Leeds Public Transport Investment Programme

Strategic Outline Case submission to Department for Transport

20 December 2016

Leeds City Council
West Yorkshire Combined Authority
# Table of Contents

1. Executive Summary ........................................................................................................... 6

2. Introduction ........................................................................................................................ 14
   2.1 Purpose of the Document .............................................................................................. 14
   2.2 Background .................................................................................................................... 14
   2.3 Structure of the Document ............................................................................................ 14

3. Strategic Case: The Local Context .................................................................................... 16
   3.1 Introduction ..................................................................................................................... 16
   3.2 Leeds in the Context of Leeds City Region ................................................................. 16
   3.3 Leeds: A Growing Economy ......................................................................................... 18
   3.4 Policy Context ............................................................................................................... 25
   3.5 Alignment with Wider Schemes .................................................................................... 29
   3.6 The State of the City of Leeds ...................................................................................... 31
   3.7 Transport Challenges affecting the Growth of the City ............................................... 37
   3.8 The Leeds Transport Conversation ............................................................................. 52
   3.9 The Opportunity for the City ....................................................................................... 53

4. Strategic Case: Developing the Programme ....................................................................... 56
   4.1 Overview of Option Generation, Shortlisting and Selection Process ....................... 56
   4.2 Long List Identification ................................................................................................. 57
   4.3 Medium List Identification ........................................................................................... 58
   4.4 Short Listing of Schemes ............................................................................................... 59
   4.5 The Preferred Option: The Leeds Public Transport Investment Programme ............ 62
   4.6 Helping to Deliver the Strategic and Policy Context for Leeds .................................. 72
   4.7 Measures for Success .................................................................................................... 76

5. Economic Case .................................................................................................................... 78
   5.1 Methodology and Assumptions ..................................................................................... 78
   5.2 Modelled Assumptions ................................................................................................. 82
   5.3 Assessment of the Full Programme ............................................................................... 83
   5.4 Value for Money Statement ......................................................................................... 84
   5.5 Sensitivity Tests ............................................................................................................ 84

6. Financial Case ..................................................................................................................... 86
   6.1 Package Costs ............................................................................................................... 86
   6.2 Allowance for risk ......................................................................................................... 87
   6.3 Funding Profile ............................................................................................................. 87

7. Commercial Case ................................................................................................................ 89
   7.1 Output Based Specification ........................................................................................... 89
   7.2 Procurement, Delivery Strategy and Pricing Framework ............................................ 90
   7.3 Risk Allocation and Transfer ........................................................................................ 91

8. Management Case .............................................................................................................. 93
   8.1 Capability to Deliver ..................................................................................................... 93
   8.2 Governance for Delivery ............................................................................................... 94
   8.3 Assurance ...................................................................................................................... 96
   8.4 Programme Plan .......................................................................................................... 97
   8.5 Communication and Stakeholder Management ........................................................ 98
   8.6 Risk Management and Strategy .................................................................................... 101
   8.7 Monitoring and Evaluation and Benefits Realisation Plan ........................................ 102
Appendices

Appendix A Leeds Transport Conversation Executive Summary .......................................................... 104
Appendix B Option Selection for Preferred Package .............................................................................. 105
Appendix C Illustrative Scheme Drawing for A61S .................................................................................. 111
Appendix D Risk Register ......................................................................................................................... 112
Appendix E Letters of Support .................................................................................................................. 113
1. First West Yorkshire ............................................................................................................................... 113
2. Arriva .................................................................................................................................................... 113
3. HCT Group (CT Plus) ............................................................................................................................ 113
4. Transdev (Commercially Confidential) .............................................................................................. 113
5. Network Rail ........................................................................................................................................ 113
6. Rail North ............................................................................................................................................. 113
7. Thorpe Park (Scarborough Developments) ......................................................................................... 113
8. White Rose .......................................................................................................................................... 113
9. Leeds Bradford International Airport ................................................................................................. 113
10. Harrogate Borough Council .............................................................................................................. 113
11. Northern Rail ....................................................................................................................................... 113
12. Chair, Leeds Transport Expert Advisory Panel ............................................................................... 113
Appendix F Detailed Programme .............................................................................................................. 115
Appendix G Appraisal Summary Table .................................................................................................... 116
Appendix H Economic Assumptions ........................................................................................................ 117

Figures

Figure 1: The Leeds City Region ................................................................................................................ 16
Figure 2: Share of businesses in selected sectors - Leeds and UK, 2016 .................................................. 18
Figure 3: Index of economic output (GVA) - Leeds and UK, 2000-14 ...................................................... 19
Figure 4: Productivity in core cities, 2004-14 ......................................................................................... 19
Figure 5: Unemployment rate - Leeds and UK, 2008-16 ............................................................................ 20
Figure 6: Indices of Multiple Deprivation (IMD) Income Deprivation .................................................... 21
Figure 7: Income Deprivation .................................................................................................................... 22
Figure 8: Living Environment Deprivation ............................................................................................... 22
Figure 9: Health Deprivation and Disability ............................................................................................. 23
Figure 10: Crime Deprivation .................................................................................................................... 23
Figure 11: Qualification levels - core cities, 2015 .................................................................................... 24
Figure 12: How the Transport policy aligns for Leeds ........................................................................... 25
Figure 13: Towards a Leeds Transport Strategy ....................................................................................... 28
Figure 14: Wider Delivery Programme Timeline .................................................................................... 29
Figure 15: HS2 Route ................................................................................................................................. 30
Figure 16: Location of high-skilled jobs across Leeds City Region, 2011 ................................................ 31
Figure 17: Communities of Leeds ............................................................................................................ 32
Figure 18: Transport Connectivity around Leeds ....................................................................................... 33
Figure 19: Sectors for identifying key transport challenges across Leeds ............................................... 37
Figure 20: Delay in minutes per km in the AM peak hour 2013-14 .......................................................... 38
Figure 21: Junction congestion hotspots in Leeds .................................................................................... 38
Figure 22: Average journey time comparison for bus & car in AM peak / inter-peak within Leeds .......... 39
Figure 23: Real Average Adult Bus Fares for West Yorkshire & Costs of Bus Operation ...................... 40
Figure 24: Relative Cost of Commuting to Leeds City Centre for Different Transport Modes ............... 40
Figure 25: NOx Levels across West Yorkshire ......................................................................................... 45
Figure 26: South Bank Challenges .......................................................................................................... 47
Figure 27: Planned housing and employment growth across Leeds 2012-28 .......................................... 48
Figure 28 Leeds Core Strategy Regeneration Priority Areas .................................................................... 49
Figure 29: Summary of the Opportunities by Sector ............................................................................. 54
Figure 30: Leeds Public Transport investment Programme Logic Map .................................................. 62
Figure 31: The Leeds Public Transport Investment Programme ................................................................. 63
Figure 32: Leeds High Frequency Bus Network ............................................................................................ 64
Figure 33: Nottingham Bus Patronage Case Study ....................................................................................... 66
Figure 34: City Centre Programme ................................................................................................................. 67
Figure 35: Enhanced Rail Package Rationale for the Rail Package ................................................................. 70
Figure 36: Governance Roles and Responsibilities ......................................................................................... 95
Figure 37: WYCA PMO Process ....................................................................................................................... 96
Figure 38: Illustration of potential PMO Pathway for scheme within the Programme .................................... 97
Figure 39: Leeds Transport Conversation Organogram .................................................................................. 98
Figure 40: Leeds Transport Conversation Questionnaire Postcard ............................................................... 99
Figure 41: Cyclical Risk Management Approach .......................................................................................... 101

Tables
Table 1: Leeds demographic and employment information .............................................................................. 17
Table 2: Rail Challenges by Sector ................................................................................................................. 43
Table 3: Summary of the transport challenges by Sector ............................................................................ 51
Table 4: Summary of the Key Themes identified through the long listing process ...................................... 57
Table 5: How the Strategic Outline Case addresses the Transport Challenges ............................................ 73
Table 6: Measures for success for the Leeds Public Transport Investment Programme ............................ 76
Table 7: Method of Benefit Calculation ......................................................................................................... 78
Table 8: Benefits Calculated for each Element of the Programme ............................................................... 80
Table 9: Elasticities ........................................................................................................................................ 82
Table 10: Summary of Package Present Value of Benefits (£000) ................................................................ 84
Table 11: Sensitivity Tests ............................................................................................................................... 84
Table 12: Scheme Costs .................................................................................................................................. 86
Table 13: Summary of Programme Funding ................................................................................................ 86
Table 14: Spend Profile for the Programme .................................................................................................. 87
Table 15 Allocation of Schemes by Project Manager .................................................................................... 95
Table 16: Communication Strategy by Stakeholder Group ......................................................................... 100
Table 17: Summary of the Top Risk .............................................................................................................. 101
Table 18: Measurement of Anticipated Impacts ............................................................................................ 102
Executive Summary
1. Executive Summary

On the 12th May 2016, Government announced its decision not to grant powers for the construction and operation of the Leeds New Generation Transport (NGT) trolleybus system following an extended public inquiry. Recognising the history and circumstances surrounding this decision, the Department for Transport’s funding element for NGT of £173.5m is being made available for “public transport improvements in Leeds”.

The DfT have advised that following the submission of this Strategic Outline Case, a ‘Decision to Proceed’ from Central Government should be reached by March 2017. Following which, the full development of the schemes outlined in this document can commence, enabling the delivery of the majority of the schemes by 2021. In parallel, working together Leeds City Council and WYCA will continue the transport conversation with the city about the longer term Leeds Transport Strategy, which will also consider the future role of Mass Transit for the city.

The Local Challenges and Opportunities

Leeds is a growing and successful city producing economic output of £20.2bn per year, a third of the City Region’s total output. Forecasts suggest that the Leeds economy is set to grow to be £29.5bn by 2036, an increase of 49% on 2016. In the city centre there has been extensive development in recent years, reinforcing the city’s position as a major retail and office location. In addition, outside of the city centre, key economic centres such as Thorpe Park, Leeds Bradford Airport and White Rose Centre continue to expand. The growth of Leeds’ economy is crucial to helping achieve better economic outcomes across the region and the North.

The key transport challenges facing the city are:

- Significant population, housing and employment growth, predominantly in central and eastern areas of Leeds. Population growth is forecast of up to 15% and employment growth of 28% by 2028;
- Substantial increase in travel demand, along with rising car ownership resulting in increased congestion levels and delay which is constrained the economic growth of the region;
- The strength of Leeds economy has resulted in a large increase in commuting to Leeds from outside the district which the current transport system is struggling to accommodate;
- There are significant variations in accessibility across the City, in particular in areas of high deprivation;
- Rising congestion levels has contributed to Leeds suffering from poor air quality, particularly in the city centre;
- Falling bus patronage as a result of uncompetitive journey times, rising travel costs and poor customer experience; and
- The rail network is highly congested, much has poor/small rolling stock and patronage is forecast to continue to grow.

If we do nothing, the associated problems of congestion will worsen, our buses will be more unreliable and our trains more overcrowded. Most importantly our economic growth will be slower. To prevent this, investment is needed to improve the efficiency of the existing capacity and also increase capacity of the transport system.

Responding to the approaches set out in the policies dictates a solution in which public transport is improved and expands its reach to accommodate a growing demand and ensure an equitable system. To increase patronage and provide an enhance service to existing users the public transport network needs to be punctual, reliable, safe and provide good information before and during the journey.

Public transport and especially bus, needs to be an accessible, attractive and viable alternative to using the car for appropriate journeys. Bus can provide a fine grain to accommodate local journeys and link communities to the city centre and employment, retail and leisure destinations. Express bus, park & ride and rail can provide the higher demand, strategic movements at the next level. Maximising the use of these public transport networks will ease the pressure on the highway network and alongside selective pinch point improvements can deliver a whole transport network which meets the economic growth aspirations of the city.

The vision is for Leeds to be a compassionate, caring city with a transport system that helps all our residents benefit from the city’s economic growth. Getting the transport system right is a critical element of achieving this vision. Our headline aims are for a transport system to support a city which is; Prosperous; Healthy; and Liveable.
The Leeds Public Transport Investment Programme

The Leeds Public Transport Investment Programme has been developed to respond to the challenges facing the city and fit within the emerging Leeds Transport Strategy which will respond to the wider Northern Transport Strategy, the Leeds District Local Plan (core Strategy), the West Yorkshire Transport and Bus Strategies and the Leeds City Region Strategic Economic Plan.

The programme will build on recent successes such as the Park and Ride site at Elland Road, the opening of Leeds Southern Station Entrance and Kirkstall Forge Railway Station, quality bus corridors and significant junction improvements. The programme will align with proposals for HS2 and Northern Powerhouse Rail to maximise this transformational opportunity for the city. The programme will also compliment investments being made through the West Yorkshire Transport Fund programme.

To move forward with the ambitions for the city, this Strategic Outline Case identifies a package of public transport improvements that, taken together, will address the challenges and help deliver the City’s key strategies. In summary the programme will help deliver the aspirations for the City by:

1. Supporting economic growth by unlocking the transport constraints in key growth areas and across the city by delivering three new rail stations at Leeds Bradford Airport Parkway, White Rose and Thorpe Park. Transforming the gateways to the City Centre and the bus network will also enable quicker journey times by bus to the City Centre;
2. Aligning the programme of works within the Leeds Public Transport Investment with the emerging Leeds Transport Strategy, West Yorkshire Transport and Bus Strategies, as well as the national/pan northern growth strategies including HS2 and Northern Powerhouse Rail;
3. Improving health outcomes especially air quality by reducing transport emissions and convert all buses in Leeds to be Euro VI or low emission by 2020. The City Centre will also be a Bus Ultra Low Emission Area to ensure the impact of buses on the air quality in the City Centre is reduced;
4. Complementing the existing schemes being delivered through the WYTF such as Leeds City Centre Package and the Corridor Improvement Programme by transforming the passenger interchange areas in the city centre and improving bus journey times on four key corridors into the city centre;
5. Reflecting the key messages from the Leeds Transport Conversation in terms of improving public transport operation and quality by working with First West Yorkshire to introduce 284 new buses to Leeds, extend the high frequency bus network to 8pm every day and improve the coverage of real time information;
6. The measures included within the Leeds Public Transport Investment Programme are deliverable within the short to medium term taking into consideration land requirements and public acceptability through the Leeds Transport Conversation;
7. Leveraging in match funding from the private sector including £71m from First West Yorkshire and other public transport providers and developments / businesses who will benefit from the public investment; and
8. Cognisance of and adaptability for the delivery of the longer term strategy through the in parallel development of mass transit options for the city of Leeds and transformation of City Centre gateways.

The process for developing the preferred option for this Strategic Outline Case has been based around identifying solutions which address these aspirations. The process has also been informed by the transport challenges facing City as well as the conclusions of the first phase of the ‘Leeds Transport Conversation’. It has also been developed to encompass robust private sector contributions, for example from bus operators.

In addition, the criteria placed on WYCA and Leeds City Council by DfT has been critical to shaping the scope of the overall package. DfT outlined that the funding may only be spent on ‘Public Transport schemes within Leeds District’, with a focus on spend in the short-medium term.

As a result, the Strategic Outline Case incorporates the following three key core elements which are described in further detail below:

1. Transformation the bus network;
2. A world class city centre gateway, being HS2 ready and high quality transport hubs; and
3. Rail stations at key economic growth, housing and employment locations.
1. Transforming the Bus Network

By 2020 the programme proposes to deliver:

- A "turn up and go" High Frequency Bus Network across the city, with enhanced frequencies in the early evening;
- A fleet of 284 new buses, offering enhanced comfort, free Wi-Fi, audio visual information systems and device charging facilities;
- Affordable, simpler fare structure, which encourage bus travel especially amongst under people under 25. There will be easy to use options to pay for travel before, during and after the journey using mobile devices;
- Customers will be able to plan journeys, pay for travel and obtain up to the minute travel advice using their mobile device;
- All buses travelling through the city centre will meet the latest ultra-low emissions standards by 2020;
- New bus park & ride facilities to the north and south of the city and a further expansion at Elland Road;
- Investment in a number of key corridors to reduce bus journey times and improve bus service reliability:
  - A61/A639 South: To provide a high quality bus priority corridor from the Stourton park & ride into the city centre;
  - A61 North: A series of bus priorities which address traffic hotspots, building on the existing Guideways in North Leeds;
  - A660: Improving bus journey times by investing in the Lawnswood roundabout;
  - A58 North East: Investment at key traffic hotspots to improve bus journey times along the corridor;
  - A647: Bus priority through the congested A647, linking to the park & ride expansion at New Pudsey railway station;
- Real time passenger information displays at bus stops in communities throughout Leeds; and
- Carry out a consultation led review of connectivity throughout the Leeds district and with funds available for community led transport projects.

