	City Centre Developments			
Junction 31a	City Centre Developments	√		
Cuerden Green	Buckshaw North of Lancaster Lane Farrington Euxton North of Chorley Whittle-le-Woods City Centre Developments		√	
Penwortham	Moss Side Leyland South Wade Hall Farrington Pickerings Farm			√
Cottam	Cottam Lightfoot Lea			√
Highway Improvements				
Dualling and possible extension of A582	Pickering Farm Farrington Moss Side Wade Hall Leyland South		√	√
Broughton Bypass including link to Eastway	Whittingham Land at Eastway/Broughton Business Park Cottam	√	√	

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
	Broughton Lightfoot			
Improvements to A6 and junction with M55	Whittingham Land at Eastway/Broughton Business Park Cottam Broughton Lightfoot	√		
South Ribble Cross Borough Link Road	Pickerings Farm Lostock Hall Gasworks Lime Kiln	√		
Pedestrians & Cyclists				
Design Guide (SPD) for streetscape design	All development sites	√		
Improved pedestrian & cycling link between Bamber Bridge and Walton Summit	N/A	√		
Central Lancashire cycling network	All development sites			√
Travel Plans				
Specifications for minimum standard for secure cycle parking	All development sites	√		
Modal split targets	All development sites	√		
Central Lancashire car parking standards	All development sites	√		
Supplementary Planning Document on Travel Plans	All development sites	√		
Umbrella or area wide travel plans for larger development sites	All large development sites	√		

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
Residential Travel Plans including new residential developments and personalised travel plans	All residential developments	√		
Effective travel plan monitoring resources to cover each of the Districts	All development sites	√		
Travel Plan Champions based at development sites	All development sites	√		
Travel Plan Forum for sharing resources and best practice	N/A	√		
Demand Management				
Decrease long stay parking in Preston City Centre and increase short stay parking	City centre developments	√		
Increase long-stay parking charges to encourage more Park & Ride/Public Transport	City centre developments	√		
Private non-residential parking (Preston City Centre) – work place parking levy	City centre developments			√
More effective use of Urban Traffic Control (UTC)	City centre developments	√		
Route management strategies	N/A		√	√
Variable Message Signing (VMS)	City centre developments	√		
Active traffic management on the motorway	N/A			√
Ramp metering on slips roads	N/A			√
Freight				
Quality Freight Partnership	City centre developments	√		
Freight Map	N/A	√		

Scheme Suggestion	Dependant Developments	Short Term 2008-2013	Medium Term 2013-2018	Long Term 2018-2028
Signage	City centre developments	√		
Localised Servicing	City centre developments/Or large mixed use sites	√	√	

6 Implementation

6.1 Introduction

6.1.1 This section of the report provides preliminary costings for the initial scheme suggestions and discusses delivery of schemes.

6.2 Costing

6.2.1 The costings are based on current prices and do not include any allowance for inflation or any optimism bias. Costings have been drawn from a variety of sources such as Local Transport Today and SPONS. The figures are presented in table 6.1 and have been broken down by scheme type and total investment for each delivery period:

- Short Term – between 2008 and 2013;
- Medium Term – between 2013 and 2018; and
- Long Term – between 2018 and 2028.

Table 6.1 Preliminary Scheme Costings

	2008-2013	2013-2018	2018-2028
Rail Schemes			
Existing station improvements	£1,500,000		
Potential new rail stations (except Buckshaw) x 4			£16,000,000
Buckshaw Rail Station	£7,000,000		
Total for Rail Schemes			**£24,500,000**
High Quality Public Transport Routes			
Longridge – Preston (guided busway along Longridge line)			£22,500,000
Broughton - Preston	£9,000,000		
Cottam - Preston			£9,000,000
Lea - Preston			£9,000,000
Preston - Samlesbury		£15,000,000	
Chorley-Buckshaw-Leyland-Preston		£27,000,000	

