Local Transport Plan 3
Environmental Report
2011 – 2021

Contents

Summary:

This report identifies a number of potential concerns based upon existing local challenges and the probable effects of the LTP3 Strategy and has been developed in partnership with Lancashire County Council. The following issues are identified in particular:

- **Access to new employment areas, centres of growth and regeneration will need to be delivered through sustainable transport if carbon reductions are to be achieved.** Following the development of the LTP3 Policy Background Papers produced jointly by Blackburn with Darwen (BwD), Lancashire County Council and Blackpool Council It was noted that per person across Lancashire, emissions per person from road transport are slightly higher than the England and Northwest averages but, on the whole, typical of the type of borough found in Lancashire[1]. In BwD 15% of all carbon emissions are currently derived from road transport and whilst travel habits and carbon emissions are currently lower in more disadvantaged communities, increasing prosperity could lead to significant growth in car travel. Ultimately the delivery of schemes such as Pennine Reach is fundamental to the success of the strategy and enabling sustainable economic growth.

- **The poor quality of the public realm is keenly felt in many areas, but particularly in the difference between disadvantaged areas and more affluent ones.** Traffic and transport infrastructure often occupies a central role in the public realm and standards of maintenance, speed management and efforts to control anti-social behaviour have a major impact on public perceptions. However, division in responsibility for the public realm and the high cost of maintenance and improvements have deterred investment.

- **Whilst there are clear health benefits to be gained from walking or cycling, there is also a risk of collisions and injury.** Measures to promote greater walking and cycling are supported in this report because of their contribution to improving public health and reducing carbon emissions. However, the vulnerability of pedestrians and cyclists needs to be addressed. Improvements in road safety will help, whilst programmes targeting driver awareness may also be beneficial.

[1] Derived from: NAEI data used by AEA to compile the DECC road transport fuel estimates. Emissions from fuel combustion in the road transport sector based on detailed DfT traffic census data and NAEI emissions factors.

Introduction:

This report documents the possible environmental impacts of the Blackburn with Darwen LTP3 Strategy. The report also includes details of likely health and equality impacts, both of which are now regularly considered in the development of new public investment programmes.

Key environmental Problems:

- The low quality of many ***public spaces***, including the streets themselves, makes walking, cycling and the use of public transport unattractive and compounds perceptions about crime and safety. Levels of road congestion and a lack of understanding amongst motorists as to the needs of cyclists and pedestrians may further discourage people.

- The rate of casualties from ***road accidents*** is a serious concern for the borough and also the rest of Lancashire. A particular concern is the rate of casualties in more disadvantaged communities especially the number of child casualties.

- The state of public health in BwD is a substantial problem which has wide ranging consequences. Walking and cycling can make a particularly important contribution towards improving ***health and well being***.

- Although the majority of commuting trips for residents of the borough are over a relatively short distance the borough is net importer of workers and many people travel considerable distances from outside the borough to access local jobs. Moreover despite relatively low car ownership in the borough the car is used more frequently for the journey to work an issue replicated across much of Lancashire where there is a high reliance on private transport. With the geography of the area making the delivery of public transport alternatives particularly challenging and the attractiveness of cycling very difficult the rate of ***carbon emissions*** from transport is a concern.

- ***Anti-social and criminal behaviour*** associated with transport has a negative impact on local communities, community cohesion and on measures to promote more sustainable alternatives to the car.

Together, these problems contribute to a reduction in the quality of life for residents and visitors alike.

About the LTP3 Strategy:

The LTP3 Strategy identifies five local transport goals and six transport related priorities which will be addressed over the period of the plan. These include: improving access to areas of economic growth and regeneration, employment and education; tackling road safety and carbon emissions; encouraging walking and cycling for better health and well being and maintaining our transport assets.

The Local authority is aware of the pressures placed on its budgets and the potential need for compromise as it aims to tackle each of its local goals and priorities. The strategy acknowledges that although it could be argued that interventions designed to reduce carbon emissions could be achieved relatively simply, managing a reduction in emissions in a financially sustainable manner, whilst supporting economic growth and social mobility is a complex task and one which may require compromise.

The Strategy also notes the health consequences of transport. This will be delivered both by schemes to address high rates of traffic accidents (particularly in disadvantaged communities and amongst children) and by improvements in networks of cycleways and footways to encourage people to walk and cycle more.

Many of these measures will need to be delivered by cross working with areas such as health care and policing. Such moves will seek to provide better value for money as well as tackling more entrenched challenges, such as road safety.

LTP3 Strategy: Local Goals

- Support the economy
- Tackle climate change
- Increase safety and security
- Promote equality of opportunity
- Promote quality of life, health and the natural environment

LTP3 Strategy: Key Priorities

- Improve access to areas of regeneration and economic growth
- Reduce carbon emissions
- Improve road safety
- Improve access to education and employment
- Improve quality of life and well-being
- Maintain our transport assets in good condition

Implementation Plan 2011 – 2015

- Road safety schemes within local neighbourhoods
- Development of cycleways and public rights of way network
- Roll out of quality bus shelters and information
- Development of innovative transport information
- Development of smartcard technology and public transport ticketing solutions
- Facilitating the delivery of Freckleton St link Road
- Facilitating the delivery of Clitheroe to Manchester Rail enhancements
- Facilitating the delivery of Pennine Reach
- Facilitating the delivery of M65 capacity improvements
- Urban traffic control upgrades
- Maintenance principal and non principal roads
- Maintenance of structures
- Investment in street lighting

Local Challenges

Baseline Data:

Despite low levels of car ownership, reliance on motorised transportation, in particular the private car, has generated problems for the local economy, environment and public health in terms of carbon emissions, air pollutants, congestion, poor journey time reliability, road safety and limited active travel.

The 2001 census revealed that 17,881 households in the borough did not own a car (33.5%) and it is possible, by further analysing this data to derive indicators for each ward giving measures of the potential demand for local public transport services, walking and cycling as a consequence of the availability, or otherwise, of a car to the members of the household.

It can be assumed that households that do not own a car will be dependent on some kind of external transport services to meet their transport needs. The population that lives in these types of household can therefore be inferred to be *'totally dependent'* on other transport services which would include walking and cycling.

In households that own a car it can be assumed that a car will always be available at least to one of the occupants. The number of cars owned is therefore equivalent to the number of people that will never have to rely on external transport services. These can be classified as *'non dependent'* on public transport, walking / cycling.

The rest of the ward population live in households that own at least one car but for whom that car may not be available because of its use by others. For example in the case of a second adult in a one car owning household where the car is used for the journey to work of another adult. These people on occasions will depend on public transport, walking and cycling and hence can be classified as *'partially dependent'.*

In the Borough overall 39% of the population (52,000) have a car always available to them however 61% of the population could be deemed as having either total or partial dependency on other transport options. (25% of the population or 34,000 people in absolute terms are totally dependent and 36% / 49,000 people are partially dependent).

Congestion and the Economy:

Reliance on the private car for local journeys creates immense pressure on the road network especially during the am and pm peaks. Despite nearly 60% of workers living in the borough travelling less than 5km to work, census data reveals that 66.3% of the population uses a car to commute to work well above the national average and there is also a high percentage of lift sharing at 9.2%.

Demand for road space is also compounded by the fact that unlike other areas in Pennine Lancashire Blackburn is also a net importer of workers and many people travel considerable distances from outside the borough to access local jobs. A net inflow of 5460 people travel into the borough for work each day and the majority of this movement is by car.

Traffic cordon data is able to demonstrate the reliance placed on the private car for journeys into the two town centres. Data for 2010 reveals extremely high levels of car usage and

despite high pedestrian movements reflecting the compact nature of the two towns and short commuting distances movements into the town by public transport and cycling are very low.

Mode	**Blackburn Town Centre Mode Split (2010)** *119,200 people recorded over 12 hrs*	**Darwen Town Centre Mode Split (2010)** *34,864 people recorded over 12 hrs*
Car	67.69%	77%
Bus	7.94%	2%
Train	2.9%	0.95%
Bike	0.69%	0.65%
Walk	19%	14.2%
Motorcycle	0.31%	0.2%
HGV	1.47%	6.2%

Ultimately, congestion hotspots within the borough are associated with corridors into the two town centres and into major employment sites.

- Blackburn West corridor (A674)

- Blackburn town centre to Darwen town centre (A666)

- Blackburn to Whitebirk and Knuzden corridor (A679)

- Blackburn to Wilpshire (A666)

- Blackburn to Guide (A6077)

Moreover, following the development of employment sites and dispersal of services along the M65 corridor which is located on the periphery of the urban area volumes of traffic on the motorway have consistently grown by about 4% per annum since its opening in 1997.

There are now concerns regarding the longer term capacity of the M65 which is a key part of the transport network for the sub region and is crucial to securing economic growth in Blackburn with Darwen and Pennine Lancashire.

Currently the M65 runs at capacity at peak times of the day and analysis using the Highways Agency's 'Traffic Impact Assessment Tool' suggests that even without the development envisaged in the Boroughs Core Strategy, natural traffic growth will mean that sections of the motorway operate over capacity at peak times after the first five years of the Core Strategy.

Combined with the historic congestion problems in both town centres road traffic is having a limiting impact on the future economic growth of the borough and is also affecting the environment.

Air Quality:

With high demand for road space from motorised vehicles transport is a major source of carbon dioxide emissions and other harmful pollutants. In 2008 it is estimated that road transport accounted for 17,500 tonnes of C02 emissions, approximately 15% of all local carbon emissions (local authority co2 emissions data set 2010) and the congestion hotpots located on radial routes into the two town centres and major employment sites present some of our biggest air quality challenges.

Following a borough wide air quality assessment undertaken in 2003 it concluded that the annual average nitrogen dioxide levels were unacceptably high at five locations:

- Accrington Rd / Whitebirk road junction, Intack

- Whalley Range / Whalley New Road junction, Bastwell

- Along the A666 corridor between Robert St and Wraith St, Darwen

- Preston Old Road / Buncer Lane junction, Witton

- Around the A666 / M65 link road junction, Earcroft

The five AQMAs are busy urban junctions where emissions from slow moving vehicles are trapped by nearby buildings and the surrounding topography. This is a particular issue for Blackburn with Darwen given the Pennine geography and tightly formed Victorian streetscape.

Action Plans were subsequently devised which identified a series of measures to be implemented during 2007-2009. Almost all of these measures have now been implemented and the relatively small changes observed may be the result of this investment, although they may also be a result of other factors such as meteorological conditions. However as some of the changes did not occur until 2009 their full effect may not yet be evident.

In 2009 there were exceedences in the Intack and Witton AQMAs with the three other sites remaining close to the annual NO2 objective. Concentrations at the affected receptors at each AQMA range from 39.0 to 43.9 µg/m3 (annual objective is 40 µg/m3). From 2007 only the Intack AQMA has remained consistently above the annual average NO2 objective.

Ongoing monitoring of air quality has also identified further pollution hotspots within the borough where further detailed assessments are being undertaken. The locations currently being monitored include:

- Blackamoor Lights

- Four Lane Ends

- Burnley Rd / Accrington Rd junction

- Moorgate St / Livesey junction

Public Transport:

Bus:

Accessibility analysis undertaken by the Council using Accession Software reveals that since 2007 access to a number of needed facilities within certain time thresholds has gradually declined.

Despite this a substantial proportion of the borough's population retains a good level of access to public transport services, with bus stops within easy reach of most people's homes and regular bus services operating to main urban centres.

2001 Census data reveals that only 7.2% of those employed in the borough used the bus to commute to work and in line with trends experienced in other non metropolitan areas the total number of bus journeys made within the borough continues to decline - no doubt influenced by declining patronage from existing users and the lack of a coordinated attempt to attract new users to the network. Bus patronage in the borough fell from 7.06 million journeys in 2006/07 to 4.95 million journeys in 2009/10.

