

West Yorkshire Local Transport Plan 2011 – 2026 (LTP3)
Bradford Local Implementation Plan

1. Introduction from Bradford Council Portfolio Holder (Environment and Sustainability)
2. Background
3. LTP 3 Vision Statement & Objectives
4. Bradford District Context and Local Transport Issues
5. Strategic Transport Themes
6. Partnership
7. Transport Monitoring, Modelling, Assessment and Strategy
8. Indicators and Performance Monitoring
9. 3 Year LTP Implementation Plans

10. Review

Appendix A – LTP Implementation Plan 2011 to 2014
Bradford Elements

**This document was approved by Bradford Council
Executive on 24 June 2011**



1. Introduction

As Bradford Council's Portfolio Holder with responsibility for transport during the preparation of this document, and as a member of the West Yorkshire Integrated Transport Authority's Local Transport Plan Committee during the development of the Local Transport Plan, I am delighted to be introducing you to this Bradford Local Implementation Plan for the West Yorkshire Local Transport Plan 2011 – 2026.

As well as having many strengths, Bradford has many challenges to meet in the future and needs an excellent transport system to meet those challenges. We need to build our economy, increase our housing stock, reduce our carbon emissions and improve our citizens' quality of life. Transport has an essential contribution to make to all of these objectives.

This Local Implementation Plan is intended to provide a local context to 'My Journey' the West Yorkshire Local Transport Plan Strategy 2011 – 2026 and many of the initiatives within it will begin to be delivered as part of the first LTP Implementation Plan 2011 – 2014.

The Council and ITA cannot deliver the West Yorkshire Strategy and this Local Implementation Plan on our own. We need the help of local communities, businesses and services to ensure that we can deliver a safer and more sustainable transport system for the District

I believe we have developed a Local Implementation Plan that, with your help, will enable us to meet our objectives. I hope you find it informative and interesting to read.



Councillor Ghazanfer Khaliq
Bradford Council Portfolio Holder
(Environment and Sport)

2. Strategic Context

The West Yorkshire Local Transport Plan 2011 – 2026 (LTP3) and this Local Implementation Plan supersedes the Bradford District Transport Strategy 2006-2021 approved by Bradford Council Executive on 24 April 2007

The introduction of the Local Transport Act in 2008 changed the governance of transport issues in England and Wales.

One of the requirements of this Act was the formation of the West Yorkshire Integrated Transport Authority (WYITA) to oversee transport policy development in West Yorkshire.

The WYITA has produced the 15-year West Yorkshire Local Transport Plan Strategy – *My Journey West Yorkshire – Local Transport Plan Strategy 2011-2026*) and detailed 3-year *Implementation Plans* which set out the transport policy and programmes in West Yorkshire.

The Local Transport Plan has been informed by the Leeds City Region Transport Strategy and Connectivity Study, which identified key strategic transport interventions required across the City Region (including improvements to the rail network, connections to Leeds Bradford Airport and local highway improvements to unlock housing growth), and by consultation with a wide range of stakeholders across West Yorkshire. Within the framework of West Yorkshire, this document sets out many of the transport aspirations of the Bradford District over the same period.

The Council and the ITA will not be able to deliver the LTP Strategy and Local Implementation Plan on its own. It will need the help and commitment of its partners and its communities to achieve the Vision set out in the next section of this document.

3. West Yorkshire LTP 2011 – 2026 (LTP3) **Vision Statement & Objectives**

MyJourney West Yorkshire - Vision 2026 ***Connecting people and places***

Working together to ensure that West Yorkshire's transport system connects people and places in ways that support the economy, the environment and quality of life.

The objectives of the Plan are:

1. To improve connectivity to support economic activity and growth in West Yorkshire and the Leeds City Region.
2. To make substantial progress towards a low carbon, sustainable transport system for West Yorkshire, while recognising transport's contribution to national carbon reduction plans.
3. To enhance the quality of life of people living in, working in and visiting West Yorkshire.

In Bradford we aim to achieve the Vision and objectives through:

- supporting the delivery of new housing and jobs and helping to regenerate existing local communities
- making it easier to access places, services and amenities by sustainable means
- creating high quality, distinctive, cohesive and safe environments
- reducing congestion and supporting greener fuel technologies
- serving the transport needs of the most vulnerable members of the community and reducing the harmful effects of road traffic within neighbourhoods.

4. Bradford District Context and Local Transport Issues

Context

Bradford District covers an area of 366 square kilometres (141 square miles) and has a varied environment which ranges from moorlands in the north and west to the valleys and floodplains formed by the river systems flowing through the District. The topography means that most of the industrial and residential development has taken place along the valley bottoms, with the majority of the population living in the urban centres of Bradford, Shipley, Bingley, Keighley and Ilkley.

The District's economic make up is as varied as its topography with some areas, particularly to the north of the District, being generally prosperous whilst others, particularly in the inner city, but also in other locations across the District, have high levels of deprivation.

Bradford is anticipated to experience strong housing and employment growth as the economy recovers, facilitated by specific initiatives including work to regenerate the city centre, the Bradford-Shipley Canal Road Corridor, Airedale and Manningham areas. Bradford had been set a target by government, through the former Regional Spatial Strategy, to provide almost 50,000 new dwellings by 2026. With its fast growing population, particularly of younger and older people, this level of housing growth is still likely to be required.

Trends show that the District is unlikely to create enough jobs on its own to meet the demands of a growing workforce. As well as good internal connectivity, therefore, links with neighbouring districts will be increasingly important to connect people with education, training and employment. For some, the West Yorkshire urban centres of Huddersfield, Halifax and particularly Leeds will provide these opportunities, but for others in Bradford's western communities, Craven and East Lancashire will have a greater role in addressing this need. There will, to some extent, be a need to focus development at locations where existing transport links have the potential to be further strengthened.