	2008-2013	2013-2018	2018-2028
Wade Hall-Broad Oak - Preston			£12,000,000
Moss Side- Tardy Gate - Preston	£9,000,000		
Chorley-Bamber Bridge-start of guided busway along old railway corridor		£13,500,000	
Chorley-Bamber Bridge-Preston via B6258		£9,000,000	
Much Hoole - Preston	£9,000,000		
Total for High Quality Public transport Routes			**£144,000,000**
Local Bus Schemes			
Leyland transport hub	£500,000		
Mini interchanges: Tardy Gate, Bamber Bridge, Lostock Hall		£300,000	
Bus Interchange – Preston Railway Station		£2,000,000	
New bus station as part of Tithe barn development	£5,000,000		
Free Shuttle Service – based on two vehicles*	£1,000,000	£800,000	£1,800,000
Mini interchange: Royal Preston Hospital	£100,000		
Croston rural transport hub			£500,000
Mini interchanges: Chorley Hospital, ASDA/Clayton Green (Short Term)	£200,000		
Total for Local Bus Schemes			**£12,200,000**
Bus Priority/HOV Lanes			
High Occupancy Vehicles (HOV)/Bus Lanes on approaches to Preston e.g. A6, A59, A582, A583	£2,000,000		
Some junction remodeling to incorporate greater bus priority e.g.	£1,000,000		

	2008-2013	2013-2018	2018-2028
Tardy Gate, Seaview (A6), Chorley Hospital, Prison Junction in Preston			
Total for Bus Priority/HOV Lanes			**£3,000,000**
Park & Ride Sites			
Tickled Trout		£4,500,000	
Broughton	£4,500,000		
Junction 31a	£4,500,000		
Cuerden Green		£4,500,000	
Penwortham (Broad Oak)			£4,500,000
Cottam			£4,500,000
Total for Park & Ride Sites			**£27,000,000**
Highway Improvements			
Dualling and possible extension of A582		£10,000,000	£17,000,000
Improvements to A6 and junction with M55	£3,500,000		
Total for Highway Improvements			**£30,500,000**
Pedestrians & Cyclists			
Improved pedestrian & cycling link between Bamber Bridge and Walton Summit	£200,000		
General improvements and extensions to cycle network			£2,750,000
Total for Pedestrian & Cyclists			**£2,950,000**
Demand Management			
More effective use of Urban Traffic Control (UTC)	£1,000,000		
Variable Message Signing (VMS)	£500,000		

	2008-2013	2013-2018	2018-2028
Active traffic management on the motorway			£10,000,000
Ramp metering on slips roads			£500,000
Total for demand Management			**£12,000,000**
Total Investment	**£59,500,000**	**£86,600,000**	**£110,050,000**

*based on an initial vehicle cost of £100,000 per vehicle and a running cost of £80,000 per vehicle per annum

6.3 Delivery Mechanisms

6.3.1 In order to successfully deliver the proposed initial transport schemes a significant amount of investment will be required. Potential funding mechanisms are dealt with in the next chapter.

6.3.2 In order to deliver the proposed schemes the following will be necessary:

- Sufficient staff resources;
- Political support; and
- Public support.

6.3.3 It is recommended that a dedicated project manager should be appointed to drive forward the delivery of the proposed schemes. The project manager will need to be supported by staff from both the districts and county council and therefore we suggest that the steering group continues to meet a regular intervals and that the steering group should be supported by a working officer group.

6.3.4 The schemes need to be delivered in a co-ordinated manner and therefore it would seem appropriate to recommend a route management approach to achieve the required delivery of:

- Public transport corridors;
- Demand management measures;
- Highway improvements; and
- Facilities for pedestrians and cyclists.

6.3.5 Measures should also be complimentary to each other and should not encourage competition between sustainable modes as the overall aim will be to reduce car traffic.

6.4 Public & Stakeholder Consultation

6.4.1 It will be necessary early on in the process to identify key stakeholders and to try to involve them in the consultation process early so as to identify and anticipate and key issues and objections. Stakeholders are likely to involve a variety of organisations and the list below is not meant to be exhaustive and can be added or deleted as appropriate:

- Highways Agency;
- Network Rail;
- Local rail and bus operators;
- Statutory environmental bodies;
- Land owners and developers; and
- Community Representatives.

6.4.2 Public consultation will be a key issue to the delivery of any transport schemes within Central Lancashire. The Local Government and Public Involvement in Health Act 2007 introduces a new duty on best value authorities to involve local people, strengthening accountability and ensuring that assessment and inspection are more reflective of and responsive to, local citizens' and services users' views. This duty is expected to be implemented from April 2009. Work is underway with key stakeholders to scope out light-touch statutory guidance on this new duty, in line with the new guidance protocol agreed with local government.

7 Funding

7.1 Introduction

7.1.1 The section sets out a number of funding sources or mechanisms through which infrastructure could be delivered, broken down into private and public sector sources.