Rail:

Rail links across Pennine Lancashire are largely poor and are a primary gap in strategic connectivity across Lancashire as a whole, with long journey times to most other significant destinations perpetuating the feeling of relative isolation from growth areas - placing a significant barrier to economic growth and prosperity.

The Manchester City Region presents a great opportunity for the Blackburn with Darwen and Pennine Lancashire economy with employment forecast to increase by 166,000 by 2026 with much of Manchester's growth expected in high value employment sectors, including financial and business services.

However, according to census data (2001) only 17,000 Pennine Lancashire residents worked in Greater Manchester a surprisingly low number no doubt greatly restricted by inadequate skill levels but also the relatively poor transport links between the two areas.

Subsequently, plans to improve the local rail offer are considered a key local priority. Despite poor connectivity patronage on the local rail network has grown at a tremendous rate with over 1 million passengers now using Blackburn station each year and significant growth recorded at Darwen station.

Station	**Patronage 2010**	**Patronage growth %** **change between 2008/09 & 2009/10**
Blackburn	1,189,078	2%
Darwen	257,073	3%
Mill Hill	54,234	21%

Cherry Tree	28,554	14%
Pleasington	8,877	16%
Entwistle	7,731	-18%

Travel to School:

Travel to school data is also able to identify the unsustainable nature of local travel patterns.

Since the data was first collected on travel to school back in 2006/07 the following trends have been noticed within Blackburn with Darwen:

- Car travel remains stubbornly high

- Car share slightly increased

- Public transport decreased

- Walking slightly increased

The table below is able to compare local school travel data for 5-15 year olds with the North West and the rest of England, what is noticeable is the lower rates of walking, cycling and public transport and higher rate of car usage which is a concern given that a fifth of all pupils commute less than a mile to school:

Mode of Transport	**BwD 2009/10**	**NW 2009/10**	**England 2009/10**
Car (including vans / taxis)	36.7%	30.2%	26.5%
Car share	4.1%	3.3%	3%
Public transport	12.2%	17.6%	17.5%
Walking	45.3%	47.3%	50.3%
Cycling	0.2%	1.2%	2%
Other	1.5%	0.5%	0.7%

Road Safety:

Traffic dominated environments and the reliance placed on the car for many local journeys are also having a detrimental impact on road safety.

Road safety is an issue that affects everybody living, working or visiting the borough and despite a good track record for reducing KSIs in our area, car drivers, passengers and vulnerable road users remain key target groups.

Children remain particularly vulnerable on our roads as pedestrians and as passengers in vehicles. Research shows that child pedestrians from deprived areas are more likely to be involved in road traffic collisions than those from more affluent areas.

In a report titled "*Child Casualties 2010; A study into resident risk of children on roads in Great Britain 2004-08*", the level of risk children are exposed to is compared across 408 local authority areas and shows that children living in some areas have almost a one in 200 chance of being injured each year.

The research is based on five years' data covering over 120,000 child road casualties and is the first time that such a detailed study has been conducted. The findings indicate that 1 child in every 260 is likely to be injured on the road extremely high compared with the national average at 1 in 427 making it the 7th worst authority area in Great Britain.

Although the boroughs child casualty figures show a general downward trend over the last 10 years, the age profile of child casualties is changing with massive progress being made amongst primary aged children there is a real concern for older children.

Active Travel:

Walking has a significant role to play in the transport system. All journeys, no matter how long or short, involves walking. Although Census 2001 data reveals that a higher proportion of workers walk to work (13%) than the national average (10%), rising to 20% in many areas where people have been traditionally housed close to industry more could be done to encourage greater numbers of people to walk for work and health.

The two reasons that most frequently used for lack of walking include:

- people perceive journeys to be quicker and more comfortable by car.

- walking is less attractive where traffic has become more dominant

Much of the urban environment has grown to accommodate the travel demands of the car, resulting in vehicle-pedestrian conflict. The provision of better facilities for the pedestrian in the urban environment is a high priority of the Local Transport Plans. More road space needs to be given to the pedestrian, especially in town centres and locations where motor traffic is in direct conflict with the pedestrian, and where there is opportunity to remove that conflict by restricting motor vehicle traffic.

Rates of cycling within the borough are extremely low with just 1% of residents commuting to work by bike (Census 2001).

Barriers often cited as reasons why local people do not consider cycling as an attractive option include topography, weather, security and safety concerns, lack of facilities and experience. Many of these barriers are often perceived and the result of a lack of knowledge/ understanding and with the right support could be removed. However, anecdotal evidence would suggest that lack of bikes and adequate training and encouragement is a real factor discouraging cycle usage.

The Active People survey conducted in 2005/06 by Ipsos Mori, on behalf of sport England provides reliable statistics on participation in sport and active recreation for all 354 local authorities in England and was updated in 2008/09 and 2009/10 to identify where any changes might be found.

The table below is able to highlight that within Pennine Lancashire BwD is at the lowest end of participation in AP1 with just over 5% however there has been significant improvement in subsequent surveys indicating the willingness of people to undertake cycling subject to the right levels of motivation, infrastructure and marketing.

Authority	% of Adult population participating in cycling in the last 4 weeks		
	Active People 1	Active People 2	Active people 3
East	-	-	10.47%
South East	-	-	10.82%
South West	-	-	10.78%
NW Region	6.85%	8.27%	8.26%
National	7.95%	8.73%	9.3%
Blackburn with Darwen	5.31%	5.62%	7.05%
Burnley	5.16%	6.62%	7.05%
Hyndburn	5.09%	7.3%	7.59%
Pendle	7.4%	7.45%	7.39%
Ribble Valley	8.62%	8.59%	12.27%
Rossendale	6.36%	7.68%	6.04%

Purpose:

Improving sustainable access through improvements to the public transport system, walking and cycling networks is a key target of the Councils Local Transport Plan 3 agenda the councils green infrastructure strategies and education and health functions.
Whilst much has been achieved within the borough in recent years through various transport and regeneration programmes, many economic, social and environmental issues remain which need to be addressed:

- The borough's young population and its relationship to the growth in car use and road accidents

- Peak time congestion and traffic levels

- The impact on and the effects of Climate change

- Chronic health issues

- Poor localised air quality and intrusive noise

- Car dependence

- The effects of long standing deprivation

- The ongoing requirement to generate jobs, improve wage and skill levels

- The need to create sustainable communities through economic restructuring and regeneration

The borough cannot therefore afford to stand still and regeneration, renewal and attracting new investment will continue to be strong priorities for the future.

The Blackburn with Darwen Core Strategy which covers the period 2011 - 2026 and forms part of the Borough's Local Development Framework establishes a 'Targeted Growth Strategy' to deliver transformation in the local economy and housing market whilst avoiding an unacceptable impact on the environment, in terms of, for example the need to travel and increased carbon emissions.

The delivery of new housing of the right type, in the right locations and at the right time, will be a key factor in implementing the targeted growth strategy. Provision will be made for a total of 9,365 net additional dwellings between 2011 and 2026 with 530/yr net additional dwellings proposed between 2011 and 2016.

Setting out the priorities for the future planning and development of the borough for the next 15 years the Core Strategy recognises that in conjunction with a wide range of other activity a 'carbon culture' must be established in which climate change issues –both impact on and adaptation to – are central to all decision making.

Clearly identified within the Core strategy is the fact that local development and investment will need to be complemented by investment in strategic infrastructure and improvements to connectivity with sustainable modes of transport key to limiting the impact on the environment.

Environmental Context:

This section details the key environmental and social problems faced in the borough and also across Lancashire. Many of these priorities have long been acknowledged and already benefit from a range of programmes, both within transport planning and beyond (for example, in health care, land use planning and policing). Co-ordinating investments across other public sector organisations are likely to become increasingly important as resources become scarce and this is duly noted within the strategy.

In Pennine Lancashire these problems are compounded by a host of other serious problems associated with economic decline, poor quality housing, outdated urban centres and large areas of poorly connected, edge of town housing estates.

The Borough of Blackburn with Darwen enjoys a wealth of environmental assets; with the West Pennine Moors covering 90 square miles, 3 sites of Special Scientific Interest, 96 Biological County heritage sites, 5 Geological Heritage sites and 4 Local Nature Reserves. Two main rivers run through the Borough: the River Darwen and the River Blakewater, along with the Leeds-Liverpool Canal, and numerous streams and brooks. In addition, there are significant areas of standing water including ponds and reservoirs.

Conversely, the Borough also suffers from, localised negative environmental problems, including derelict land, air quality and flood risk.

The Public Realm & Green Spaces: Like most places, the construction of bigger and faster roads and increasing traffic volumes have had pronounced and largely negative impacts on the quality of the urban environment, in terms of noise, air pollution and being a barrier to pedestrians. Easy access to natural areas and open spaces (including parks and gardens) is important for health and well being, particularly in those parts of Blackburn that have no open spaces in the immediate vicinity.

Traffic Impacts

Increasing traffic volumes, particularly along crowded urban roads, has led to progressive changes in the built environment. Piecemeal introductions of greater and greater amounts of traffic regulations, signs, and other street furniture have eaten into public spaces; and major road building projects have led to the virtual severance of local communities. The effects of these changes have had significant impacts on the health of individuals and society.

Although monitoring shows that growth in traffic volumes are at least stabilising, forecasts predict increasing congestion on the urban road network. One of the major difficulties faced by highway authorities is understanding vehicle journeys, rather than individual congestion hotspots. Work in this area will help ensure that public transport (particularly bus services) provide genuine alternatives and thereby help reduce overall traffic volumes.

Anti-Social and Criminal Behaviour: Anti-social and criminal activities (e.g. aggressive driving or vandalising bus shelters) may have a disproportionate impact on people's perceptions of transport safety, even though such actions are relatively rare compared with

other day-to-day risks. Whilst good progress has been made in specific areas (e.g. drink driving), rates of dangerous driving in BwD, Lancashire and other parts of the northwest, are still high compared with the rest of the country. The reasons for this are unclear.

Wildlife areas of national and regional importance have been identified and designated in Blackburn with Darwen and the Core Strategy of the Local Development Framework advocates an environmental strategy of protection and no net loss. Wildlife sites are, nevertheless, vulnerable to disturbance and physical destruction from mis-use, mis-management and development, including infrastructure works. Reduced areas and fragmentation results in habitats that are too small and isolated to support species and means the natural environment is less able to provide the services on which people depend.

Transport infrastructure, including, cycleways and footpaths, can conflict with wildlife areas. Maintenance programmes can have a significant adverse impact on the ecological interest of verges and hedgerows whilst habitats can be lost to managed landscapes alongside new infrastructure projects.

Road Accidents: Although there have been great successes in reducing the rates of killed and seriously injured on local roads the borough along with the rest of Lancashire has a comparatively poor record in road safety. Particular problems surround the numbers of people injured in major urban areas, high rates of child casualties (particularly in more disadvantaged communities), and the number of motorcycle casualties in rural areas.

Road accidents involving children

The number of children killed or seriously injured is particularly high in the more disadvantaged districts of Pennine Lancashire, despite the fact that car usage in these areas is often lower than in other parts of the county.

There may be a range of reasons for this, but most incidents are simply a result of poor visibility due to on-street parking and children playing.

As noted in the Local Challenges section the Road Safety Analysis Ltd investigation into Child Casualties in 2010 identified Blackburn with Darwen and Pendle as the 7th worst performing area for child road causality risks in Great Britain. Worryingly analysis of the 408 areas in GB, using casualty rates between the periods 2004 to 2008, revealed that five of the ten worst areas were within Lancashire with Preston recording the highest rate (1 in 206 children injured on GB roads per year). The average GB rate is 1 in 427 which is actually significantly lower than the risk for all people at 1 in 231.

Detailed examination of accident data confirms that the risk to cyclists and pedestrians is also high, although the small numbers involved make statistical analysis difficult. The severity of accidents (i.e. those resulting in people killed or seriously) is also typically higher in more rural areas where accidents are dominated by vehicle drivers and where speed is the principal determinant.