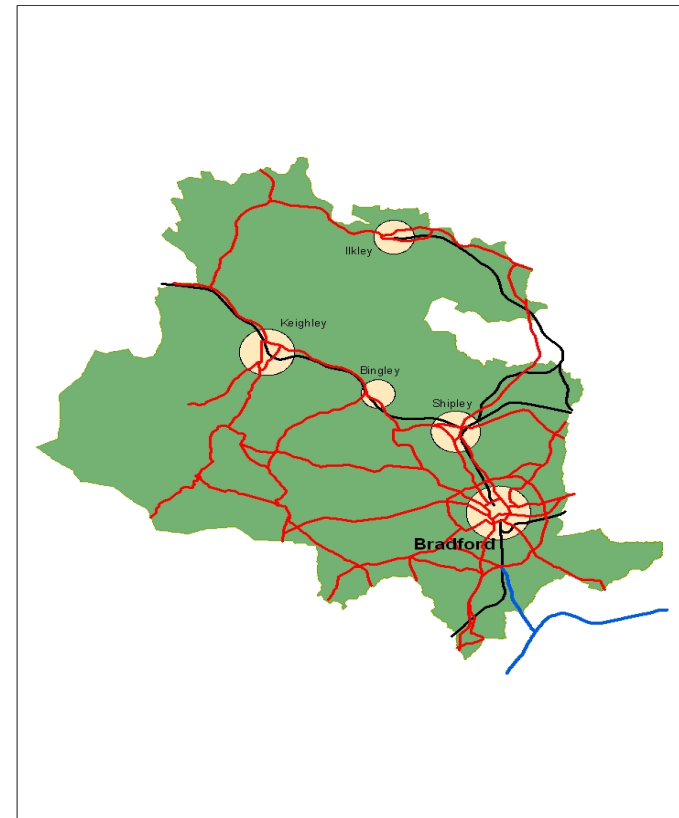
If we are to unlock the economic potential of the District we will have to find a way to balance the needs of a growing economy with the needs of residents and communities – a move towards a model for sustainable economic development for the District, which would be supported through targeted investment in transport initiatives.

Transport Network

The transport network in the urban area of Bradford City is strongly characterised by a radial pattern of routes leading to the city centre, though there is also an outer and an inner ring road. The main routes to the north of the District follow or link Airedale and Wharfedale and there is also an important network of routes serving Keighley and smaller settlements to the west of the District. There are 1900km of roads in Bradford District, which it is the responsibility of the Council to

maintain. Along these routes there are 400 road bridges, 1,000 retaining walls, 300 footbridges, 57,000 street lights, 337 traffic signal junctions and pelican crossings and 8,000 illuminated signs / bollards.

Fig 1. – A & B Road Network and Rail Links in Bradford



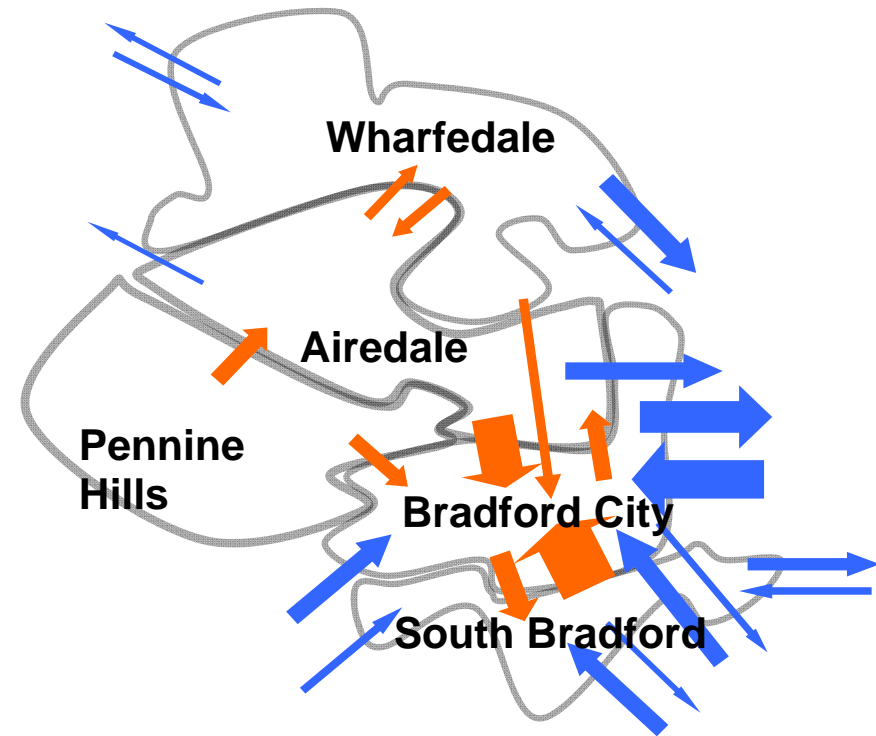
There is an extensive public transport network across the District including a well used local rail system serving Airedale and Wharfedale and directly linking to Leeds, Calderdale and Greater Manchester.

There is also a high level of bus use throughout the urban area which is encouraged by a generally good quality and high frequency network, though in common with other parts of West Yorkshire bus use has been declining in recent years and there have been some service cuts that have further discouraged the use of buses for travel.

Existing and Future Traffic Patterns

The 2001 Census provides useful information on how people travel to work. The data indicates that approximately 77% of working people who live in Bradford District also work in Bradford District. Of the remainder 51% travel to Leeds, 25% to other West Yorkshire districts and 8% to Craven District. Of those commuting into the District 33% come from Leeds, 39% from other West Yorkshire districts and 9% from Craven District. 15% of people who work in Bradford District do so in the city centre. Between 1991 and 2001 the average distance travelled to work by people working in the District increased by 28% to 8.4km. 23% of people who work in Bradford District travel less than 2km to work, of these, half travel by car. The 2011 Census will provide updated information on these travel patterns which will be essential for planning our future transport requirements in detail.

Fig. 2 – Journey to Work Flows in Bradford



One of the biggest challenges in the District is potential future road traffic growth related to housing and economic growth and the dominance of the car as the main mode of travel.

It is clear that housing and employment growth, and its location, will significantly affect travel patterns and could result in more people using the transport network. Major

regeneration projects, particularly in the city centre are likely to lead to increased traffic movements on inner and outer ring roads. Employment growth in the M606 corridor is likely to lead to increased congestion in this sector of the District. Future growth in the numbers of jobs and houses in the Airedale Corridor is likely to put increased pressure on road and rail capacity.

An integrated strategy, in the form of the emerging Local Development Framework (LDF), for providing housing and employment growth in optimum locations will reduce the number and length of car journeys and maximise opportunities to encourage the use of sustainable modes of transport. This will assist in reducing the impact of transport on the environment, especially with regard to its effect on air quality and its contribution to climate change.

The District also needs to ensure that its strategic road and rail links are improved, particularly those to Leeds, Leeds Bradford Airport (which is becoming increasingly important to the local economy) and to the Manchester City Region (especially Manchester Airport) and East Lancashire to cater for an increasing number of journeys being made to and from these locations.

Early transport assessment work undertaken for the LDF has identified a number of transport corridors which will need to be studied further to determine how the transport impacts of housing and employment growth can be managed in a sustainable way.

Transport Impacts on Communities

As described above, good strategic connectivity and sustainable spatial planning is important for the future economic performance of the District and the quality of life of its citizens. Equally important is the health and well being of the people who live, learn, work and play in our local neighbourhoods.