2. A world class city centre gateway, being HS2 ready and high quality transport hubs

Many of the public transport arrival points in Leeds are located in iconic streets with a strong historic, cultural and architectural background. These arrival and departure points should link to Leeds Station, reflect our 'Best City' aspirations, enhance the public realm and improve the customer experience. Simplifying the road layouts to reduce congestion, upgrading the pedestrian environment, improving signage and legibility and redesigning stop infrastructure is proposed at the following key gateway locations:

- The Headrow – the main east west corridor in the city centre fronting Leeds Town Hall through the heart of the retail area;
- Infirmary Street / Park Row – primary Leeds station gateway and links to business district, civic quarter, hospital and universities; and
- Vicar Lane (Corn Exchange) / Boar Lane / Lower Briggate - Gateway to and links between retail core, markets, South Bank and Leeds Station.

3. Rail stations at key economic growth, housing and employment locations

It is recognised that our rail network is vital to our transport system, enabling efficient and effective strategic connectivity into Leeds and to the wider Leeds City Region. There has been significant growth in rail use in recent years with more expected in the future following the capacity enhancing new Northern and Trans-Pennine franchises and HS2 and Northern Powerhouse Rail. The proposed programme will develop the opportunities for three new rail stations across the city, plus improvements for access at others as follows:

- A parkway station serving Leeds Bradford Airport provides a rail link for airport passengers, supports employment growth surrounding the airport and provides strategic park & ride for the city and surrounding districts;
- A new station at White Rose to support the employment and retail centre via improved connectivity;
- A new station at Thorpe Park linked to employment and housing growth areas in the east of the city with a strategic park & ride function for the city and surrounding districts;
- Deliver access improvements at Cross Gates, Morley and Horsforth rail stations so all users can access all platforms; and
- Car park expansion at New Pudsey to increase its capacity within the Leeds Bradford corridor.

Our ambition remains to have a transport system that can move large numbers of people through the city. We will be reviewing the options for mass-transit solutions – be that light rail, tram-train or tram.

### Outcomes

As a consequence of these measures, we aim to:

- Move on the trajectory towards doubling bus patronage from 2016 levels in 10 years;
- Significantly improve air quality and reduce carbon emissions, particularly in the city centre;
- Support economic growth and job creation by creating almost 2,000 new jobs which will generate a GVA of over £200m p.a.
- Reduce road congestion; and
- Work towards all stations in Leeds being accessible.

Leeds £173.5m Public Transport Investment Programme December 2016

This package supports our overarching objectives:

- **Prosperous Leeds** – more people using a modern and attractive bus service and greater access to the rail network will enable the city to better accommodate growth. Improving the city centre environment will help attract new businesses and improve the city’s readiness for future opportunities such as HS2.
- **Liveable Leeds** – the improvements to the city centre and district centres will make them more people friendly. People will have access to a wider labour market. The significant programme of projects will support new opportunities for skills development and new and better local jobs. People of all abilities will have more opportunities to connect to the rail network.
• **Healthy Leeds** – people friendly streets encourage more walking and cycling whilst improvements to our bus fleet and more people travelling by public transport will improve air quality and reduce carbon emissions.

With this funding opportunity, the recent renewed commitment to HS2 and the Northern Powerhouse agenda, the prospect of further devolution deals and the West Yorkshire Transport and Bus Strategies, it is an appropriate time to set a new strategic approach for transport in the city.

Alongside the delivery of this short term programme, the Leeds Transport Strategy will be developed further in the next year, building on and continuing the Leeds Transport Conversation to set out the long term interventions needed to enable the growth aspirations for the City to be realised.
Impact on the People of Leeds

Dan is an 18 year old student, who travels from Chapel Allerton to Leeds College of Building in Leeds city centre. He catches the bus with friends who attend the college. According to the bus stop timetable, the bus is running late. By the time it arrives, Dan worries he might not make his favourite 9:00am class on time. When Dan gets to the front of the queue and tries to pay with a £20 note, he is told by the driver that he can’t as his doesn’t have change. Luckily, Dan’s friends halt and pay his fare, but this situation has increased the chance that he is going to miss the start of his class. The journey to the college is a long 17 minutes for Dan, he and his friends meet the start of the lesson and have to play catch up on work.

After

Before Dan leaves home to get the bus, he goes onto the Leeds bus app to buy his ticket for the journey. He meets his friends at the bus stop, talking about the match last night as the bus arrives, and they scan their tickets on the smart ticketing facilities on the bus. This reduces the waiting time of the bus at stops, meaning the bus is quick, on its journey along the A61 corridor. The changes to the corridor for buses mean Dan no longer worries he might miss his classes; won’t be regularly arriving early to his favourite class, thankful for the Leeds Public Transport Improvement Programme.

Claire is 45 years old, she lives in Morley and works in East Gartforth. She was involved in a bad traffic accident several years ago which has resulted in her having to permanently use a wheelchair. Claire lives close to Morley train station, but is unable to access the platform to commute to work. Instead she has an 80 minute commute, catching two buses which are often late and meaning sometimes sharing the disabled priority area with pushchairs.

After

The Leeds Public Transport Investment Programme has helped Claire feel more included and valued within Leeds. The accessibility improvements at Morley Station mean Claire is now able to access the rail network, significantly improving her journey experience to work. She can easily go to the city centre for shopping trips. This experience has become much safer and easier with the city centre gateways making the city centre more accessible and enjoyable for Claire.
Before
Peggy is a 67 year old retired nurse who’s lived in Roundhay all her life. Once a month, she goes to visit her friend Beryl, who lives in Pudsey. Peggy doesn’t own a car, so is reliant on the bus. Before leaving home, she looks at her paper timetable to check what time the bus should arrive at her stop, to go to the city centre. Peggy walks to the bus stop and waits for the bus, It doesn’t turn up at the time on the timetable, so she stands in the shelter to shield from the rain. With no up-to-date information available on the bus’s location, Peggy is unsure what time the bus will arrive. It eventually arrives 15 minutes late. The journey takes 17 minutes to Leeds city centre, with Peggy alighting at the Corn Exchange to catch her next bus to Pudsey. Peggy notices how the area has become rundown, not as attractive as it was when she regularly visited the city centre. Peggy hopes her bus to Pudsey turns up on time, so she can escape this uninviting polluted environment, to the cozy front room of Beryl’s house.

After
With the investment in real-time information at bus stops, Peggy finds the bus she wants to catch to visit her friend Beryl is due in 4 minutes, just as the timetable on the internet said. Peggy boards the new low emission bus, with a sense of satisfaction that, not only was she well informed of her transport, the bus is less polluting than it once was when she used to travel to Beryl’s. The bus ‘sails’ along the A58 corridor, soon arriving at the Corn Exchange. While Peggy has to wait for her next bus to Pudsey, she no longer minds, as the attractive public realm environment that has been created puts a smile across her face as she sees people enjoying the pleasant surroundings. Maybe next time, Peggy should ask Beryl to meet her in the city centre so they can reminisce and marvel at improvements which have been created.

Before
Tom is a 32 year old accountant who lives in Barnsley. He works in the financial quarter of Leeds, usually travelling to Leeds via car and using Leeds Bradford International Airport when he travels for monthly business trips to Berlin. Tom is beginning to get frustrated by his commute to Leeds, regularly queuing on the M621 for lengthy periods. Once he arrives in the city centre, his next challenge is to find a parking space, often resulting in Tom having to park and walk 20 minutes to work, reducing his productivity. Tom notices the cost to park in the city centre has recently risen considerably. When Tom travels to Berlin he has to drive to the airport, with no viable alternative as the 757 bus only departs from Leeds city centre.

After
The Leeds Public Transport Investment Programme has helped increase Tom’s productivity. Whilst he still commutes to Leeds by car, instead of driving into the city centre, he now uses the bus park and ride facility at Stourton. This is easily accessible by the motorway, meaning Tom is not going far out of his way, and is guaranteed a parking space reducing his worry and stress. With Tom able to access his emails via the on-board Wi-Fi, he can settle straight into work when he arrives at the office. This is usually earlier than it used to be, with the express busway for the Stourton bus, and the bus stopping just a 5 minute walk from the office. When Tom has meetings in Berlin, he can catch the train from Barnsley to Leeds, a second train to Leeds Bradford Airport Parkway, then an express bus to the airport reducing his journey time and cost.
Introduction
2. Introduction

2.1 Purpose of the Document

This document forms the Strategic Outline Case for the Leeds Public Transport Investment Programme. The document has been prepared in line with the principles of HMT Green Book and Department for Transport Major Scheme Business Case guidance and includes the five cases of Strategic, Economic, Financial, Commercial and Management.

This is a programme level Strategic Outline Case submission regarding a £270m programme of measures, with funding brought together from the Department for Transport, local government sources, plus significant contributions from the private sector.

2.2 Background

On the 12th May 2016, Government announced its decision not to grant powers for the construction and operation of the Leeds New Generation Transport (NGT) trolleybus system following an extended public inquiry. Ordinarily, in such circumstances, if a scheme fails at this stage, no funding is made available to the sponsoring authorities, with all the associated costs having to be borne by the sponsors. In an unprecedented move, recognising the history and the continuing need for significant public transport improvements, the Department for Transport’s funding element for NGT of £173.5m is being made available for “public transport improvements in Leeds”.

The development of this Strategic Outline Case has reflected on and been informed by the transport challenges facing City as well as the conclusions of the first phase of the ‘Leeds Transport Conversation’. It has also been developed to encompass robust private sector contributions, for example from bus operators.

The DfT have advised that following the submission of this Strategic Outline Case, a ‘Decision to Proceed’ from Central Government should be reached by March 2017. Following which, the full development of the schemes outlined in this document can commence, enabling the delivery of the majority of the schemes by 2021.

In parallel, working together Leeds City Council and WYCA will continue the conversation with the city about the longer term Leeds Transport Strategy, which will also include consider and outline the role of Mass Transit for the city.

2.3 Structure of the Document

As a programme level Strategic Outline Case submission, the structure and contents of the document are as follows:

- Chapter 3 – Strategic Case – outlining the challenges and opportunities for transport in Leeds;
- Chapter 4 – Strategic Case – option generation and defining the preferred option;
- Chapter 5 – Economic Case – demonstrating the economic benefits of the preferred option;
- Chapter 6 – Financial Case – providing an overview of the cost allocations for the programme;
- Chapter 7 – Commercial Case – outlines the proposed procurement opportunities for delivery of the programme; and
- Chapter 8 – Management Case – sets out the proposed programme governance arrangements, risk management, and monitoring and evaluation approach.
Strategic Case:
The Local Context
3. Strategic Case: The Local Context

3.1 Introduction

This chapter outlines the strategic case for the Leeds Public Transport Investment Programme. It will provide a summary of how the programme will contribute towards the wider national, regional and more local policy objectives. Moreover, the case for much needed investment in public transport is made. As part of this, the key challenges and opportunities for public transport investment in Leeds are set out. The Strategic Case is presented, as follows:

- Section 3.2 –The Local Context;
- Section 3.3 –Leeds: A Growing Economy;
- Section 3.4 –Policy Context;
- Section 3.5 –Alignment with Wider Programmes;
- Section 3.6 –The State of the City;
- Section 3.7 –Transport Challenges Facing the City;
- Section 3.8 –The Leeds Transport Conversation; and
- Section 3.9 –The Opportunity for the City.

This strategic context has been critical to shaping the development of the Leeds Public Transport Investment Programme, which is reported in Chapter 4.

3.2 Leeds in the Context of Leeds City Region

The Leeds City Region is the largest UK economy outside of London, and is critical to the North’s and the UK’s success. With an economy worth over £62 billion, Leeds City Region accounts for 5% of the UK’s economic output and a fifth of the output of the Northern Powerhouse¹. Figure 1 shows Leeds in the context of Leeds City Region.

Figure 1: The Leeds City Region

¹ GVA data for Local Enterprise Partnerships, 1997-2014, ONS 2015
The Leeds City Region has 10 districts and forms a conurbation of 3 million residents. The City Region is a well-defined functional economic area, with 93% of people both living and working there. The West Yorkshire Combined Authority (WYCA), which was formed in April 2014, is the Local Transport Authority and has responsibility for transport, economic development and regeneration in the five West Yorkshire Districts of Bradford, Calderdale, Kirklees, Leeds and Wakefield. Leeds City Council (LCC) is the planning and highways authority for the Leeds district.

Leeds is the centre of the City Region, both geographically and economically. With a population of 774,000 (Table 1), it is home to a quarter of Leeds City Region’s residents. The City also attracts a substantial inflow of workers from neighbouring districts, accounting for almost a third of all jobs in the City Region, and a third of total economic output. The Independent Economic Review, undertaken for the Northern Powerhouse in 2016, made specific reference to Leeds being critical to the need to rebalancing the North with the rest of England².

**Table 1: Leeds demographic and employment information**

<table>
<thead>
<tr>
<th></th>
<th>Leeds</th>
<th>Leeds City Region</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population, 2015</td>
<td>774,000</td>
<td>3,026,700</td>
<td>54,786,300</td>
</tr>
<tr>
<td>Total working age population, 2015</td>
<td>509,000</td>
<td>1,919,400</td>
<td>34,669,600</td>
</tr>
<tr>
<td>Change in working age population 2000-15</td>
<td>10.7%</td>
<td>9.9%</td>
<td>10.2%</td>
</tr>
<tr>
<td>GVA, 2014</td>
<td>£20,188m</td>
<td>£62,451m</td>
<td>£1,377,851m</td>
</tr>
<tr>
<td>Productivity (output per hour worked), 2014</td>
<td>£28.2</td>
<td>£27.2</td>
<td>£31.5</td>
</tr>
<tr>
<td>Total employment, 2015</td>
<td>437,900</td>
<td>1,372,300</td>
<td>25,698,800</td>
</tr>
<tr>
<td>Employment change, 2010-15</td>
<td>8.2%</td>
<td>5.7%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

*Source: West Yorkshire Combined Authority*
3.3 Leeds: A Growing Economy

The economic geography of the UK is changing, with the growth of knowledge intensive employment sectors, such as financial and professional services. There has been substantial development activity across the City, with major development schemes worth over £4 billion completed in the last 10 years. The pipeline of new schemes in development is even larger, with major investment areas including the South Bank, Kirkstall Forge, Aire Valley Enterprise Zone, Thorpe Park and the airport. Leeds City Council has been proactive in working with developers and Government to bring forward schemes providing funding for businesses to invest, and partnering with the private sector to invest in infrastructure.

Leeds is the second most attractive core city for inward investment, with the fastest rate of private sector jobs growth and largest wage increases of any city. Leeds has the largest number of fast-growing “scale-up” firms outside the South East. Leeds is also a world leader in big data and home to the Open Data Institute and Data Mill North. It is a world leading city for health innovation, and has more health professionals than any other city in the world, giving a wealth of expertise in health data science.

The Yorkshire & Humber Regional Econometric Model (REM), developed by Experian, suggest that the Leeds economy is set to grow to be £29.5bn by 2036, an increase of 49% on 2016. Employment, measured by the number of full-time equivalents (FTEs), is set to increase by 52,000 over the same period to 439,000. This 13.5% forecast growth in employment exceeds the national forecast of 11.3% over the same period.

3.3.1 Ensuring Good Growth

Both Leeds City Region and the City of Leeds are committed to the principle of “good growth”. This means achieving both the right quantity and the right quality of growth; creating a strong, productive and resilient economy where a radical uplift in business competitiveness, productivity and profits go hand in hand with access to good jobs that pay higher wages, and where all residents have access to opportunities and enjoy improved quality of life.

Leeds is currently performing relatively well on earnings, both for all workers and those on low pay. It is also close to the UK average on employment, but lags behind the UK on measures crucial to sustainability and inclusivity, such as fuel poverty and skill level, as well as on output and productivity. Leeds is certainly not alone, other major UK cities also trail the national average on these indicators, but it identifies areas where work can be done to achieve the City’s good growth ambitions.