Health: The borough has considerable health problems and efforts to improve co-operation across relevant agencies and organisations has become a key priority. Particular attention is being given to the acute level of health inequalities within the borough and across Lancashire. This can be seen in a number of different health problems and contributes to very significant differences in life expectancy between different communities.

Health and Physical Activity

As individuals, we are becoming less active and this is already having significant impacts on public health. Whilst the problems of lack of exercise affect all communities and all sections of society, women and people from the most deprived communities are least likely to take part in physical exercise.

Choices about how we travel and opportunities to do more walking and cycling can help improve health through physical exercise (as well as reducing harmful vehicle pollutants and being cheaper in many cases). Of course, pedestrians and cyclists are more vulnerable than other road uses and the risk of injury is seen as a major deterrent to many people. However, it is generally recognised that the health benefits of increased walking and cycling outweigh the risk of injury.

Health Impact Assessment. Appendix 1 details health problems in the Borough and across Lancashire and their relevance to the local transport plan process. The conclusions of that report can be summarised as follows:

- Local safety schemes continue to provide solutions to specific road safety problems, with aggregated public health benefits. Growing interest in wider road safety programmes (specifically around 20mph zones and shared spaces) offer the prospect of changing in attitudes towards travel, community safety and personal responsibility. However, the short-term benefits in terms of casualty reductions are far from clear.

- There is sufficient evidence as to the health benefits of physical activity to merit further investment in walking and cycling schemes. There are often also complementary benefits in terms of urban regeneration. These are particularly important in more disadvantaged communities.

- Anti-social and criminal behaviour has a negative impact on community 'resilience' and public interaction, problems which can lead to deeper social tensions. Policing initiatives (including those brought forward by the safer travel unit) remain important in this regard.

Low levels of fitness and health are a major concern and impact upon the quality of life and wellbeing experienced by the boroughs residents and the problem of sedentary lifestyles continues to worsen and is likely to place increasing demand on health services.

The Dr Foster Intelligence, 'Social marketing on obesity and physical activity data analysis' conducted in April 2008 for Blackburn with Darwen PCT identified priority groups as older people, women (including Asian girls) people from BME communities, people from lower socio-economic groups, drinkers and smokers. The Marmot Review[2] recommends improving active travel across the social gradient to reduce health inequalities.

There is some evidence which suggests that environmental factors including access to green spaces and problems of graffiti and litter have an influence on levels of physical activity and rates of obesity. Access to green spaces and the quality of public spaces is a concern particularly in disadvantaged communities.

[2] The Marmot Review: Strategic Review of Health inequalities in England Post-2010 (2010)

Carbon Emissions from Private Transport: The proportion of people using public transport has fallen and this has a significant impact on BwD's and also Lancashire's carbon emissions[3]. In Blackburn with Darwen and Pennine Lancashire economic links with the wider areas have largely failed to materialise and the 'travel horizons' of many people in this area is unusually low, however despite relatively low car ownership in the borough the car is used more frequently for the journey to work as a driver or passenger. Blackburn with Darwen is also a net importer of workers and many people travel considerable distances from outside the borough to access local jobs.

Journey times on inter-urban bus routes are not particularly attractive when compared with trips by car. This is partly because there are few bus prioritisation schemes and express bus services are not normally financially viable. Publicity and public awareness are also a problem. Indeed, many areas which do have good public transport services are still underused because of lack of awareness, cost and perceptions of reliability and quality. The importance of Pennine Reach to the local economy and to tackle congestion and local air quality cannot therefore be underestimated.

Nationally, it is estimated that as many as half of all trips are of less than five miles and in BwD nearly 60% of workers living in the borough travel less than 5km to work which makes public transport, walking or cycling viable options. Meanwhile, the increasing number of longer journeys, especially those travelling into the borough for work and the attractiveness of employment and education opportunities in centres of growth such as Manchester for our residents suggests a growing market for railway services – a fact borne out already through increasing ticket sales and patronage at local stations across Lancashire.

[3] AEA, Local and Regional CO2 Emissions Estimates for 2005-2008 (2010) Carbon emissions from transport in Lancashire were 2.4 tonnes per capita, which is higher than city regions such as Manchester (City Council administrative area) 1.5 tonnes). The average figure for London is 1.3, whilst in very rural areas like Eden the figure is 9 tonnes per person. (DfT)

Area Profile for Blackburn with Darwen:

People:

Covering an area of 13,700 hectares and with a population of 141,200 people in approximately 55,000 households Blackburn with Darwen is the key geographical and cultural gateway to Pennine Lancashire.

Enjoying a strategic position in the north of England, being located approximately 10 miles to the east of the major transport axes of the M6 and the West Coast main line, the borough comprises a relatively compact urban area set within attractive countryside.

The borough has a very distinctive ***demographic profile*** which without intervention may ultimately increase local dependence on the private car for future transport requirements. Nearly a third of the boroughs population aged 0 - 19 years, the highest such proportion of all authorities in the North West and the second highest in England. Conversely there is also growing population of older people with projections suggesting that those aged over 65 years will account for over 15% of the population by 2027.

BwD is also an extremely ***diverse borough*** and is home to the highest percentage of non white residents in the North West 22% (a figure four times the national average). As a result the borough is predominantly a dual faith community with 63% Christian and 19% Muslim and presents many challenges to encouraging active travel and public transport usage.

Suffering from the effects of long standing deprivation the Borough was ranked 17th of all local authorities in England and Wales on the 2007 Index of Multiple Deprivation.

Unemployment has been traditionally high and although it does not fall disproportionately on any one ethnic group, it is concentrated amongst the 18 - 24 age groups. As a result a number of schemes aimed at regenerating the local economic base and encouraging new employment growth have been implemented. Yet despite this investment and the continued decline of its staple industries the local economy is still reliant on a declining manufacturing base with more people employed in the manufacturing sector compared with regional and national figures.

With very limited high value service sector employment the boroughs output today is founded on relatively low wage, low added value, and low skilled employment. Gross Value Added (GVA) data highlights that the borough contributes less to the UK economy per head of population, than the UK average.

Chronic health issues are also prevalent within the borough with high levels of obesity, coronary heart disease, diabetes, lung cancer and child tooth decay exacerbated by poor diet, poor exercise levels, poor housing conditions and poor education levels.

The mortality rate in the borough continues to be higher than the national average with life expectancy the fifth lowest in the country resulting in men in most deprived wards living eight years less on average than those in the least deprived wards. Moreover, a fifth (20.3%) of residents in the borough consider themselves to have a limiting long term illness, a greater percentage than for England and Wales (18.2%).

Yet there is a willingness within the community to engage with local service providers to remove many of the social and economic barriers that currently limit life chances.

***Place**:*

Through the development of the textile industry the two towns of Blackburn and Darwen grew very quickly in the nineteenth century and as a result the borough is now left with a legacy of Victorian housing and transport infrastructure which presents many challenges but also brings opportunities.

Blackburn benefits from a public transport interchange where road and rail modes meet. As such it forms a natural transport hub where the north- south Manchester to Ribble Valley routes (A666 and Clitheroe to Manchester Rail) cross the east –west Preston to Colne routes (M65, A677, A679, cross Pennine Rail and Leeds & Liverpool Canal). As a result accessibility is good although congestion is an issue at peak times causing delay, poor journey reliability and worsening air quality.

Darwen, which is a smaller mill town with a very separate identity, has comparatively limited accessibility. Located in a deep valley setting, Darwen is constrained by surrounding hills with only one route along the valley bottom between the northern and southern ends for the main through highway (A666). There are no highways running westwards from the town and only minor roads to the east. With few alternative routes congestion at peak times at key junctions are serious concerns.

Congestion is one of a number of factors which is constraining local economic performance and transport policy in the borough has been geared towards supporting sustainable regeneration and economic growth in the two town centres as well as developing greater connectivity to regional centres.

Despite it's close proximity to the north's most economically successful city regions (Manchester and Leeds) accessibility is poor and as noted in the 2008 Centre for Cities Report 'City Links' weak commuter transport and trade links are inhibiting wealth from spilling over into Blackburn with Darwen and the rest of Pennine Lancashire.

Although poor ***air quality*** is generally less significant in Pennine Lancashire than the more urbanised and congested parts of lowland Lancashire. The carbon footprint of residents in Pennine Lancashire (rated as CO_2 emissions per person) is lower than for Lancashire as a whole. However, like other areas, emissions from private transport and freight vehicles still have a significant impact on air quality and BwD has designated 5 Air Quality Management Areas and is undertaking detailed assessments on a further four pollution hotspots.

Key challenges for Blackburn with Darwen have therefore been noted as: capturing new investment and creating new higher value employment opportunities; increasing delivery capacity and improving connectivity especially for those without access to a car in order to mitigate against any potential environmental damage.

Assessment of the Strategy:

Taking into account the evidence base provided by the Transport Framework (Atkins 2009) the policy background papers produced jointly by the Lancashire highway authorities, national and local transport policy and the public consultation and local engagement the LTP3 Strategy consists of five local transport goals and six key priorities.

Although LTP3 consultation strongly identified the need for transport to aid economic regeneration people were fully aware that this needs to be carried out with as little impact on the environment as possible, hence the LTP3 Strategy is very much geared to creating growth and cutting carbon.

To enable Blackburn with Darwen to make a greater contribution to the regional economy, the LTP3 strategy notes that improvements to connectivity will require long term investment and co-ordination of the local transport infrastructure.

Recognising that it is a challenging time in which to prepare a long term transport strategy, with the public sector facing considerable cuts and uncertainty about future funding levels, the focus on assisting regeneration is evident throughout the LTP3 Strategy with particular focus on the urban centre of Blackburn evident within the Implementation Plan

LTP3 recognises that improvements to infrastructure alone will not deliver sustainability, the use of technology and behavioural change techniques will also be necessary and the Implementation Plan 2011-2015 is able to detail how the LTP3 strategy will be delivered.
Strategic packaging of schemes will be undertaken through a combination of investment in infrastructure and behavioural change techniques within a 'sustainable transport solutions programme' which is delivered through local corridors, neighbourhoods and hubs.

LTP3 continues the theme of LTP2 by moving away from the traditional predict and provide to an approach which takes account of the choices that people can make - seeking to influence those choices and tackling the problem at its cause by influencing travel demand, rather than mitigating its impact.

The strategy of widening choice and managing demand developed for LTP2 is essentially repeated for LTP3 given the success of this adopted strategy approach.

In terms of the integrated block funding the councils programme is aligned with DfT priorities noting that it is crucial to help improve road safety, stimulate local economies by reducing congestion, and deliver social justice to local communities.

With limited resources available the Council also agrees with the DfT that it is essential that highways maintenance continues to be prioritised, reflecting the economic and social importance to local communities, the need to safeguard the largest single public asset, and the liabilities for future years that can be created from short term cuts in maintenance. Maintenance of assets therefore represents approximately 64% of total planned investment and is split into five sections covering the principal road network, non principal roads, structures, street lighting and urban traffic control.

The Implementation Plan does however try to retain a balanced approach to investment with significant funding directed toward improving public transport infrastructure on street and at transport hubs, improving traffic flow and reducing congestion levels on main corridors,

developing cycle routes and public rights of way and delivering technology improvements to develop better public transport information and create smartcard ticketing.

The following section provides an assessment of each of the policy areas, detailing the likely benefits and dis-benefits of the policy approach and proposed measures contained in the strategy and Implementation Plan.

Although Blackburn with Darwen has 3 sites of Special Scientific Interest it does not have any Special Areas of Conservation, Special Protection Areas and listed Ramsar sites which are designated European sites. Therefore a Habitats Regulation Assessment is not required.

