

# **Bradford District Transport Strategy 2006-2021**

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# BRADFORD DISTRICT TRANSPORT STRATEGY 2006-2021

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## **1.0 INTRODUCTION**

### **1.1 The purpose of the District Transport Strategy**

The Bradford district needs a Transport Strategy to support and develop its economy, to help create sustainable communities and to provide a safe and healthy environment for those living here.

The West Yorkshire Local Transport Plan Partnership has been the means since 2000 to provide local transport investment programmes in the district, bringing in around £10m each year. Major transport schemes have been completed in south Bradford at M606, A641/A6177, the Manchester Road guided bus scheme and the Connecting the City project in the city centre. New trains have been introduced on the Airedale and Wharfedale electrified network. The bus companies are investing in new vehicles and technology.

Yet this is not enough to 'connect the district' and there is little prospect of such significant investment in the near future. The Government is increasingly interested in financial measures to control congestion as the alternative to funding road building. Yet the district faces key gaps in both quantity and quality of its transport network. This District Transport Strategy makes the case for a 'step-change' in investment in the district as part of a comprehensive approach to meeting the transport needs of business, residents and visitors.

### **1.2 Role of Bradford District**

Bradford district has a clear economic role. Recent projections for the Leeds City Region suggest that over the next decade around 40,000 new jobs can be created in this district. A further 60,000 jobs can be created in Leeds. Over 150,000 jobs can be created in the city region and this will be the key element in enabling Yorkshire and Humber region to improve its economic competitiveness. The district's population will grow faster than any other metropolitan area in the region and in time the district will become the second largest city in the region and the third largest in England. The district's work force will not only grow but become younger. Neighbouring areas see Bradford district's workforce as a key economic asset. The economic synergy between Bradford and Leeds needs to be facilitated by a fit for purpose transport system.

### **1.3 Bradford district's location**

The national highway and rail networks pass tantalisingly close to Bradford district but not close enough for the district to enjoy high quality access. The current Regional Transport Strategy promotes investment in these national networks, the ports and some public transport corridors. What Bradford district needs is recognition that improvement in its economic performance requires a comprehensive transport network to deliver better 'connectivity' and that this is a regional priority, not merely a local one. Furthermore, the growth areas identified in the 'Yorkshire and Humber Plan' (November 2005) include Airedale and Bradford/Leeds. Airedale is also a gateway with the Central Lancashire city region.

#### **1.4 Sustainable Communities**

Transport affects many aspects of life. A fully comprehensive transport strategy would include measures that reflect the shared priorities which formed the basis of the second round of Local Transport Plans (2006-2011): accessibility, safety, congestion and air quality as well as asset management. Yet the LTP does this well. This strategy does not repeat themes covered in the LTP and its reporting framework, instead its overall focus is on strategic investment.

The guidelines for LTP preparation were strict on the introduction of new 'major schemes'. Accordingly, additional work was commenced to bridge this 'gap' through preparation of a 'transport vision'. This work was taken on for the wider Leeds City region and a Transport Vision submitted with the LCR Development Plan. The vision has much to recommend for transport investment in the Bradford district and this strategy embodies the city region approach.

#### **1.5 What this document includes**

This document includes the context for the district, the issues for the district's transport network, the strategy including key investment and actions to be sought with partners.

What this document is not is a comprehensive approach to all aspects of transport planning in the district. These matters are addressed in the West Yorkshire Local Transport Plan and in the Local Development Framework.

## 2.0 CONTEXT

### 2.1 Economy

The central importance of the economy to a successful District has been recognised for some time, but it is only relatively recently that the range of actions this implies has been fully considered and prioritised as being at the heart of a cohesive and healthy District. Given that the key components of the economy are *people*, *business* and *place*, an efficient and effective transport system is a key element in ensuring that the economy can function as productively as possible. The economy will also make a strong contribution to the development of the Sustainable Community Strategy and the *place* dimension to the development of the District's Local Development Framework core Strategy.

There is growing recognition of the key role of Bradford District in the region and city region. It is worth noting that:

- Bradford is forecast to be the fastest growing economy in the Yorkshire and Humber region over the next ten years (Table 1)
- Bradford has the fastest growing workforce of any metropolitan authority outside London (Table 2) and
- In six of the nine English regions, Bradford would be the regional economic capital

FTE	2006	2016 Base scenario	FTE Growth scenario	%
Bradford district	182,074	200,567	222,250	22.1
Leeds district	367,746	387,868	425,943	15.8
All city region	1,196,508	1,258,745	1,346,493	12.5
Bradford growth		18,493	40,176	
City region growth		62,237	149,985	

Source: Yorkshire Futures, Experian Business Strategies

Age group	2004	2028	Change 2004 -2028	
			Number	%
Working age	300,700	347,300	46,600	15.5
All ages	481,800	575,100	93,300	19.4

Source: ONS

The transport implication is that Bradford district's workforce will become of increasingly strategic importance in the city region economy. An efficient and effective transport system is required that will enable the district's workforce to access employment across the city region and thereby increase its level of economic activity. The complementary relationship between Bradford and Leeds economies is a powerful element of the city region and existing travels flows between the two cities underlines this. The increasing dependency

upon this relationship for the city region requires transport investment to match.

However, the District faces some serious challenges if all its residents are able to take advantage of this potential economic growth. Whilst workforce skills are still the lowest in the sub region and employment rates are amongst the lowest in the region, it is the disruption caused by an incomplete and disconnected transport system that will increasingly hold back the district's economic performance. There has been little change to the pattern of unemployment within the district and it remains particularly severe in deprived areas and among disadvantaged groups. Many jobs will be provided within the district and it is important that the local transport system is capable of allowing the district's workforce to access them. Given the size of the working age population, good transport within the district and its main centres is important to the economic performance of the city region as a whole. Yet this is not only a concern for a particular part of the district, the need to improve 'connectivity' is a district wide priority.

There are two other significant features of the district's economy that have transport implications. The first is the shift away from manufacturing to service sector which is likely to continue. The district's rate of growth in the service sector jobs has not matched the pace of growth recorded at regional and national level. Regeneration activity includes the transformation of the city centre and this will be important for the service sector. The anticipated growth in city centre employment will make a substantial contribution to the district's overall job growth and will be complemented by the Airedale Corridor, other centres and some dispersal of work locations through technology advances. The district will need a transport system for these wider areas to be accessed by all communities.

The second is the shift towards small and medium enterprises. The transport implication is that this may lead to more dispersed business locations. This would also suggest that some of the larger employment sites and traditional employment areas will be redeveloped for mixed or other uses which may have transport impacts, such as on peak travel and on existing public transport networks.

## **2.2 Sustainable Communities**

'Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse need of existing and future residents, are sensitive to their environment and contribute to a high quality of life. They are safe and inclusive, well planned, built and run and offer equality of opportunity and goods services for all.' This is the definition advanced by Communities and Local Government.

Transport's contribution is that sustainable communities are 'well connected' with good transport services and communication linking people to jobs, schools, health and other services. They offer:

- transport facilities, including public transport, that help people travel within and between communities and reduce dependence on cars

- facilities to encourage safe local walking and cycling
- an appropriate level of local parking facilities in line with local plans to manage road traffic demand
- widely available and effective telecommunications and Internet access
- good access to regional, national and international communications networks.

At district level, transport planning for sustainable communities will focus on improving accessibility for those without private transport, and safety. These are issues that figure prominently in the more deprived areas of the District but also affect the district's rural areas.