3.3.2 Business, economic output and productivity

There are over 26,000 businesses located in Leeds. The City has seen strong growth in its business base in recent years, with 29% more businesses than in 2010 compared to growth of 21% nationally. The City is the largest centre outside London for financial and professional services, with 9,300 financial and professional firms based in the City, collectively employing 142,000 people. These knowledge-based industries are crucial to the future growth of the UK economy, and their growth in Leeds in recent years has far outpaced national performance. There are now 51% more financial and professional services firms in Leeds than there were in 2010, whilst the number of such firms has increased by 38% across the UK as a whole.

Figure 2: Share of businesses in selected sectors - Leeds and UK, 2016

Source: Inter-Departmental Business Register, ONS 2016
Leeds produces economic output of £20.2bn per year, a third of the City Region’s total output. The City’s output has grown by an average of 4% per year between 2000 and 2014 (Figure 3), broadly in line with the UK average growth rate of 4.2% per year. However, the economic downturn of 2008 had a greater impact on growth in Leeds than it did nationally. In the years between 2000 and 2008, immediately prior to the crash, growth in Leeds averaged 6.0%, faster than the 5.2% across the UK as a whole. Indeed, output in Leeds grew faster than the national average in 6 out of 9 years between 2000 and 2008. Between 2008 and 2014, growth fell to an average 1.4% per year in Leeds, just half of the 2.8% averaged nationally. National output has grown faster nationally than it has in Leeds in each year since the start of the downturn.

Figure 3: Index of economic output (GVA) - Leeds and UK, 2000-14

![Index of economic output (GVA) - Leeds and UK, 2000-14](image)

Source: Office of National Statistics

Whilst productivity in Leeds is lower than across the UK as a whole, it does outperform all other core cities with the exception of Bristol as shown in Figure 4. Output per hour worked in Leeds stood at £28.80 in 2014, around 91% of UK productivity levels, but higher than the £27.50 in Sheffield, the next best performing major northern city. The Leeds Public Transport Investment Programme will be a key part of ensuring access to employment and training is not inhibited by poor transport options.

Figure 4: Productivity in core cities, 2004-14

![Productivity in core cities, 2004-14](image)

Source: Sub-regional productivity, 2000-14, ONS 2016
3.3.3 Employment, skills and inclusion: the socio economic context

Almost 438,000 people are employed in Leeds, in a diverse range of sectors with the City a net importer of jobs. The City retains an important core of manufacturing jobs, with over 29,000 employed in the sector – almost 7% of total employment. Transport and logistics is also a major employment area, accounting for over 13% of all jobs.

Financial and professional services have been at the centre of growth in the City's economy in recent years. Almost 142,000 people were employed in the sector in 2015, around 32.5% of all employment in the City. This number has risen by 32,700 (30%) since 2009, with this growth largely driven by the professional, scientific & technical sector, where employment is up by 44.6%, and the business administration & support sector (up 42.7%). These sectors have experienced growth well in excess of the national average, where employment across the broader financial & professional services sector is up by 16.7% since 2009. They also form important specialisms for the City, with employment in financial services 75% higher, and in professional services 30% higher than the national average. Leeds also has a thriving creative & digital sector. The number of such businesses located in the City has grown by 37% since 2010 to over 3,200, collectively employing over 62,000 people.

The City has seen strong growth in average earnings in recent years, with wages now broadly in line with the national average. Median wages for Leeds residents working full-time currently stand at £528.70 per week, up by 10.8% over the past five years. This has outpaced national growth of 8.1%, though earnings remain slightly lower than the £538.70 averaged nationally. When looking at earnings for all workers, as opposed to just those working full-time, wages in Leeds are slightly higher than the national average - £441.30 per week, as opposed to £438.60 nationally.

Employment levels in Leeds are also close to the national average. The City's employment rate of 73.3% in June 2016 is slightly below the UK rate 73.7%, but is higher than all core cities apart from Bristol. The employment rate was generally higher than the national average in the years preceding the recession, but fell more sharply in the years following 2008 and took longer to recover and close the gap.

A similar picture emerges when looking at unemployment. As Figure 5 shows, the unemployment rate in Leeds was close to the national average before the recession, after which the rate in Leeds rose to 10% whilst peaking around 8% nationally. The gap has closed in recent years however, and in June 2016, the unemployment rate for Leeds matched the UK rate of 5.2%. Yet, at a ward level, there is significant variation in this figure though with data from the 2011 Census showing the wards of Harewood and Wetherby to have unemployment of 2.3%, compared to 10.1% and 9.3% for the wards of Gipton and Harehills and Burmantofts and Richmond Hill respectively.

Figure 5: Unemployment rate - Leeds and UK, 2008-16
Despite this improving labour market picture, the City still has significant pockets of deprivation. 21.2% of the population of Leeds live in the 10% most deprived areas of the country. Leeds District is ranked 100 out of 326 authorities according to The Indices of Deprivation 2015 meaning it is one of the 30% most deprived Local Authority areas.

Similar to unemployment, deprivation across the district is not uniform; Figure 6 shows the location of the most deprived wards in Leeds. Areas which are most deprived are predominantly located to the south and east of the city centre.

**Figure 6: Indices of Multiple Deprivation (IMD) Income Deprivation**

As well as a combined Indices of Multiple Deprivation score, a number of separate indicators are included below to illustrate the varying levels of deprivation by Lower Super Output Area. These are income, living environment, health and crime. The results of these individual indicators are presented in Figure 7 to Figure 10. The most disadvantaged areas portrayed by the indicators are around the east and south of the City close to Harehills and in the areas of Middleton and Morley.
Figure 7: Income Deprivation

Figure 8: Living Environment Deprivation
Figure 9: Health Deprivation and Disability

Source: 2015 IMD

Figure 10: Crime Deprivation
Improved connectivity to the areas where there is higher levels of deprivation is one mechanism to improve access to employment and training opportunities, to make all the communities across Leeds attractive places to live and work. By necessity, this will form part of the investment programme.

Improving skill levels of residents will support the challenges the City faces with regard to productivity. Whilst the proportion of the working age population in Leeds who have no formal qualifications is in line with the national average at 8.8% (Figure 11), the City has comparatively few people educated to degree level. Only 33% of residents of Leeds have NVQ4+ qualifications, compared to 37% nationally and lower than most core city areas.

**Figure 11: Qualification levels - core cities, 2015**

3.3.4 Summary of Socio-Economic Context

Leeds is undergoing substantial land-use and transport change. The impact of not developing the transport system given the economic and socio-demographic growth in the city seen in recent years is that there will continue to be on-going problems caused by the demand for use of the transport network exceeding its capacity, particularly at peak times. Unless addressed this will make Leeds a less attractive destination for developers, employers and employees and ultimately, this will constrain the City’s future growth.

Understanding the socio-economic context is critical to developing transport interventions which will help the City to grow. The socio-economic context for Leeds can be summarised as:

- Leeds is a major economic hub in the North, producing economic output of £20.2bn per year, a third of the City Region’s total output. Forecasts suggest that the Leeds economy is set to grow to be £29.5bn by 2036, an increase of 49% on 2016;
- Leeds is the largest centre for financial and professional services outside London with manufacturing and transport and logistics also major employment areas;
- The strength of the economy has seen substantial development activity across Leeds in the last decade with the scope and potential impact of new schemes in development even larger;
- Leeds has the second highest employment rate of the core cities with median wages for Leeds residents up 10.8% in the last 5 years, outpacing the national growth of 8.1%;
- Unemployment for Leeds as a whole matches the UK at 5.2% though analysis shows large differences within Leeds with unemployment significantly higher than the Leeds average in the wards of Gipton and Harehills and Burmantofts and Richmond Hill;
- The District of Leeds is within the top 30% most deprived local authorities; and
- The wards to the south and east of the city centre have the highest levels of deprivation.
3.4 Policy Context

This section summarises the key strategies / policies and Figure 12 summarises how the policy context aligns and overlaps at different geographical scales. A summary of each is provided below.

Figure 12: How the Transport policy aligns for Leeds

3.4.1 The emerging pan-Northern Transport Strategy

The emerging pan-Northern Transport Strategy is being developed for Transport for the North, which will become the first sub-national transport body in 2017. The Northern Transport Strategy\(^3\) will establish a 40 year vision for rail, highway, freight, international connectivity and smart and integrated travel across the North. Through this programme, ambitious plans are being developed to transform journey times between the major cities of the North through Northern Powerhouse Rail and to provide a better customer service for passengers through simplified fares and an integrated ticketing offer. Within the Northern Transport Strategy, it is also noted how improved connectivity to the North’s international gateway, such as Leeds Bradford Airport, is required to support the businesses in the North to compete on the world stage.

The Leeds Public Transport Investment Programme will accelerate this objective by delivering improved access to the airport and help to make connectivity within Leeds City Region competitive at the global scale.

3.4.2 Leeds City Region Strategic Economic Plan

The Leeds City Region Strategic Economic Plan (SEP)\(^4\), 2016-2036, is the ambitious, long-term strategy to fulfill the Leeds City Region’s exceptional economic potential, and cement its place as a growth engine for the North and the nation as a whole.

Refreshed in 2016, the vision is “to be a globally recognised economy where good growth delivers high levels of prosperity, jobs and quality of life for everyone”. In achieving this, the City Region will:

- deliver upwards of 35,000 additional jobs and £3.7 billion of annual economic output by 2036;
- become a positive, above average contributor to the UK economy;
- seek to exceed the national average on high level skills and to become a ‘NEET free’ City Region; and
- make good progress on headline indicators of growth and productivity, employment, earnings, skills and environmental sustainability.

To meet this ambition, a key priority of the SEP is to accelerate job creation, deliver new homes and secure more private sector investment in key strategic locations. This will be achieved by providing commercial and residential sites that have the best possible digital and energy connections, sustainable transport access, and are resilient against disruption and damage.

The SEP identifies 10 large scale ‘game changing’ initiatives that will achieve real progress towards delivering the City Region’s vision. This includes:

\(^4\) [http://www.westyorks-ca.gov.uk/business/](http://www.westyorks-ca.gov.uk/business/)
Boost business growth, productivity, exports and investment by linking businesses to support and funding, including through the LEP growth service, skills service and trade and investment programme;

Deliver 30+ West Yorkshire Plus Transport Fund schemes and make progress towards a single ‘metro style’ public transport network, connected to major national/northern schemes such as HS2 and Northern Powerhouse Rail; and

Develop and regenerate integrated spatial priority areas, supporting employment, quality environments and the building of 10,000-13,000 new homes per year.

The Leeds Public Transport Investment Programme will help facilitate these initiatives by providing transport which improves peoples’ access to jobs and opportunities, bringing a major economic boost to the City and driving economic growth and value for the City Region.

3.4.2.1 Inclusive Growth

The Combined Authority and LEP Board have together initiated an Inclusive Growth project to better enable the City Region to achieve the goals in the Strategic Economic Plan and ensure the benefits of growth are experienced widely. The first stage of its work seeks to:

- Provide analysis of intelligence and data to establish strengths and gaps in current work;
- Undertake an audit of current activities across the WYCA geography, and draw out best practice;
- Determine collective priorities, and engage widely with local members, businesses and community groups on what good growth means to them; and
- Support a joint city region and RSA conference on Inclusive Growth in Bradford, capitalising on the RSA’s national activity.

3.4.3 West Yorkshire Transport & Bus Strategy

The West Yorkshire Transport Strategy⁵ sets out a 20 year vision for travel around West Yorkshire, to make it easier and more reliable, “using a high class, modern, well connected transport network, that enhances business success and peoples’ lives”. The Transport Strategy supports the growth aspirations of the Leeds City Region Strategic Economic Plan by aiming to achieve a radical uplift in business success and in connecting growth and wealth, to ensure that people, communities and the environment benefit from sustained, positive outcomes. There are three overarching objectives:

- Economic Growth: To improve levels of connectivity and reduce congestion, thereby increasing business productivity and providing access to wider labour markets;
- Quality of Life: To create a ‘sense of place’, encouraging active travel and health benefits and increasing access to opportunities in a safe way; and
- Sustainability: To have a positive impact on our built and natural environment, improving development viability and increasing longer term resilience.

The bus network is an integral part of the transport system across West Yorkshire, currently 3.5 million bus journeys are made each week. The new Bus Strategy⁶ for West Yorkshire sets out that the vision of the bus strategy is “to create a modern, integrated and innovative bus system, which puts customers first and contributes to the delivery of West Yorkshire’s economic, environmental and quality of life ambitions, as set out in the Strategic Economic Plan and the West Yorkshire Transport Strategy”. The strategy seeks to increase patronage by 25% by 2026, by making catching the bus in West Yorkshire an attractive and natural choice for everyone.

To deliver growth and to resolve the challenges that currently exist in the industry, the West Yorkshire Bus Strategy proposes a blend of coordinated policies:

- To provide consistent and excellent customer services across the bus system;
- To provide modern, coherent and integrated bus services;
- To provide integrated, simple and affordable bus fares for all;
- To provide easily accessible and reliable travel information;

⁵ http://www.westyorks-ca.gov.uk/transport-strategy/
⁶ http://www.westyorks-ca.gov.uk/Transport/Bus_Strategy/
- To present the bus system as a single network; and
- To provide a modern bus system, which contributes to improved air quality.

3.4.4 Leeds District Local Plan (Core Strategy)

The Leeds Core Strategy\(^7\) sets out the spatial planning framework for the Leeds District, with a focus on plans for the longer term regeneration and growth over a 16 year period.

The Core Strategy was formally adopted by Leeds City Council on 12th November 2014, been found sound by the Inspector appointed to oversee the public examination process, subject to the inclusion of the main modifications set out in the Appendix 1 to his report. The Core Strategy now forms part of the Development Plan and will be used in determining planning applications. The Council will continue to have regard to the remaining UDP ‘saved’ policies. All Local Development Framework (LDF) documents will be directly guided by the Core Strategy policies, including the Site Allocations Plan, Aire Valley Leeds Area Action Plan and Neighbourhood Plans.

The Core Strategy has four key objectives:
- Prioritise sustainable development in planning for economic prosperity;
- Seek to remove social inequality;
- Secure opportunities for regeneration and planning for infrastructure, and
- Maintain, protect and enhance the environmental quality for the people of Leeds.

Leeds has ambitious plans for housing and employment growth, including building more affordable housing, improving infrastructure, greenspace and public health. Good quality new homes are at the heart of Council ambitions for growth, and Leeds City Council is committed to providing 70,000 additional homes by 2028. A further 493 hectares of employment land and 1 million sqm of office space is also planned to accommodate forecast growth in jobs. These growth aspirations are likely to result in an increased demand for travel, with the challenge for Leeds to accommodate the increasing population, whilst:
- Minimising the growth in travel by car in order to reduce carbon emissions and traffic congestion;
- Ensuring the appropriate location and accessibility of development;
- Continuing to improve the public transport networks and services to accommodate growth;
- Improving journey time reliability and the connections with key destinations outside of the city centre; and

The Leeds Public Transport Investment Programme will help deliver these goals.

3.4.5 Emerging Leeds Local Transport Strategy

Following the recent Government decision not to grant powers for the NGT trolleybus project, Leeds has commenced development of a new, full Transport Strategy\(^8\) for the City. This new strategy will consider the growth of the City as well as the problems and challenges. It will identify a pipeline of coordinated further investments that to enable the City to deliver its aspirations. The City wants to take a significant step towards a transformational change to the public transport offer across Leeds and the emerging strategy is built on three overarching themes:

- Prosperous Leeds - A transport system for Leeds that facilitates a prosperous, sustainable economy for the City, the City Region, the North, cementing our long-term economic competitiveness both nationally and internationally;
- Liveable Leeds - A transport system which helps Leeds to be a great place to live and work for everyone;
- Healthy Leeds - A transport system that has a positive effect on peoples’ health and wellbeing and raises health and environmental standards across the City through the promotion of walking and cycling and the reduction of air pollution, noise and carbon emissions.

The Strategy will set a 20 year vision for transport in Leeds. Getting the transport system in Leeds right is a critical element of achieving Leeds City Council’s Best City ambition. A good transport system, connecting people to jobs, goods to people, bringing businesses closer together, and providing opportunities for training and reducing social exclusion, is a vital requirement of a competitive economy. The ambition remains to have


a transport system that can transport large numbers of people through the growing city. Therefore, as part of the development of the Leeds Transport Strategy, options for mass transit will be reviewed. The programme for completion of the strategy is set out in Figure 13 below.