Policy:	**Goal 1: Support the economy** **Priority: Improving access to areas of regeneration and economic growth**
What challenges does the policy aim to address?	The state of local economy is a key concern and investment in transport improvements which support economic growth and regeneration will underpin the new Strategy. Measures stated in the draft Strategy include: • New infrastructure projects to connect Lancashire's economy with the wider region (rail enhancements on the Clitheroe to Manchester line, Pennine Reach and M65 capacity improvements; and • New road improvements, bus and railway enhancements to provide local people with improved access to key employment areas and improve quality of place– Blackburn station canopy improvements for platform 4 and Freckleton St link Rd.
What environmental benefits will the policy provide?	***Poor economic performance*** has led to a range of social and environmental impacts with the end result that the borough is home to some of the most disadvantaged communities in the country. In many cases, these communities are doubly affected impact of ***limited employment opportunities*** and deep-seated ***environmental and social problems***. Measures to help deliver improved economic fortunes within the borough are likely to provide positive benefits to these disadvantaged communities through which there is an opportunity to address many of these entrenched problems, provided the intervention is economically, socially and environmentally sustainable.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	• The economic emphasis running through the Strategy is likely to divert investment away from other stated priorities, most notably in terms of investment in the public realm and infrastructure for walking and cycling. • The focus on delivering better access to employment areas and solving delays caused by congestion will lead to greater pressure for new road infrastructure and perpetuate the reliance on private transport. • Development of transport infrastructure can have an adverse

	effect on the environment in terms of biodiversity and landscape by way of land take or intensive maintenance measures. The Strategy aims to avoid these risks by prioritising investment in new public transport services and delivering a comprehensive sustainable transport solutions programme of investment. The strategy aims to refocus investment on peak-time commuter services and to improve services for disadvantaged communities. This should help increase passenger numbers overall. Parking remains a challenge, particularly in Blackburn town centre with struggling retail economies citing the lack of free parking as a reason for not attracting customers. However, any free parking is likely to undermine the viability of local bus services.
Conclusions	BwD suffers from economic problems which have severe consequences for a number of its communities. In many cases, these problems result in other impacts on public health and other local environmental problems. In this context, the case for solving the economic causes of these problems is overwhelming, and in most cases will override other environmental considerations. The same case cannot be made for more affluent communities, which are also responsible for much high rates of car use and greater carbon footprints. In these communities, there is a compelling need to move rapidly towards more sustainable forms of transport. The main transport infrastructure proposals are considered in more detail in the Major Transport Scheme table and have been / will be subject to individual environmental assessment.

Significant effects of the LTP3:

Whilst it is difficult to determine the environmental impacts of the LTP3 strategy given its strategic nature there are some significant effects of the LTP3 Strategy and Implementation Plan within Goal 1:

- Promoting economic inclusion: A major factor in this is the ability firstly to access work, but secondly to access higher quality jobs. Many higher quality jobs within the Borough (for example in ICT or advanced manufacturing) are located on business parks close to the M65, where the primary means of access is the car. In addition the car remains the main means of access to work for a large proportion of the working population. Despite this, the Borough has a comparatively high proportion of people without access to a car. If areas of higher quality employment remain mainly only accessible by car, these people are considered at risk of being excluded from taking higher quality jobs.

LTP3 is able to impact on this issue to a large degree through the choices it makes on accommodating and promoting different modes.

Links to Identified Problems

- Poor accessibility by walking / public transport to key business parks: Whitebirk, Shadsworth, Walker Park
- Low wage, low skill economy

- Developing and maintaining a healthy labour market: This relates to people's ability to take jobs in the Borough, and to employers' ability to find a labour force that meets their needs. It is relevant to the wider economic success of the Borough since the availability of a suitable workforce is a major locational factor for businesses.

A significant factor in people's ability to take jobs is their ability to physically access them. As noted in the LTP3 Strategy this is currently a problem in relation to a number of the business parks in the Borough, and the current situation is vulnerable because of relatively low car ownership levels. Inward commuting is also a factor in a healthy labour market – but this can lead to increased congestion and air quality concerns.

The main areas where LTP3 will have an effect are those of access to jobs as described above, and on issues of broader connectivity as they relate to inward commuting. Its direct impact on physical access to jobs is the most significant; connectivity and inward commuting depends to a greater degree on the actions of others including neighbouring transport authorities, GMPTE and operators.

Links to Identified Problems

- Poor accessibility by walking / public transport to key business parks: Whitebirk, Shadsworth, Walker Park
- Poor quality of rail provision / connectivity
- Low wage, low skill economy

- Developing a strategic transport, communications and economic infrastructure:
This issue relates to the large scale (possibly physically but mainly in terms of importance) "building blocks" on which the Borough's economy relies. These building blocks are seen as essential to the "strategic economic regeneration" of the Borough. The main building block that is within the sphere of influence of LTP3 is the connectivity of the Borough to the rest of the City Region and beyond.

There is a qualitative consensus that the quality of strategic linkages, particularly by rail to Manchester, is poor, and that this impacts on the attractiveness of the Borough as a place to live or invest. This is considered a vulnerability in the current situation.

LTP3 can impact on this issue, though as noted in the Strategy the scale of investment potentially required and the number of other agencies required to act means that the effect of the LTP3 is potentially only marginally "significant".

Links to Identified Problems

- Pressure for increased car travel from in-commuters to business parks
- Poor quality of rail provision / connectivity
- Low wage, low skill economy

Policy:	**Goal 2: Tackle climate change** **Priority: Reduce carbon emissions**
What challenges does the policy aim to address?	Across Lancashire average levels of carbon emissions from road transport are higher than in its more metropolitan neighbours. Road transport accounts for 15% of all carbon emissions in the borough. The low use of public transport is a significant factor. Since 2006/07 bus patronage in BwD has reduced from 7.06million to 4.95 million journeys by 2009/10 and although this is in line with other non metropolitan areas it is affecting the commercial bus network. The LTP3 Strategy aims to address this through the better targeting of public transport services, information and ticketing solutions. Measures included in other parts of the Strategy will guide this work.
What environmental benefits will the policy provide?	Investment in public transport services which meet people's travel to work requirements will do most to increase passenger numbers and reduce the number of vehicle miles on BwD's roads. Similarly, investment in walking and cycling routes will help reduce the number of shorter journeys and will support the regeneration of the boroughs parks and other underused assets such as derelict land. Although this policy area will mainly consider reducing carbon emissions there will also need to be an adaptation to climate change strategy by reviewing design and specification standards and maintenance cycles.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	There are significant variations in the typical travel habits of people across Lancashire with Pennine Lancashire residents having relatively limited travel horizons. Ultimately, there are overwhelming economic reason why certain disadvantaged communities whose travel horizons are currently limited should be encouraged to travel further. However, this will have impacts on the borough's and Pennine Lancashire's overall carbon footprint and may lead to greater car dependence as people's incomes increase. Therefore, investment in schemes such as Pennine Reach 'rapid bus' service are intended to provide sustainable alternatives to private transport. Reductions in funding for public transport, both from central government and in local subsidies, are likely to have reduced services and increase fares on a wide range of bus services and will impact particularly in isolated communities and vulnerable individuals. A maintenance review is required to prepare our entire transport infrastructure to meet the additional demands expected as a result of more extreme weather patterns resulting from climate change. When reviewing maintenance arrangements however the effect on the natural environment also has to be considered since some climate proofing solutions could result in negative impacts.

Conclusions	The impacts of climate change are widely considered to potentially have serious impacts on growth and development as noted in the Stern Review- The Economics of Climate Change (2009). The borough will need to reduce its contribution to climate change through a range of transport solutions and also spatial mitigation measures, including building design and location of development to reduce energy and car use. There is also a recognised need to secure environmental gains from all activities affecting maintenance, operation and improvement of transport networks. Future roadside maintenance activity should safeguard and enhance the natural environment, promote biodiversity and take into account protected species. Transport networks can play a role in providing valuable ecosystem services that can actually assist in the management of and adaptation to climate change. Linear transport features such as canal towpaths, PROW, cycle routes and even road verges and railway embankments are well suited to enhancing wildlife connectivity across our countryside, as well as providing areas for carbon storage, enabling better water conservation, and in the towns providing valuable cooling systems. However, the geography of BwD coupled with relatively low passenger numbers on public transport services means that the transport infrastructure has a large carbon footprint and has the potential to grow – transport in total contributes 30% of the UK's emissions and is the one sector in which emissions are growing rather than decreasing. Subsidy cuts in bus services and further network reviews from operators coupled with the overriding economic imperatives to regenerate the borough also risk increasing local carbon emissions.

Significant effects of LTP3:

- Achieving cleaner air for everyone: The issue of air quality in the Borough focuses on the monitoring regimes established under the AQMAs in five locations in the Borough. It is also linked to the issue of health.

AQMAs have been declared at five road junctions within the Borough and there are a further four hotspots now being monitored. The dominant cause of this is road traffic, particularly where it is stationary. AQMAs are declared where there is a "receptor" – in these cases houses near the road junctions. In view of this the current situation is considered highly vulnerable.

LTP3 can impact directly on levels of standing traffic and traffic flows in particular locations, and is therefore a major contributor to addressing the issues found in the AQMAs. Its effect on this issue is therefore highly significant.

Links to Identified Problems

- Air quality

- Promoting sustainable waste management and reducing all types of pollution: As well as being of intrinsic importance, the reduction of pollution is linked to a range of other sustainability objectives, notably health and potential damage to historic buildings and other resources.

The majority of transport-related pollution arises from the use of motor vehicles – primarily cars although buses, PTWs and trains also emit pollutants. The vulnerability of the current situation is also therefore similar, significant issues being the dominance of the car as the means of travelling to work, relatively low levels of walking and cycling, and the existence of five AQMAs in the Borough.

Transport remains a major contributor to pollutant emissions, though it is recognised that industry and power generation are also highly significant. In addition, LTP3 can not result in a dramatic "step change" in terms of modes but rather an incremental shift over a relatively long time period. The potential effect of LTP3 on overall levels of pollution is therefore considered marginally significant. There is also uncertainty regarding firstly the extent of modal shift that can actually be achieved within the life of LTP3, and secondly the modes to which people might shift from the car – the effect on pollution of transferring to buses is clearly much less than that of transferring to bicycles.

Links to Identified Problems

- Air quality
- Public transport patronage, particularly rail
- Low levels of walking and cycling
- Dominance of car as means of travel to work

- Limiting and adapting to climate change: The issues relating to climate change emissions are the same as those described above in relation to reducing pollution. Adapting to climate change – for example by taking account of a river's increased propensity to flood in the design of infrastructure – is addressed through the design of capital projects, and is appraised primarily through NATA and through consultations with the relevant bodies on planning applications. LTP3 can therefore be seen to have a significant effect on this issue.

Links to Identified Problems

- Air quality
- Public transport patronage, particularly rail
- Low levels of walking and cycling
- Dominance of car as means of travel to work

Policy:	**Goal 3: Increase safety and security** **Priority: Improve road safety**
What Challenges does the policy aim to address?	The rate of traffic accidents in the borough, as with the rest of Lancashire, is poor when compared with other parts of the country, and children and young drivers are two particularly vulnerable and high risk groups. These problems are typically more serious in more disadvantaged communities. Measures within the new Strategy include: • Targeted driver and road safety programmes aimed at children and young drivers; • Speed limit enforcement and traffic calming measures; • Where appropriate the development of 20mph zones; • Assessing scope for new safety improvements during routine maintenance programmes.
What environmental benefits will the policy provide?	The development of 20mph zones in residential areas are likely to increase ***public confidence*** and facilitate **active travel**, encouraging more people to walk and cycle locally and improving their health. In the longer-term this may promote greater awareness and ***social responsibility*** on the part of all road users. These changes (which may take time to materialise) will support other measures, particularly those around the 'healthy streets' initiative. Evidence from recent cycling demonstration towns show that cycling can be increased without a corresponding increase in accidents. However, much of these improvements were brought about through new off-road cycling routes and are therefore segregated from motorized traffic. Such schemes are however significantly more expensive than on-road schemes and given budget pressures value for money would have to be taken into account.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	• Good progress has been made in reducing traffic casualties; however, future reductions are likely to become harder and revolve around more entrenched problems (e.g. attitudes towards social responsibility). • Pedestrians and cyclists are particularly vulnerable in road traffic accidents and measures to promote walking and cycling set in other parts of the draft Strategy may, as a consequence, lead to increasing and more serious casualties. Notwithstanding this, the health benefits of walking and cycling significantly offset such risks. • Increased signage and levels of street lighting have often been associated with road safety schemes in the past and these have an impact on sensitive local landscapes, whilst traffic calming measures can also result in increased levels of noise and poorer air quality.