### **2.3 National context**

The aim of the Department for Transport is 'transport that works for everyone...which balances the needs of the economy, the environment and society'. DfT has four objectives that support this aim and define its focus:

- to sustain economic growth and improved productivity through reliable and efficient transport networks
- to improve the environmental performance of transport
- to strengthen the safety and security of transport
- to enhance access to jobs, services and social networks, including for the most disadvantaged.

The economic focus of this strategy should therefore expect to receive support from Government. DfT gives some further support in explaining the key tasks of its work including 'improving the current operation and capacity of transport networks....., shaping the future pattern of demand for transport, including through land-use planning and appropriate pricing.....'

DfT has also sought to deliver the Government's sustainable development objectives by:

- Tackling congestion (which damages economic competitiveness, worsens local air quality, and adds to the stress of our daily lives)
- reducing social exclusion related to transport and accessibility
- integrating transport and land-use planning to produce more sustainable patterns of development
- improving training and skills within the transport sector
- Reducing the environmental and health impacts of transport (including transport's impact on air quality, greenhouse gas emissions, noise pollution and public safety)

Government has introduced the Transport Innovation Fund as the major source of future national funding available to local partners. Whilst in its pilot stage, it is clear that Government sees the use of TIF in direct relationship to demand management measures including the introduction of road pricing schemes in advance of any nationwide consideration. The Leeds City Region was unsuccessful with a second round bid. Consideration of a locally funded study into appropriate and effective congestion measures may be pursued.

Government introduced a Regional Funding Allocation process in 2005. This established a Regional Transport Board which allocated funding to projects based on the Regional Transport Strategy.

The prospect for national transport investment will be informed by the Government's response to the Eddington report on Transport delivered in December 2006.

## **2.4 Regional and City Region context**

A Regional Transport Strategy (RTS) has been compiled by the Yorkshire and Humber Assembly and was used as the background for the 2005 Regional Funding Allocations process. The RTS also forms part of the Regional Spatial Strategy (RSS). The RSS promotes the importance of Bradford and Leeds growth to the Region through their close proximity. Of all the centres neighbouring Leeds, only Bradford district has a reciprocal two-way travel to work relationship (Census 2001). The approach of the RTS has been to identify priorities that arguably are of national importance that happen to be in this region, rather than projects that make the region, and especially the city region, work better in themselves. Accordingly, investment in the national motorway network, the East Coast main line and access to the ports figures strongly. The RTS does not acknowledge the strategic contribution of Bradford district in its investment priorities, nor did the decisions arising from the 2005 Regional Funding Allocation process.

The RSS was subject to an Examination in Public in autumn 2006 and any changes to be proposed by Government will be published in 2007.

A Leeds City Region Development Plan (LCRDP) has been prepared to set out to Government the range of measures that would enable the city region to improve its economic performance. The city region has the opportunity to create an additional 150,000 jobs in the period 2006 – 2016. Bradford is predicted to offer 40,000 of these along with 60,000 in Leeds. This is the heart of the city region economy. The projected demographic change of the Bradford district, especially the high proportion of young people unique within the city region, will be a major provider of the work force needed to supply this growth in jobs. The LCRDP was launched on 3 November 2006 and included a Transport Vision which has a primary purpose of connecting people to jobs.

## **2.5 Leeds City Region Transport Vision**

The need for a Transport Vision was identified first by the West Yorkshire Local Transport Plan Steering Group arising from the restricted scope of Government guidance for preparation of Local Transport Plans for 2006-2011. This guidance prevented the LTP Partnership from looking beyond the programme period. Consultants were appointed to prepare a West Yorkshire approach and this work was expanded to incorporate the eleven city region authorities.

The Transport Vision has been based on an analysis of the corridors between centres in the city region. This has enabled key elements of

the Council's 2004 District Transport Strategy to be recognised; notably, major schemes (Airedale, Shipley Eastern Bypass and Canal Road, the Bradford Outer Ring Road and the city centre), public transport, access to the airport and the A650.

The Transport Vision has identified additional key city region investment which will impact upon the Bradford district and needs to be incorporated in this update of the District Transport Strategy. A significant element of this is changes to the rail network including electrification of the Bradford Interchange (Caldervale) lines as part of a wider cross city region project and the creation of a new network serving Leeds Bradford International Airport. This new network, based on 'tram-train' technology, links the city region's principle regeneration focal points between Bradford city centre, Shipley (Airedale), the airport, Leeds city centre, the Aire Valley (south east Leeds) and The Five Towns.

The City region has formed a Congestion Partnership to prepare proposals and measures to help deliver the Government's congestion target and for future bidding into funds such as TIF.

## **2.6 West Yorkshire Local Transport Plan 2006 -2011**

The LTP is the mechanism for the provision of funding for programmes that can assist sustainable communities e.g. accessibility, safety, rights of way, cycling. The current LTP was prepared with DfT 'Shared Priorities' of:

- Delivering Accessibility
- Tackling Congestion
- Air Quality
- Safer Roads, and
- Effective Asset Management.

LTP funding comes for Integrated Transport and Maintenance investment programmes. Funding is allocated to Area Committees for a range of local measures whilst district wide maintenance and Integrated Transport programmes are determined by the Council's Executive.

Integrated Transport funding is invested to deliver LTP objectives, including schemes identified in LTP as having a value of over £200,000. Key schemes to be delivered in this LTP period include:

- Junction improvement measures at Southfield Lane/ little Horton Lane, Queens Road/Bolton Road and Leeds Road on the outer ring road and at Harrogate Road/New Line, Greengates (A658). These relate to congestion and public transport objectives.
- bus measures on Tong Street A650
- national cycle network
- investment in UTC modernisation for congestion and energy saving including city centre traffic management and control
- investment in scheme development for Airedale and Bradford city centre.

Maintenance funds are allocated to asset management through maintenance of highways, bridges and highway structures and street lighting.

Metro, the West Yorkshire PTE, receives LTP funds for public transport measures, some of which is invested in the district, e.g for public transport interchanges, public information and school travel. Opportunities are taken to coordinate Metro and Council projects create greater impact and to offer value for money.

Some of this investment is important to progress this strategy but needs also to address key sustainable community issues related to safety, equality and accessibility. It is evident that the scale of investment required in the district's transport infrastructure is not available at the levels available through Local Transport funding.

## **2.7 Complementary District Strategies**

The District Transport Strategy relates to other district wide documents.

The adopted Unitary Development Plan was drafted to closely relate to the district's economic priorities but precedes the Regeneration master plans and the City Region Development Plan. Arising also from the imminent updated Regional Spatial Strategy and the change to a Local Development Framework, new planning documents are in preparation that will in due course replace the UDP. These will draw on the District Transport Strategy, namely, the Core Strategy and City Centre and Shipley / Canal Road Corridor Area Action Plans as well as make the supporting spatial case and provide land use protection to transport projects and associated development. The expectation of the LDF is that it will embed accessibility into land use allocations.

The Community Strategy and 20/20 Vision identified key themes for the district. These documents are in process of being updated as the Sustainable Community Strategy in which Transport will be a key theme. The LDF will provide the spatial dimension for the SCS.

The Council's Corporate Plan 2006 – 2009 includes a corporate priority for 'Creating a more Prosperous District'. Within the aim for 'connecting the district' the plan sees pressing the case at regional level for improved transport infrastructure and scheme development in Airedale and the city centre as outcomes

A new District Economic Strategy is being prepared during 2007.