There are strong correlations between areas of deprivation, road casualty rates and health problems caused, or exacerbated through, an inactive lifestyle. Partnership working in Bradford has been highly effective in reducing the number of people killed and seriously injured on our roads and in 2010 they were at the lowest level since 1974 when the Bradford Metropolitan District was established. However fear of injury, perceptions about personal security and physical obstructions to sustainable travel are often cited as reasons people are disinclined to walk, cycle or use public transport. It is essential, therefore, that our public spaces and neighbourhoods are made safer and more attractive by reducing risk of injury, improving feelings of security and removing barriers to walking, cycling and public transport access. As well as improving health through physical activity, increasing social interaction through the provision of safer streets and public transport systems will improve mental health and overall wellbeing.

Bradford is renowned for its work with local communities (and communities of interest) and development work on projects

with a direct impact on those communities will continue to be the subject of detailed consultation and engagement. In addition, the Local Integrated Transport Schemes programme contained within the Implementation Plan would be prioritised by the constituency based Area Committees thus ensuring that it reflected local needs and desires.

Delivery of more strategic Integrated Transport Schemes, prioritised by the Council's Executive, will also continue to be developed with local communities through local engagement and empowerment approaches.



Air Quality and Carbon Emissions

Bradford has significant air quality problems, mainly attributable to transport, and there are currently four designated air quality management areas in the District. These areas have been identified as exceeding the government health based objectives for nitrogen dioxide. Air quality problems can shorten lives by up to nine years in air quality hotspots and reduce the average life expectancy in the UK by 7-8 months - the health costs are £20 billion annually.

The Council has adopted an Air Quality Strategy which will be implemented through an Air Quality Action Plan. Many of the actions in the Action Plan will relate to transport and this Local Implementation Plan does, therefore, include a number of initiatives intended to improve air quality across the District, though advances in vehicle technology will also have a major part to play in tackling this problem.

In 2008, transport accounted for 20.6% of CO₂ emissions in the District. The West Yorkshire LTP Strategy and this Local Implementation Plan contain a number of initiatives aimed at managing carbon emissions within the context of the predicted growth in the economy. Combined with Government action and advances in vehicle technology it is predicted that CO₂ emissions will fall significantly by 2026 across West Yorkshire.

5. Strategic Transport Themes

The West Yorkshire Local Transport Plan Strategy 2011-2026 document identifies 4 strategic transport themes which influence travel across West Yorkshire as follows:

- **Network Asset Management;**
- **Travel Choices;**
- **Connectivity;** and
- **Enhancements.**

The following sections describe how these themes will be applied in the Local Implementation Plan 2011-2026.

An additional item covers Local Integrated Transport Schemes which will be delivered in partnership with local communities.

Network Asset Management

A well-maintained and managed transport network forms the basis of good local transport provision.

This includes our footways, street furniture, traffic signals and streetlights, as well as the roads, car parks and public spaces within the District

It is widely recognised that transport infrastructure assets are a Highway Authority's largest and most valuable fixed asset both financially and to the community. The 1900km of Council maintained highway in the District is the only infrastructure asset used by everyone in their day to day activities.

While the basic duty of a highway authority is to maintain the highway in a safe and serviceable condition, it is recognised that a well maintained, high quality highway provides a strong contribution to the local environment and quality of life in the neighbourhoods, and is also vital for economic prosperity and the regeneration of the District.

Asset Management Plan

The *West Yorkshire Transport Asset Management Plan* sets the guidelines as to how transport assets are maintained, and how they will be maintained in the future. An asset management plan for Bradford is also in development which will build on the West Yorkshire guidelines but provide more local context and reflect local conditions. The introduction and implementation of this approach should lead to an improvement in long term decision making. This in turn will allow us to make better use of the budgets available and provide a more robust and efficient service to road users and residents, whilst ensuring efficient, appropriately targeted, maintenance and improvement of the existing assets.

Highway Maintenance

The approach to maintenance within the District can be defined as three distinct and separate activities: -

Routine Maintenance – the day to day reactive maintenance operations that are necessary to keep the assets functioning but generally does little to improve its overall condition.

Planned Maintenance – the planned resurfacing or reconstruction work that generally does not increase the asset's capacity beyond that it was originally designed for but does restore that part of the asset to its original condition and capacity, i.e. maintains a steady state.

Improvement Schemes – Improvement work that includes creation or upgrading that either creates a new asset or upgrades an existing one beyond its previous capacity.

As part of Asset Management planning we will be developing lifecycle plans for each asset detailing specifically how maintenance will be managed which recognises how the investment in timely routine maintenance affects the future demands for maintenance expenditure. A well constructed asset maintained in good condition should deteriorate at a slower rate than an asset in poor condition - as its condition deteriorates then it follows that maintenance costs will increase. Consequently, it is vital that suitable investment is maintained in order to keep a suitable balance between planned and reactive maintenance in order that an asset can

achieve its full potential life term and that funding is in place for the eventual replacement of the asset at that time.

The Principal Road Network, with a few exceptions, is currently in a relatively good condition. This is partly due to a particular emphasis on this type of road over the last 10 years.

The Non-Principal Classified and the Unclassified networks are generally in a poorer condition than the Principal roads. It is the aim to maintain the percentage of the network requiring maintenance to single figures.

Even if funding levels were to remain around a similar level as recent years, with increases in line with inflation, it is still expected that the condition of all types of road would decline. In reality, however, funding for Highway Asset Maintenance will fall in future years and there is, therefore, more pressure on our ability to maintain the network at a steady state. Consequently there is also more emphasis on our abilities to manage the assets.

Future economic growth is likely to increase the pressures on the existing highway network. New housing and employment developments will also extend the actual length of the asset. This in the longer term will produce a requirement for additional maintenance expenditure.

Road surfaces can be renewed, protected, repaired or retextured. Renewal involves replacing the top surface course and will also normally require replacement or patching of parts

of the underlying layer. Protection treatments include surface dressing, restoring the skid resistance and sealing the surface to prevent water ingress into the construction layers below. Repairs are more simple treatments such as patching, filling potholes and crack sealing. Retexturing increases the serviceable life of the surface course by restoring suitable levels of skid resistance.

In recent years the programme of overlay, resurfacing and renewal has been determined on a worst first basis. The move to an asset management based approach may allow more consideration of the whole life cost of an individual carriageway including: -

- Consideration of the type and quality of construction.
- Suitability for the type and volume of traffic.
- More timely intervention when initial deterioration occurs.
- More extensive treatments that allow an enhanced future life.