Conclusions	Future road safety programmes face significant challenges as continued reductions in casualty numbers begins to rely more on behavioural and cultural changes than on engineering solutions. Investment in more facilities for walking and cycling and where appropriate implementing 20mph residential zones should offer significant benefits in this respect. However, such changes are likely to be considerably slower to materialise than previous engineering solution have been. The high rate of child casualties and casualties in disadvantaged communities more generally represent a significant and high profile challenge. Prioritising road safety schemes in these target areas will bring benefits, although many problems also relate to the quality and design of the urban environment. Public realm improvements and wider regeneration programmes fall outside the local transport plan however there needs to be consideration of street clutter from signage and the effects of additional lighting.

Significant effects of LTP3:

- Supporting sustainable modes of travel to make safer streets: Promoting more sustainable modes of transport, such as walking and cycling will have an effect on rates of car usage and subsequently the perceived and real dangers of road traffic. This objective also relates to a wide range of issues including congestion (and its impact on economic performance), air quality, climate change emissions, and health (through exercise).

Analysis of the baseline data for LTP3 identifies vulnerabilities in relation to the use of sustainable modes of transport. Although levels of walking are high, cycle usage and rail travel within the Borough is extremely low (using data from the Town Centre Modal Split studies and data on mode of travel to work), and there is a substantial qualitative consensus that the quality of infrastructure discourages people from using these modes. There is also downward pressure on bus use, though this is more in line with national trends. Given the reasons for low levels of rail use and the national reduction in bus patronage, both of these aspects of the current situation are considered vulnerable.

LTP3 is able to impact substantially on the use of sustainable modes. This can be directly through the provision of new infrastructure – additional rail track, bus lanes, cycles routes etc, but also indirectly through "softer" measures aimed at encouraging people to use alternative modes and informing them of how they can do so.

However there is also a real and perceived danger attached to the use of more sustainable forms of transport which must be overcome such as the fear of crime on the journey to and at bus stops / public transport hubs, also the fear of the theft of bicycles.

In determining the significance of this effect it is recognised that it is partially dependent on the actions of external agencies and on people's individual choices, which generates a degree of uncertainty.

Links to Identified Problems

- Air quality
- Public transport patronage, particularly rail
- Low levels of walking and cycling
- Health

Policy:	**Goal 4: Promote equality of opportunity** **Priority: Improve access to education and employment**
What challenges does the policy aim to address?	Pennine Lancashire has failed to benefit from recent economic growth seen in other parts of the region and levels of deprivation in these communities remains high. These problems are caused by (amongst other things) a shortage of employment, low rates of car ownership and poor access to wider employment and training opportunities. The LTP3 Strategy will aim to provide greater information and ticketing options for public transport so that the 'travel horizons' in the borough (i.e. the distances people can afforded to travel) are increased and encompass a wider range of employment and education opportunities. Measures stated in the LTP3 Strategy and Implementation Plan include: • Enhanced public transport information and options linking disadvantaged communities with new employment areas. • Development of intelligent information systems and ticketing solutions • Facilitating delivery of Pennine Reach • Facilitating the delivery of rail improvements to Manchester
What environmental benefits will the policy provide?	The strategy aims to promote and develop ***sustainable transport*** especially for disadvantaged and isolated communities, helping individuals to travel to access much needed jobs, training and education. Provide students and young people with greater information and ticketing solutions which will help those from poorer backgrounds to improve their ***employment prospects***, which in turn may have long-term positive effects on health. The proposals (which include working with schools and colleges to promote sustainable travel) may also a change in ***attitudes to travel*** among younger generations, possibly reducing dependence on cars in the long term.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	• Increasing the 'travel horizons' of people in more disadvantaged communities will have adverse environmental consequences, most notably in terms of increased carbon emissions. • Increasing affluence is likely to result in a continued preference for private transport. Measures taken to provide affordable public transport services in these areas will reduce this risk, particularly if passenger numbers are enhanced by new ticketing solutions using smartcard technology.
Conclusions	If the proposed measures are successful, increasing incomes and employment security will have a range of positive environmental, social and health benefits. Developing a fit for purpose public transport network in partnership with transport operators is key to reducing travel by private car and enabling wider access to education and employment opportunities.

	Measures that provide better access to education and employment should help to improve overall wellbeing, particularly for those in disadvantaged and isolated communities. However, there are clearly a wide range of environmental problems with promoting greater travel (including local impacts associated with new infrastructure and global impacts through carbon emissions). Over the longer-term it will be difficult to prevent increasing prosperity resulting in greater car use (as seen in more prosperous areas).

Significant effects of LTP3:

Improving access to local services and facilities: Access to services and facilities is a central issue for LTP3. This objective relies on a full range of accessibility data generated using the "Accession" software package. Accessibility relates to a wide range of other "quality of life" issues including social and economic inclusion, community cohesion and deprivation.

The current situation with regard to certain aspects of accessibility is considered highly vulnerable. This is firstly because of the existing baseline per se, which shows that access to a number of key locations within the Borough by public transport/walk including major employment areas and health care facilities have declined since 2007 thus placing upward pressure on car use. Secondly, this problem with accessibility has a substantial cumulative impact on a number of other issues including health, exclusion and deprivation. This impact will disproportionately affect those without a car.

LTP3 will be the main driver influencing accessibility of existing local services in the Borough (the accessibility of new development is more significantly impacted on by the planning system). Although delivery is dependent to an extent on partners' actions (such as bus operators), the scope of LTP3's influence, along with the issue of cumulative effects referred to above, mean that its effects on this aspect of the current situation will be highly significant.

Links to Identified Problems

- Accessibility of hospital facilities
- Accessibility of business parks
- Health
- Low-wage, low-skill economy

- Promoting social and ethnic equality: This objective considers how the LTP3 Strategy affects issues of equality between different groups in the community. It can relate to equality in a wide range of senses: between people of different ethnic backgrounds, ages, income levels, genders, disabilities and so on.

Two main vulnerabilities in the current situation that are within the scope of the LTP3 have been identified. The first is the issue of access to key facilities as already noted: this disproportionately impacts on those who do not have access to a car. The second is in terms of road safety in residential areas: historically accident rates have been highest in areas with large Asian heritage populations. Although the current situation in accident rates has improved and is not currently considered a problem, it is considered that this remains vulnerable in that reassigning effort and resources away from this issue in future is likely to result in accident rates rising again.

LTP3 is the main mechanism for influencing levels of accessibility of existing development as described above. It is also a major driver of road safety in residential areas, though in this respect it is complemented by other actions including lessons on road safety in schools. Its impact on this aspect of the current situation is therefore considered significant.

Links to Identified Problems

- Accessibility of hospital facilities
- Accessibility of business parks

Policy:	**Goal 5: Promote quality of life, health and the natural environment** **Priority: Improve quality of life and well-being**
What Challenges does the policy aim to address?	Transport has significant social and cultural consequence. In a positive way, transport enables people to access essential services and prevents communities become isolated; in a negative way, transport disrupts community life, worsens the quality of the public realm and causes concerns about crime and safety. Additionally, transport has significant health consequences, worsening health through air pollution but improving it for those who choose active travel such as walking or cycling. The Strategy aims to tackle these problems by: • Improving access to services for vulnerable or isolated groups, by new, adaptable transport services or changing the way services are delivered. • Improving access to open spaces for leisure activities and expanding the network of walkways and cycleways to make walking and cycling more attractive • Development of Witton Country Park as a regionally significant cycling hub • Continued investment in the local Rights of Way network.
What environmental benefits will the policy provide?	The Strategy takes an important step towards managing the impact of transport infrastructure on the public realm. Measures such as tackling ***vandalism***, improve ***street lighting*** and maintaining ***pavements and street furniture*** will have a positive influence in many areas. The cross working with other organisations which will be necessary to implement these measures will bring coherence to these efforts. The impact of these measures should help foster a greater sense of pride in local communities and greater ***social responsibility*** on the part of individuals. The impact of more ***attractive, safer-feeling places*** and better connected pedestrian and cycling networks is also likely to result in more people ***walking and cycling***. Improving local air quality and noise levels will greatly benefit health and wellbeing of the local residents and visitors. Improving access to needed services through public transport investment and/or better co-ordination of community transport and welfare transport will also enable more vulnerable and isolated groups to take full part in society.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	• The state of public health in the borough gives cause for concern across a wide range of measures of health. There is also strong evidence to suggest that many of these health problems occur disproportionately in disadvantaged communities and amongst low income families with priority groups noted as older people, women (including Asian girls) people from BME communities, people from lower socio economic groups, drinkers and smokers. • Developing policies to encourage rates of walking and cycling

	need to take account of the many cultural and social barriers to participation. Without due care and attention to these barriers investment in green infrastructure will not be maximised. • Providing improved access to the countryside could result in increased levels of disturbance of sensitive species- for instance cyclists and walkers with dogs could disturb ground nesting birds and this would therefore need to be managed. Cycle trails within sensitive areas which are not carefully planned could also lead to walkers carving out new paths to avoid any conflict with cyclists on bridleways –potentially disturbing the local wildlife and habitat. • In order to maintain a standard of living and quality of life, retaining access to needed services is essential. However cuts in funding for local bus services and the effects of the local review into the non commercial bus network may make it uneconomical to run certain services, particularly in more isolated areas –leading to social exclusion. This would impact significantly on vulnerable people in affected areas. This pressure may increase if additional resources are diverted to support additional commuter services on more profitable corridors. For these individuals new ways of delivering services (whether through services such as community taxis or dial-a-bus services or through changes in primary services such as health care or post offices) will be important and may need to be considered.
Conclusions	The quality of public places (particularly in urban areas) is frequently cited by residents and visitors of across the region as a significant concern and transport is often a major influence on this. However, the cost of improving and maintaining public spaces has been, and continues to be, a considerable deterrent to public investment. Increasing fare prices and the closure of less profitable bus services are possible as a result of national cuts in the subsidies given to bus operators. Proposals to look at alternative ways for affected people to access essential services would help reduce the effect of this, particularly on young people, the elderly and rural communities. The impact on the environment of LTP3 investment needs to be carefully considered and measures aimed at protecting and enhancing the natural environment need to be fully recognised in terms of impact on biodiversity, landscape and water etc. Through policy measures relating to green infrastructure, transport networks can play a role in providing walking and cycling routes, and providing valuable ecosystem services that can assist in the management of and adaptation to climate change.

Significant effects of LTP3:

Protecting areas of wildlife and landscape value and improving access to them: This issue covers two main themes: avoiding damage to important resources; and improving access to them.

The vast majority of investment in the LTP3 programme is within the urban area, and no large scale new infrastructure is proposed in any rural part of the Borough. The appraisal has not identified any significant effect, either positive or negative, of LTP3 on sensitive landscape or wildlife resources.
The primary vehicle for improving access to the countryside is the Rights of Way Improvement Plan or RoWIP. The content of this is unaffected by the overall strategic option selected for the LTP.

Links to Identified Problems

- SSSIs
- Landscape and Access to the Countryside

Promoting healthy living environments: This objective covers a range of sub-issues, from the suitability of the mix of housing, to direct health indicators. The issue of physical access to health care facilities is also an important element as is the issue of air quality, which is a significant issue for healthy living environments, and is dealt with under Goal 2.