**Figure 13: Towards a Leeds Transport Strategy**

![Figure 13: Towards a Leeds Transport Strategy](image-url)
3.5 Alignment with Wider Schemes

The schemes to be delivered through this Strategic Outline Case are developed in the context of existing national and local transport schemes already being developed or delivered. A summary of the schemes already being developed or delivered is shown in Figure 14 with further details provided below.

**Figure 14: Wider Delivery Programme Timeline**

![Wider Delivery Programme Timeline](image)

3.5.1 High Speed 2: A Growth Strategy for Leeds Station

High Speed Rail provides the prospect of transformational change, which would give a major boost to the Leeds City Region economy. The Government plans to invest £55.7 billion to build a new high speed rail network, High Speed 2 (HS2), from London to Birmingham, Leeds and Manchester (Figure 15). Direct high speed rail services will be operational by 2033, reducing journey times from London to Leeds by up to an hour, to only 83 minutes. This new line will provide a significant increase in capacity to meet the growing demand for rail travel.

As well as the direct improvements from HS2, the new high speed network will release constraints on the existing local and longer distance rail networks, creating opportunities for improving connections between the North’s major cities and towns for commuters, business travel and potentially freight. Local politicians have called on the Government to accelerate delivery of HS2 and to future proof a connection to the existing High Speed 1 in the south, for improved cross-channel links.

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A new HS2 station – the Yorkshire Hub – will be located in the centre of Leeds, integrated with the existing Leeds rail station. We are working with the Government, HS2 Ltd, the rail industry, Transport for the North and local partners to develop our proposals for the Yorkshire Hub now\(^\text{10}\). The upgrade of Leeds station will be a project of regional and national significance, providing a centrepiece of the region’s transport network and a world-class passenger experience – bringing together onto a single integrated site HS2, Northern Powerhouse Rail (previously called HS3) and other inter-city and urban rail services, alongside regional rail and other local public transport services.

Creating the Yorkshire Hub, will not only strongly support the regeneration in the South Bank area of Leeds and the transformation of Leeds city centre, but the Yorkshire Hub will be an asset that benefits the whole of the Leeds City Region. Investment from the Leeds Public Transport Investment Programme will play a fundamental role in helping advance the Yorkshire Hub proposal to create a world class gateway to the rest of the city centre and beyond, whilst increasing peoples’ access to the wider rail network. Our aim is to provide a step change to the One System Public Transport ambition set out in the West Yorkshire Transport Strategy.

### 3.5.2 Leeds City Region Growth Deal (West Yorkshire plus Transport Fund)

The West Yorkshire plus Transport Fund\(^\text{11}\) gives the opportunity for the region to develop a number of schemes to support growth and jobs. The £1bn fund is targeted at reducing congestion, improving the flow of freight and making it easier for people to commute to and from expected major growth areas. In Leeds, the schemes under development include:

- Leeds City Centre Package - increasing capacity along the M621 and Armley gyratory to enable traffic to be removed from Leeds City Square;
- Leeds Airport Link Road - Surface access improvements to Leeds Bradford Airport;
- East Leeds Orbital Road link road – to unlock housing and development east of Leeds; and
- A new park and ride at Temple Green which will provide an extra 1,000 spaces.

The West Yorkshire plus Transport Fund programme complements the recently delivered major schemes in Leeds which include the Elland Road park & ride, delivered in partnership with WYCA, and now being extended to meet demand; the new station at Kirkstall Forge which provides a new park & ride option and unlocks new homes and employment; and the Leeds rail station southern entrance. The rail measures will complement the greater local control through Rail North, growth and new trains provided by the new Northern and Trans Pennine franchises.

The Leeds Public Transport Investment Programme will accelerate the delivery of several of the West Yorkshire plus Transport Fund schemes whilst going above and beyond to complement the overarching aims of the West Yorkshire Transport Strategy and drive the vision for bus provision and service levels across West Yorkshire.

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\(^{10}\) [http://www.leedsgrowthstrategy.co.uk/]

\(^{11}\) [http://www.westyorks-ca.gov.uk/wytf/]
3.6 The State of the City of Leeds

3.6.1 Role of Leeds City Centre

GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom. The link between GVA and GDP can be defined as GVA (at current basic prices) plus a tax on products less subsidies on products is GDP (at current market prices).

In 2011, GVA for West Yorkshire was £41.3 billion. Leeds contributed £18.0 billion to this representing 44% of the West Yorkshire total, being the largest contributor in West Yorkshire. With 34% of West Yorkshire’s population, the GVA contribution of Leeds is disproportionate.

Leeds city centre performs a key economic and strategic role at the heart of the Leeds district, accounting for 27% of all jobs in Leeds. Increasingly, the city centre is playing the role of a centre for the whole of Leeds City Region, as highlighted in Figure 16. Leeds city centre makes up 0.04% of all land in the Leeds City Region, yet was home to 6.2% of all private sector jobs in 2011. This concentration of economic activity within the city centre has resulted in Leeds being the second most attractive core city for inward investment. For example, Leeds has now become a world leader in big data and health innovation.

Figure 16: Location of high-skilled jobs across Leeds City Region, 2011

Source: Core Strength – Centre for Cities

Leeds city centre’s role is not only economic; it is a place of learning and leisure, with health, cultural and civic institutions as well. The universities (Leeds Beckett and University of Leeds) play an important role with 56,000 students enrolled. The city centre is also home to an established and developing residential population. The number of people living in the city centre grew by 96% between 2001 and 2011 with further growth of city centre living a strong aspiration of the sustainable growth of Leeds; the LDF Core Strategy outlining plans for 10,200 additional dwellings in the city centre by 2028.

There is also a strong emphasis on further economic growth in the future in the city centre, exemplified by the ambitious South Bank masterplan. One of Europe’s largest regeneration projects, the aim is to double the size of Leeds city centre by regenerating 180 hectares of land, providing 35,000 jobs and over 4,000 homes. For this and other future city centre developments to be successful, it is essential that transport systems are in place to allow people to move easily in a denser and productive city centre with good connections to link workers to businesses and businesses to other businesses. This therefore emphasises the need for significant investment in transport to help accommodate and facilitate this growth.

Investment will be needed in public transport to support this future growth of Leeds city centre, as private transport will become less practical in a busier central area. Leeds City Council’s vision in their Core Strategy is to minimise the growth in travel by car and continue to improve the public transport networks and services.
3.6.2 The Communities of Leeds

The Leeds district covers an area of 213 square miles, with the city centre at its heart the main urban area covers nearly a third of that area (Figure 17). This urban area also includes inner-city communities such as Beeston and Harehills to outer suburbs like Horsforth and Roundhay. The rural parts of Leeds include larger settlements such as Wetherby and Otley, as well as several smaller towns, small villages and other rural settlements. Whilst each individual community has an individual character and identity, Leeds City Council has a shared vision for Leeds to be the best City in the UK by 2030 with all communities’ attractive places to live and work. This will see Leeds being fair, open and welcoming, its economy prosperous and sustainable, and all the communities of Leeds being successful.

Figure 17: Communities of Leeds

Source: Leeds City Council, Core Strategy

To realise this vision, it is essential that the individual transport needs of the communities are considered. The transport need varies across the communities: for example, some of the south and east of the district are the most deprived in Leeds so connectivity to employment and training opportunities are essential. In addition, improvements to access between communities and from these communities to the city centre are vital to access the opportunities Leeds city centre provides and so residents enjoy improved quality of life. Feedback from the Leeds Transport Conversation has shown that these connections for all communities need to be improved. Improving connections to the transport network will be essential to achieving the goal of being best City in the UK by 2030, and part of the programme seeks to address this need to ensure all communities benefit from transport investment.

3.6.3 Transport Connectivity through Leeds

Leeds City Region is at the centre of the country and the city of Leeds sits at the heart of the city region. Geographically it sits in the middle, at the cross roads of London, Edinburgh, Liverpool and Hull. It at the centre of our national transport networks – from East Coast Mainline and Trans Pennine to the M1 and M62.

The distinctiveness as a city region is made up of many diverse economic hubs. Excellent connectivity is key for the city region to reach its full potential, ensuring the region can work effectively together, and each add value so that the sum of our parts is greater – with distinct towns and cities joining to form a single economy.
We are fully supportive of the work of Transport for the North to reduce journey times and increase capacity and frequency between the largest cities - the Northern Powerhouse starts here.

The City's role as a major economic centre necessitates significant investment in transport and wider infrastructure. Over the 40 years from 1971 to 2011, the number of cross-boundary commuting journeys between local authority districts has increased three fold, from 121,000 to 355,000 trips between 1971 and 2011. Cross boundary travel now represents 37% of all commuting in West Yorkshire. Rail is the predominant cross boundary public transport mode, accounting for 71% of cross boundary commuting in 2011 (28,900 of 40,500 trips). The corresponding bus figure is 19% (19,800 of 102,200 trips). In Leeds, 31% of people working in the district live outside the boundary\textsuperscript{12}. Figure 18 summarises the strategic transport network around Leeds.

**Figure 18: Transport Connectivity around Leeds**

Within Leeds District, there are five key modes of transport; car, rail, freight, bus and active modes. A summary around the role of each is provided below:

### 3.6.3.1 Role of the Car

Leeds is at the heart of the strategic highway and motorway network with the M621, A58(M), M62, M1 and A1(M) passing through Leeds and providing East-West and North-South connectivity across the entire country. Passing through Leeds, these sections of motorway are some of the most congested in the country and Highways England is continuing to invest heavily in upgrading to increase capacity. This investment in highway infrastructure has been complemented by increases in car trips and recent figures have indicated that car traffic has returned to pre-recession levels with 7.7 billion vehicles miles by car across West Yorkshire in 2015.

Across Leeds there are many communities where there is no rail station and often bus services which do not reflect the current travel patterns. In these areas the car is the main mode of transport and as such, is key to accessing employment and training opportunities. This is reflected through car trips in Leeds accounting for 44% of journeys in 2011. In rural areas of Leeds commuting by car is as high as 60%. Overall, it can be seen that at present travel by car is the dominant transport mode in the City.

When looking at trips to the city centre, the proportion of trips by car are much lower due to a combination of factors including congestion in peak periods and the radial bus and rail services available into the city centre. However, the level of car trips into the city centre is still much higher than other UK Core Cities. The congestion, particularly on the radial routes into Leeds, is constraining potential job opportunities as people struggle to get into the city centre or to other key employment sites.
3.6.3.2 Role of Rail

As well as being at the heart of the highway network, Leeds is also at the centre of the national rail network. Leeds railway station provides connectivity to every corner of the UK, from London, to Penzance, the Midlands and Trans Pennine and to the North and across Scotland. Rail services in Leeds can be summarised as follows:

- Long distance high speed services to London from Wakefield, Leeds, Bradford, and other regional centres;
- Cross country services between Scotland/North East and Birmingham/South Coast and South West that stop at Leeds and Wakefield;
- Inter-regional services from the North East, Scarborough, Hull and York to Manchester, Manchester Airport and Liverpool stopping at Garforth, Leeds, Dewsbury and Huddersfield;
- Inter-regional services from York to Blackpool via Leeds, Bradford and the Calder Valley; and
- Local services that provide important commuting and leisure connections to Leeds and key regional centres including Bradford, Huddersfield and Wakefield.

As a result of this connectivity, commuting patterns are changing and the role of rail is increasingly important for those areas which can benefit from a local railway station in Leeds district. The number of cross-boundary commuting journeys between local authority districts has increased three fold over the last 30 years to 355,000 trips. Cross boundary travel now represents 37% of all commuting in West Yorkshire. Rail is the predominant cross boundary public transport mode, accounting for 71% of cross boundary commuting.

Unlike other large cities, Leeds has just one city centre railway station. This improves interchange connectivity and has enabled Leeds to become the busiest station in the North of England and the third-busiest station in the UK outside of London, after Birmingham New Street and Glasgow Central. Figures released by the Office of Rail and Road show that in 2015-2016 the annual usage of Leeds rail station was 29,723,734, the equivalent of 81,435 per day. In 2006 it was 17,356,732, indicating that annual usage has grown by over 12 million in the last ten years, an increase of 71.2%. This growth is expected to continue and with further increase once HS2 and Northern PowerHouse Rail also connect into the existing station.

In January 2016, the Leeds station southern entrance was opened and is expected to provide 20% of commuters with faster links to employment sites south of Leeds city centre and to reduce crowding at the existing exit. Whilst this will make rail travel to the south of the City more attractive, the overcrowding on the rail network is still likely to reduce the attractiveness for use.

3.6.3.3 Role of Bus

Bus is a fundamental and significant component in the delivery of a modern, integrated transport network for Leeds. Whilst there are only 14 suburban rail stations, there are over 4,400 bus stops served by over 600 buses every day. Buses are a crucial component of the Leeds transport system and often the only public transport option for many people. Each week people in West Yorkshire make almost 3 million journeys on local bus services, making them the most highly used form of public transport.

Buses take people to work, school, college and university, hospital, shops and to a range of social and leisure activities across West Yorkshire. In addition to the economic benefits, the bus is an effective tool of social policy. Vulnerable and socially disadvantaged groups in society are often the most reliant on bus networks. Bus services are fundamental to providing the jobless with access to work; young people to education and training; and providing a way out of social isolation for older and disabled people. Buses:

- Allow people travel to and from work. For many commuters, if a bus were not available they would have to either change job or would not be able to work at all;
- Bring wider productivity benefits to urban economies bringing business closer together, lowering costs and increasing productivity. It is estimated that bus networks in Metropolitan areas generate in excess of £400m per year from these types of benefits;
- Enable more people to participate in the labour market, retain employment and stay in work longer;
- Provide access to a wider range of jobs and increasing the chances of employers and employees achieving the right skills match;
- Allow travel to and from school, college or university, which is allowing students to gain the knowledge and skills that will underpin the future West Yorkshire economy;
Facilitate travel to and from shops and various leisure attractions. Collectively, it is estimated that bus users spend £27.2bn annually on retail and leisure. Buses allow consumers to access shops and services more easily and enable them to source a wider range of products or take advantage of better prices. By supporting access to key retail locations, buses provide a platform for further retail development which can help local economies grow and prosper; and

Importantly, as long as they are affordable, buses are available to all. They allow those without a car, either through choice or because they cannot afford one, to access jobs and services. Without buses, it would be impossible for West Yorkshire’s towns and cities to function, or grow.

3.6.3.4 Role of Freight

The freight sector is essential to supporting the wider economy and encouraging prosperity. West Yorkshire is the destination of 61 million tonnes and the origin of over 54 million tonnes of freight annually. 93% of this freight is transported by road and 7% by rail. Whilst the motorway network around Leeds takes the majority of freight traffic (66%). Leeds has a number of key freight destinations. Not least, Stourton, which is a key regional centre for freight, as it is the location of an intermodal rail freight terminal. Leeds city centre is also a key destination for freight deliveries.

Despite the economic benefits, congestion on the both the strategic and local road network makes the movement of freight inefficient, causing delays for deliveries, and ultimately costing the economy money. The sector has a disproportionately negative impact on local environments, such as increased emissions and noise, which is exacerbated during congested road conditions. However, freight distribution is now changing. ‘Just in time deliveries’ and the impact of on-line shopping are having a significant impact. Keeping freight on the key route network as much as possible, is one method in which to manage the impact on local environments.

As well as road and rail, freight is also transported by water. However, water freight has declined considerably over recent years. However, water as a mode does have the potential to grow for bulk haul items. Water based trips offer carbon savings over road based movements, free up capacity on the road and rail network and are suitable for bulk freight which tend not to be time sensitive products. In Leeds, the Leeds-Liverpool canal passes through the city centre, providing an opportunity for freight transport.

3.6.3.5 Role of Active Modes

Walking and cycling are a growing form of transport in Leeds. The 2011 Census showed that the proportion of cycle trips for travel to work journeys has increased by 70% since the 2001 Census, demonstrating a step change in appetite for cycling within West Yorkshire. This growth in cycling is supported by the Active Peoples Survey (2012), which showed that the proportion of participants who cycle for both leisure and as a mode of transport at least once a month in Leeds was 10.3%. In addition, across Yorkshire, Sport England has recorded a 6% increase in cycling once a week since 2011 and a 16% increase since 2008.