### 3.0 TRANSPORT IN THE BRADFORD DISTRICT

3.1 This section assesses key aspects of transport in the Bradford district and identifies key investment gaps in the promotion of strategic transport infrastructure investment.

#### 3.2 Key dimensions of travel and transport in Bradford district

##### General traffic

The use of the road system in Bradford District is dominated by private vehicles. These form some 80% of the vehicles on the road and carry around 70-75% of the travelling population. The journeys involved have a wide range of origins and destinations; they also have a wide range of journey purposes, from leisure to commuting. Other journeys occurring as part of the working process involving either travelling as part of the working procedure or the transfer of goods and equipment are an essential element of the district's business activity.

##### Journey to work

The 2001 Census revealed important information about how and where people travelled to work in the district.

- 149,782 people live and work in Bradford district (77%)
- 41,468 (23% of 16-74 population in work) commute out from district – 51% to Leeds, 25% to other West Yorkshire districts and 8% to Craven district
- 44,895 commute in - 33% from Leeds, 39% from other West Yorkshire districts and 9% from Craven district.

From	Number into Bradford	Total on corridor	Number out from Bradford	To
Leeds	15000	36000	21000	Leeds
Calderdale	7000	12000	5000	Calderdale
Kirklees	9000	<14000	<5000	Kirklees
Wakefield	<5000	-	<5000	Wakefield
Craven	4000	7200	3200	Craven
Harrogate	1400	<2400	<1000	Harrogate
GMcr/Lancs	2000	<4000	<2000	GMcr/Lancs

Source: WYLTP Figs 1.3/1.4  
Flows in West Yorkshire are 5000 min; elsewhere 1000 min.

- Bradford and Leeds is the heaviest corridor between West Yorkshire districts and the most balanced.
- 15% of people who work in Bradford district do so in the city centre (29,000 approx) – of these one third travel from outside the district.
- Between 1991 and 2001 the average distance travelled to work by people working in the district increased by 21% to 8.5km, slightly below the West Yorkshire figure of 25%

Other journeys occurring as part of the working process involving either travelling as part of the working procedure or the transfer of goods and equipment are an essential element of the district's business activity.

- 23% of people who work in Bradford district travel less than 2km to work, of these half travel by car
- The proportion of Bradford residents travelling to work by car rose by 6% between 1991 and 2001 compared with a West Yorkshire figure of 3%

### Mode share

The differences between the tables reflects the data sources: the census data includes all journeys to work by Bradford residents; the Monitoring Cordon figures relate only to those crossing a cordon located between the City Centre and the Outer Ring Road, wherever their origin.

	Rail	Bus	Car/taxi	M'bike	Cycle	Walk	Other
1991	2.1	18.5	63.8	0.8	0.8	13.5	0.4
2001	3.6	12.6	70.0	0.8	0.8	11.8	0.4

Source: Census. Excludes those working at/from home

Period	Direction	Rail	Bus	M/bike	Car	Cycle	Walk
0730-0930	Inbound	4.8	16.4	0.3	73.6	0.2	4.5
1400-1600	Outbound	2.7	16.0	0.3	5.0	0.1	5.9
1600-1800	Outbound	4.5	16.1	0.4	75.3	0.2	3.4

Source: Bradford Monitoring Cordon survey

### Car ownership

Car ownership levels in Bradford are lower than national average levels. Improvements in the economic success of the community are therefore likely to lead to higher demands for private travel, especially given the perceived direct costs of vehicle ownership.

	H'hlds with no cars or vans	H'hlds with one car or van	H'hlds with two or more cars or vans
Bradford district – no.	58592	79003	42651
Bradford district – %	32.3	43.9	23.8

Source: Census 2001

	% h'hlds with no cars or vans	Cars or vans per h'hld	Rank (out of 378 LAs)
England & Wales	26.8	1.11	
West Yorkshire	32.2	0.98	

Bradford district	32.3	0.97	309
Source: Census 2001			

### Traffic levels

Despite the increase in private vehicle ownership, all day traffic levels throughout Bradford district have remained fairly static since the mid 1990's. Flows in 2003 were around 4% below the peak of 1996 and only 1% above 1993 levels

Peak hour traffic levels within the Bradford urban area itself (measured on the Bradford Monitoring Cordon) have also followed this trend, with morning peak hour flows 2% below 1993 levels and evening peak hour only 1% above 1993 levels. However, all day flows have risen by 5% over this period, although they are down from the peak of 2001

Surveys of car journey times show that average peak period speeds in Bradford are similar to the other West Yorkshire districts, at around 34 kph (21 mph) in the peak direction. Inter peak speeds are around 40 kph (25 mph) and are also broadly similar to the other districts.

Monitoring of the three corridors used to provide information for the Government congestion target, A650/Manningham Lane, Leeds Road (A647) and Little Horton Lane reveal little change.

### Congestion

Concern about congestion needs to be understood. Whilst there is little change recorded at particular periods it is clear that public perception believes there to be increasing congestion. This is most likely manifested in lengthening of peak periods as drivers seek to avoid congestion. Studies included in the LTP reveal that whilst many of the key junctions and the corridors leading to them are congested in the morning peak period, a substantial number are remaining so throughout the inter-peak period, especially on the outer ring road, in the city centre and Airedale. (Congestion is defined as traffic speeds less than 70% of speed limit.) This is a concern for those journeys involving either travelling as part of the working procedure or the transfer of goods and equipment. Whilst the aim will be to develop the overall transport system to maintain congestion levels broadly at or less than current values, the prospect of doing so without significant changes, especially in the inter-peak, will hold back the district's economy.

## **3.3 Key themes**

### Sustainable communities

#### Accessibility

Access to a reasonable range of facilities by all of the resident population is an important element in creating sustainable communities and in particular to address social inclusion. The facilities to be considered in access terms relate primarily to school, medical and retail destinations. Equally, access to employment is a similar requirement of a transport system. The aim is to assess and set reasonable standards in terms of:

- The time taken to access such facilities;
- Determination of the percentage of the resident population whose access facilities currently meet these standards and
- Development of measures to increase the population with acceptable access to these facilities.

The provision of good access to transport modes other than the private car and the maximisation of the choice of mode available for such journeys on a network capable of encouraging their use is an important aspect of transport planning and is closely related to liaison with public transport operators, consultation on planning applications and the Local Development Framework.

#### Mobility

Part of the population has personal difficulty in accessing the street, public transport and public facilities. Liaison groups have been set up to inform scheme design and to identify investment priorities for Local Transport funding.

#### Road safety

Transport systems, especially the highway, bring safety concerns. Considerable investment is made through Local Transport funding to ensure that highway measures and programmes provide safety for all users. The introduction of a specific Road Safety Grant and the publication of a Local Safety scheme programme, including speed management measures, to which Local Transport funding may be allocated is a significant element in delivery of sustainable communities.

A significant element of road safety work is targeted at children and schools. Education, training and publicity programmes are provided including 'kerb craft' and cycle training. Additionally, assistance is provided to schools in the drafting of travel plans.

#### Environmental impacts

##### Air quality

The environmental impacts of transport systems are addressed through measures and programmes. Particular attention is now paid to the air quality impacts of the highway network and new schemes. In highly developed urban areas such impacts have to be carefully balanced with the economic and accessibility objectives of projects.

##### Noise

The noise impacts of transport projects have been understood for longer than air quality and measures incorporated in scheme preparation and assessment.