Bridge Maintenance

The Council's Bridges Unit will continue to adopt a robust asset management approach to prioritise maintenance and strengthening works on all highway structures. Our aim is to carry out works on all asset groups within the stock in order to improve the overall condition so that we can achieve our optimum average stock Bridge Condition Index score of 88% by 2020.

52 bridges have so far been identified as requiring strengthening or major maintenance over £50,000. It is our intention, to undertake work on at least 50% of these structures during this period subject to funding. Underwater bridge inspections will be carried out on our entire stock of river bridges in 2011/12. We shall prioritise any remedial works and protection measures which are recommended.

Retaining Walls

Our stock of retaining walls (in excess of 110km) is in varying stages of disrepair. We are proposing to undertake significant planned strengthening and major maintenance works on



retaining walls. However, during this funding cycle our investment on walls will be focussed on those walls on the non Principal Route Network (PRN) routes because our inspections indicate that retaining walls on these routes have deteriorated significantly. This level of deterioration has arisen in part because in the recent past investment on retaining walls was primarily targeted on the PRN and other major routes in the District.

Reactive Maintenance

The incidence and reports of collapsed or dangerous structures caused by accident damage, flooding or structures coming to the end of their useful life will continue to increase. It is anticipated that more resources will need to be directed towards emergency and reactive maintenance works in order to deal with the problem and also manage user expectations. We intend to fully recover all costs incurred by the authority in rectifying third party accident damage on our highway structures.

Street Lighting

The programme of Street Lighting inspections, structural reviews and assessments will continue as part of our asset management process. Our objective is to continue to employ recognised good asset management practices to ensure that our assets continue to be safe for use and fit for purpose so that they meet the need of users.

In managing the street lighting asset the primary consideration is that of public safety. As the infrastructure is ageing it is essential to have a robust programme of inspection and replacement strategy. Bradford is working towards implementing a regime in accordance with the County Surveyor's Society guidelines for testing lighting columns for structural integrity. When carrying out replacement of the columns, sustainable lighting is installed, controlled by a Central Management System. This provides the facility to dim the lighting outside peak periods and other energy/labour saving functions such as automatic fault reporting via web hosting software to reduce unnecessary reactive maintenance visits impacting on the transport network.

Urban Traffic Control

Bradford Council's traffic signal assets contribute to the safe and efficient operation of the highway and bus network as well as being adaptable to sustainable development. The latest technology in signal control is used at a large number of sites including micro – processor optimisation and sophisticated bus priority facilities

There are 342 signalised sites in the District, of which 163 are junctions and the remaining signalised pedestrian crossings, most of which are Puffins. Of these sites 81% have LED signal heads which are more sustainable as they reduce overall costs, increase efficiency and resilience, and reduce the carbon emissions. Various independent reports acknowledge energy savings of approximately 70% from LED

signals when compared with traditional halogen equipped sites. The remaining sites will be upgraded to LED signal heads by the end of 2011 with the help of a Carbon Reduction Grant. Also by the end of 2011 only three traffic signal installations will be more than 20 years old and the great majority will have tactile facilities to assist people with vision problems.

During the LTP period the intention is to maintain and extend the application of new technologies in all aspects of signal and information control and thus retain Bradford's status as a leader in this field of work. At the same time we will strive to seek more savings in revenue and capital costs through energy efficiencies and partnership working.

Public Rights of Way

The Public Rights of Way network is extensive throughout the District comprising approximately 1000 km of routes. It includes rural and urban paths and bridleways, which require maintenance and enhancements, and is therefore an integral part of the District's transport network. The *Public Rights of Way Improvement Plan* (ROWIP) sets out the District's strategy up to 2017 and future ROWIPs will develop this over the lifetime of this Local Implementation Plan.

As a result of the public consultation for the Rights of Way Improvement Plan and ongoing customer feedback, the Council holds a database of requests for improvement of the network. These will be prioritised to identify potential footpath

and bridleway improvements which could be implemented to contribute to the LTP. These include

- Rights of Way improvements to enable a wider range of users to access local services, facilities and places of interest, using non-vehicular means or as part of a multi-modal journey - including physical improvements or legal orders to change line of paths/create or record new routes to facilitate improved network linkage.
- Rights of Way improvements to increase confidence and reduce crime and fear of crime - e.g. lighting, surface, barriers etc.
- Improvements and enhancements to key strategic recreational routes which would benefit both residents and visitors to the district.
- Promotion of the rights of way network as means of travel, exercise and recreation through signposting, mapping, information and route suggestions.

Public Transport Assets

There is also of course a requirement to maintain public transport assets such as bus stops, bus shelters, rail stations and information technology assets such as the 'yournextbus' real time information system. For example, it is proposed to resurface the bus deck in Bradford Interchange as this has become damaged through many years of bus use. Investment in asset management is a key requirement to maintain and enhance the quality of travel by public transport.

Travel Choices

Increasing the number of sustainable travel options available to the public and businesses within the District, through travel choice, is a key objective of the LTP 3 Strategy and this Local Implementation Plan

To achieve the Vision and Objectives set out in the West Yorkshire LTP 3 Strategy it is essential that, wherever possible, we provide people with information about the choices they can make before and during their journey – or, indeed, help them to make the choice not to travel on that particular occasion. Once they have made that choice we also need to ensure that their journey is as quick, safe and cost effective as possible.

Travel Planning is one way of encouraging residents and businesses to adopt more sustainable travel habits. This will be developed further within the District to influence both individual travel choices and that of organisations by providing information, incentives and enforcing travel plans.

Relatively simple and popular initiatives such as introducing flexible working arrangements, where this is practicable, lead to a reduced requirement to travel within the traditional peak periods, therefore reducing congestion.

Other travel plan measures include reducing the number of unrestricted parking spaces in workplaces, offering parking spaces for shared car use and encouraging staff to travel by

public transport or by cycling / walking (or by a combination of these).

It is important that, as a major employer and community leader, Bradford Council shows commitment in this area and it is therefore encouraging its own staff to make informed travel choices and work more flexibly, whilst investigating better ways of delivering the transport requirements of its services. As a large fleet operator, the Council is evaluating new technologies, and improved fuel efficiency of fleet vehicles. Trained drivers, efficient route planning, and low emission vehicles are examples of how the authority is taking control of carbon emissions from transport operations.

Active Travel – walking and cycling - is another important way of reducing congestion whilst also improving health and reducing carbon and pollutant emissions.