Appraisal has identified a serious vulnerability in the current situation in terms of physical access to Royal Blackburn Hospital by non-car means. There are also significant problems in the Borough in relation to people's health, notably in terms of the proportion of people with a limiting long term illness.

LTP3 will be the main driver for influencing non-car access to hospital facilities. It therefore has scope to have a significant effect on this issue. In terms of wider issues of people's health in Blackburn with Darwen, appraisal considers that there is a clear relationship through issues of air quality and the use of "healthy" modes such as walking and cycling. However it is considered that many other factors affect people's health including rates of smoking, diet, quality of housing, levels of activity and so on. Because of this the effect of LTP3 is considered only marginally significant.

Links to Identified Problems

- Accessibility of hospital facilities
- Health
- Air quality

- Reducing poverty: The primary indicator for poverty is data from the ONS' Indices of Deprivation (IoD) and information on average wage levels in the Borough. Poverty can be linked to a number of other issues including poor health.

Blackburn with Darwen scores comparatively poorly on a range of indicators of poverty. It is ranked within the most deprived Boroughs within the IoD, and has a comparatively low wage economy. The current situation is therefore considered vulnerable.

The main effect of LTP3 on this issue will be through access to jobs. The effect of LTP3 on this issue is considered significant, though it is clear that many other factors influence levels of poverty in the Borough.

Links to Identified Problems

- Low wage economy
- Accessibility of business parks

Policy:	**Overarching Priority: Maintain our transport assets in good condition**
What challenges does the policy aim to address?	Maintaining transport infrastructure in good condition is an on-going process and falling behind with maintenance can be costly in future years. On-going maintenance will be a continuing priority even through short-term fiscal constraints. The draft Strategy aims to tackle these problems by: • Improved procedures for pothole repairs and ensuring the safety of road engineering remains acceptable. • Improving resistance to flooding through drainage improvements and structural strengthening • Cross-service working to improve management of walkways and the public realm. • Modernising street lighting Measures will also be taken to manage the risk posed by severe weather, and to look at ways of improving the resilience of transport infrastructure to these extreme events.
What environmental benefits will the policy provide?	Maintenance (of pavements, street furniture, bus stops, clearing graffiti, etc) is often cited in public satisfaction surveys as having a significant influence of feeling of safety, willingness to use public transport, and general satisfaction with local communities. Proposals supported in the Strategy will see greater partnership working with other authorities with responsibilities for the public realm. Continued working with police authorities will also help tackle vandalism and anti-social activities. Improvements to street lighting and traffic signs, such are replacing lamps with LEDs, can reduce carbon emissions. If the Council were to reducing the lighting of signs and introduce modernised street lighting which reduces levels of light spill this could reduce the disturbance for certain night flying species. Measures to adopt improved winter gritting techniques could result in positive effects on water quality if it reduces in less salt being washed into watercourses. Moreover positive effects on the biodiversity, water quality and climate change adaptation objectives could result from any surface water management activities.
Will the policy have any adverse effects, are they acceptable and can these effects be reduced?	Maintenance practices can lead to the loss of heritage features and the degradation of the historic built environment. The replacement of paving slabs and cobbles with tarmac are often cited examples, but other features such as road signs are also increasingly criticised for their visual impacts. In many cases, the cost of like-for-like repair of historic highway materials and the cost of rectifying past mistakes are prohibitive. Similarly maintenance of the transport network can have an adverse effect on biodiversity and local landscapes if inappropriate verge maintenance regimes and methods are adopted and if materials out of

	keeping with local landscapes are introduced. Any tree canopy reduction or tree felling will also affect the local biodiversity and any transport scheme should try and avoid this happening. There could also be adverse effects on water quality and biodiversity through bridge maintenance activities which will need to be mitigated against through appropriate working practices. The introduction of new bollards and signs that require to be lit increases the Council's carbon emissions. Diamond grade reflective signs can reduce the need for lighting but is not always an acceptable solution from a traffic management perspective.
Conclusions	The quality of public spaces is important in all communities, but is particularly poor in more disadvantaged areas. The quality of the public realm also has a special influence on how attractive places are for private investment. Differences in the quality of urban environments also exacerbate the separation between more and less affluent groups. The recognition that highways are an integral and continuous part of the public realm is a useful step. Closer working with other relevant authorities should help improve outcomes locally and allow greater input from local communities.

Significant effects of LTP3:

- Ensuring the quality of the townscape and its contribution to the public domain is enhanced through good urban design and maintenance.
- Reflect and maintain local character
- Protect the Borough's historic environment, townscape and archaeological resources

These objectives in combination relate to the quality of physical infrastructure and development taking place in towns. It also has links to the issue of how transport infrastructure (street furniture, signage, signals etc) and its maintenance affect the urban environment.

The historic environment is vulnerable in that it is irreplaceable. LTP3 has the potential to have an irreversible effect on historic resources, and more generally can significantly affect the quality of the public realm, either positively or negatively, through the design and maintenance of schemes.

Links to Identified Problems

- The built and historic environment

Conclusions:

The LTP3 Strategy seeks to target over reliance on car journeys, which is a major contributor to traffic and congestion, road safety and poor levels of physical activity by delivering schemes through a combination of physical infrastructure improvements and a sustainable transport solutions programme of investment. As a result a balanced Implementation Plan is proposed.

However, given the challenges facing local authorities as they try to maintain service provision with limited resources there is a significant risk that funding could be diverted from sustainable transport solution measures to support the physical infrastructure designed to facilitate economic growth.

Summary

- The case for solving entrenched economic problems is overwhelming, particularly because of the severe social and health consequences that disadvantaged communities currently suffer. However, the effect of increasing the travel horizons of these groups will make achieving future carbon reduction more difficult and so the delivery of an improved local rail offer and bus network through investment in Pennine Reach and the Manchester to Clitheroe rail service is vital.

- The cost of maintaining public spaces is frequently prohibitive and the division of responsibilities between different organisations means that initiatives in local areas can lack clarity. In the absence of significant reductions in vehicle numbers, improvements in the management of the public realm will be required in the impacts of traffic are to be reduced.

- Whilst behavioural change techniques are to be supported the reluctance to regularly use more sustainable modes of transport such as public transport, walking and cycling may be the fear of crime. Fear of crime which may be created by a range of factors including graffiti, litter, vandalism, street lighting, and are significant deterrents. Therefore as well as developing smarter travel initiatives continued support for the safer travel unit is essential to target the perceived and real crime on the transport network. Moreover work through the local Community Rail Partnership is important to ensure safety on the railways through liaison with Network Rail, Northern Rail and the British Transport Police.

- Further reviews of the local bus network and any reduction in the subsidy given to operators for non commercial operations is likely to see a number of less profitable services withdrawn or bus fares increased. This is likely to impact most significantly on already isolated groups (including rural communities), the young and the elderly. Any rises in fares may adversely affect low income households. BwD will need to continue to work with local transport operators, taxi companies and community transport to ensure accessibility to key services is not adversely affected.

- The introduction of 20mph zones in appropriate locations along with other innovative safety schemes may help to increase the confidence of vulnerable road users, create greater sense of community, and lead to changes in driver attitudes. However, the

benefits of this are unlikely to be seen as rapidly as ore traditional engineered solutions.

- The safety of children on our roads is unlikely to benefit significantly from residential speed limit changes, since most accidents occur at lower impact speeds. In this case, solutions such as the regulation of parking in residential areas and schemes to encourage greater parent involvement are likely to be more beneficial[4].

It is clear that the Strategy takes account of these and other issues identified in this report. However, there is still a dislocation between economically-driven transport measures and those of a more social or environmental focus. This could lead to significant pressure for new road infrastructure and perpetuate reliance on private transport.

Therefore it is important to consider appropriate mitigation measures for the potential adverse effects identified within the Assessment of the Strategy section of this report.

Biodiversity:

- Design of any new infrastructure and the maintenance of existing assets should protect and enhance the natural environment.

- Protocols should be introduced for bridge, road and footway maintenance operations and roadside verge maintenance in order to ensure that adverse effects on biodiversity are minimised and enhancements are achieved wherever possible.

- LTP3 should ensure it recognises the role that transport networks can play in the mitigation and adaptation to climate change. Making the network more resilient to climate change can, if not done carefully, impact negatively on wildlife and mitigation should be considered to address this issue.

Landscape:

- It is vital that the ROWIP is integrated into LTP3 and there is full support for the role that Rights of way network, green lane and quite lanes have in providing access to the open countryside, as well as employment, education and other services and facilities.

- Design of new infrastructure and maintenance of existing should adopt techniques that reduce adverse effects on local landscapes –e.g. through appropriate materials, signage and lighting

Health:

- There should be full recognition of the mental and physical health benefits associated with access to the natural environment.

[4] Evidence from residential communities with high incidents of child casualties suggests that the high density of parked cars especially along old terraced streets obscures visibility. Meanwhile, accident records suggest that in the majority of cases, children are hit when unaccompanied by parents.

The LTP3 Strategy openly admits that there will need to be compromises in the goals and priorities identified when implementing local schemes with the economic growth agenda potentially outweighing goals to support health and reduce carbon emissions.

However, it is clear that the root cause of severe environmental and social problems in many communities is a result of the economic difficulties which the borough has faced. As a result, measures to improve economic prospects in such areas could well have very positive benefits especially the major transport schemes which are proposed.

Each major transport scheme identified within the LTP3 Strategy will already have or will be subject to individual environmental assessments with statutory consultation. The table below is able to briefly set out reasons for the investment and the environmental impact.

Major Transport Schemes	**Why is it required?**	**Environmental Impact**
Freckleton St link road	Forms part of wider masterplan for area helping to regenerate SW corner of Blackburn town centre. There is poor image of the area compounded by the quality of under used land and buildings Completes Blackburn town centre orbital route which will assist town centre regeneration. Lack of public transport routes and poor quality pedestrian and cycling routes Given the impact on the local historic environment planning conditions will be attached to the granting of any planning permission to enable a full programme of recording and archaeological investigations.	Construction impact upon landscape character will be of minor consequence due to development area predominantly being an urban character consisting of a few areas of open green space. There will be noise and air quality issues during construction. Dust from construction likely to impact on quality of the area by creating visual haze and potentially adding to silt levels of water course – reducing its quality. Impact on the local historic environment including the demolition of 53 King St a Grade II listed building, harm to the site of a former Roman Catholic Church and possible burial ground; demolition of an unlisted Spiritualist Society temple and clearance of St Peter's Church and graveyard. Potential loss of trees and

		reduction in grass verge and vegetation. Increased flow of traffic through site will have negative impact on tranquillity of site. A NATA assessment has identified a preferred route which has carbon emissions forecasted to decrease the most over the appraisal period Infrastructure designed to assist levels of walking and cycling will have a positive impact on the environment. By making the area a destination accessible by these modes will lead to a reduction in car borne travel.
Manchester to Clitheroe rail enhancements	Single line sections of the local rail line from Blackburn to Manchester are acting as a capacity constraint on future development of the service and economic prosperity of Pennine Lancashire Poor commuter transport and weak trade links are preventing the wealth from growth centres (Manchester) spilling into Pennine Lancashire Poor connectivity to growth centres is inhibiting Blackburn and Darwen to attract skilled workers and retain residents with higher skills levels. Congested road network into and out of Manchester in the	Noise, dust and vibration during construction work Clearing of line side vegetation and bank trimming Management of invasive species Additional or increased drainage discharges Impact of traffic management if bridge reconstructions are required – also possible impacts on biodiversity and soils and protected species – e.g. bats. Operation of additional units to run a 30 minute frequency will have a noise and air quality impact. However this is expected to be mitigated against by the switch from

	peaks is not sustainable	private car to rail and increased patronage of the service.
Pennine Reach	The underpinning principle of Pennine Reach is to improve connectivity by public transport from within and outside the Borough to key strategic employment sites and to support the future regeneration of Pennine Lancashire's towns. Pennine Reach will provide a key sub-regional transport system between Darwen, Blackburn and Hyndburn	The Pennine Reach scheme has been developed out of recognition that there was an increasing reliance on the use of the car as a means of travel and access in the region due to the relatively poor state of the public transport facilities. While the majority of the proposals operate on existing roads there are some locations where road widening and construction is required therefore noise, vibration and air quality will be affected. Moreover monitoring the impact on the on biodiversity and soils will be essential. Any increase in surface run off and vehicle based contaminants is expected to be insignificant. Overall the major scheme business case indicates that a reduction in carbon emissions over the 60 year appraisal period would be 12,284 tonnes The scheme will encourage people to use public transport and additional cycling infrastructure as part of the scheme will also promote more sustainable forms of travel.
M65 Capacity improvements	There is currently enormous pressure at certain junctions of the M65 in the am and pm	Additional capacity will result in additional usage worsening noise and air

	peak. Existing infrastructure may be unable to cope with any additional demand created by the delivery of the 'Targeted Growth Strategy' identified in the Councils Core Strategy in terms of further residential and employment developments in the area.	quality. Any construction work would impact in terms of vibration, noise and air quality.