##### Sustainability

Over the past decade the environmental impacts of traffic and transport schemes have been presented as issue for sustainability. These impacts, coupled with congestion, have led to investigation and introduction of demand management measures. The concerns are now part of wider 'climate change' concerns and carbon reduction. Whilst demand management will be important to this strategy's

approach to congestion, it is likely that alternative technology may in due course offer alternatives to the carbon content of current vehicle fuels. However, maintenance of the transport network has its own carbon footprint through electricity usage, especially for street lighting and traffic signals. Investment in low energy use and whole life costs will become increasingly significant for investment programmes.

### Modal information

#### Cycling

Cycling is not an intensively used form of transport in Bradford but provides a sustainable, healthy means of travel for a range of journeys that could otherwise be carried out by car, not only for leisure but also for some work and school journeys. Furthermore, encouragement of travel by cycle will assist in minimising the demand for road space from other road users. However, the numbers of accidents involving cycling casualties is high in relation to the levels of cycling that take place, highlighting the vulnerability of this group of road users. Allocation of road space for cyclists is a matter for local scheme design whereas the creation of long distance cycle routes including the National Routes 66 and 69 and the Great Northern Trail is of strategic importance to the district.

*Investment gap: Long distance routes*

#### Pedestrians

More journeys are made on foot than by any other mode other than the car but this significance is overlooked. The principal transport planning attention to walking arises from the vulnerability of this group of road users, especially children. Allocation of road space for walking and attendant safety measures is a matter for local scheme design and Local Transport funding. However, there is a more strategic role in the management and creation of the rights of way network including longer distance routes including footpaths and bridleways. The forthcoming Rights of Way Improvement Plan prepared to meet the requirements of the Countryside and Rights of Way Act 2000 will establish priorities. This will refer to the health promotion dimension of walking.

There is a further strategic aspect to walking which is the public realm in city and town centres. The transformation of the city centre and town centres through investment in public realm is recognised.

*Investment gap: Long distance routes  
Rights of Way Improvement Plan  
City and town centre public realm*

#### Water

The Leeds Liverpool Canal is the only navigable waterway in Bradford District. It is a significant recreation and tourist facility. Proposals to re-open the Bradford Canal from Shipley to the city centre will increase the leisure use of the waterway as well as enable associated long distance cycling and walking.

*Investment gap: Re-opening of the Bradford Canal*

## Public transport

### Bus

There are three principle operators in the district. High frequency networks have been developed in Bradford and Keighley. There has been investment by operators in high quality corridors such as the Keighley – Bradford 662 route. A ‘guided bus’ corridor has been developed on Manchester Road (A641); this has retained patronage levels. In some parts of West Yorkshire there is an overall decline in patronage, but not in Bradford district. Retaining the bus as a realistic alternative to private car usage is a complex issue including issues of punctuality, information, ticketing and vehicle quality.

The city region Transport Vision identifies some corridors as being best served by investment in high quality bus services in partnerships between operators, Metro and the local highway authority. In this district the Bradford and Huddersfield and Bradford – Leeds corridors are proposed for this approach. LTP also proposes corridor measures for Bradford -Wakefield on Tong Street and a coordinated approach is being taken currently with Manningham Lane / A650. The introduction of Public Transport Improvement Plans with operators may assist in this approach.

### Rail

Rail will continue to be the dominant public transport mode in those corridors where it exists, notably Airedale. Airedale and Wharfedale services are the busiest in the West Yorkshire network as are Shipley and the two Bradford stations.

The immediate investment priorities for the local network are set out in Metro’s Rail Plan 6. This identifies two of the four proposed new stations as being in Bradford district with Low Moor the most ready to introduce. This does not include the Manningham station proposed in the Masterplan. The logic for this station is strong as part of a recasting of Bradford Forster Square – Leeds services which will also serve a new station in north Bradford at Apperley Bridge. Overcrowding on some peak services into both Bradford city centre stations needs to be addressed. Whilst the high standard of the Forster Square service is recognised, services to the south of the city are of poor quality in terms of both rolling stock and infrastructure provision and considerable investment is needed.

The district is served by the Inter –City East Coast franchise but to a very low frequency. This franchise is being replaced. The case for better direct long distance services is a key issue for business both in Bradford city and in Airedale.

Department for Transport is carrying out a Regional Planning Assessment to establish what level of rail service is to be funded over the next twenty years. The projections for the district economy need to be a key element in the DfT decision.

Network Rail is to carry out a Rail Utilisation Study (RUS) for the region for the next decade. This will address capacity investment in the network and will be important for the introduction of new stations and other investment that will provide more capacity. Additionally, concerns by Network Rail over joining/splitting of ‘open-access’ services to London at Doncaster will need to be resolved.

### Taxi and private hire

Taxi and private hire vehicles are an element of transport open to those without private transport and provide a convenient alternative to other modes for all users. The hackney carriage trade is consulted on changes to ranks and is known to hold particular views on the allocation of road space.

*Investment gap: High quality bus corridors  
Opening of new stations  
Capacity improvement*

### Freight

The movement of freight is an important component of economic activity throughout the district. Companies with a high logistics element are concentrating increasingly on sites in the south of the city with a general trend away from isolated sites in west and north Bradford. This may lessen any detrimental impacts of this movement on local communities over time but the changing nature of local companies, including a higher proportion of SME businesses, means that road freight traffic will continue to be prominent in the urban areas. The need for Airedale companies' road freight to access the national road network through Bradford and to the north west is an important requirement of the district's economy.

Opportunities to develop rail freight terminals in the district are considerably limited with one rail served waste metal site at Shipley, an unused served site in Bradford and two allocations in the UDP at Low Moor and Keighley, neither of which have been implemented.

*Investment gap: Completion of the strategic highway network*

### Travel plans and other initiatives

Travel plans are an important demand management tool that can be introduced by organisations to reduce the impact of private car journeys. They can include car based measures including car-share as promoted by the Council through the 'Liftshare' website based service. Travel plans are increasingly called for as part of the transport mitigation measures for new developments. Residential development may also provide 'car-club' as an alternative to direct provision for car ownership.

### Parking

The Council is considering the introduction of taking 'de-criminalised parking' powers as a means of providing better traffic management and enforcement of on-street parking. This would be associated with assessing the level of charging for on-street parking schemes. It has been shown that this direct approach can deliver better use of on-street parking for the business community. With increasing numbers of people living in the district's centres, the introduction of effective parking schemes will be increasingly important.

Bradford city centre has a large supply of off-street parking both in charged facilities and on vacant sites. The city centre Masterplan proposes the development of many of these sites for development as well as acknowledging the 1800 spaces being provided at Broadway

and promoting three new and replacement car parks on the perimeter of the city centre.

The key issue is the balance between long stay and short stay parking in the city centre. As a general comparison, parking in Bradford is cheaper than in other West Yorkshire centres and may need to be addressed in the context of wide area congestion measures.

#### Network management

The use of new technology to better manage traffic flow is an aid to the council's role as Traffic Manager. LTP funded investment is in place for modernisation projects but additional resources will need to be applied to introduce new features such as variable message signing to city centre car parks and control of traffic management bollards for the pedestrian areas. Additionally public transport can benefit by new technology enabling real-time information and advanced signal priority to be introduced for buses taking advantage of GPS.