7.2 Mainstream Public Sector Funding Sources

7.2.1 There have been increasing pressures to develop infrastructure through creative mechanisms to tie private sector funding linked to development outputs. However, it is important to recognise that the scale and timing of a number of the major infrastructure requirements identified within the proposed Transport Strategy mean that there will be a continued requirement for public sector funding to support development and growth aspirations. In order to frontload a number of the large infrastructure projects, mainstream public sector funding will be required and this can only be provided by the UK Central Government departments.

Local Transport Plan / Regional Funding Allocations

7.2.2 The current Lancashire Local Transport Plan (LTP) identifies major infrastructure projects which are programmed to receive regional funding allocations. Whilst these are spread across Lancashire there are no direct infrastructure schemes within Central Lancashire with the projects identified through this Strategy sitting outside of the current shortlist of projects.

7.2.3 The Local transport Plan process is changing with proposals under the Transport Bill to remove the requirements for local transport authorities to produce LTPs every 5 years. Local transport authorities will now have much more discretion over when they need to update their plans.

7.2.4 Funding allocations have also changed with both the highways and integrated transport blocks being formulaic. This will place limitations on what can be delivered through future local transport allocations requiring the need for greater priority.

Transport Innovation Fund

7.2.5 The Transport Innovation Fund (TIF) was originally proposed in the 2004 White Paper 'The Future of Transport' and represents additional public sector funding outside of the Regional Funding Allocation and LTP block grants. The Fund is directly targeted at two priority objectives; tackling congestion and improving productivity with £290m available nationally in 2008/09 rising to £1.3bn in 2011/12 and £2.55bn in 2014/15. The Greater Manchester authorities have recently successfully obtained TIF funding linked to the introduction of a congestion charge around the regional centre, with TIF funding providing a substantial upfront investment in a number of major public transport proposals, including the extension of the existing Metrolink tram network. Whilst the Central Lancashire authorities have significant ambitions for economic and housing growth it is unlikely that TIF funding represents a realistic opportunity in the short term, as eligible projects are intended to have a national or regional significance for productivity, with the scale of the Greater Manchester proposal representing a clear benchmark.

Community Infrastructure Fund

7.2.6 The Central Lancashire authorities are awaiting a decision relating to their Expression of Interest jointly prepared with the Blackpool, Fylde and Wyre Councils, responding to the invitation set out within the Housing Green Paper, 'Homes for the future: more affordable, more sustainable', for a second phase of Growth Point allocations. A decision is anticipated by the end of July from central government with a successful bid ensuring that the authorities would have access to the second round of the Community Infrastructure Fund (CIF2). The Green Paper identified that a total of £300m would be made available nationally through CIF2 with further rounds of funding anticipated.

7.2.7 The CIF fund is designed to complement mainstream transport funding with existing LTP / RFA schemes generally not eligible. However, the fund is specifically targeted at linking the provision of funding for transport infrastructure to the delivery of housing, with CIF bids expected to illustrate their role in unlocking large housing development sites, enabling the acceleration of housing development and improving the sustainability of major locations for housing growth. These criteria fit closely with a number of the projects identified within the strategy with the original EOI including a shortlist of key schemes/projects associated with unlocking a number of large housing sites in South Ribble and Preston to accelerate the delivery of housing across the area.

7.2.8 It is important to note that the CIF is a capital grant allocation, with no revenue funding available, therefore limiting the projects eligible for application. However, funding is not limited to large or major infrastructure proposals with packages of smaller-scale infrastructure schemes also eligible. It is important to note that funding obtained from CIF will be ring-fenced to specific projects and non-transferable, with schemes needing to be complete by the 31st March 2011.

7.2.9 Three Expressions of Interest (EOI) for the Community Infrastructure Fund (CIF) were submitted to the Department of Communities and Local Government (DCLG) in September 2008 to support early housing development within Central Lancashire. These EOIs included:

- Broughton Park & Ride including junction improvements at M55 Junction 1 and bus priority measures along the A6 Garstang Road. The proposals will support development to the north of Preston;
- Sustainable Travel in South Ribble, which included highway improvements along the A582 and the creation of a high quality bus corridor along the B5254 Leyland Road/Watkin Lane, which supported developments at Pickerings farm, Moss Side, Gas Works and Lime Kiln; and
- Buckshaw Parkway Park & Ride which, supported the development at Buckshaw Village.

7.2.10 The outcomes of the expression of interest are expected to be announced in January 2009 and a full business case to be submitted by April 2009. The announcement for successful schemes is expected in July 2009.