APPENDIX 1: STATEMENT ON HEALTH IMPACTS

This statement on health impacts was developed in partnership with Lancashire County Council in support of the LTP3 Policy Background Papers which have subsequently formed the basis of BwD's Strategy and Implementation Plan.

Health Impact Assessments:

Analysis of community-wide health problems is undertaken through the Joint Strategic Needs Assessment, in a partnership between Lancashire County Council, Blackpool Council and Blackburn with Darwen Borough Council and the five Primary Care Trusts. Additional oversight is provided by the Community Safety Partnership, which tackles issues around criminal behaviour and community perception of safety.

Headline Problems

- Although significant reductions have been made in road casualties, rates recorded by the Police in Lancashire, Blackburn and Blackpool are (remain) high compared with other parts of the UK[5].
- Overall recorded casualty rates are highest in Preston, although other areas have specific problems. Accidents involving motorcycles are a particular concern in rural areas, especially in the district of Lancaster; meanwhile rates of child casualties are high in more disadvantaged parts of Lancashire, Blackpool and Blackburn.
- Accidents resulting in fatal or serious injuries are disproportionately high on rural roads.
- Pedestrians and cyclists are particularly vulnerable in road accidents and the likelihood of serious injury amongst those involved in collisions is significantly higher than that of car drivers. In common with this, surveys suggest that concerns and perceptions about safety may deter people from walking and cycling.
- Disadvantaged communities are significantly more likely to suffer from poorer lifestyles and poorer health. Incidences of coronary heart disease, poor health in children and stress-related illnesses are all more common in disadvantaged communities. Overall life expectancy is also lower in these communities.
- Physical activity is an important contributor to good health and declining activity is a problem affecting all parts of society. Whilst conditions such as overweightness and obesity are a significant problem in more disadvantaged communities the problem of poor diet and lack of exercise are also increasingly common in more affluent communities, particularly among children.

[5] Variations in the way different casualty records are recorded and categorized makes numerical analysis of road safety problematic. Individual statistics and analytical methods should be treated with caution.

The Health Agenda

Lancashire has considerable health problems and efforts to improve co-operation across relevant agencies and organisations has become a key priority in the region. Particular attention is being given to the acute level of health inequalities seen in the County (Joint Health Unit, 2010). This has been recognised as a 'big ticket' issue by the Lancashire Partnership.

Organisations involved in the Partnership are responding to these challenges through measures focused on reducing inequalities in infant mortality, cardio-vascular disease, cancers, alcohol related diseases and accidents, all of which contribute significantly to reducing life expectancy in Lancashire.

The Partnership has decided to focus part of its measures on a 'healthy streets' initiative, aimed particularly at using local government regulatory powers to encourage people out onto the streets to be both physically and socially active (Lancashire Partnership, 2010). Trials of community-wide 20mph zones are part of this programme, but the measures go much further to cover problems such as alcohol misuse and fear of crime.

The Community Safety Partnership has also identified four priority areas around alcohol abuse, domestic violence, anti-social behaviour and road safety (Community Safety Partnership, 2010). This is supported by the work of the Safer Travel Unit which tackles problems of antisocial behaviour on journeys by public transport. The unit also cooperates with agencies to regulate the sale of alcohol to young people.

The Objectives:

Transport is a major cause of accidents and pollution, whilst also providing people with access to jobs and services, giving people an opportunity to walk or cycle as part of a healthy lifestyle, and shaping public and communal places. The extent of these impacts and benefits has a significant influence on public health.

The third Local Transport Plan preparation has begun by identifying priority objectives which are intended to guide how decisions about new transport investment will be made. The six priorities identified are:

Priority 1: Improve access to areas of regeneration and economic growth
Priority 2: Improve access to education and employment
Priority 3: Reduce traffic congestion
Priority 4: Improve road safety
Priority 5: Improve quality of life and wellbeing
Priority 6: Maintain our transport assets in good condition

The focus for the strategy will be on sustainable transport solutions (including buses, trains and walking and cycling), with investment in new road infrastructure limited to providing access to regeneration and growth areas and helping secure direct

economic benefit. Businesses and individuals will be supported to make better use of transport services through dedicated travel planning exercises.

Road safety programmes and driver training schemes will continue to be delivered, whilst 20mph speed limits will be introduced where appropriate.

A Summary of Road Safety

Although significant reductions have been made in road casualties, rates in Lancashire, Blackburn and Blackpool remain high compared with other parts of the UK. Overall casualty rates are highest in Preston, although other areas have specific problems. Rates of child casualties are high in more disadvantaged parts of Lancashire, Blackpool and Blackburn.

Accidents involving motorcycles are a particular concern in rural areas amongst weekend riders, and in urban communities amongst younger riders. Casualty figures indicate that rural casualties are particularly high in the Lancaster district.

Cars are most frequently involved in accidents, reflecting the number of private motor vehicles compared with other road users. Human error (either by way of lapsed concentration, a lack of attention, or deliberate risk taking) is the most common causes of accidents. Speeding and drink driving account for a far smaller proportion of accidents, although the severity of these is often worse and the risk of fatalities is greatly increased.

The number of children killed or seriously injured is worst in the more disadvantaged parts of Lancashire, particularly in Pennine Lancashire, where as many as half of all pedestrian casualties are under the age of 16. Although figures vary slightly depending on how they are weighted, similarly acute problems exist in Preston and Blackpool (RSA Ltd, 2010). There may be a range of reasons for such a high number of child casualties, but many incidents are simply a result of poor visibility due to on-street parking and children playing.

The number of cyclists killed or seriously injured in road accidents across the UK has steadily increased in recent years (TRL, 2009). Like pedestrians, cyclists are significantly more vulnerable than motorists. A high proportion of fatalities amongst cyclists occur on rural roads where traffic speeds are higher, whilst lorries also present particular hazard to cyclists.

Behaviour and a lack of experience are common problems amongst child cyclists, and cycling between the pavement and the road is a major cause of accidents in this age group. Overall, however, a lack of observation by motor vehicle drivers is the most common cause of accidents involving cyclists.

In spite of these problems, it is generally recognised that the health benefits of increased walking and cycling outweigh the disadvantages of increased injuries. Furthermore, initial evidence from the Lancaster Cycling Demonstration Town project

has shown an increased the level of cycling without an accompanying increase in cycling casualties[6].

A Summary of Public Health

The health of people in Lancashire is varied, just as their prosperity is also varied. On the one hand, significant problems exist with respect to alcohol abuse, diabetes and mental health whilst, on the other, levels of physical activity and obesity among children are generally better than elsewhere (NHS, 2010). Furthermore, there are marked inequalities in health which are related to severe problems of deprivation affecting many communities and in some places life expectancy is still significantly below the national average (JHU, 2010).

Joint Strategic Needs Assessments (undertaken by local Primary Care Trusts) report high incidences of conditions such as cardiovascular disease and diabetes, which are linked to lifestyle conditions, including poor diet, excessive alcohol consumption and lack of exercise. Drug use is also increasingly reported in hospital admissions.

Although rates of physical activity and levels of obesity in Lancashire are comparable or better than the UK as a whole, the problem of sedentary lifestyles continues to worsen and is likely to place increasing demand on health services. In most parts of Lancashire, measures of average body mass index show that the population is rapidly moving from average to overweight. Whilst this affects all parts of the population, these problems are still very pronounced in the most deprived communities of Lancashire, Blackpool and Blackburn.

There is some evidence which suggests that environmental factors including access to green space and problems of graffiti and litter have an influence on levels of physical activity and rates of obesity (Ellaway et al., 2005). In Lancashire, access to green spaces and the quality of public spaces is particularly poor in disadvantaged communities.

Anti-social and criminal activities (e.g. aggressive driving or vandalising bus shelters) may have an impact on people's mental health and sense of wellbeing and act as a further deterrent to healthy lifestyles.

There is a growing view that declining social interaction and community cohesion can have health impacts, for example in terms of mental health and the ability of vulnerable or elderly people to lead independent lives. While the causes of this are varied, heavy traffic can lead to effectively sever communities, public amenities, etc. Traffic calming schemes and 20mph limits in appropriate locations may help to reduce these effects.

[6] In the case of Lancaster many of the new routes brought about by the project are off-road and therefore segregated from motorized traffic. Pedestrians may also use these routes.

Impact of Existing Measures on Road safety and Public Health

Measures to address many of the problems described above are well established and have proven benefits. Specific funding is allocated annually to programmes including local safety schemes – including traffic calming and speed limits – and cycling and pedestrian prioritisation schemes, whilst efforts have been made in the way of improving accessibility to key health care services, A significant number of cycling schemes have also been delivered (including cycling demonstration towns in Lancaster and Blackpool).

Good progress has been made in reducing all types of road accidents, and monitoring of local safety schemes shows that these actively contribute to casualty reductions. Internationally, pan-European agreements and directives continue to have a significant influence over vehicle safety and the protection afforded to pedestrians and cyclists in the event of collisions.

Improvements have also been seen in many health conditions, although there is growing evidence that progress has been significantly slower in disadvantaged communities. Furthermore, lifestyle related problems (including alcohol consumption and obesity) are continuing to worsen.

Emerging Solutions

Blackburn with Darwen will identify appropriate 20 mph zones and continue to monitor the effectiveness of existing schemes whilst continuing to engineer solutions for speed management.

The concept of 20 mph zones builds upon the previous Government's draft Road Safety Strategy, which was published in 2009, and is related to the idea of 'shared spaces' which aims to make public highways more amenable to non-motorized traffic. The current Government has recently reinforced this by urging Council's to reduce 'street clutter' by reviewing the need for excess signs and street furniture.

The draft Road Safety Strategy (referred above) also proposed that a more concerted programme of reviewing rural limits should be moved forward to tackle the continuing high rate of serious accidents and fatalities on rural roads. Measures were also proposed to re-examine the function of different rural routes in order to manage the number of uncontrolled junctions joining faster roads.

Conclusions

- The local safety scheme programme will continue to provide public health benefits under the third local transport plan.
- Proposals to implement 20mph limits where appropriate are likely to have benefits, particularly with regard to perceptions of safety, and may help encourage individuals to be more physically and socially active.
- The evidence for casualty reductions in 20mph limit areas and their effectiveness will need to be monitored.

- Health problems suffered by disadvantaged communities in East Lancashire, Preston and Blackpool make it particularly important that walking and cycling is supported in these areas.
- Consideration should also be given to measures aimed at improving the street scene and public spaces, which may require changes in current maintenance protocols. There may be commonalities between this and other local safety programmes.
- A review of rural road speeds should be implemented, making use of existing casualty figures and work already undertaken on defining a functional road hierarchy.
- The publicity and interventions made by the Safer Travel Group will continue to help make public transport more appealing.