To promote these travel modes during Implementation Plan 1 of LTP 3, the Living Street / Connect 2 scheme will be completed supported by £1.5m of match funding from the National Lottery secured by Sustrans. This will link Bradford City Centre, West Bowling and beyond with a high quality walking and cycling route. Another major active travel project is the Great Northern Trail linking villages to the west of the District and we will continue to develop this scheme in partnership with Sustrans and the Great Northern Trail Forum. Additionally funding will be provided in LTP Implementation Plan 1 to deliver a number of minor cycle facilities and footpath improvements, including continuing to make

enhancements to the Rights of Way network and improving the accessibility of our streets. In the longer term a network of strategic walking and cycling routes will be developed to better link communities to each other and to the City Centre and other employment, learning and leisure areas.

It is also recognised that promoting the benefits of cycling and walking, including the health benefits mentioned earlier, as a leisure activity as well as a means of getting around the District, requires further development. We will continue to train children to cycle safely through the Dft funded Bikeability scheme and additional local training. We will also work with partners to encourage cycling. These activities will give people the confidence to move around their communities safely and thus improve their health and well being and reduce their reliance on car travel. Cycling will be further embedded into the planning process, with developers required to include facilities for cyclists as part of new planning applications wherever possible.

Car Share

Encouraging people to car share is another important area of work that is being progressed. A local car sharing website, bradfordcarshare.com has been established and signs will be erected to promote this website and the idea of car sharing. In addition, High Occupancy Vehicle Lanes are being introduced commencing with the busy Wakefield Road route to the south east of the city.



Car Parking

It is important that we manage our car parks and on street parking facilities, in a way that maximises the use of our parking asset, to provide the opportunity for our retail and commercial centres to thrive and to ensure the best possible take up of more sustainable modes of transport. In city, town and village centres short stay parking will be encouraged and we will increase the number of short stay parking spaces in the City and Town Centres where practicable. Through the use of planning policy, which will be contained in the future Local Development Framework for the District, we will also aim to control car parking at new developments to encourage the use of sustainable transport wherever this is possible.

Connectivity

Connecting people with jobs, learning, service and leisure facilities

Public transport provides good opportunities for sustainable travel in many parts of the District.

A number of bus priority schemes and improvements to bus stops have been introduced in recent years but, as previously indicated, bus patronage has declined, resulting in reductions in network coverage and frequency along some routes. This suggests more radical interventions are required to reverse this trend.

The 2008 Local Transport Act paved the way for the formation of Bus Quality Contracts or Partnerships between bus operators, METRO and Local Authorities. The Council and Metro are considering using this legislation within Bradford District as it could help deliver further bus service improvements throughout the LTP3 period. However an alternative approach based on Partnership working is also being progressed.

A Bradford District Bus Performance Improvement Partnership has been established, with Bradford Council, Metro, bus operators and the Police as members, to agree means of improving bus service operations within the District.

The Partnership will continue to develop three year Bus Action Plans to coincide with the LTP Implementation Plan periods. Where changes to bus services are necessary there will be more involvement with local people in planning these changes to ensure that they work as best as possible for the communities they serve.

Measures to improve public transport may include the provision of new energy efficient buses and a better network coverage, which would be supported by improved bus infrastructure (shelters, raised kerbs, hard - standings in rural areas etc) and further bus priority measures on roads in the District, beginning with the locations shown in the Implementation Plan 1 scheme table at Appendix A of this document (subject to outcome of feasibility studies). We will also be developing new transport 'hubs' where people will be able to change between modes of transport, or from bus to bus, in a safe, comfortable and convenient location. It will also be important to develop appropriate services in consultation with local communities to cater for those living in more rural areas to ensure that they are not socially or economically excluded.

Metro has already extended the existing Metrocard travel ticket to locations beyond West Yorkshire and further expansion would bring further benefits. SMART ticketing for buses and trains will be introduced through the Yorcard project. This product will provide seamless ticketing for journeys within, and to some locations, outside West

Yorkshire, simplifying journeys by public transport and thus making them more attractive.

Travelling Safely

It is essential that, whatever mode of transport people use, they should feel that they can do so in safety.

Providing safer roads is an integral part of network management in the District. Looking back over the 10-year period 2000 to 2010, the statistics show a steady decrease in the numbers of crashes and casualties on our local roads.

Detailed road casualty statistics are collated each year and presented in a document called *Road Injuries*. The figures suggest that particular emphasis is required in this strategy period on young age groups and vulnerable road users, as well as within our most deprived communities.

The *Bradford District Safer Roads Partnership*, comprising Health, Emergency Services and Local Authority officers, provides a forum for discussing and agreeing annual *safer roads* plans and initiatives within the District. Local road safety is promoted through neighbourhoods, local forums including community representatives and neighbourhood police, who also meet regularly with Council staff to address community safety issues. A *Safer Roads Action Plan* for the District is currently in preparation

As well as this important partnership work we will continue to invest in measures such as safety cameras, bus lane and parking enforcement and street lighting that discourage illegal and anti social behaviour. To make public transport safer improvements will be made to passenger waiting areas at stops and stations and improved service reliability and information will increase traveller confidence.

Freight

Freight Development Plans are considered at a West Yorkshire level. Prescribed routes and restrictions for Heavy Goods Vehicles (by weight or width) are determined locally on the basis of infrastructure limitations and safety and environmental concerns. West Yorkshire authorities will develop improved routing information and other enhancements for freight in partnership with the logistics and haulage industry and other partners.

Enhancements

Enhancing the transport network over the Local Transport Plan period will focus on making better use of new technology to improve the efficiency and safety of travel and to encourage economic growth in the District. We will also work with private developers to ensure that the District's highway network remains operationally fit for purpose.

Travel Information

Applying communications technology to provide clear and accurate travel information to the public will be introduced via a range of initiatives. Variable message signs (VMS) and information signs will assist with this, for example the introduction of VMS signs at Shipley and on approaches to the M606 motorway. Partnership agreements with the Highways Agency will also allow for sharing of information in relation to congestion on both the council's highway network and the wider motorway network.

There will also be further installation of real time information displays in bus shelters to give passengers details of bus arrival times which will give them more confidence when travelling. Linked to this real time system is bus priority at signals which is continuing to be delivered at a large number of junctions across the District.



Highway Improvements

We also recognise that low cost, innovative, highway improvements to reduce congestion at critical locations, regenerate neighbourhoods and to improve safety, will continue to have a major call on the limited transport budgets available to the Council.

Those measures include safer routes to school and to play, town and village centre regeneration, local safety schemes, signal controlled pedestrian crossings, signing and lining schemes, linking traffic signals, junction improvements, and

bus priority measures. Schemes proposed for delivery in the first 3 year Implementation Plan period include:

- Completion of Little Horton Lane / Southfield Rd junction improvement.
- Completion of Leeds Road / Laisterdyke Junction Improvement.
- Improvements to Canal Road corridor to ease congestion and provide better walking and cycling facilities.
- Improvements to Saltaire Roundabout and surrounding area (West Yorkshire Strategic Programme of Schemes).