Despite the increases in cycling identified in the 2011 Census, the proportion of people that cycle to work in Leeds is still low compared with other cities. Local consultation highlighted a lack of infrastructure, safety concerns and lack of training as three key issues, which were barriers to greater levels of cycling. This is supported by the CityConnect pre-scheme monitoring, which showed that 44% of respondents were fairly uncomfortable or very uncomfortable riding a bike on roads used by cars and other vehicles, suggesting busy roads are deterring the uptake of cycling in West Yorkshire. There is therefore a need to provide high quality cycle routes to reduce or remove conflict with other road traffic. This is supported by the results of the West Yorkshire Combined Authority Tracker Survey, which showed that 15% did not cycle because they were worried about not being safe on the roads.

In 2016, Leeds City Council completed the Leeds to Bradford Cycle Superhighway, this is the first Cycle Superhighway in a network of high quality cycle infrastructure to generate a step change in the design and delivery of cycle facilities across the City, which has generated over 100,000 cycle trips. The success of CityConnect was followed by the delivery of a second phase of infrastructure improvements, which are focussing on integrating cycling into the city centre and creating connections to the north and south. The infrastructure components are supported by an extensive behavioural change programme, which has been working with communities across the city to encourage the take up of walking and cycling. This has been particularly focussed on communities where there are high levels of deprivation and poor health inequalities.

3.6.4 Recent Investment in Transport in Leeds

The Leeds Public Transport Investment Programme will build on a number of recent investments in public transport across Leeds. The A65 Quality Bus Corridor\(^\text{14}\) has seen the delivery of bus priority on one of the most congested radial corridors into Leeds city centre. The scheme opened in August 2012 delivering reduced journey times in the peak hours and was complemented by a £3 million investment in the vehicles operating on the corridor by First Group. Overall the scheme culminated in a patronage increase of up to 12% in the first year of operation. It is success such as this, which this programme will aim to build upon.

Leeds City Council started the delivery of a programme of park & rides, which has been identified as being essential to manage the traffic growth in the City, coupled with the shortfall in parking facilities in the city centre, with the predicted development of ‘cleared site’ car parks expected as the economy grows. The programme started with the opening of the hugely successful Elland Road in July 2014. The original 400 space car park offered a bus service every 10 minutes Monday to Saturday from 7am to 7pm with a journey time of 10 minutes to the city centre and the introduction of well-lit bus shelters and real time information throughout the route. Customer feedback has been positive for the park & ride facility with more than 80% of users previously travelling into the City by car. The strong demand has resulted in an expansion of the site to 800 spaces which opened in October 2016. On the back of the success of this scheme, a further park & ride site at Temple Green is due to open in 2017 to further reduce congestion and improve the City’s air quality.

Highway and bus priority works have been carried out at several pinch points on key corridors in Leeds including Horsforth roundabout, Rodley roundabout and Thornbury Barracks. These junctions were highlighted as suffering from significant congestion and areas of inadequate road safety. Improvements that have taken place involve signalisation, improved accessibility for all highway users and landscaping work to improve the overall appearance of the schemes.

Kirkstall Forge railway station was a new station delivered by WYCA and Leeds City Council, in partnership with Network Rail, Northern Rail and Commercial Estates Group. The station lies on the busiest stretch of the Airedale and Wharfedale rail lines between Leeds and Shipley and opened in June 2016. The station acts as a local park and ride station to encourage modal shift from cars. The station also has a specific objective of facilitating the development of a strategic brownfield redevelopment site at Kirkstall Forge, acting as a catalyst to lever in £400m of private investment. The Leeds station southern entrance also opened in January 2016, providing direct access from the station to the south of the city.

3.6.5 Smart City

The world’s most successful cities have ‘smart programmes’ where citizens, voluntary, public and private sectors co-operate to achieve sustainable city outcomes and increase economic competitiveness. A recent Arup study found Smart City services have the potential to add value to the UK economy of $40bn by 2025. Leeds is already a major hub for technology and data jobs, but more needs to be done for Leeds to evolve into a 21st Century global city, an ambition which is shared by City stakeholders who are committed to achieving this.

Leeds has two main visions for where it wants to be as a Smart City namely:

- Leeds is the best city for delivering better health and wellbeing outcomes enabled through information and technology, where more people will live fulfilling lives and making Leeds the best place to grow old; and
- Leeds is the best city for deriving the value from data to become known as ‘The Data City’

It is therefore essential to have a joined up approach to best utilise the core infrastructure such as transport to promote and harness innovation to improve sustainability and ‘liveability’. This will require transport systems to be efficient, environmentally friendly and meet the population’s mobility needs. Already across West Yorkshire, the MCard provides travel on both the rail and bus network using a smart card. On the bus network, almost all buses across Leeds can now read smartcards and there are now over 1 million smart transactions taking place across West Yorkshire per week.

This will increase further with support from Transport for the North. The Integrated and Smart Travel workstream will provide integrated across the north of England on bus, train and light rail, enabling customers to travel without the need to purchase individual tickets.

\(^{14}\) A65 QUALITY BUS CORRIDOR One Year Monitoring and Evaluation Report, November 2014
3.7 Transport Challenges affecting the Growth of the City

This chapter summarises the key transport challenges Leeds faces in realising its economic growth aspirations, which will be developed further through the emerging Leeds Transport Strategy. The challenges have been identified through consideration of the available evidence sources including:

- The conclusions of the Leeds Transport Conversation;
- Traffic flow data;
- Data from the Census;
- Data on car and bus journey times;
- Data that considers how easy it is to get to and from different parts of the City;
- Outputs from the existing computer model of the Leeds road network, and
- Data on the use of bus and rail.

From this, a series of problems facing the city have been identified, some of which are network wide challenges, but with other focused on specific spatial areas of the City. A key consideration for this programme is to understand how the challenges for Leeds vary across the district. This spatial consideration is fundamental to making sure the solutions are targeted and will generate material change for the local communities in which they are focused. As such, the challenges have also been considered on a spatial basis. Figure 19 illustrates the broad sectors for this assessment of identifying the key challenges. Whilst these sectors are extremely coarse and there are a range of different local transport challenges within each sector, they provide a framework for considering transport challenges at a strategic level across Leeds District.

**Figure 19: Sectors for identifying key transport challenges across Leeds**
3.7.1 High Levels of Highway Congestion

Traffic on major roads has risen by approximately 12% between 2000 and 2015\textsuperscript{15}. This growth in trips has put increased stress on the road network, with the average vehicle delay per mile on A-roads in Leeds being 30-45 seconds in 2014. Figure 20 highlights the significant congestion on the key radial routes into and out of Leeds city centre in the weekday peak hours, especially to the north west of the City.

Figure 20: Delay in minutes per km in the AM peak hour 2013-14

\[\text{Figure 20: Delay in minutes per km in the AM peak hour 2013-14}\]

This issue is consistent with congestion hotspots, illustrated in Error! Not a valid bookmark self-reference. Although located across the district, creating delays to journeys, they are most visible in the north west of the area. A hotspot is defined as locations that generate the most delay in seconds on the highway network.

Figure 21: Junction congestion hotspots in Leeds

\[\text{Figure 21: Junction congestion hotspots in Leeds}\]

\[\text{http://www.dft.gov.uk/traffic-counts/area.php?region=Yorkshire+and+The+Humber&la=Leeds}\]
This delay is not consistent across all transport modes, with bus journey times two minutes slower per mile compared to cars in the AM peak hour in 2013-14 as shown in Figure 22. Figure 22 also highlights buses are much slower than cars in the congestion free inter-peak, with this difference down to lost time picking up passengers, which can account for around 50% of bus journey time in the inter-peak. Data regarding this value has not been collected for the peak hours, but is predicted to be higher with this appearing to be supported by the average inbound bus speeds during the morning peak period on radial routes in West Yorkshire being below 12mph in 2014\(^6\).

**Figure 22: Average journey time comparison for bus & car in AM peak / inter-peak within Leeds**

![](image)

*Source: Leeds City Council*

Congestion across the Leeds district is a key contributor to poor local air quality, increased journey times and reduced reliability for all highway users, which increases the overall cost of transport to the economy. Increased journey time for buses reduces the attractiveness of the services and as such, is a key factor in causing bus patronage to decline. This combination of factors has caused significant issues in a number of sectors in Leeds:

- A61 North: Chapel Allerton & Moortown – high levels of traffic and congestion leading to poor bus journey times;
- A58: Roundhay & Wetherby — high levels of traffic and congestion leading to poor bus journey times;
- A63 / A61 South: Stourton, Middleton & Aire Valley – high proportion of in-commuting from the wider region, with a high proportion of freight movements. Poor air quality in the corridor;
- A62 / A643: Morley & Beeston – high levels of traffic and congestion causing poor air quality;
- A647: Pudsey & Bramley – high levels of traffic and congestion leading to poor bus journey times;
- A65: Aireborough and Kirkstall – high levels of traffic and congestion leading to poor bus journey times and causing poor air quality; and
- A660: Headingley, Weetwood, Bramhope and Otley — high levels of traffic and congestion leading to slow bus journey times and poor air quality.
3.7.2 Rising Cost of Travel by Public Transport

The cost of using public transport has risen faster than inflation with the average rail fare in West Yorkshire increasing by 26% between 2011 and 2015, during which time the Consumer Price Index (CPI) grew by only 7.4%. Data on the rise in bus fares is available from 2005-14 (Figure 23), with off peak fares rising by 70% and peak fares 60%, during which time, the CPI rose by a little over 20%.

Figure 23: Real Average Adult Bus Fares for West Yorkshire & Costs of Bus Operation


The cost of public transport is a network wide issue across all areas of Leeds. Figure 24 illustrates the generalised cost of commuting to Leeds city centre for different modes of transport, based on observed journey times, fares and charges. As can be seen, travel by bus is the costliest option, with car the cheapest option if there is the choice of free parking. The majority of the cost is in the travel time, with Figure 22 showing travel by bus to be considerably slower per mile than travel by car.

Figure 24: Relative Cost of Commuting to Leeds City Centre for Different Transport Modes

Source: Leeds City Council
3.7.3 Declining Bus Patronage

There have been many positive initiatives over the past decade by the bus industry, which have led to pockets of growth as a result of investment. However, overall patronage remains around 18% lower than it was twenty years ago. The economic crisis from 2008 onwards led to a further reduction in patronage culminating in the lowest ever level in 2010/11 of below 180 million journeys at a West Yorkshire level. In spite of the slight uplift in the last four years (which will be due to a range of factors including the improving economic outlook), bus trips per head of population have continued to decline overall. This picture of bus patronage decline has occurred against a backdrop of:

- A reduction in vehicle km operated on local bus services in West Yorkshire;
- An increase in bus fares at rates higher than the Consumer Price Index and the cost of operation.
- Rising car use and an increasing population;
- A highway network which is very highly congested in many areas;
- A rail network which has seen substantial patronage growth and is forecasting further growth;
- An increase use in ‘active’ and other modes.

The situation is in line with national trends as passenger demand for bus services has declined in England outside of London. Brighton, Oxford and York are examples of where bus patronage has increased. The long term decline in bus usage is not inevitable. With the right conditions a spiral of decline can be turned into a virtuous circle where patronage growth generates both the revenue to fund investment to deliver further improvements and the need for additional services to provide more capacity, in turn attracting more passengers to bus.

Based on the analysis of the available evidence sources, including a range of passenger surveys and consultations, a range of problems affecting the bus system have been identified, and are summarised below:

- Buses are not always on time, and occasionally fail to turn up at all;
- Buses can take a long time to reach their destination, and the journey time can vary from day-to-day;
- The bus network is complicated and difficult to understand, meaning that it can be hard for new or infrequent users to work out which bus to catch;
- It can be difficult to work out which bus ticket offers the best value for money;
- Travel by bus is not always seen as a satisfactory experience (for reasons that could include poor customer service from drivers, safety concerns, poor cleanliness and comfort of vehicles);
- Bus travel information can be inconsistent and / or not always easily available;
- It is difficult for customers to understand who operates their bus service, what WYCA does, who to contact if things go wrong, and where to find out information or to provide feedback; and
- Some buses are old and the exhaust emissions can be harmful.

As a result, these problems lead to:

- Reducing the attractiveness of buses for people who can use their cars instead;
- Inefficient economic costs for passengers who travel in crowded conditions and who are delayed;
- Financial costs to bus operators due to lost revenue; and
- Road congestion, leading to an buses bunching and irregular pattern of service, delays and poor reliability.

Bus patronage decline is an issue across the City but there are a number of specific corridors where congestion is a major issue for buses, including:

- A61 North: Chapel Allerton & Moortown;
- A58: Roundhay & Wetherby;
- A62 / A643: Morley & Beeston;
- A647: Pudsey & Bramley;
- A65: Aireborough and Kirkstall; and
A660: Headingley, Weetwood, Bramhope and Otley.

3.7.4 Poor Public Transport Accessibility

The public transport network provides a vital role in connecting people to employment and training opportunities. This is especially the case in areas where there are low levels of car ownership and areas of highest deprivation. In Leeds, there are several communities with low levels of car ownership and high deprivation, for example, in Hyde Park and Woodhouse 62% of households have no access to a car or van. Connectivity to the public transport network across Leeds is variable; there are some areas of Leeds with relatively poor journey times to Leeds city centre, when compared with the car.

Access to the rail network provides key connectivity into the city centre and other local centres. However, not all rail stations in Leeds are accessible for all users. There are several stations, such as Garforth, Cross Gates, Morley and Horsforth, which, due to historic infrastructure, are not accessible for use by wheelchair users or to parents with pushchairs and young children. This significantly limits the travel horizons for these groups of people, reducing their access to employment, training and social opportunities.

There are also many communities across Leeds not served by rail. Where this is the case the bus network becomes the only public transport offer. Journey times to the city centre on the bus network across Leeds vary considerably. This is especially the case for communities with no direct access to the core bus network. For example, some of the communities out to the east of the City are not on the core bus network and have some of the lowest levels of car ownership. As such the viability of the secondary bus network becomes vital for access to employment and training opportunities in the city centre and other areas of Leeds.

The areas of Leeds with poor public transport accessibility include:

- A58: Roundhay & Wetherby;
- A660: Headingley, Weetwood, Bramhope and Otley; and
- A63 / A61 South: Stourton, Middleton & Aire Valley.
3.7.5 Overcrowded Rail Network and Rail Car Parks

The growth in passenger numbers on the rail network in recent years has been substantial. More and more customers are using the rail network in Leeds and it is reaching patronage levels not seen for half a century. But with this success comes some challenges that need to be addressed, such as:

- Overcrowding on trains in the rush hour is commonplace and sometimes customers get left behind on platforms;
- Reliability and punctuality of trains has improved but is not as good as it should be;
- Most local trains are very old and are not what customers expect in a modern economy;
- Train frequency, timetabling and journey times are generally not good enough for our City Region economy;
- Some station facilities are poor quality;
- Travel information needs to be better especially at times of disruption; and
- Tickets are not always easy to buy and understand.

Rail in the region currently faces problems including peak hour crowding, poor punctuality and poor rolling-stock quality. The key rail issues for each sector of Leeds are presented below in Table 2.