APPENDIX 2: STATEMENT ON EQUALITY IMPACTS

This statement on equality impacts was developed in partnership with Lancashire County Council in support of the LTP3 Policy Background Papers which have subsequently formed the basis of BwD's Strategy and Implementation Plan.

Discussions have been held with representatives from different minority groups regarding potential transport requirements. The outcomes of these discussions have informed the Council's understanding of potential impacts of the draft Strategy and will be taken forward in subsequent Implementation Plans.

The need to consider potential impacts on different communities and individuals is enshrined in law and is a core objective of the Council's 'Narrowing the Gaps' strategy. The following statement details the potential impacts of the draft Strategy on different sections of society (including on the basis of age, disability, faith, gender, race and sexual orientation) and in on wider community cohesion.

Equality and Diversity Needs

Lancashire has a diverse population and a diverse range of communities. Despite significant improvement in standards of living across the board, inequalities still exist in a number of areas. The Comprehensive Area Assessment undertaken by public service providers in Lancashire identifies two categories of at risk groups:

- People who experience inequalities, disadvantages or discrimination
- People whose circumstances make them vulnerable

Whilst these issues affect individuals, problems also extend across and affect the cohesion and vitality of whole communities. Evidence suggests that differing economic fortunes, deprivation, integration between ethnic and social groups, and inequalities in public health all have wider community impacts. Unfortunately, such problems still affect many communities within the borough and across Lancashire. The seriousness of these issues was clearly highlighted by the Burnley Riots of 2001.

Equality Impacts of the Strategy

Priority: Improve access to areas of regeneration and economic growth

The local economy is hindered by a shortage of high-quality business sites, both in central locations and in areas of declining economic prosperity. The impact of this reduces wealth creation, affects people's standards of living and has led to growing disparities in the economic fortunes of different areas. In many of the worst affected areas, the social make-up of communities may lead to disproportionate impacts on ethnic or vulnerable minorities, although all sections of society are affected.

Since there is no clear pattern or bias in the location of Lancashire's potential business growth areas towards particular minority or vulnerable communities, it is

unlikely that there will be any differential impacts associated with new infrastructure projects.

Priority: Reduce carbon emissions

Reductions in carbon emissions will rely on reductions in traffic. This would also result in reductions in harmful pollutants which are emitted at the same time as CO_2. However, as there is no discernable pattern in the relationship between existing congested routes and particular communities or sections of society, it is unlikely that any future traffic reductions will be disproportionately benefit any particular groups.

Notwithstanding this, certain groups may benefit from certain reductions in harmful pollutants. For example, there is evidence that women may be more susceptible to certain kinds of particulate pollution.

Priority: Improve road safety

Neighbourhood safety schemes will continue to be delivered in partnership with the local community through local consultation to ensure the physical measures proposed provide a safe accessible environment

The continuation of programmes such as the 'safer travel unit' which helps enforce against anti-social behaviour on public transport will have positive benefits for vulnerable members of society. Reductions in anti-social behaviour are also likely to help ensure greater community cohesion, and make travelling by public transport more attractive for everyone.

Proposals for 20mph speed limits in appropriate locations is likely to improve community confidence and encourage people to spend more time out and about in their community. This is also likely to help improve community cohesion, and may indeed have other benefits (e.g. crime reduction). Trials are being run in disadvantaged communities where rates of child casualties are particularly.

Priority: Improve access to education and employment

In many of the most disadvantaged communities, young people, in particular, suffer from a lack of employment opportunities and low expectations. Coupled with poor educational achievements, this can lead to under-achievement and has a drag effect on the low economy. However, Improving skills and training and widening people's travel horizons is therefore important in many isolated and disadvantaged communities, but particularly so for young people. Improvements to information provision and ticketing solutions are particularly beneficial to young people, who are less able to afford other forms of transport and require sufficient knowledge of the public transport network to plan education, employment and leisure journeys.

Priority: Improve quality of life and well-being

Developing walking and cycling networks has the potential to improve the quality of the local environment. The greatest benefits are likely to be felt in more disadvantaged communities where serious underlying health problems exist; and amongst women, who, statistically, are least likely to do sufficient regular exercise.

There may be additional benefit to individuals from certain ethnic groups, who are more prone to diabetes and for whom regular exercise is especially important in controlling the disease.

The work with British cycling should enable a range of cycling opportunities to be developed for BME groups, women and young girls.

Priority: Maintain our transport assets in good condition

Vulnerable individuals, particularly the elderly, visually impaired or those with mobility problems may be most at risk of trips and falls as a result of poorly maintained pavements or a lack of suitable road crossing. Concerns about personal safety among such individuals may prevent people for leading independent and healthy lives.

APPENDIX 3: REVIEW OF ENVIRONMENTAL TOPICS

This review of environmental topics was developed in partnership with Lancashire County Council in support of the LTP3 Policy Background Papers which have subsequently formed the basis of BwD's Strategy and Implementation Plan.

Water Quality: Although water quality and pollution control are not new issues, the Water Framework Directive and the development of a River Basin Management Plan for the northwest region (currently in draft form) have set significantly more challenging objectives than were present when the previous LTPs were produced. The highway network can be a major source of pollution, ranging from the general build-up of contaminants on road surfaces to the consequences of major environmental incidents. Flooding and highway drainage also have important influences on water quality, as excess water can carry pollutants directly in nearby water courses.

Noise & Air Quality: Again, although these are not new issues, there is growing recognition of the wider impacts transport can have on quality of life and the public realm. Poor air quality and excessive noise caused by traffic and congestion can also be detrimental to health as well as deterring people from taking up more healthy transport options such as walking and cycling. These issues were identified as particular priorities in a recent DfT briefing, The Future of Urban Transport.

Climate Change & Flooding: Updated projections for climate change scenarios were published in 2009. Regional forecasts for the north-west region include increases in mean summer temperatures of +1.5°C by 2020, increasing to +3.7°C by 2080. The forecasts also predict increased winter rainfall amounts of +6% by 2020, increasing to +16% by 2080. Corresponding decreases in mean summer rainfall are also predicted.

Flooding is closely related to the highway network and has strong links with climate change and land-use planning, both key priorities in the third round of local transport plans. A comprehensive review of flooding in the UK highlighted the importance of managing local surface water flows (of which public highways are a major factor) as well as the risks that flooding can pose to the safety of road users. Managing surface water drainage from the highway, slowing down the flow of water into nearby watercourses, and preparing for emergencies are major challenges for local transport authorities.

A surface water management plan is also being developed for the borough in consultation with the environment agency.

Population: Population and employment estimates are available for the period 1999 - 2008. Broken down by sub-region, Central Lancashire and West Lancashire saw slight increases in population (+2.7%), but substantial increases in employment opportunities (+19%). Lancaster and the Fylde Coast saw moderate increases in

population (+4.2%), with slightly greater increases in employment opportunities (+7.1%). Pennine Lancashire saw a negligible increase in population (+0.9%) and a marked decline in the number of job opportunities (-1.4%). In 2008, Lancashire provided a total of 586,000 jobs, against a population of 715,000 economically active people. The unemployment rate was 5.6% and around 90,000 people (net) found employment outside of the County.

Forecasting local demographic changes is highly problematic however forecasts for Pennine Lancashire suggest that population levels will grow more slowly than other areas despite having a growing young population due to migration and the inevitable affects of an ageing population.

Health: A recent Government paper (The Future of Urban Transport) highlighted the diverse range of impacts that our reliance on private transport has on our health and the health of the environment. Pollution, noise and the risk of road accidents are notable impacts, but other less obvious consequences include increasing 'stresses' on the public realm, making urban centres less attractive and deterring people from visiting.

Our reliance on private transport also deters people from making journeys on foot or by bicycle, which could otherwise have perceptible health benefits. The UK's level of walking and cycling is significantly lower than most other European countries, despite the fact that our road safety record overall is very good. The safety record for cyclists, however, is comparatively poor. How active different communities are is not well understood.

Local Environment: The attractiveness of public spaces is likely to influence how willing people are to use public transport or participate in active transport. Litter, fly-posting, graffiti, and fly-tipping have a marked impact on some areas. Green Infrastructure also has important links with biodiversity and addressing climate change. The provision of improvements to existing parks and cycleways are likely to form the main part of local transport plans' contributions towards biodiversity targets.

Natural Heritage: The law provides a robust framework for the protection of statutorily designated wildlife sties and protected species, and the planning system has an important role in the on-going protection of these. Increasingly, the contribution of non-statutory wildlife sites, ancient woodland and networks of natural habitats are also being recognised through the planning system, with efforts also being made to integrate these under the concept of green infrastructure. Work on this is still in its infancy.

Landscape and Heritage: Most of Lancashire's town and village centres have designated Conservation Area, and a wealth of attractive and historically-important streets, buildings and public areas which will play an important part in the economic revival of many communities. Traffic, and the infrastructure necessary for the management of traffic, frequently has an adverse impact on the heritage and attractiveness of these areas – Indeed, many towns now have pedestrianised streets in order to overcome these immediate problems. The Blackburn town centre

movement strategy has been designed to accommodate planned regeneration which will provide an improved quality of place.

APPENDIX 4: ECONOMIC AREA PROFILE

Pennine Lancashire

The regeneration agenda – tackling isolation and bringing opportunities to local communities – is a driving force across Pennine Lancashire.

A 2008 Centre for Cities report found that although large cities like Leeds and Greater Manchester were booming, poor commuter transport networks and weak trade links were preventing this wealth from spilling over into Pennine Lancashire, where GVA output remains low when compared nationally and to neighbouring City Regions, with high levels of employment in lower value economic activities.

Studies into travel to work patterns within Pennine Lancashire show that only 16% of the workforce works outside the sub region. In terms of current commuting levels from within Pennine Lancashire to Greater Manchester this is extremely low with only 2.6% and 3.6% of resident employees in Burnley and Blackburn respectively commuting to Manchester. (Centre for Cities, 2008) This clearly reflects the poor connectivity and long journey times by public transport.

This poor connectivity inhibits the ability of towns like Blackburn and Darwen to attract skilled commuters and also to retain residents with higher level skills. With the further decline of manufacturing employment in the North West, future employment will be driven by higher level skills and through more service based sectors. Employment in Greater Manchester is set to grow by almost 150,000 by 2026, particularly in Manchester City centre with forecasts of 93,000 largely in the financial and business services (EKOSGEN, 2008) – this is considerably more than forecasts for neighbouring economies such as Pennine Lancashire.

Connectivity between the Pennine Lancashire sub region and the expanding economy of Greater Manchester must be addressed in order for this growth to be felt by local businesses and communities and ultimately support future economic growth in Pennine Lancashire.

Improving access to jobs, increasing travel opportunities and raising incomes are important goals which the Strategy aims to address.

Key points:

- The structure of Pennine Lancashire's economy remains fragile and improved links with Preston and Leeds have largely failed to materialise. Natural links continue to operate between parts of Pennine Lancashire and north Manchester, but these too are constrained by the limited choice of transport options although transport schemes have been identified that will improve connectivity.
- Low car ownership and the poor range of train services throughout East Lancashire can combine with limited 'travel horizons' to restrict people's opportunities for education and employment.

- Levels of deprivation across wide areas of Pennine Lancashire are a serious concern and, like other places, are worsened by the effects of traffic and congestion in our urban centres. Higher rates of road accidents are also seen in many of these deprived communities.
- Allied to this, transport and traffic adversely affects the quality of the public realm, how it is used, and how it is cared for. Not only has this implications for the wider regeneration agenda, it can also deter individuals from walking and cycling, which both have health benefits. Severance created by busy roads can also prevent proper social interactions, which impact on the prospects, self-esteem and cohesion of local communities.

APPENDIX 5: REFERENCES

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