*Investment gap: continued modernisation of existing equipment*

### **3.4 Locational issues for transport in the district**

#### Local Development Framework

The district's Unitary Development Plan adopted in 2005 was drafted having particular regard to the transport implications of the district's development requirements, especially in the hierarchy of settlements and the location and phasing of sites for housing. The emergence of regeneration master plans for Airedale, Bradford city centre, Manningham and the Canal Road corridor post date the UDP. They promote strategic development opportunities, intensification of development and make specific proposals for new elements in both the highway and public transport systems

The replacement of the UDP by new Development Plan Documents will address the comprehensiveness of the transport system and its integral relationship with district's spatial development. A new Core Strategy is being prepared which will determine any changes to the role of settlements and whether any new strategic land allocations (as suggested in the master plans) are needed. Area Action Plans are being prepared for the city centre and the Shipley and Canal Road Corridor which will incorporate proposals for new transport infrastructure.

#### The Strategic Network

Integration with the wider economy of the Yorkshire and Humber region, the accessibility of the area by residents and visitors by a range of modes and the movement of a strong and successful economy is the role of the strategic transport network, accessed whether by road, rail or air.

The importance of good links to national road and rail networks is fundamental especially for the communities in the north and west of the district for which this is a particular issue.

The district's strategic highway network is the M606, Outer Ring Road (south), A650 (including Wakefield Road / Shipley Airedale Road / Canal Road, Keighley Road) and A629. This is dislocated between Queens Road (Bradford) and the Bingley Relief Road at Cottingley.

The rail network does not function as part of the national strategic network owing to the 'hub' role of Leeds.

#### Cross Boundary Issues

There are cross boundary issues with the strategic network notably to the west of the district into north Yorkshire and with Lancashire. There is no rail connection between Airedale and north east and central Lancashire. There are issues for public transport where these cross into adjacent districts. Examples of this are the A641 corridor between Bradford and Huddersfield and the A650 corridor between Bradford and Wakefield.

High quality links between Bradford and Leeds by all travel modes are important for the city region economy, employment opportunities for the district's workforce and the regeneration of the district including Bradford city centre.

#### Interchange and park and ride

An important feature of public transport is the ability for users to change between services and modes in a efficient manner. Investment by Metro in Bradford and Keighley has improved the bus interchange (although there are concerns for the capacity of Bradford Interchange) but interchange is much less convenient in Shipley and Bingley. Interchange between bus and rail is generally poor, even at Bradford Interchange where the bus and rail operations could be better integrated.

Park and ride is the means of interchange between private and public transport. This essentially is a rail based activity in this district confined to Airedale and Wharfedale services. Additional parking at rail stations is shown to increase rail patronage. Differences in train fares across the boundary with north Yorkshire has a perverse effect. Introduction of a 'Zone 6' as a city region transport initiative could assist in addressing this.

Opening of a new station at Low Moor would make a park and ride contribution. Bus park and ride, perhaps relayed to A641, needs further development.

*Investment gap:                    Improvements to facilitate interchange at Shipley and Bingley  
    Additional parking at rail stations  
    Coordination of local bus networks with interchanges and rail stations*

#### Airedale

The Airedale Masterplan considers the entire Airedale corridor within Bradford district from Esholt to Eastburn. Associated with the Masterplan is a subsequent study into the regeneration of the Canal

Road corridor between the Airedale and city centre masterplan areas which promotes the re-opening of the Bradford Canal and its development implications.

The principal strategic need in Airedale is the solution of transport problems south of the Bingley Relief Road. Car users and bus passengers and operators are equally affected by congestion in Saltaire and Shipley. The Highway Agency's proposed 'de-trunking' of this road provides the opportunity to provide sufficient funding to allow satisfactory progress to be achieved on identifying measures that will address congestion should the authority seek to bring these forward. This issue is of city region and regional importance.

The regeneration measures proposed by the Masterplan have significant transport implications, a core element of which is the provision of a Shipley Eastern Link Road to access the masterplan proposals in the Shipley and lower Baildon area. This highway scheme would also incorporate highway measures to improve conditions on Canal Road corridor which is part of the authority's long standing strategic Central Spine Road Strategy. Adoption of the Spine Road Strategy is essential to address access issues for Airedale and the northern part of the district with the city and the strategic road system to the south. Such a scheme would normally be a major scheme for Local Transport funding. Other funding sources may be necessary.

The local highway network contribute to the transport requirements in Airedale. The 'Yorkshire Bus Initiative' project is district wide and includes the Aire Valley. Measures in Shipley, Bingley and Keighley are required.

In Keighley there has been an ongoing review of transport in the town to consider possible traffic measures. To date the review has been unable to identify readily apparent measures to address transport issues. Forthcoming works to introduce traffic signals at the Victoria Park roundabout will impact upon both the A650 and the town centre. This will assist in assessing what works may be necessary on Hard Ings Road as the strategic highway in Airedale. A solution may well require consideration of longer term measures, such as an eastern bypass, to redistribute movement in the town and the Worth Valley.

In Bingley the main focus is to take action to embed the benefits of the Bingley Relief Road for the benefit of the local community and the viability of the town centre without encouraging local traffic growth. Improvements to public transport interchange at Bingley Station would follow.

Airedale enjoys a good quality local rail service. Around 70% of work journeys between Airedale and Leeds are made by train. However, better opportunities for interchange with local bus network or park and ride, especially closer to the North Yorkshire boundary, are required. Furthermore, the possibility of the wider district being served by higher frequency inter city services is likely to lie in the development of services in Airedale with Shipley station developed as a high quality hub.

*Investment gap: Agreement upon A650 Shipley / Saltaire / Cottingley preferred option, funding and implementation plan  
Shipley Eastern Link Road and Canal Road improvement  
Shipley Station integrated transport interchange  
Hard Ings Road, Keighley  
Park and Ride  
Bingley Station Interchange*

## Bradford

### Urban area

Bradford (and Shipley/Baildon) is by far the largest urban area in the district. Owing to its landscape the majority of its transport needs have to be served by the use of car, bus or by cycling and walking. The rail network is limited to the Shipley Bradford corridor as the Bradford Interchange routes do not currently serve stations in the district.

Congestion is a day long concern on key parts of the road network. If it is to be minimised and accessibility issues addressed it is crucial that investment is made in all modes of transport. Walking is still the method of travel which is second to the car in terms of the number of trips made and we need to encourage this and cycling, relating them to, amongst other things, travel to school and the increasingly important health and obesity agenda.

The Bradford urban area needs to function for business. Investment in the strategic road network will address this in part but a particular issue is the quality of the Outer Ring Road and in particular its significant junctions with major radial routes in the city. The outer ring road is also a barrier for public transport routes into the city centre. Schemes have been developed for some junctions to improve public transport, safety and congestion and these can be pursued through Local Transport funding but the complexity of the orbital routes, particularly on the west and north of the city, requires resolution and funding.

Whilst the pattern of employment areas is changing, many jobs will be provided within the district and it is important that the local transport system, in essence the bus, is capable of allowing workforce to access them. The anticipated growth in city centre employment will require that the bus network can make a substantial contribution to commuting. However, other employment centres will develop to which the bus network has traditionally been less well connected. These need to be accessed by all communities. Additionally, some of the larger employment sites and traditional employment areas will be redeveloped for mixed or other uses which may have transport impacts, such as on peak travel and on existing public transport networks.