7.3 Current Private Sector Funding Mechanisms

7.3.1 In considering private sector funding mechanisms it is important to recognise and understand the implications of current market sensitivities. The well documented current downturn in the market

will have implications regarding the viability of schemes and the level of contributions attainable through development at least within the initial phases of the Strategy. Current projections are indicating that it is unlikely that the market will fully recover in the next four to five years and this will have significant implications regarding both the level of development and the viability of schemes - and therefore the quantum of funding available to be negotiated.

The Existing S106 Regime

7.3.2 The three Central Lancashire authorities have, over recent years, successfully secured S106 agreements associated with a number of major schemes including the large Buckshaw Village development located on the border of South Ribble and Chorley. These agreements have funded a range of infrastructural elements including public transport improvements.

7.3.3 Despite these successes the current regime has not maximised the potential from significant levels of private sector housing development across Central Lancashire. Smaller housing developments and windfall developments have not been required to provide contributions to transport infrastructure, with these developments representing a significant proportion of the overall supply of housing across the three authorities. Other pressures to deliver affordable housing units and regeneration initiatives have also limited the overall funding contributions to infrastructure improvements.

7.3.4 Continuing to use traditional S106 agreements to negotiate funding for infrastructure also fails to address the fact that the impact of development is cumulative with a large number of small sites collectively creating pressure on existing infrastructure as well as the delivery of the larger sites. This is clearly illustrated through the overall Strategy and the identified infrastructural projects. It is difficult to directly associate a number of the large public transport and highway improvements required to specific development sites. The overall quantum of development, particularly under an accelerated growth scenario would place pressure upon infrastructure beyond that directly associated with specific sites and require an approach to developing new infrastructure which was not piecemeal in nature.

7.3.5 Agreeing specific infrastructure requirements and agreed contributions when planning permission is granted, as prescribed through the traditional S106 route, prevents sufficient flexibility to recognise that external circumstances may change throughout the development programme leading to transport requirements or opportunities which are new and/or different to those agreed.

7.3.6 In order to achieve the levels of infrastructure improvements proposed alongside the ambitions for economic and housing growth it is clear that an alternative regime for obtaining private sector contributions to infrastructure improvements will be required.

Community Infrastructure Levy / Tariff Model

7.3.7 The publication of documentation on the Community Infrastructure Levy (CIL) by DCLG (January 008) and provisions within the Planning Bill clearly signals the Governments intent to bring forward a system of locally based developer contributions within a tariff system. This statutory planning charge would operate under a similar approach as a Section 106 Tariff approach, with the primary difference being the fact that there would be a set of national policy guidelines defining how the charge would be calculated in each of the housing markets or localities.

7.3.8 If approved the CIL would be a standard charge decided by designated charging authorities and levied by them on new development e.g. a prescribed amount per dwelling or m^2 of development. The scale of the charge will need to take into account the full range of development costs placed on the develop, including affordable housing contributions and bespoke site issues including land remediation costs.

7.3.9 Unlike previous legislation the CIL would remove restrictions regarding the linking of contributions to the impact of, or benefit to, development at a specific site or sites. This ability to pool resources would enable the cumulative effect of development on infrastructure to be recognised and addressed through the delivery of jointly funded strategic infrastructure projects. It is important to note that contributions generated through CIL could not be used for general local authority expenditure, and would not be available to remedy pre-existing deficiencies unless these have been aggravated by new development. However, this does not preclude contributions from being spent on upgrading or improving existing infrastructure if additional pressure results from new development.

7.3.10 As noted above, it is unlikely that the money generated through the implementing of the CIL would be sufficient to meet the entire costs of the projects identified within the Strategy, especially as a number of these require initial 'pump priming'. Therefore monies obtained through the public sector funding sources identified above will continue to be important, however, the CIL represents a potential means to repay some of the public sector investment and also ensure the continued delivery of infrastructure projects to assist in facilitating other development sites phased later within the Strategy.

7.3.11 If approved the CIL would clearly represent a critical factor in facilitating the delivery of infrastructure for projects in the future, ensuring that a greater proportion of development would contribute to infrastructure improvements and a greater flexibility to provide large scale strategic infrastructure projects. The Strategy clearly establishes a set of infrastructure projects to which monies generated through the CIL could contribute. Continuing to update this Strategy will mean that the Central Lancashire authorities have the required framework in place to introduce the CIL assuming it is approved by Government.