Table 2: Rail Challenges by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Rail Lines in Sector</th>
<th>Key Issues</th>
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<tbody>
<tr>
<td>A61 North: Chapel Allerton &amp; Moortown</td>
<td>No rail network</td>
<td>• Overcrowding on trains in the rush hour&lt;br&gt; • Reliability and punctuality of trains is poor&lt;br&gt; • Some station facilities are poor quality&lt;br&gt; • Travel information needs to be better especially at times of disruption&lt;br&gt; • Cross Gates and Garforth stations are not accessible for all users&lt;br&gt; • Tickets are not always easy to buy and understand.</td>
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<tr>
<td>A58: Roundhay &amp; Wetherby</td>
<td>No rail network</td>
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<tr>
<td>A64: Gipton, Harehills &amp; Garforth</td>
<td>York and Selby Lines</td>
<td>• Overcrowding on trains in the rush hour&lt;br&gt; • Reliability and punctuality of trains is poor&lt;br&gt; • Some station facilities are poor quality&lt;br&gt; • Travel information needs to be better especially at times of disruption&lt;br&gt; • Cross Gates and Garforth stations are not accessible for all users&lt;br&gt; • Tickets are not always easy to buy and understand.</td>
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<tr>
<td>A63 / A61 South: Stourton, Middleton &amp; Aire Valley</td>
<td>Hallam Line Leeds-Wakefield Line&lt;br&gt; Sheffield/Doncaster Line&lt;br&gt; Pontefract Line</td>
<td>• Overcrowding on trains in the rush hour&lt;br&gt; • Reliability and punctuality of trains is poor&lt;br&gt; • Local diesel trains are very old&lt;br&gt; • Train frequency, timetabling and journey times are generally poor&lt;br&gt; • Some station facilities are poor quality;&lt;br&gt; • Travel information needs to be better especially at times of disruption;&lt;br&gt; • Tickets are not always easy to buy and understand.</td>
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<tr>
<td>A62 / A643: Morley &amp; Beeston</td>
<td>Huddersfield Line Wakefield Line</td>
<td>• Overcrowding on trains in the rush hour&lt;br&gt; • Reliability and punctuality of trains is poor&lt;br&gt; • Local diesel trains are very old&lt;br&gt; • Train frequency, timetabling and journey times are generally poor&lt;br&gt; • Some station facilities are poor quality;&lt;br&gt; • Travel information needs to be better especially at times of disruption;&lt;br&gt; • Cottingley and Morley stations are not accessible for all users&lt;br&gt; • Tickets are not always easy to buy and understand.</td>
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<tr>
<td>A647: Pudsey &amp; Bramley</td>
<td>Calder Valley Line Leeds-Bradford Line</td>
<td>• Overcrowding on trains in the rush hour&lt;br&gt; • Reliability and punctuality of trains is poor&lt;br&gt; • Local diesel trains are very old&lt;br&gt; • Train frequency, timetabling and journey times are generally poor&lt;br&gt; • Some station facilities are poor quality;&lt;br&gt; • Travel information needs to be better especially at times of disruption;&lt;br&gt; • Tickets are not always easy to buy and understand.</td>
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<td>Route Description</td>
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<td><strong>A65: Aireborough and Kirkstall</strong></td>
<td>Airedale Line Wharfedale Line</td>
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<td>• Overcrowding on trains in the rush hour</td>
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<td><strong>A660: Headingley, Weetwood, Bramhope and Otley</strong></td>
<td>Harrogate Line</td>
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<td>• Overcrowding on trains in the rush hour</td>
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<td>• Horsforth and Headingley stations are not accessible for all users</td>
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<td>• Tickets are not always easy to buy and understand.</td>
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<td><strong>City Centre</strong></td>
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<td></td>
<td>Passenger and Train capacity at Leeds Station, also interchange facilities and</td>
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<td>impact of gating on passenger flows</td>
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3.7.6 Poor Air Quality

Levels of NO\textsubscript{2} in West Yorkshire are the third worst in the country and in Leeds, the annual mean emissions of PM10 and PM2.5 have been found to be above World Health Organisation guidelines. Leeds has six sites designated as Air Quality Management Areas (AQMAs) due to air pollution levels that are regularly above national standards. Figure 25 displays the NO\textsubscript{2} levels across West Yorkshire, with air quality clearly being shown to be a problem within Leeds city centre and towards the south of the district along the M62 Corridor.

**Figure 25: NO\textsubscript{2} Levels across West Yorkshire**

Across Leeds, 1 in 20 deaths are attributable to air pollution for the over 30s\textsuperscript{17}. At the West Yorkshire level, particulate matter costs West Yorkshire a conservative estimate of £564m per annum, affecting the productivity of the Leeds economy.

Traffic congestion exacerbates emissions of air pollutants, greenhouse gases and noise. CO\textsubscript{2} emissions produced by transport account for around 28% of total emissions in West Yorkshire, though CO\textsubscript{2} emissions attributable to transport fell by 12.5% between 2005 and 2007. However, the reduction occurred at a slower rate than for other sectors in the same time period, which saw a fall of approximately 16%. More recent results show CO\textsubscript{2} emissions to have fallen further, with this fall as a percentage greatest in Leeds of the West Yorkshire districts, due in part to newer vehicles being more efficient in general and the increase in hybrid and electric cars amongst reasons for the fall. Yet, ultra-low emission vehicles still account for less than 0.05% of cars in West Yorkshire, demonstrating more work needs to be done to promote these vehicles. Emissions from buses are a major contributor to poor air quality within Leeds, with only around 10% of the Leeds bus fleet at Euro VI or better standards of emissions.

An additional 2 sites are due to be declared AQMA areas in 2017;

- Main Street, Pool-in-Wharfedale
- Chapel Hill, Morley

A further four sites have been identified as localities with levels of NO\textsubscript{2} above national standards that could be designated AQMA sites in the near future;

- Corn exchange (Leeds city centre)

\textsuperscript{17} Fraction of all-cause adult mortality attributable to anthropogenic particulate air pollution (measured as fine particulate matter, PM2.5) (Public Health England).
• Selby Road, Garforth
• Rein Road, Morley
• Gotts Road, Armley

Air quality is at its worst in the following areas of Leeds:

• City centre, including Corn Exchange, City Square and Wellington Street
• A62 / A643: Morley & Beeston
• A647: Pudsey & Bramley
• A65: Aireborough and Kirkstall
• A660: Headingley, Weetwood, Bramhope and Otley
3.7.7 Accessing a growing City Centre

Leeds city centre plays a key economic and strategic role at the heart of the Leeds district and Leeds City Region, accounting for 27% of all jobs in Leeds. This concentration of economic activity within the city centre has resulted in Leeds being the second most attractive core city for inward investment. The city centre is also home to an established and developing residential population. The number of people living in the city centre grew by 96% between 2001 and 2011, with further growth expected. The LDF Core Strategy outlines plans for 10,200 additional dwellings in the city centre by 2028. As well as employment and housing, Leeds city centre is also a growing hub for retail and leisure, making it a key destination for trips at all times of the day.

There is also a strong emphasis on further economic growth in the city centre, exemplified by the ambitious South Bank masterplan. One of Europe’s largest regeneration projects, the aim is to double the size of Leeds city centre by regenerating 180 hectares of land, providing 35,000 jobs and over 4,000 homes. For this and other future city centre developments to be successful, it is essential that transport systems are in place to allow people to move easily in a denser and productive city centre with good connections to link workers to businesses and businesses to other businesses. This therefore emphasises the need for significant investment in transport to help accommodate and facilitate this growth. Figure 26 summarises the challenges for the South Bank.

Figure 26: South Bank Challenges

With the arrival of HS2 to Leeds city centre, it is important that the City can provide a transport network that enables efficient onward connectivity. HS2 and Northern Powerhouse Rail opportunities will signify a step change in the provision of transport in the North and in the connectivity to Leeds. This fundamental change will transform how the city connects to the rest of the UK. However, in planning for this growth, catering for high volumes of trips over a medium distance across the city centre is important.
3.7.8 Future Housing and Employment growth across the City

The Core Strategy sets out that it is anticipated that the population of Leeds is expected to rise from 755,136 in 2010 to 860,618 in 2028. This 15% growth in population is complemented by a 28% increase in employment. Together, this makes it imperative that plans are made now to ensure the city can effectively manage and embrace these forecasted changes. It raises major challenges for Leeds in seeking to meet the complex demographic needs of the existing population, together with the implications of an ageing and growing population over the Plan period and it is important that planning for such growth forms part of an overall strategy.

In addition, the level of housing growth expected to occur by 2028 within Leeds is greater than any other authority within England. A growing and diverse economy brings a need for new housing, sustainable and reliable transport systems, and services to meet the changing needs of the population. Bringing this future growth and prosperity to all residents remains a key consideration for the District. The Core Strategy sets out a need for 70,000 new homes by 2028.

The leading employment sectors as a whole are the financial and business services which account for 43% of the growth, and public administration, education and health (25%). These are forecast to remain the two leading sectors in Leeds over the next 10 years.

As can be seen in Figure 27, the largest housing growth is expected to be in Central and Eastern Leeds.

Figure 27: Planned housing and employment growth across Leeds 2012-28

Economic growth, and supporting this growth, is central to the Leeds City Region SEP. Large job growth is expected in the city centre and East Leeds (Figure 27), with the location of SEP spatial priority areas such as the city centre South Bank and Aire Valley Enterprise Zone. Therefore, it is essential appropriate measures are taken to ensure local people are able to access local employment opportunities, and that transport infrastructure is able to support such growth. Given the future growth aspirations of Leeds, there will be an increase in demand for travel, which if unabated, will increase current traffic congestion issues.

The Leeds Core Strategy also sets out the Regeneration Priority Areas as illustrated in Figure 28. It sets out that district wide regeneration should remain flexible and responsive to the changing needs of localities and neighbourhoods. Given the length of the Core Strategy plan period, it is anticipated that new priorities will arise which the LDF will need to reflect and respond to in terms of appropriate resource allocation. The Council’s Regeneration Priority Programmes focus on four spatial areas:

- East Leeds;
- Aire Valley Leeds;
- Leeds Bradford Corridor (incorporating the West Leeds Gateway); and
- South Leeds.
The key areas of employment and housing growth for the City are in the following sectors:

- City Centre and in particular the South Bank;
- A64: Gipton, Harehills & Garforth;
- A63 / A61 South: Stourton, Middleton & Aire Valley; and
- A62 / A643: Morley & Beeston.
Summary of the Transport Challenges

This chapter has summarised the key transport challenges facing the city. These challenges can be summarised as:

- Significant population, housing and employment growth, predominantly in central and eastern areas of Leeds;
- Significant increase in travel demand in the last 15 years, along with rising car ownership, has increased congestion levels and delay across the district especially in the peak hours. The capacity of the radial road network constrains the volume of traffic entering the city centre in the morning peak hour and leaving in the evening peak hour. There has been growth in peak period traffic, but this has taken place either side of the peak hour;
- Peak period traffic volumes across a cordon around the city show general traffic growth between 1990 and 2012. However, between 2004 and 2012, traffic volumes show a decline. Since 2012 traffic levels have returned to pre-recession levels;
- There are a number of extremely congested routes into Leeds including the A61(N) Scott Hall Road and the A660 Otley Road. Both show that congestion adds more than 100% to journey times in the morning and evening peak periods;
- Falling bus patronage has occurred as a result of a range of reasons including uncompetitive journey times, rising travel costs and poor customer experience;
- There are significant variations in accessibility across the City, in particular in areas of high deprivation;
- The rail network is highly congested, much has poor/small rolling stock whilst patronage is forecast to continue to increase;
- Rising congestion levels has contributed to Leeds suffering from poor air quality contributing to reduced productivity of the Leeds economy, with 1 in 20 deaths in Leeds attributable to air pollution. Air quality is particularly poor in the city centre;
- Between 2008 and 2012 the cost of public transport has been consistently higher than the price of fuel; and
- The strength of Leeds economy has resulted in a large increase in commuting to Leeds from outside the district which the current transport system is struggling to accommodate.

A summary of the key transport challenges across the city is provided in Table 3 below.
Table 3: Summary of the transport challenges by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>High levels of traffic congestion</th>
<th>Congestion leading to Bus Delays</th>
<th>Overcrowded rail network</th>
<th>Poor public transport accessibility</th>
<th>Poor Air quality</th>
<th>Significant forecast in housing and/or employment growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>A61 North: Chapel Allerton &amp; Moortown</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A58: Roundhay &amp; Wetherby</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>A64: Gipton, Harehills &amp; Garforth</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>A63 / A61 South: Stourton, Middleton &amp; Aire Valley</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>A62 / A643: Morley &amp; Beeston</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A647: Pudsey &amp; Bramley</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A65: Aireborough and Kirkstall</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>A660: Headingley, Weetwood, Bramhope and Otley</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>City Centre</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Across the City</td>
<td>Large increase in commuting to Leeds from outside the district</td>
<td>Rising cost of travel by public transport</td>
<td>Declining bus patronage</td>
<td>Poor customer experience and satisfaction on public transport</td>
<td>Catering for future growth to and across the City Centre</td>
<td></td>
</tr>
</tbody>
</table>
3.8 The Leeds Transport Conversation

Alongside the development of this programme, the City is undertaking a Leeds Transport Conversation. This conversation is informing the components of both the Leeds Public Transport Investment Programme and the emerging Leeds Transport Strategy.

The Leader of the Council called for a “Leeds Transport Conversation” with the City which was launched at the Transport Summit on the 10th June. In total the online questionnaire had 8,169 responses. Officers also attended many public and community events including targeted stakeholder workshops, community committees, workshops with young people, older people, equality groups and local forums.

In parallel, the West Yorkshire Combined Authority has run two consultations on the West Yorkshire Transport and Bus Strategies. Officers from both organisations attended events across the city and the feedback from these consultations is shaping and informing the development of the emerging Leeds Transport Strategy.

An independent analysis of the feedback from the questionnaire and conversation has been prepared and a summary is provided in Appendix A.

The key themes are;

- Reliability, poor service and lack of accessibility of public transport were highlighted as major problems. Accessing local services was also seen as very important leading to strong support for better bus services in the city;
- Many people felt rail could offer a better and more sustainable journey, hence strong support for rail investment to improve capacity and access to the rail network;
- There was strong support for making the city centre a better, more people focussed place, while also recognising the need to provide for pedestrians and cyclists across the city;
- Reducing congestion on busy junctions and reducing the environment impact of transport was considered important;
- People were open to change and wanted greater travel choices leading to considerable support for park & ride and a future mass transit system; and
- The timing of investment was also considered with the majority favouring a balance of short term and long term interventions.

Only the first phase of the Conversation is complete. As schemes develop and the broader Leeds Transport Strategy develops, the Conversation will continue to evolve through further engagement in the New Year.

Further details around the consultation are included in Management Case in chapter 8.
3.9 The Opportunity for the City

Chapter 3 has considered the importance of Leeds in relation to West Yorkshire and the wider Leeds City Region, with respect to the economy and transport. The role of rebalancing the national economy has also been referenced, with the significant role Leeds can play in that, potentially making a significant contribution to the Northern Economic Powerhouse. It is clear there are opportunities for growth, although evidence suggests that this growth can only be achieved if it is sustainable in transport terms, as congestion is already causing problems on the highway network.

A review of national, regional and local strategy has been undertaken. The aims of all of these are consistent in that they seek to make Leeds a prosperous, and importantly, a well-connected City. Connectivity is important within Leeds, and across the wider Leeds City region, in particular as Leeds city centre serves as the main destination for many commuter and leisure journey. Better national and international connectivity is also needed, and this will be partly achieved with the arrival of HS2, and improvements to access to Leeds Bradford Airport.

Analysis of the transport problems suggests there simply is not enough capacity on the City’s bus, rail and road networks to accommodate growth. Some people will respond to this by travelling at another time, which will mean that congestion spreads into other times of the day. Some will respond by changing their travel patterns.

Ultimately though, some people will not travel at all which will mean that the City cannot grow to its full potential and this in turn will affect economic growth. Doing nothing is not an option. If we do nothing, the problems of congestion will worsen, our buses will be more unreliable and our trains more overcrowded. Most importantly economic growth in Leeds will be slower. To prevent this, investment is needed to improve the efficiency and capacity of the transport system.

There is a clear need to improve public transport and expand its reach to accommodate growth and ensure an equitable system. To increase patronage and provide an enhanced service for users the public transport network needs to be punctual, reliable, safe and provide good information before and during the journey.

Public transport and especially buses, need to be accessible, attractive and a viable alternative to using the car for appropriate journeys. Bus can provide a fine grain to accommodate local journeys and link communities to the city centre and employment, retail and leisure destinations. Express bus, park & ride and rail can provide the higher demand, strategic movements. Maximising the use of these public transport networks will ease the pressure on the highway network and alongside pinch point improvements, can deliver a whole transport network which meets the economic growth aspirations of the City.

Increasing public transport capacity on radial routes into the city centre and making this journeys attractive to travellers who would otherwise travel by car, could be achieved through the following measures:

- Increased capacity on public transport to accommodate the growth in demand. This can be achieved by an increase in train capacity where there is current over-crowding on the rail network and also to provide targeted investment on radial corridors currently served by bus;
- Reduced public transport journey times, which will make public transport more efficient and encourage mode shift;
- Improved public transport punctuality and reliability; and
- Improved quality of public transport information on vehicles and at stops and stations.

It is clear from the challenges that a range of solutions are required which will vary from corridor to corridor and area to area. The programme will need to address the following aspirations:

- Support economic growth by unlocking the transport constraints in key growth areas and across the city;
- Align with the emerging Leeds Transport Strategy, West Yorkshire Transport and Bus Strategies, as well as the national/pan northern growth strategies including HS2 and Northern Powerhouse Rail;
- Improve health outcomes especially air quality by reducing transport emissions and making a significant contribution towards compliance with DEFRA’s legal requirement of the city;
- Complement the existing schemes being delivered through the WYTF such as Leeds City Centre Package and the Corridor Improvement Programme;
- Reflect the key messages from the Leeds Transport Conversation in terms of improving public transport operation and quality;
- Are deliverable within the short to medium term taking into consideration land requirements and public acceptability;
- Leverage match funding from the private sector, public transport providers and developments / businesses who will benefit from the public investment; and
- Cognisance of and adaptability for the delivery of the longer term strategy.