*Investment gap: comprehensive improvement to outer ring road junctions to reduce congestion, improve public transport and safety*  
*Selective improvements for orbital traffic where the diverse movements involved are not well served by bus routes and where access to the strategic road network is an important consideration*  
*Improvement to performance of high frequency radial bus corridors*  
*Opening of new rail stations*

## City Centre

The implications of the Bradford Centre Regeneration Masterplan in terms of changes and intensification of land use for the overall transport network are considerable. The Masterplan, through its Neighbourhood Development Frameworks, promotes a package of public transport, parking and pedestrian projects. It identifies also a significant increase in the levels of residential, retail and commercial activity in the city centre. While individual elements of these proposals will be considered as they are brought forward, a viable and comprehensive transport system in the city centre needs to be maintained for all users including service and public transport access.

This city centre's role as the district's meeting place demands improvement in the quantity and quality of public realm to create a more pedestrian friendly environment. This will be supportive of the greater activity through which the Masterplan promotes the transformation of the city centre.

One of the most challenging issues is reduction of through traffic on Godwin Street and Westgate which must be resolved to be able to implement the Masterplan transport aspirations in their entirety. This cannot be achieved without the creation of a replacement highway route. This would normally be a major scheme for Local Transport funding but current Department for Transport assessment methods are unlikely to be supportive. Other funding sources may be necessary.

The city region Transport Vision promotes the introduction of a new network linking regeneration areas with 'tram-train' technology through a combination of street running, dual-use or conversion of the heavy rail network and new alignments. This could include some street running in the city centre linking the two railway stations.

*Investment gap: Agreement upon City Ring Road West preferred option, funding and implementation plan*  
*Public transport access*  
*Public realm traffic management measures*  
*Public realm environment*

## Wharfedale

Transport in Wharfedale has a strong element which is Leeds and North Yorkshire orientated as well as movements to Bradford and the motorway network beyond. The need to attract the district's Wharfedale residents into Airedale and the city centre for work, commerce and leisure is a part of regeneration efforts and to this end there is a need to address congestion levels generally on the road network serving these communities and maximising access by all transport modes.

*Investment gap: Shingley Eastern Link Road and Canal Road improvement  
Shingley Station integrated transport interchange  
Park and Ride  
Long distance routes*

### Rural areas

The majority of the population in the district live and work in urban communities but there are a significant number whose activities are based in the more isolated rural areas of the district. The particular problems of rural areas tend to concern accessibility and the lack of local facilities. Car owners can usually compensate through the access afforded by the car but innovative transport solutions are often necessary for others. Whilst accessibility needs to be examined on a community by community basis, it is an issue for the district in creating and supporting sustainable communities.

Work on accessibility issues will help to identify the needs of rural areas and will assist in directing the resources available to measures aimed at addressing the transport needs of this community and to areas where it will achieve maximum benefit.

*Investment gap: Local accessibility*

### Leeds Bradford International Airport and other airports

Located in Leeds district but on the border of Bradford, Leeds Bradford International Airport (LBIA) is important to the district's economy both for business travel, employment and as a facility for communities in the district. The potential role of the airport in the city region is promoted by the airport's own master plan and the current national document 'The Future Development of Air Transport in the United Kingdom'. Accordingly good access to the airport from the district (as well as and not only from Leeds) needs to be assured. The role of Manchester as the international air gateway for the north of England is acknowledged but LBIA's 'spoke' connections with the 'hubs' of Amsterdam and Paris are recognised.

Whilst the city region Transport Vision promotes new transport networks to incorporate the airport with the city region regeneration areas, in the short term, people from Bradford District will continue to access the airport by car, taxi or bus. A current constraint to airport access is the Greengates junction on A658.

Future expansion of the airport to provide economic benefits of the airport will need to address any environmental impacts within this district.

*Investment gap: A658 Greengates junction improvement*

### **3.5 Key conclusions**

#### Connectivity

The priority is to create the conditions for the district's economy to deliver prosperity. This means that the quality and condition of the transport network is a central element in connecting the workforce to employment. Trends show that private transport is on the increase and with greater prosperity will continue to grow within the constraints of affordability. Business requires access to the road network and yet is constrained by the levels of general traffic. Whilst these levels are not necessarily increasing at conventional peak times (from which it is apparent that key parts of the network are full), some parts of the district are already suffering congestion throughout the working day.

It is essential that the means are found to enable business' needs to be met at levels which can be accommodated reasonably by an adequate road system which is acceptable both in terms of the scale of the system and in its impacts on the communities surrounding it.

The expansion of the road system to accommodate unrestricted growth is not a viable aspiration in economic, environmental or social grounds. There remains, however, the need to promote specific improvements to improve the cohesiveness of the road network at key locations. These would enable strategic 'gaps' in the network to be closed and allow for the introduction of additional facilities to address the needs of the all users.

#### Congestion

Congested conditions on the transport system lead to a number of unwelcome impacts. It reduces traffic speed, affecting general traffic, public transport and other road users. It increases the adverse impacts of noise and pollution levels. There are also negative impacts on the general attractiveness of the areas affected by congested conditions and on the economic effectiveness of business activity.

Whilst strategic improvements to the road system are essential to the district's economic performance, the increased demand for movement needs the alternative and complementary greater use of public transport and encouraging the use of walking and cycling and the implementation of travel plans.

The use of innovative approaches to maximise capacity of the transport system, especially to prioritise users associated with economic activity.

#### Investment priorities

The analysis of the type and location of district's transport system's deficiencies has identified 'investment gaps'. The role of demand

management as a complementary approach has been recognised but this is not a convincing alternative to the overall conclusion that direct investment into key infrastructure is essential. This needs to be over and above what may reasonably be expected through Local Transport funding, especially given its role in providing investment in transport measures for sustainable communities.

Proposals for this investment are set out next.

## **4.0 STRATEGY**

### **4.1 Objective**

The key objective of the strategy is to address the issues of connectivity and congestion. The reality is that the Bradford district has an incomplete transport network of differing quality which is suffering congestion in key locations and which inhibit connectivity especially for the functioning of the economy.

The approach of the strategy to meet the objective needs to be both comprehensive and integrated. This means that the case for investment in infrastructure has to be made in the complementary context of demand management measures. The strategy needs also to enable the district to be formed of sustainable communities.

### **4.2 Sustainable Communities**

The transport system needs to play its part in creating and supporting Sustainable Communities. Whilst this strategy is about making the case for investment in the district's transport infrastructure over and above what is likely to be obtained through Local Transport Plan funding resources, it is important to recognise the role such investment can play in achieving some of the features of sustainable communities. It is important also to ensure that investment attracted as a result of this strategy minimises any detail adverse impact upon local communities.

### **4.3 Demand Management**

Management of the use of the transport network and the demand for travel is central to the strategy. Normally, consideration for users of the system is given in order to:

- Vulnerable groups and emergency services
- High occupancy vehicles
- Shopping and commercial traffic
- Other road users

A range of traffic and demand management interventions and other measures are proposed. Some of these would prepare the ground for investment and should be viewed not only as signs of the Council's commitment to a comprehensive transport strategy but also as supporting justification for major infrastructure investment.

Technology is increasing in importance in control of the use of the transport system as its sophistication increases through time. This can relate to:

- the control and co-ordination of all traffic on the network and maximising its use,
- improving conditions for specified identifiable sections of this traffic,
- improving the directions given to traffic.

It can also relate to further measures such as the ability to increase the level of home working and retail activity to reduce traffic levels and improving the awareness of mode choice.

Measures to utilise technology to improve traffic conditions and reduce the need for travel will, in general, be supported by the authority.