An Emerging Tariff Model

7.3.12 In advance of the CIL South Ribble has already drafted a policy to introduce a development tariff on new house building. This adopts a similar approach as would be prescribed more formally nationally through the CIL. The Tariff, which is currently being consulted upon, prescribes a £4,000 tax on each housing unit developed with monies pooled collectively to contribute to the development of key infrastructure projects.

7.3.13 The opportunity exists to expand the proposed South Ribble Tariff system and adopt a 'public sector ringmaster' model covering the three authorities in advance of the CIL. This approach has been used in Milton Keynes to provide key infrastructure projects required to facilitate continued new development. This model enables a public sector organisation to provide upfront funding for infrastructure that is then repaid by multiple benefiting private investments as development is delivered. Agreements are reached with key landowners whose development is dependent upon the delivery of a major scale infrastructure project, with a public sector organisation acting as the accountable body.

7.3.14 This approach works best where there are a number of larger development sites that have a complex infrastructure burden or a shared interest in a large scale infrastructure component. It is clear that across Central Lancashire these conditions exists with the Strategy identifying a number of large potential early phased developable sites which under an accelerated growth scenario in particular, would require significant infrastructure projects to progress in parallel.

7.3.15 The Growth Point EOI submitted by the Central Lancashire authorities and Blackpool incorporated a Tariff model, with a higher tax of £10,000 suggested. Consideration was also given to the opportunity presented through the large quantum of publicly owned developable land within Central Lancashire. A number of the large potential housing development sites within Central Lancashire are within public sector ownership (mainly English Partnership ownership). This offers the potential to develop a model based on public sector land pooling in association with private sector development partners, which sees the public sector gain from; increases in land value achieved through the granting of planning permission, investment in enabling infrastructure or market trends. Existing models which incorporate this approach are currently being explored by the Government and include the current round of pilot Local Housing Companies. Alongside a Tariff model, as described above, the opportunity exists under this approach to maximise the contribution of private sector development to the infrastructure projects outlined within the Strategy.

7.4 Alternative Funding Sources

7.4.1 In addition to the public and private sector funding sources and mechanisms identified above a number of other specific funding opportunities exist which should be given consideration in the future delivery of transport infrastructure across Central Lancashire over the lifetime of the Strategy. These other funding sources and mechanisms are summarised below.

European Funding - CIVITAS

7.4.2 The authorities within Central Lancashire are not classified as being eligible for European funding directly under spatial designations for assistance. This limits the opportunity to seek European funding directly for infrastructure projects.

7.4.3 However, Preston is one of four cities within England which are included within the CIVITAS initiative. The CIVITAS initiative (CIty-VITAlity-Sustainability) is an EC project set up to support and evaluate the implementation of ambitious integrated sustainable urban transport strategies within key selected cities, the intention being to learn lessons which can be replicated and applied across Europe.

7.4.4 Preston, along with the cities of La Rochelle and Ploiesti, as part of CIVITAS II are developing a project titled SUCCESS (Smaller Urban Communities in Civitas for Environmentally Sustainable Solutions), focussed on delivering sustainable transport solutions and providing best practice case studies. The involvement in these European funded initiatives clearly raises the profile of infrastructure improvements within Central Lancashire and could potentially secure additional funding opportunities.

7.4.5 For example, as part of the redevelopment of the city centre of Preston, which will include a significant quantum of new office and retail floorspace, the opportunity exists for the Preston Vision Board to access European funding via the NWDA and English Partnerships in addition to the other large public sector funding sources identified above.

Local Authority Business Growth Initiative

7.4.6 The Strategy identifies new large employment sites which are planned to come forward over the plan period and contribute to economic growth across Central Lancashire. Whilst most of the private funding models focus on housing development, it is important to recognise that the potential also exists to obtain infrastructure funding assistance from economic development and the local business base.

7.4.7 The Local Authority Business Growth Initiative (LABGI) allows local authorities to spend a portion of business rate revenue on locally identified initiatives. This therefore offers the opportunity to capture funding from existing as well as new businesses which benefit from new infrastructure projects which clearly have an economic development benefit. This could include for example, the improvement or introduction of new public transport projects linking employment sites with residential areas. It is important to recognise that the funds generated through this approach are likely to be limited in scale and should therefore complement or supplement other funding sources. Consideration will also need to be given to the impact on the 'health' of local businesses and their ability to compete with increased costs associated with raised business rates.