Based upon the challenges summarised in Section 3.7.8, the opportunities for the City can also be considered in the same spatial sectors as set out in Figure 29. Chapter 4 sets out how this Leeds Public Transport Investment Programme has been developed through considering these opportunities individual challenges by sector.

Figure 29: Summary of the Opportunities by Sector
Strategic Case:
Developing the Programme

04
4. Strategic Case: Developing the Programme

4.1 Overview of Option Generation, Shortlisting and Selection Process

As outlined at the end of Chapter 3, it is clear from the challenges that a range of solutions are required which will vary from corridor to corridor and area to area. What is needed is a package which will need to fit alongside existing and planned investment to address the following aspirations:

- Support economic growth by unlocking the transport constraints in key growth areas and across the city;
- Align with the emerging Leeds Transport Strategy, West Yorkshire Transport and Bus Strategies, as well as the national/pan northern growth strategies including HS2 and Northern Powerhouse Rail;
- Improve health outcomes especially air quality by reducing transport emissions and making a significant contribution towards compliance with DEFRA’s legal requirement of the city;
- Complement the existing schemes being delivered through the WYTF such as Leeds City Centre Package and the Corridor Improvement Programme;
- Reflect the key messages from the Leeds Transport Conversation in terms of improving public transport operation and quality;
- Are deliverable within the short to medium term taking into consideration land requirements and public acceptability;
- Leverage match funding from the private sector, public transport providers and developments / businesses who will benefit from the public investment; and
- Cognisance of and adaptability for the delivery of the longer term strategy.

The objective led approach to identifying how schemes deliver these aspirations is set out below and a summary of how the programme will address these aspirations is set out in Section 4.6.6. The process for developing the preferred option for this Strategic Outline Case has been based around identifying solutions which address these aspirations. In addition, the criteria placed on WYCA and Leeds City Council by DfT has been critical to shaping the scope of the overall package. DfT outlined that the funding may only be spent on ‘Public Transport schemes within Leeds District’, with a focus on spend in the short-medium term.

The option generation and selection process for the Strategic Outline Case can be summarised as follows:

- Long list identification: Working with stakeholders to identify potential ideas and solutions to the transport problems and challenges facing the city. Schemes were assessed against the DfT criteria and schemes which did not comply with the criteria were not taken forward to the Medium List stage. The following stage considered assessment of schemes against the objectives and corridor challenges;
- Medium listing: The remaining schemes were considered in line with the vision and objectives of the Leeds Transport Strategy. This was undertaken on both a spatial basis and in the context of the transport problems and constraints within each sector (as defined in Chapter 3). Those schemes which best aligned with the problems identified in Chapter 3 were taken forwards to the shortlisting stage. In addition, schemes were considered against other already committed schemes being progressed through other programmes to ensure they aligned; and
- Short listing: The remaining schemes were developed in greater detail, with greater focus on deliverability and more detailed characteristics of the individual schemes and their contribution within each sector. At this stage consideration was also given to how the schemes worked together within the overall package and the private sector contributions were also brought into the package.

At various stages throughout the option generation process, new schemes have come forward, for example through workshops/events associated with the Leeds Transport Conversation. Where schemes have been identified late, they have still been taken through this full option sifting process. A more detailed description of this process is provided below. The details of the schemes which have not progressed through each stage is set out in Appendix B.

The discounting of schemes for the purposes of this Strategic Outline Case does not mean that WYCA and Leeds City Council do not want to progress a particular scheme. It only means that for the purposes of the Strategic Outline Case the scheme does not offer best alignment with the requirements of this particular funding source. A full option selection process will be undertaken for the development of the full Leeds Transport Strategy.
4.2 Long List Identification

The long list of schemes has been derived from:

1. The spatial assessment of the challenges
2. Feedback through the Leeds Transport Conversation
3. Workshops involving officers from a range of disciplines internal within LCC and with key stakeholders including WYCA and transport operators
4. The Expert Panel and Cross Party Council Members Groups

Over 140 schemes were identified through the long list process; some were spatial and focussed on a specific sector whilst others were city wide proposals. The process for identification of potential schemes aimed to be inclusive of all options and also reflect the growth aspirations for the city. All potential schemes identified by stakeholders or through the Leeds Transport Conversation were incorporated and collated within the Long List. The long list of schemes covered a range of themes. A summary of the themes is provided in Table 4.

Table 4: Summary of the Key Themes identified through the long listing process

<table>
<thead>
<tr>
<th>New rail stations</th>
<th>Bus service quality</th>
<th>Personal travel planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail Station Infrastructure Improvements</td>
<td>Demand responsive transport</td>
<td>Digital connectivity</td>
</tr>
<tr>
<td>Rail rolling stock improvements</td>
<td>Cycle infrastructure upgrades</td>
<td>Car clubs</td>
</tr>
<tr>
<td>New highway links</td>
<td>Cycle hire</td>
<td>Car parking strategy</td>
</tr>
<tr>
<td>Highway network improvements</td>
<td>Transport hubs expansion</td>
<td>Taxi strategy</td>
</tr>
<tr>
<td>Bus park &amp; ride</td>
<td>City Centre transport interchange improvements</td>
<td>Wayfinding and pedestrian infrastructure improvements</td>
</tr>
<tr>
<td>Key route bus network journey time improvements</td>
<td>Public realm improvements</td>
<td>Airport surface access improvements</td>
</tr>
<tr>
<td>Tram/ Tram-train development</td>
<td>Leeds Underground development</td>
<td>River and canal improvements</td>
</tr>
<tr>
<td>Green infrastructure improvements</td>
<td>Rail Park &amp; ride</td>
<td>Workplace travel planning programmes</td>
</tr>
</tbody>
</table>

At this long listing stage, the assessment was solely based upon the overarching criteria for the funding, set by the Department for Transport. An assessment of the schemes against the Programme objectives and addressing the challenges identified in Chapter 3 was undertaken in the Medium and Short List processes. Consequently, schemes were only progressed to the Medium List if they:

- Focussed on public transport in Leeds district
- Deliverable in the short to medium. Whilst no definitive time period was set, a working assumption was used that the short to medium term would typically be around up to 2021.
- Capital schemes, unless funding was to be provided as match funding

As a result of the long list assessment, a number of specific schemes and themes were discounted, this included:

- New highway bypasses –the criteria required the funding to be spent on public transport schemes and these were therefore not applicable;
- Delivery of a mass transit system –the funding was required to be spent by 2021. It is unlikely that a new mass transit (e.g. Tram, Tram-Train, Light Rapid Transit) network would be completed by 2021 and would also use all/the majority of the funding.
- Workplace travel planning –the funding was for capital schemes and no match funding to this programme was available for delivery of workplace travel planning

Themes discounted at this stage will be considered again through the development of the Leeds Transport Strategy. For example, this does not mean that the city does not want to progress a tram solution. It just means that delivery of a tram solution does not align with the criteria of this funding. A tram solution is still considered fundamental to the City and will be considered as part of the full Leeds Transport Strategy. Appendix B reports the conclusions of the assessment for every scheme/theme identified as part of the long listing process.
4.3 Medium List Identification

Following the long listing process, around 50 schemes remained on the list. Not all the schemes can be delivered as this would be unaffordable and unlikely to be value for money. As such, a Medium Listing process was also required. The Medium List process was focussed on the prioritising schemes which support the vision and aspirations of the emerging Leeds Transport Strategy and also address the specific problems and opportunities on each individual corridor across the City which were identified in Chapter 3. Chapter 3 also set out that the objectives of the emerging Leeds Transport Strategy are for a:

- Prosperous Leeds - A transport system for Leeds that facilitates a prosperous, sustainable economy for the City, the City Region, the North, cementing our long-term economic competitiveness both nationally and internationally;
- Liveable Leeds - A transport system which helps Leeds to be a great place to live and work for everyone; and
- Healthy Leeds - A transport system that has a positive effect on peoples’ health and wellbeing and raises health and environmental standards across the City through the promotion of walking and cycling and the reduction of air pollution, noise and carbon emissions.

The assessment of the medium list was based on

- Assessment against the transport challenges for each sector as identified in Chapter 3 and
- The vision and aspirations of the emerging Leeds Transport Strategy set out in Chapter 3.

Through the Medium List process a series of schemes were not progressed. The types of schemes discounted included:

- Park & ride options – sites too close to the city centre where journey time benefits will be minimal and where land was not available;
- New Rail Stations – locations where journey times on the rail network will not provide benefit and locations where new rail track would be required; and
- Rail station car park expansions – locations where land availability is limited.

Appendix B sets out the reasons for inclusion and exclusion of each scheme.
4.4 Short Listing of Schemes

The medium list assessment stage led to a series of schemes remaining across the following six thematic areas:

- New bus priority infrastructure;
- New Park and Ride sites;
- New rail stations;
- Rail station accessibility improvements;
- Rail station car park improvements; and
- City centre transport improvements.

In arriving at a definitive short list, the assessment criteria utilised in the Medium list stage was repeated and complemented by an approach where:

- Individual schemes were considered in greater detail, with a greater focus on the deliverability and more detailed characteristics of each thematic area;
- The ability to lever in investment from the private sector was also taken into account; and
- Consideration was also given to the spatial scale and scope of the overall package of measures.

A description of the characteristics for each of the themes is provided below and the following sections provide further details on the preferred option.

4.4.1 Bus Priority

The bus priority package was developed after assessing the core radial routes/corridors into Leeds, taking into consideration the following factors:

- Areas in Leeds where bus is the main public transport option;
- Congestion mins/Km of delay;
- Number of identified congestion hotspots on the route/corridor;
- Air quality – locations where there is poor air quality; and
- Potential future housing and employment growth opportunities along the route/corridor.

The analysis showed that delivering bus priority on the A61 North, A647 and A58 would generate the greatest level of benefit. Each of these corridors was seen to have congestion in excess of 0.67 minutes/KM. The corridors also have the capacity to include bus priority, thereby ensuring some advantage for buses over the current provision. Each corridor also has a number of identified congestion hotspots on the corridor, which causes significant delay to buses. There is also a significant number of new employment and housing sites likely to be developed on each corridor. The corridors that were discounted either did not have significant levels of delay to buses or have other interventions planned on the route.

4.4.2 Bus Park & Ride

The bus park & ride provision has been assessed using the following criteria:

- Travel demand - Census 2011 Travel to Work analysis of Leeds Super Output Areas and the wider Yorkshire districts to understand where people are travelling from for jobs in Leeds city centre. This will make sure that the corridors, which have the greatest travel flows are captured before the city centre;
- City Centre Mode Share - The Leeds Transport Model has then been used to identify the locations where a bus park & ride could capture the demand and be a competitive alternative to the private car. The 2008 Leeds Transport Model surveys indicate that 25% of car users travelling to the city centre could switch to alternative modes;
- Committed rail schemes - Change in provision of rail capacity has also been considered – corridors where there has been a committed increase in rail capacity have a reduced requirement for a bus park & ride;
- Future Growth – location of future housing growth has also been considered; and
• Availability of land in suitable locations across the district.

Stourton Park & ride and an expansion to Elland Road Park & ride have been identified as the preferred option for delivery. There is also potential for a park & ride in the north of the City, but land availability is a greater challenge. Both Stourton and Elland Road Park & rides are favoured because they provide opportunities for good bus priority into the city centre where the journey time can be made competitive with the private car. Both park & rides are strategically located to catch potential increased commuting demand in the event of new housing sites being delivered in both Kirklees and Wakefield.

Sites, such as Alwoodley Park & ride was rejected due to limited land available, and the site is too far out of Leeds, meaning there is unlikely to be significant journey time benefits for the park & ride compared with the private car. Also, other rail services may provide a more competitive travel option.

4.4.3 Passenger Information Improvements

The locations for improvements to passenger information have been assessed using the following criteria:

- Index of Multiple Deprivation – identification of the areas in the 10% most deprived in Leeds;
- District Centres – identification of the district centres with poor or limited real time information or a requirement for an upgrade;
- Core Route Network – identification of the bus stops on the core route network where there is no real time or a requirement for an upgrade; and
- Corridors with bus priority planned – identification of where investment will be made and level of information provision in these areas.

The areas identified for investment include the 20 district centres of Leeds, the core route corridors where the Leeds Public Transport Investment Programme will be invested (A660, A61 North, A61 South, A647), and the 20% most deprived communities across the district.

Locations that have not been prioritised include areas considered to be less deprived, bus stops outside the core network and bus stops that have buses that stop less than every two hours.

4.4.4 New Rail Stations

The new rail stations have been assessed using the following criteria:

- Areas where the rail network could be maximised;
- Population catchment density – existing demand from Census 2011 and potential future demand based upon planning aspirations;
- Future employment growth – existing demand from Census 2011 and potential future demand based upon planning aspirations; and
- Operational feasibility – integration of services into current and future timetables.

Leeds Bradford Airport Parkway, Thorpe Park and White Rose have been identified as locations which are likely to benefit the most from a new rail station. Each site has land available, are located in close proximity to key housing and employment sites, have the operational capacity available and they provide a competitive journey time into Leeds city centre, when compared with the private car.

Stations that have been considered further, as part of the Leeds Public Transport Investment Programme, require either greater financial investment, for example additional new rail track, have greater operational complexities, are not located close to housing or employment sites or have limited journey time benefits into Leeds city centre.

4.4.5 Rail Station Accessibility Improvements

The rail station accessibility package has been assessed based upon the following criteria:

- Passenger demand by station; and
- Current accessibility issues – all stations across Leeds must be accessible for all.
Cross Gates, Horsforth and Morley stations are currently not accessible for all. All other stations across Leeds district can be accessed by all users or are committed for enhancement through other funding sources. Equality of access is a key objective for both Leeds City Council and the West Yorkshire Combined Authority.

4.4.6 Rail Station Car Park Improvements

The station car park improvements have been assessed using the following criteria:

- Locations where access to the rail network can be maximised;
- At least one potential site located nearby (under 300m);
- No obvious environmental, heritage, highway or political constraints;
- Station has good service levels and there is high demand for these services;
- Demand for parking exceeds existing supply;
- There is strong political support for parking improvements at a local level.

New Pudsey station has been prioritised because there is evidence of significant demand for additional parking, the existing car park is full to capacity before 8am, the demand for the train services through New Pudsey is high, and there is land available, meaning the site is deliverable in the short term.

Sites, such as Guiseley station car park, also have significant demand for additional parking and the car park is full before 8am, but delivery of a car park expansion is more complex, which is likely to require purchase of additional land and is not deliverable in the short term.

4.4.7 City Centre Transport Improvements

The transport network in the city centre is critical to the operation of the transport network across the wider district. As such these schemes were assessed separately. Locations across the city centre, where investment is needed, have been assessed by:

- Public transport interchange areas – identification of where across the City, the largest number of buses stop and passengers interchange; and
- Waiting facilities – identification of the locations where the waiting facilities and provision of information requires improvements.

The Headrow, Infirmary Street, Corn Exchange, Lower Briggate, Leeds Rail Station and Leeds Bus Station have been identified as the preferred areas for investment. Each location has a number of bus passengers interchanging and a high number of bus stops with poor waiting facilities. Locations, such as Eastgate were not taken forward because relative to the above locations, there are fewer passengers interchanging and fewer bus stops in the vicinity.
4.5 The Preferred Option: The Leeds Public Transport Investment Programme

The schemes to be included within the Strategic Outline Case have been selected to deliver the following aspirations:

- Support economic growth by unlocking the transport constraints in key growth areas and across the city;
- Align with the emerging Leeds Transport Strategy, West Yorkshire Transport and Bus Strategies, as well as the national/pan northern growth strategies including HS2 and Northern Powerhouse Rail;
- Improve health outcomes especially air quality by reducing transport emissions and making a significant contribution towards compliance with DEFRA’s legal requirement of the city;
- Complement the existing schemes being delivered through the WYTF such as Leeds City Centre Package and the Corridor Improvement Programme;
- Reflect the key messages from the Leeds Transport Conversation in terms of improving public transport operation and quality;
- Are deliverable within the short to medium term taking into consideration land requirements and public acceptability;
- Leverage match funding from the private sector, public transport providers and developments / businesses who will benefit from the public investment; and
- Cognisance of and adaptability for the delivery of the longer term strategy.