Work will also continue or commence on developing the following schemes so that they can be in a strong position to access future funding opportunities in 2014 or beyond

- Harrogate Road / New Line Junction Improvement
- Tong Street Corridor Improvements
- Hard Ings Road, Keighley Improvements
- Carlisle Road / Toller Lane Junction Improvement

There is likely to be an absence of significant levels of Government funding for new major transport schemes in the District at least in the early part of the Local Transport Plan period. It is therefore envisaged that more expensive transport infrastructure enhancements (such as link roads or bypasses) would only be implemented if substantially funded by the private sector through emerging Community Infrastructure

Levies or Tax Incremental Financing. Such schemes will be developed through planning agreements, or through partnership arrangements, identified in the Local Development Framework, which support new housing or create jobs.

Masterplans for Airedale and the Canal Road corridor will, for example, influence the provision of transport enhancements within these areas over the Local Transport Plan period (eg Shipley Eastern Relief Road and further improvements to Canal Road). Improvements to Bradford Outer and Inner Ring Roads and road links to Leeds Bradford Airport will also be required.



Rail Improvements

The local rail network is franchised to Northern Rail until 2013, when it will be re-tendered. Passenger demand on commuter routes into the major urban centres of Bradford and Leeds is rising. The Council is working with Metro and other partners to develop improvements such as new rail stations at Low Moor and Apperley Bridge and service improvements on the Caldervale line. In the longer term it is hoped that improved rolling stock provision will address some of the quality and congestion issues on the West Yorkshire rail network and may provide opportunities for the development of new stations at Manningham and Laisterdyke in association with new development.

Low Moor Rail Station, which will be on the Caldervale Line, is included in the West Yorkshire Strategic Programme of Schemes and is scheduled for completion late 2013.

Apperley Bridge Rail Station is being considered by the Department for Transport for funding and a decision on this is expected by the end of 2011.

These stations will provide much improved access to the rail network for residents to the south and the north east of the District. They will also serve the businesses in their local area thus helping to improve their economic performance.

A study into the potential for improving the Caldervale line in terms of journey speed and quality is underway and this will

provide evidence to use to promote improvements to this line in future rail franchises.

In the early stages of the Local Transport Plan period rail station improvements at Forster Sq, Keighley, Ben Rhydding, Burley in Wharfedale and Frizinghall are also planned and the car park at Crossflatts rail station will be extended.

Further major considerations over the LTP period will be improved rail access to Leeds / Bradford Airport and providing strong support for the High Speed Rail 2 link to Leeds City Region.



Low Carbon Vehicle Infrastructure

Whilst low carbon hybrid vehicles have been available for a number of years, major vehicle manufacturers are now rapidly developing viable electric motor vehicles.

In conjunction with this development, it is recognised that support of transport infrastructure and charging points will be needed to enable the new electric vehicles to be charged and operate effectively on the local road network.

Local Integrated Transport Schemes

Engagement with local communities and local partnerships (involving police, fire and rescue, community support agencies, health and education providers) through the Constituency Area Committees will continue to be vital to the delivery of the LTP at the local level. We will deliver initiatives to give people a choice of how they travel and for them to be safe and experience reduced levels of pollution, severance and intimidation especially where they live. Measures to improve safety and reduce road casualties will be integrated with other measures to deal with safer routes to school and to play, local cycling and walking networks, accessibility, mobility, local severance, antisocial and illegal behaviour. We will carry out small schemes within local communities to improve access to jobs, goods and facilities and tackle issues of illegal and anti-social behaviour and the increased risk of road injuries.



6. Partnership

The successful delivery of the Local Transport Plan will depend on the engagement with, and the involvement of, local communities and local partnerships alongside the strategic transport improvements that are required.

Particular concerns in the Bradford District are the levels of deprivation in some areas and the need to address issues including access to jobs, goods and facilities, the problems caused by illegal and antisocial behaviour and the increased risk of road injuries.

The *Bradford District Partnership* is the local strategic partnership (LSP) which provides the forum to ensure there is a joined up approach to identifying, assessing and delivering the complex needs of the District. The partners comprise of key people from local organisations, including the Council, the Police, NHS Bradford, Incommunities (social housing provider) and local businesses.

This Local Implementation Plan embraces the three key priorities of the *Bradford District Partnership*, by contributing to:

- **Healthier Communities**
- **Safer and Stronger Communities, and**
- **Skills, Enterprise and Work**

The particular transport issues in the five constituency areas of the Council will be identified and actions monitored through the Area Committees. The work of the Area Committees has been instrumental in regenerating our neighbourhoods and contributing to the overall reduction in road crashes and injury.

The new *Local Enterprise Partnership (LEP)* has been formed with the remit of improving the economy of the Leeds City Region. Transport strategy will influence the decision making process for many of the issues raised at this and other economic forums.



Other transport partnerships include the *West Yorkshire Local Transport Plan Partnership* (West Yorkshire Local Authorities and Metro), the *Safety Camera Partnership* (comprising of the Police, the District Councils the Crown Prosecution Service and the Health Authority); the *Bradford District Safer Roads Partnership* (comprising of the Council, WY Police, NHS Bradford, and WY Fire and Rescue Service); and the *Bradford District Bus Performance Improvement Partnership*.

The Council also directly supports, or works with, a number of organisations which are focussed on specific issues. The Mobility Planning Group, Planning & Highways Access Forum and Bradford Access Action all consider the impact of transport initiatives and policies on the needs of people with limited mobility or who face other challenges when moving around the District. Frequent liaison is also made with cycling organisations and groups representing older people. Metro run Passenger Consultative Committees who discuss changes affecting public transport.

Work on individual projects is often done in partnership e.g. the Living Street/Connect 2 scheme has been developed in partnership with Sustrans and work on the Great Northern Trail is informed by a group which includes representation from the Council, Sustrans and Pennine Prospects.

7. Transport monitoring, modelling, assessment and strategy.

It is important to plan for the future growth in the demand for travel to ensure that the transport network caters for this demand and is not a restriction on economic growth.

In order to do this, the Council collects a wide range of transport data including traffic counts, mode share data, journey time information and road casualty figures. In addition to this Metro gathers information relating to public transport such as bus and rail patronage, customer satisfaction and information usage surveys.

The Council uses a number of transport models to inform transport and planning policy and scheme appraisal and development.