8 Recommendations & Further Work

8.1 Summary of Findings

8.1.1 From the evidence presented in this report it is clear that if no significant level of intervention is taken, then traffic levels will continue to grow and the existing congestion problems around Preston will continue to get worse. The existing transport infra-structure will not facilitate the development aspirations that the area is currently promoting.

8.1.2 The car already has a considerable advantage in the area particularly in South Ribble and Chorley where the bus services may not be as frequent as they are in Preston. Preston also has a student population which affects car ownership levels and it its relatively compact making walking and cycling easier for local trips.

8.1.3 If the imbalance between the car and other more sustainable modes are to be addressed then a step change will be required in the public transport networks. The step change will need to incorporate service improvements and infrastructure improvements to raise the profile of public transport networks therefore we have made suggestions for further consideration that include:

- Local rail station improvements;
- Potential new rail stations;
- Strategic core bus network for Central Lancashire;
- Local bus schemes;
- Bus priority measures;
- Potential new park & ride sites;
- Highway improvements;
- Cyclist and pedestrian measures;
- Travel plan measures;
- Demand management measures; and
- Freight measures.

8.1.4 We have estimated the initial costs in the short, medium and long term to be:

- Short Term (2008-2013) - £59.5 million;
- Medium Term (2013-2018) - £86.6 million; and
- Long Term (2018 – 2028) - £110.5 million.

8.2 Development of a Transport Model

8.2.1 Many of the interventions identified as part of the proposed Transport Strategy will have a significant impact on traffic movements in the area, as will the delivery of significant amounts of new development. Unfortunately, the necessary data and the required mechanisms are not currently available to enable the accurate evaluation of the impact the proposals would have, both in relation to mode transfers, congestion and economic evaluation. This analyses and

evaluation is fundamental to any future bid for substantial funding from Central Government sources. Therefore, in order to actively progress the proposals and to assess the impact of new development over an area wide basis, then it is strongly recommended that consideration should be given to the development of a multimodal land use transport model for the Central Lancashire area.

8.2.2 A transport model is usually required in developing the business case for a major scheme bid and it can also be used to test different development scenarios and would be a useful tool when assessing the impact of planning applications, particularly those that will have a significant impact upon the transport networks.

8.2.3 The estimated cost of developing a transport model would be approximately £650,000 - £750,000 and this will cover additional data collection costs as well as time needed to develop and validate the model.

8.3 Further Investigations

8.3.1 Additional feasibility studies will need to be undertaken for the highway and public transport proposals and it is recommended that these are undertaken on a corridor basis. These may incorporate:

- Additional data collection e.g. origin-destination surveys, traffic counts, junction counts, journey time surveys;
- Detailed junction assessments;
- Detailed site audits and engineering surveys;
- Accessibility assessments using Accession;
- Demand forecasts – based on service frequencies, fares, journey times;
- Developmental impact – additional traffic generated by new developments along the corridor;
- Environmental impacts e.g. air quality, climate change, biodiversity; and
- Behavioural changes – modal switches, targeted marketing.

8.3.2 Given time and financial constraints it is recognised that there will be a need to prioritise the corridors in order of those that will need most attention. Through analysis undertaken as part of this study we have been able to identify links along the key corridors that are likely to exceed capacity as a result of traffic growth and new developments proposed for 2018 and 2028. The corridors below are listed in order of priority with those requiring early attention being listed first:

- A6 North – although the select link analysis did not indicate any capacity issues at present the Lancashire speed survey results did highlight congestion issues along this corridor and as Broughton is the next Park & Ride site to be implemented after Junction 31a it is recommended that this corridor should be given priority. This would also assist the situation on the Eastway, which would be relieved by the Broughton Bypass;
- A582 by 2018 this corridor is forecasted to be over capacity by 48%;

- A49 Wigan Road and B5248 Dawson Lane as significant employments and residential development at Buckshaw is likely to see substantial increases in traffic in this area;
- A59 East coming to Preston this section of road is forecast to be 47% over capacity by 2018 (based on Preston inner cordon) and Stagecoach have reported issues on the route by the police headquarters;
- A6 South – there are particular capacity issues at the junction between London Way and Higher Walton Road which will require further investigation and is currently forecast to be 13% over link capacity;
- A59 East – the link capacity is forecast to be over 6% capacity by 2018;
- B6243 – the link is forecast to be over 5% capacity by 2018; and
- B6241 Tom Benson Way.

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