These measures are being considered in two timeframes:

Up to 2011 (to tie in with the current Local Transport Plan timeframe)

- *Introduce decriminalised parking*
- *Upgrade Urban Traffic Control (UTC) system and introduce Urban Traffic Management Control*
- *Contribute to a city region congestion study with/without TIF support*
- *Evaluate 'no-car' lanes*
- *Continued use of 'soft' measures such as travel plans including implementation of a Council Travel Plan*
- *Continued improvement of the bus network including Public Transport Improvement Plans*
- *Continued improvement of corridors and gateways with particular focus on those monitored for the congestion target*

During this period there will not be aggressive interventions in the city centre whilst the economy is being re-established through the Bradford Centre Regeneration Masterplan and measures to improve the quality of the city centre as a shopping / leisure destination and as a working and living environment.

2011 – 2016

- Greater use of on-street car park charges
- Introduce measures as may result from a congestion study
- Reduction in less accessible allocations in the Local Development Framework

#### **4.4 Investment in infrastructure**

In order to realise the economic potential of the Bradford district workforce it is important that movement of people and goods is able to take place in the best possible way. This part of the strategy takes the issues highlighted in the previous section and promotes a range of investments in both highways and public transport that will enable the district to fulfil its regional, city region and local roles. This investment is seen as an essential requirement to bring the district to a level before which road pricing and other hard demand management measures may be equitably and practicably introduced.

#### **4.5 Investment in highways**

Regional / inter-regional

The M606/A650/A629 route is the district's highway spine. Its function is to connect Bradford district to the national motorway network, to

Central Lancashire and the North West as well as to other parts of the city region. It is also essential to strategic movement within the district. Recent investment on the outer ring road from the M606 at Staygate, Manchester Road/ Shipley-Airedale Road and the Aire Valley Trunk Road stages between Cottingley and Kildwick provide a purpose built highway. The incomplete Shipley - Saltaire - Cottingley section (and the associated Canal Road) remains a major impediment to this strategic route. Congestion is caused by the mix of traffic as the 'missing link' functions as an all purpose highway in one of the most active parts of the district. Proposals to bypass Saltaire are under investigation to find an acceptable option to complete this key infrastructure.

*Proposals: Completion of A650 Shipley - Saltaire - Cottingley  
Hard Ings Road, Keighley*

#### City Region

Integrated with the regional / inter-regional proposals is the need to address the highway network at Shipley which is key to releasing economic potential in this part of the Airedale master plan. A new link road is proposed between Canal Road and Otley Road, releasing land for economic development, reducing traffic in the town centre and enabling better public transport integration for both bus and rail passengers. This highway project will also include the improvement of Canal Road from the Bradford outer ring road to Shipley. This is an important project as it needs to be integrated with the creation of the Bradford canal, a key district regeneration priority, as well as public transport measures.

Work on the city region Transport Vision identified a significant movement across the south east of the district from the Spenn Valley towards Harrogate and A1. This uses the outer ring road, Sticker Lane / Dick Lane and Harrogate Road. A key location is Leeds Bradford airport (LBIA) and the airport master plan suggests that access to the airport could be taken from A647, Leeds outer ring road, A658. The implication of this route is that improvements will be necessary between Dudley Hill and Thornbury and also at M606 Staygate to improve access from Rooley Lane onto M606 completing the recent stages of work.

*Proposals: Canal Road Improvement / Shipley Eastern Link Road  
Thornbury – Dudley Hill  
M606 Staygate – final stage*

#### District wide

The scale of the district means that its local economic performance is significant for the city region and regional. This means that proposals that might otherwise be seen as of only local significance are in fact of greater importance and priority. Investment in the district highway network needs to fulfil several purposes in supporting the economy. It needs to provide access to key employment and business areas, to improve public transport for the workforce (and other non-car networks) and facilitate visitor access to the major centres, notably the city centre.

Proposals which have a clearly greater than district impact will make a contribution in local areas.

The Bradford outer ring road is a key part of the network. Recent surveys reveal that it suffers some of the highest levels of congestion anywhere in West Yorkshire. In south Bradford recent investment associated with the M606 Staygate and Mayo Avenue / Manchester Road junction provides a standard of highway complementary with many major centres. Unfortunately elsewhere the route is poor. Some junctions have seen recent local improvement such as at Thornton Road and Queens Road / Manningham Lane but these are exceptions. Many of the junctions are unimproved and have been so for generations.

The outer ring road junctions are also crossing points for routes into and out of the city centre which are important for journeys to work. It therefore acts a constraint upon public transport, not only for passengers who work in the city centre and the major institutions and companies within the outer ring road but also those that need to change buses in the city centre.

The outer ring road fails to provide a suitable route for traffic crossing Bradford as shown by the high traffic flows of through traffic within the city centre, especially on Westgate and Godwin Street. This traffic is inhibiting regeneration on the west side of the city centre. A similar volume of traffic has been removed from the east side of the city centre through the 'Connecting the City' project to facilitate the Broadway redevelopment. However, no such alternative highway network exists on the west side of the city centre and alternative measures are needed and are being investigated.

Access between the city centre and Leeds has long been a concern, especially for the business community. Whilst the M606/M62/M621 is undoubtedly the strategic route, its length is such that the majority of road users are aware of the A647 Leeds Road. This route is a significant local centre, a major public transport corridor and consequently a source of high levels of congestion. The parallel Leeds Old Road is no better as a strategic route. Accordingly, an alternative Bradford - Leeds corridor needs to be investigated, perhaps utilising the general route of Bowling Back Lane and beyond.

Traffic in Keighley town centre has a similar pattern with that in the city centre owing to the constraints of the Worth Valley. Some relief to the town centre may be possible but in the longer term consideration needs to be given to an eastern bypass. (Proposals for such a road were considered in the 1990s but were not taken forward.)

*Proposals: Bradford Outer Ring Road junctions  
Bradford City Centre West  
A647 alternative  
Keighley Eastern Relief Road*

#### **4.6 Investment in Public Transport**

Public transport plays an essential role in the Bradford economy as well as providing for accessibility and social inclusion benefits for the wider community. The majority of public transport journeys in the district are made by bus owing to the settlement pattern and the landform but in key corridors rail plays the larger role, notably in Airedale.

The city region Transport Vision identified the corridors essential to forming the basis for city region investment priorities. This has two implications, firstly the contributions that different modes can make and secondly that corridors between centres are less appropriate to define the contribution made by the bus than by rail. This is because the bus is able to penetrate settlements more deeply. It is important in this strategy to reflect not only the longer distance corridors that can be well and appropriately served by bus but also those investments that can assist the bus in performing its more short distance role.

### Bus

The bus industry provides comprehensive local networks in Bradford and Keighley and longer distance corridor services between major centres, notably Bradford and Keighley / Huddersfield / Halifax and Leeds. Frequency and punctuality are important to public acceptability especially on journeys to work. The impact of congestion upon general traffic has similar effects on the bus.

The Transport Vision recommended that investment is needed in two corridors where the bus can best fulfil an enhanced strategic role. The Bradford Leeds corridor where there needs to be a range of routes (both bus and rail) to serve the employment centres whilst recognising that there is a dispersal of workplaces in the cities. The Bradford Huddersfield corridor is seen worthy of further investment owing to the circuitous nature of the present rail service with its attendant time penalty. The LTP promotes further a Wakefield Road / Tong Street bus priority scheme.

Within Bradford the constraint of many of the outer ring road junctions on radial routes and thereby bus services has been recognised.