The models we use include:

- **Leeds City Region Urban Dynamic Model** - this provides a strategic indication of the impacts on specific transport policies or schemes on housing and jobs growth and carbon emissions
- **Bradford Multi - Modal Model** – this provides information on the impacts of larger scale schemes on traffic flows and public transport use across the District

- **Local Micro Simulation Models** – these are built specifically to examine in detail the local impacts of large and medium scale transport schemes or land use developments. They have the advantage of showing information in a graphical format which can be easily understood by consultees and other interested parties.
- **Accession Model** – this helps us to plan the location of services and consider the implications of changes such as bus service alterations. It provides a ‘contour’ map of access time to facilities such as hospitals, schools, shopping centres etc.

In addition to these models Metro also uses a model to predict future changes in bus patronage dependent on bus policy and plans.

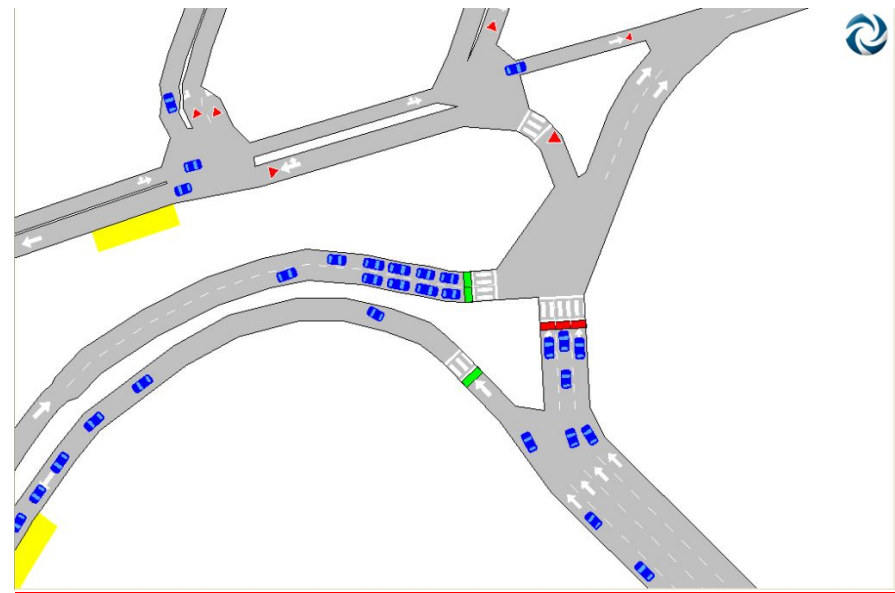
Our transport models will enable future transport problems and issues to be identified, and for schemes and options to be tested. The models will aid decision-making and enable economic assessments to be carried out for transport projects. They will also inform the preparation and implementation of our Local Development Framework by giving some indication of impacts of land use and planning policy decisions.

It is acknowledged that trip patterns and rates within the District will change with time, due to social and economic factors, and the completion of major development sites within and outside the District. Therefore, further travel/traffic

surveys and network revisions will be required throughout the life of the Strategy period to keep the models as relevant and as accurate as possible.

It is envisaged that the first major revision to the multi - modal model will be after the 2011 census data is available in 2012 as this will enable us to update journey to work information which is collected in the census.

Fig. 3 – Extract from Aimsun Micro Simulation Model



8. Indicators and performance monitoring

A number of key indicators are planned to inform various West Yorkshire Local Transport Plan transport strategy outcomes.

Bradford Council proposes to use the same key indicators for consistency within the West Yorkshire Local Transport Plan partnership.

Under the three objectives of *Economy*, *Low Carbon*, and *Quality of Life*, ten indicators are to be used to measure the impact of the local transport strategy as shown in the tables below:-

Objective	Indicator headline	Survey type
Economy	Satisfaction with all Transport modes	Customer feedback
	Bus journey time reliability	Journey times
	Car journey time reliability	Journey time survey
	Access to labour market	To be determined
	Principal Road Condition	Condition surveys

Objective	Indicator headline	Survey type
Low Carbon	Low Carbon Trips	Mode use surveys
	Bus & rail patronage	Patronage surveys

Objective	Indicator headline	Survey type
Quality of Life	All road casualties (person KSI)	Police casualty data
	Public transport access to local services	Accession modelling
	NO ₂ / PM ₁₀ emissions	Air Quality surveys

Targets and milestones are being developed for each LTP3 indicator and consultation on these with stakeholders will be undertaken during 2011/12.

9. LTP 3 Year Implementation Plans

As well as preparing this Local Implementation Plan which covers the 2011 – 2026 LTP period, Bradford Council is responsible for developing and agreeing the 3-year LTP Implementation Plan proposals for the District with the West Yorkshire Integrated Transport Authority.

The first LTP Implementation Plan is for the period **2011 to 2014** and the Bradford Integrated Transport schemes included in that Plan are set out in **Appendix A**. (The District's Highways Asset Management Programme is managed annually by Bradford Council and is thus not included in Appendix A but is available upon request). Approval for further development of the highway projects in the first LTP Implementation Plan was given by the Council's Executive on 18 March 2011. Following this endorsement, the implementation programme was then approved by the West Yorkshire Integrated Transport Authority. The headings for the first LTP Implementation Plan Programme are as follows:-

1. Transport Assets

- Network Management
- Public transport Assets

2. Travel Choices

- Information
- Integrated Ticketing
- Active modes
- Demand management and Enforcement

3. Connectivity

- Safety and Enforcement
- Bus priority
- Bus Quality Partnership/ Contract
- Interchange Hubs

4. Enhancements

- Strategic schemes
- Highway improvements
- Rail improvements

5. Other Projects

- Local Integrated transport schemes
- LTP 2 Commitments
- Transport Planning and Development

10. Review

The Local Implementation Plan outlined in this document covers the period 2011 to 2026.

The West Yorkshire LTP Implementation Plans will, however, be developed in 3-year cycles to ensure they are responsive to changing circumstances. To ensure that this Local Implementation Plan reflects future economic, social and technical changes, and provides information about proposals as they emerge or clarify, this document will also be revised and updated every 3 years.

Performance reviews of the spending, schemes and initiatives, linked to agreed targets and milestones, will be undertaken within the 3-year implementation plan periods.

The reviews will therefore provide the background data to produce the update of the Local Implementation Plan and the new implementation programme for the subsequent 3-year plan period.