Bus penetration into Bradford city centre is relatively high compared with other major centres. Traffic management protects several key bus routes from general traffic. The city centre streets need to serve several functions and in some instances the needs of pedestrians will be uppermost. The Bradford Centre Regeneration master plan for the city centre promotes the creation of considerable areas public realm which will require the transfer of some bus stops to alternative places. The master plan also promotes a 'bus box', the implementation of which will afford greater priority for the bus and needs the engagement of the bus industry.

*Proposals: Strategic Bus Corridors to connect Bradford with Leeds, Wakefield and Huddersfield.*

*Outer ring road junction priorities*

### Interchange

A significant proportion of journeys by public transport require interchange between one journey and another. Effective and attractive interchange is also a factor in demand management through reducing the need to travel by private car for all or part of the journey.

Bus and rail stations are the traditional places for interchange. Considerable investment has been made in interchange by Metro at Bradford, Keighley and Ilkley. However, further investment could be made at Bingley and Shipley as identified in the Airedale master plan. Furthermore, the city centre master plan identifies the considerable opportunities for development at both Bradford Interchange and Bradford Forster Square station.

Park and ride is a further traditional role for interchange for car drivers and rail services.

*Proposals: Improved interchange facilities at Shipley and Bingley  
Develop further park and ride at appropriate locations*

## Rail

Good rail services are extremely important to the Bradford district economy. A major challenge is the provision of superior connectivity for the workforce and business community without which city region performance will be inhibited. The district is served in the main by the Metro local network with some services extending to York, Manchester and Blackpool. A number of services on the Airedale route extend to Lancaster, Morecambe and Carlisle. Inter city services to London are meagre. The rail industry approach appears to be that Bradford district is best served through interchange at Leeds.

The city region Transport Vision promotes the electrification of Leeds – Bradford Interchange – Halifax in association with electrification east of Leeds to Selby and York. This would offer significant additional travel opportunities for the city region economy.

### Bradford - Leeds

The 2001 census revealed the strong two-way relationship travel between Bradford and Leeds, unique to the city region. Accordingly, in this respect and with a view to the development of the economy, much more needs to be made of the Bradford – Shipley – Leeds service. This would include the opening of new stations at Manningham and Apperley Bridge (and at Kirkstall in Leeds) as well as the enhancement of Shipley and Frizinghall stations. This is a key rail corridor which will contribute to the Bradford/Leeds growth area in the RSS Leeds City region. The Bradford – Apperley Bridge section facilitates also key development within the Airedale masterplan. This needs also to be seen as integral with the Shipley area highway proposals.

### Bradford - Manchester

The franchise focus on Northern Trans-Pennine Leeds - Huddersfield - Manchester corridor obscures the important Bradford – Manchester link provided by the Caldervale service. It is essential that 'west' West

Yorkshire is able to enjoy a direct, high quality rail service with the Manchester city region. Express services are being promoted from the Calder Valley to Leeds and these would not serve Bradford (nor indeed Halifax). Network Rail's Business Plan identifies key infrastructure works at Bradford Interchange / Mill Lane junction and these are welcomed to improve reliability and increase capacity. Capacity improvements on the Caldervale route need to incorporate the opening of the Low Moor station in the south Bradford employment zone.

#### Inter-city

Inter-city services to 'west' West Yorkshire and Craven are poor, ignoring the role which this part of the region serves, especially in the crucial financial services sector and the new technology sector and long distance leisure travel. Airedale is a key growth area in the RSS Leeds City region and the absence of inter-city services places its economic performance at a disadvantage.

Whilst Bradford Interchange may be an acceptable station to serve central, south and west Bradford, Shipley Station (already one of the busiest stations in the West Yorkshire network) is a key hub for north Bradford as well as a significant station in Airedale and has considerable further interchange potential. Shipley Station is at the heart of an integrated transport package for this part of Airedale (see also Bradford – Leeds above). The opportunity for a parkway station in Airedale should be investigated as parts of North and Central Lancashire are known to look to Airedale for national connections.

The opportunity for 'open access' Bradford – Halifax - London services fills an important element of the district's rail needs.

#### New networks

The city region Transport Vision promotes the creation of a new network utilising existing 'heavy rail' routes and some new alignments, operated by 'tram-train' technology, to link the city region's principle regeneration areas. This would serve Bradford city centre – Shipley – Leeds Bradford airport – Leeds city centre – Aire Valley (South East Leeds and the Five Towns). This project would bring considerable advantages in connectivity to the Bradford economy and the city region.

The re-opening of the railway between Skipton and Colne is under consideration. This could offer additional connectivity with north east and central Lancashire.

*Proposals: Improved 'connectivity' between Bradford and Leeds on both Airedale and Caldervale routes including new stations at Manningham and Apperley Bridge and at Low Moor, additional park and ride.*

*Lobbying for better service provision in the Inter City East Coast franchise, especially in Airedale: Supporting open access services where this is in the district's interest.*

*Support for city region Caldervale (Bradford Interchange) electrification; development of 'tram/train'*

*network (including access to airport); links with north east and central Lancashire*

#### **4.7 Other investment**

##### **Leeds Bradford International Airport**

The airport is an important gateway for business as well as for leisure travel. It is also an increasingly significant employer within reach of the local workforce. Improving the airport's accessibility to Bradford district is most important and will be promoted within this district and with Leeds as a key city region requirement.

*Proposal: implement improvement to Greengates junction (A658).*

##### **Cycling**

Cycling is not an intensively used form of transport in Bradford but provides a sustainable, healthy means of travel for a range of journeys that could otherwise be carried out by car. The creation of long distance cycle routes including the National Routes 66 and 69 and the Great Northern Trail is of strategic importance to the district.

*Proposal: complete long distance cycle routes through the district*

##### **Bradford Canal**

The proposed re-opening of the Bradford Canal from Shipley to the city centre is not only of importance to regeneration but also in transport terms for its prospective contribution as a long distance cycle route and footpath. The design requirements for the canal will be incorporated within the proposals for the Shipley Eastern Link Road and Canal Road improvement as well as within emerging development proposals within the corridor.

*Proposal: prepare an implementation plan for the delivery of the Bradford Canal*

## **5.0 Conclusion**

- 5.1 This strategy is a comprehensive assessment of investment in Bradford district's transport infrastructure. The Council as Highway Authority and as recipient of Local Transport funding can take responsibility for delivery of some elements. The Council has also the role of bringing together key partners to promote this strategy. Some partners are also prospective funders. The success of this strategy depends upon their recognition of the key role that this district will play in improved economic performance of the region and city region. This strategy also articulates the district's transport needs for national and regional planning purposes. In particular it is important that the next version of the Regional Transport Strategy should promote the district with greater priority.
- 5.2 The immediate priorities to progress the proposals are to:
- Decide the strategy for the Airedale route
  - Finalise feasibility studies for the Shipley Eastern Link Road and Canal Road Improvement and move to detail design
  - Ensure the district's aspirations for rail are included in Government's announcements on rail franchising and funding
  - Decide how to proceed with highway and traffic measures to the west of the city centre
- 5.3 The nature of this strategy does not lend itself to setting of specific targets; individual project delivery will require project management. Similarly, there is no specific risk assessment. What needs to be understood is that actions from the strategy need to be developed and outcomes kept under review at regular intervals. The ultimate test will be what investment decisions are taken in future Regional Funding Allocation rounds.

## **References**

West Yorkshire Local Transport Plan 2006 -2011

Draft Regional Spatial Strategy (including Regional Transport Strategy) – ‘the Yorkshire and Humber Plan’ (2005)

City of Bradford MDC Corporate Plan 2006 - 2009