APPENDIX A
LTP IMPLEMENTATION PLAN PROGRAMME 2011 TO 2014 – BRADFORD ELEMENTS

BRADFORD SPECIFIC SCHEMES ARE SHOWN IN ITALICS ALL OTHER SCHEMES COVER ALL WEST YORKSHIRE AND WILL HAVE IMPACTS ON BRADFORD INCLUDES 20% OVERPROGRAMMING WHICH WILL BE MANAGED BY LTP PARTNERS

TRANSPORT ASSETS				
Network Management				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Lorry Route map, including routing, restriction and consultations	50	50	0	100
HGV Access Scheme	0	30	70	100
Central Urban Traffic Management Control	0	200	200	400
Improvements to traffic signals including providing facilities for disabled people and more efficient operation through use of new technology	125	125	150	400
Public Transport Assets				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Records management, document management and collaborative working systems to support public transport assets	77	0	0	77
Bus Shelter improvement programme in urban areas across West Yorkshire	854	427	43	1324
Upgrade of core elements of the Real Time Passenger Information system	128	128	128	384
Hard - standing improvement programme at rural bus stops across West Yorkshire	0	0	43	43

Public Transport Assets continued				
Replacement of life expired vehicles for Metro Local and CityBus services	0	256	256	512
Replacement of life expired vehicles to support maintenance of public transport assets across West Yorkshire	128	17	17	162
ICT programme to support public transport assets	60	154	102	316
Upgrade of the main Bus Service Timetable software which holds all West Yorkshire service information	77	137	60	274
<i>Repairs to carriageway at Bradford Interchange</i>	38	342	0	380
Maintenance equipment for Metro bus stations across West Yorkshire	31	8	13	52
AccessBus booking system with full demand responsive transport capacity	51	0	0	51
Provision of printed timetable information at all West Yorkshire bus stops	90	0	0	90
Bus shelter improvement programme in rural areas across West Yorkshire	0	0	128	128
TRAVEL CHOICES				
Information				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Expanding public transport journey planning websites and other sources to include provision of walking, cycling and other travel information	50	250	100	400
Bringing together current knowledge of West Yorkshire citizens and their travel needs to enable personalisation of information and ticketing provision	50	100	100	250

Information continued				
Enabling customers to develop website information to suit their personal needs	50	50	100	200
Enhancing real time passenger information on disruption to normal services / networks	75	75	75	225
Ensuring information is available on the move to phone based internet services	50	50	50	150
Enabling the benefits of real time public transport information to be rolled out more widely eg to employers, shopping centre, health centres.	100	200	200	500
Variable Message Signs displaying travel information to help reduce congestion	0	200	200	400
Enabling provision of on-street information at key interchanges when travel centres are not available	50	100	150	300
Minor measures to encourage sustainable travel	100	100	100	300
Integrated Ticketing				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Public Transport ticket vending machines / smartcard top up points in conjunction with information kiosk provision	85	507	507	1099
Issue of Smartcards to young people, Metrocard holders and pay as you go	85	84	85	254
Smart enabled devices in school to enable students to pick up ticketing	17	51	51	119
Development of non transport smart products on ITSO cards	0	63	42	105
Upgrade of gates to accept Smartcards at gated rail stations	85	84	42	211
Smartcard Equipment for AccessBus, MyBus and other LTP funded vehicles	0	127	85	212

Active Modes				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/12	2013/14	3 yr Total
<i>Connect 2 Walking and Cycling route between Bradford City Centre and West Bowling</i>	527	309	0	836
<i>Bradford District wide walking/cycling measures including ROW improvements</i>	50	50	50	150
Demand Management and Enforcement				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Strategic Signing to help reduce congestion in urban centres	50	75	0	125
Business case for Demand Management Measures	0	0	50	50
Automatic Number Plate Recognition to help management of traffic and provide information for future scheme development	100	100	50	250
CONNECTIVITY				
Safety and Enforcement				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Provide/renew safety cameras to ensure effective enforcement and reduce casualties	225	225	225	675
Fixed bus lane enforcement cameras to assist bus operations	108	108	108	324
Mobile CCTV enforcement of bus lanes to assist bus operations	25	120	0	145

Bus Priority				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
<i>Allerton Rd, Bradford inbound bus lane</i>	30	85	150	265
<i>Bolton Road, Bradford outbound bus lane</i>				
<i>Thornbury Gyratory, Bradford - scheme to be determined</i>				
<i>Thornton Road, Bradford - inbound bus lane</i>				
<i>Toller Lane, Bradford - both directions bus lanes</i>				
<i>Woodside Road Low Moor – inbound bus lane</i>				
Bus QC / Partnership				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Develop Bus Quality Contract / Bus Partnership Scheme	100	100	100	300
Interchange Hubs				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Hubs Implementation, define and agree locations, branding, define key components of a hub and develop schemes	200	0	0	200
Information Points, passenger shelters, seats and other street furniture at each hub.	0	750	750	1500

ENHANCEMENTS				
Strategic Schemes				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
New Rail Stations with car parking at Kirkstall Forge and Apperley Bridge	56	181	101	338
<i>Connecting Airedale - improvement works at Saltaire</i>	<i>344</i>	<i>1656</i>	<i>0</i>	<i>2000</i>
<i>Low Moor, Bradford - New Rail Station and car park</i>	<i>488</i>	<i>2382</i>	<i>2527</i>	<i>5397</i>
Introducing Traffic Light Priority for Buses at up to 200 traffic signal locations throughout West Yorkshire	600	110	0	710
Highway Improvements				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Canal Road / Otley Road/ Valley Road Improvements	325	275	200	800
Rail				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Safety & Security improvements including CCTV & better lighting at 10 stations across West Yorkshire inc Forster Sq, Frizinghall, Burley in Wharfedale, Ben Rhydding & Keighley	100	100	100	300
General improvements to passenger facilities at rail stations, including Bradford Interchange and Forster Square	205	200	200	605
Strategic rail infrastructure and service development planning including the Northern Hub	115	65	70	250

OTHER PROJECTS				
Local Integrated Transport Schemes				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
<i>Locally determined measures that meet LTP objectives including casualty reduction, safer routes to school, pedestrian crossing facilities, local parking management etc.</i>	900	900	900	2700
Measures to support transport hubs including pedestrian and cycling improvements, car clubs and taxis	250	500	250	1000
LTP2 Commitments				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
<i>Great Northern Trail</i>	40			40
<i>Southfield La / Little Horton La Junction Improvement</i>	385	134		519
<i>A647 / A6177 Leeds Rd / Laisterdyke Junction Improvement</i>	50			
Transport Planning & Development				
Project Name	Profiled Capital cost (£'000)			
	2011/12	2012/13	2013/14	3 yr Total
Development of schemes for delivery from 2014 onwards	75	75	100	250
Management and monitoring of LTP3	190	190	180	560
Development of funding bids as required to access additional support for transport projects	100	100	100	300