The option generation and assessment process outlined above has been undertaken to develop the proposed programme. As a result, the Strategic Outline Case incorporates the following three key core elements:

- Transformation the bus network;
- A world class city centre gateway, being HS2 ready and high quality transport hubs; and
- Rail stations at key economic, housing and employment locations.

Consistent with each of these elements is the introduction of smart technology, open data and information sharing to maximise the benefits of the package and to ensure future proofing. The package of elements are described and illustrated in Figure 30 and Figure 31.

As this is a Strategic Outline Case, all schemes identified at this stage are at an outline ‘proposal’ stage and will be subject to detailed development through the WYCA assurance framework. Further details on this are provided in the Management Case. As schemes develop there may be the need to change or alter the package to reflect challenges which arise through development. Where alternative schemes are identified, these will also need to be tested through the option selection generation process outlined earlier in this report.

Figure 30: Leeds Public Transport investment Programme Logic Map
Figure 31: The Leeds Public Transport Investment Programme

Leeds £173.5m Public Transport Investment Programme December 2016
4.5.1 Transfoming the bus network

Buses are an essential component of the network and are the most used form of public transport with 15% of Leeds working residents travelling to work by bus (compared with 3.5% using the train). They also provide a vital service to those without access to a car (currently around 32% of households).

Focusing on the city centre, 43% of commuters use public transport and 46% use car, with the remainder using active modes. Examples from other core cities, such as Nottingham and Manchester, show a greater use of public transport and active modes can be achieved.

It is very clear from the Leeds Transport Conversation debate that for many communities across the district the bus will remain a critical and fundamental element of the transport strategy for years to come. There was also considerable support for park & ride to increase the bus offer in the city.

The aim is to double the number of bus passengers in ten years. This increase in the number of people using public transport will relieve congestion and support sustainable economic growth. The current high frequency bus network is illustrated in Figure 32.

Figure 32: Leeds High Frequency Bus Network

Figure 32 shows that the core bus network is at present a radial network serving the suburban areas to the City Centre. The Reconnecting Communities Project will help to enhance this by providing connectivity across areas, for example between communities along the outer ring road.

To achieve this, public and private investment is required to reverse the downward trend in patronage by ensuring fast, high quality, reliable, frequent and relatively low cost services. This investment needs to tackle inherent problems affecting bus services in Leeds including a lack of integration, unreliable journey times, complex ticketing arrangements, poor community transport solutions, pricing levels and poor travel choice information. Older buses also contribute to poor air quality in some locations.
Leeds City Council and West Yorkshire Combined Authority have developed a close collaborative working relationship with the bus operators to develop a package of improvements that will provide a better passenger experience. This collaborative approach means that passengers will see improvements sooner as the bus companies are willing to invest now alongside the bus priority measures the Council can provide.

The overall proposed package will therefore include a balance of capital investment for highway infrastructure matched by commitments by bus companies. By 2020 the programme proposes to deliver:

- A “turn up and go” High Frequency Bus Network across the city, with enhanced frequencies in the early evening;
- A fleet of 284 new buses, offering enhanced comfort, free Wi-Fi, audio visual information systems and device charging facilities;
- Affordable, more simple fare structure, which encourage bus travel especially amongst under people under 25;
- Easy to use options to pay for travel before, during and after the journey using mobile devices;
- Customers will be able to plan journeys, pay for travel and obtain up to the minute travel advice using their mobile device;
- All buses travelling through the city centre will meet the latest ultra-low emissions standards by 2020;
- New bus park & ride facilities to the north and south of the city together with further expansion at Elland Road. Appendix C contains example scheme drawings of Stourton Park & Ride and the associated bus priority measures on the A61 South;
- Proposals to invest in a number of key corridors to reduce bus journey times and improve day to day bus service reliability:
  - A61/A639 South: To provide a high quality bus priority corridor from the Stourton Park & Ride into the city centre;
  - A61 North: A series of bus priorities which address traffic hotspots, building on the existing Guideways in North Leeds;
  - A660: Improving bus journey times by investing in the Lawnswood roundabout;
  - A58 North East: Investment at key traffic hotspots to improve bus journey times along the corridor;
  - A647: Bus priority through the congested A647, linking to the park & ride expansion at New Pudsey railway station;
- Real time passenger information displays at bus stops in communities throughout Leeds including the city centre; and
- Leeds City Council, West Yorkshire Combined Authority and the bus companies will carry out a consultation led review of connectivity throughout the Leeds district and with funds available for community led transport projects. This will make sure that the High Frequency Bus Network is supported by a secondary bus network, which addresses the community requirements for transport.

Together this package, delivered under a new partnership with the bus operators, will work towards generating a step change in the bus provision across the city, making it a much better alternative to the private car. The outcomes would be a reduction in bus journey time, improved reliability and modal shift generating a benefit to the environment and the economy.

An example of where improving the bus offer in a city has been demonstrated to make significant increases to patronage is Nottingham. Figure 33 summarises how Nottingham achieved a 10% bus patronage increase between 2004/05 and 2014/15.
4.5.1.1 The Rational for the Bus Package

Travel surveys for Leeds show that public satisfaction with bus services and bus patronage is falling. Between 2001 and 2011, bus patronage as a form of commuting to Leeds city centre, fell by 8%. This could be explained by uncompetitive journey times, inadequate journey information available and communities being poorly connected to the core bus network.

The West Yorkshire Bus Strategy consultation revealed that stakeholders felt more could be done to improve infrastructure to ensure a better customer experience. The package will therefore contribute to this desire by delivering bus priority measures to improve bus journey times as an attractive alternative to the private car. The package will further support the views given in the consultation with the real-time improvements at bus stops and transport hubs aligning with the strong support shown by Leeds respondents to travel information when planning a journey being easily accessible and reliable.

A key priority of the Leeds City Region Strategic Economic Plan is to focus growth and development on the urban centres across the region. Enhancing the quality of the bus network will help to drive business competitiveness across the city.

The package is a key contributor to working towards delivering the West Yorkshire Bus Strategy and its vision of creating the best bus system in Europe. The real-time improvements align with the Strategy’s policy of providing easily accessible and reliable travel information, tailoring the bus service to customers’ expectations, further strengthened by the speedy and reliable Wi-Fi connectivity that will be provided by the new bus fleet.

This new fleet will also support the Strategy’s policy of creating a bus system which contributes to improved air quality with the Euro VI or better buses helping realise West Yorkshire’s environmental aspirations. Underpinning all this will be the investment in bus infrastructure the package will provide, aligning with the Bus Strategy’s encouragement of infrastructure projects improving conditions for buses through delivering bus priority, congestion reduction and highway efficiency, emphasising the package’s significance in helping increase bus patronage within Leeds and therefore West Yorkshire.
4.5.2 World class city centre gateway, being HS2 ready and high quality transport hubs

With the arrival of HS2 to Leeds city centre, it is important that the city can provide a transport network that enables efficient onward connectivity. HS2 and Northern Powerhouse Rail opportunities will signify a step change in the provision of transport in the North and in the connectivity to Leeds. This fundamental change will transform how the city connects to the rest of the UK.

Leeds Station is the busiest rail station in the north of England and passenger numbers are forecast to more than double over the next thirty years, reaching a level similar to those at Gatwick airport. As a major transport hub for the city, Yorkshire and the wider north of England as a whole, we need to plan for significant future growth in rail use into Leeds and across the city region. An integrated ‘T’ shaped station in Leeds to accommodate HS2, Northern Powerhouse Rail and local and regional services, the Council has commissioned an Atkins led consortium, made up of a group of leading global design, engineering and project management consultants, to develop the masterplan for Leeds Station to create a distinctive modern destination and fully integrated national transport hub. The Leeds Public Transport Investment Programme will facilitate delivery by building on the West Yorkshire Transport Fund, and other investments, to support the Leeds Station Masterplan once developed next year.

The Council is working with the West Yorkshire Combined Authority to commission the development of a HS2 growth strategy that will provide an economic assessment of the additional interventions needed to maximise the benefits of HS2, including options for funding. The Council is keen to see progress before HS2 arrives and this part of the investment package and longer term strategy will support better interchange within the city centre.

There is strong support in the Leeds Transport Conversation responses to take through traffic out of the city centre and to make the city streets more conducive to walking and cycling.

Many of the public transport arrival points in Leeds are located in iconic streets with a strong historic, cultural and architectural background. These arrival and departure points should link to Leeds Station, reflect our ‘Best City’ aspirations, enhance the public realm and improve the customer experience. Simplifying the road layouts to reduce congestion, upgrading the pedestrian environment, improving signage and legibility and redesigning stop infrastructure is proposed at the following key gateway locations:

- The Headrow – the main east west corridor in the city centre fronting Leeds Town Hall through the heart of the retail area;
- Infirmary Street / Park Row – primary Leeds station gateway and links to business district, civic quarter, hospital and universities; and
- Vicar Lane (Corn Exchange) / Boar Lane / Lower Briggate - Gateway to and links between retail core, markets, South Bank and Leeds Station.

Improving the quality of the city centre transport network will increase the proportion of commuters to Leeds city centre travelling by public transport and active modes. Interchange in the city centre is a key component to successfully deliver the benefits of HS2 and Northern Powerhouse Rail across the district and city region.

Figure 34: City Centre Programme
4.5.2.1 The Rationale for the City Centre Gateways Package

The concentration of economic activity within the city centre has resulted in Leeds being the second most attractive core city for inward investment and is a world leader in big data and health innovation. Leeds city centre is the focal point of the Leeds City Region and a key contributor towards rebalancing the North\textsuperscript{18}. The role of Leeds City Centre will become of greater importance as HS2 and the South Bank Masterplan are realised.

Moreover, the programme will help advance the Yorkshire Hub proposal, bringing HS2 to Leeds. This transformational change will help reduce congestion on the existing network, whilst creating opportunities for improved connections to other northern cities and towns, aligning with the Northern Powerhouse vision. However, in Leeds city centre, there is a high volume of traffic, which severely affects the air quality. The NO\textsubscript{2} levels within the city centre contribute to West Yorkshire having the third worst air quality in the country. This situation is exacerbated by 23.5\% of the buses operating in Leeds being Euro V emission standards or lower, so they are a major contributor to the poor air quality across the city.

Due to the previous nature of transport investment within Leeds, a legacy has been created in which traffic dominates parts of the city. This is the case for certain areas of the city centre, contributing to pedestrian severance and limiting the place making and economic potential. This programme of schemes will address many of the adverse impacts of traffic.

\textsuperscript{18} SQW (2016) Independent Economic Review
4.5.3 Rail stations at key economic, housing growth and employment locations

Leeds city centre is the economic powerhouse of the City Region’s economy, particularly for knowledge intensive and financial and professional services jobs. It is supplemented by a number of key growth points including Kirkstall Forge, White Rose Office Park and Retail Centre, Thorpe Park and Leeds Bradford Airport. Making a step change in the connectivity of key growth points via improved public transport is an important component of the proposals being brought forward.

It is recognised that our rail network is vital to our transport system, enabling efficient and effective strategic connectivity into Leeds and to the wider Leeds City Region. There has been significant growth in rail use in recent years with more expected in the future following the capacity enhancing new Northern and Trans-Pennine franchises and HS2 and Northern Powerhouse Rail. The proposed programme will develop the opportunities for three new rail stations across the city, plus improvements for access at others as follows:

- A parkway station serving Leeds Bradford Airport provides a rail link for airport passengers, supports employment growth surrounding the airport and provides strategic park & ride for the city and surrounding districts;
- A new station at White Rose to support the employment and retail centre via improved connectivity;
- A new station at Thorpe Park linked to employment and housing growth areas in the east of the city with a strategic park & ride function for the city and surrounding districts;
- Access improvements at Cross Gates, Morley and Horsforth rail stations so all users can access all platforms;
- Car park expansion at New Pudsey to increase its capacity within the Leeds Bradford corridor; and
- Development of a mass-transit proposal for the City, to link into the emerging Leeds Transport Strategy.

The enhanced rail opportunities are illustrated in Figure 35.

This rail investment is consistent with the feedback from the survey where 74% of respondents agreed that investment in future schemes should improve capacity and access to the rail network. 53% of respondents supported an increase in park & ride options around the city, therefore parking expansion at new and existing rail station needs to contribute to city’s park & ride options.

The inclusion of the rail stations within this programme will help focus partners to accelerate delivery. Leeds City Council will continue to work with WYCA, Network Rail, Rail North, DfT and the private sector to build on the feasibility work already undertaken, carry out consultation and seek dedicated resources to aid scheme delivery and set out how they fit with other plans for the network.

These improvements to the rail network will bring significant benefits to the regional economy by improving connectivity within the city region and, improve access in the future to HS2 and Northern Powerhouse Rail. In addition, the Council expects that all of these proposed rail stations will generate meaningful sector funding contributions from neighbouring land-owners and developers.

A parkway at Leeds Bradford Airport has the advantage of utilising the existing Leeds Harrogate line and being capable of delivery at significantly less cost than a rail halt immediately adjacent to the airport terminal due to the challenging topography that would otherwise have to be addressed. It is also aligned with plans for major new commercial development adjacent to the airport and, as a strategic rail park & ride for outer North West Leeds and commuters from neighbouring districts, which would increase its patronage and enhance the business case. Taking account of all of these factors this option is considered to be a more deliverable proposition in the medium term, which would not obviate the potential for a rail halt adjacent to the terminal over the long-term should airport passenger numbers justify a business case for such a proposal.

White Rose is already an important centre for retail and jobs. Major employers at the White Rose Office Park include HSBC and O2. In addition proposals are also coming forward for a 6th form college on the site. The retail centre is also expanding, including a new cinema and restaurants and the provision of a new rail halt at White Rose will complement existing use, planned growth and the new housing outlined in the Council’s Site Allocations proposals.

Thorpe Park is also set to expand. Planning consent has been given for new a retail and cinema development as well as new housing. In addition, the provision of a new bridge over the railway to link in Manston Lane in the North will help facilitate further housing coming forward and will be the southern spur to the East Leeds Orbital which will facilitate a further 5,000 houses in the East Leeds Extension. The land to the north of railway is owned by Leeds City Council which facilitates the provision of strategic rail park & ride, which will help
stimulate development at Thorpe Park and improve connectivity to Leeds city centre and further locations on the Trans-Pennine route.

**Figure 35: Enhanced Rail Package Rationale for the Rail Package**

4.5.3.1 **The Rationale for the Rail Package**

The current rail network does not allow residents to take full advantage of the potential growth opportunities in Leeds, with poor access to key development sites such as the airport. This may stifle both job creation and house building and, as a result, the City Region’s aspiration to build an internationally competitive economy.

This aspiration will be strongly supported by the construction of the three new stations at strategic locations on the rail line, helping unlock development opportunities at Leeds Bradford Airport Parkway, Thorpe Park and White Rose. This improved connectivity will support economic activity and growth.

In the Leeds City Region’s SEP, Leeds Bradford Airport is identified as one of employment growth priority areas within the City Region, with investment to be prioritised there. The SEP outlines how a better connected airport in terms of public transport links, is required to unlock its full economic potential which this package will deliver. The strategy also gives specific mention to the need for improved surface access to the airport. A parkway-type station on the existing rail network is proposed as a short-to-medium term option to provide enhanced connections to the airport. Increasing access to the rail network for more people in Leeds will help contribute to the target in the West Yorkshire Transport Strategy of 50% more trips made by rail in the West Yorkshire region by 2026. As well as making the rail network more accessible at key strategic points, there are also locations where historic infrastructure is limiting peoples’ access to use rail. Not all rail stations in Leeds are PRM TSI compliant, meaning that people with disabilities or reduced mobility, may not be able to access the rail system, creating a barrier to accessibility for certain groups within Leeds. Provision of PRM-TSI compliant footbridges at Cross Gates, Horsforth and Morley will assist in meeting the wider national and regional objectives of improving accessibility to the transport network.

Potential accessibility to the rail network is also limited, by the insufficient car parking at rail stations. The demand for travel in Leeds is growing. There are areas of the city where the bus network is at capacity and there are no or limited options for rail. As such options for alternative mass transit systems will be considered
for future delivery. This programme will undertake a high level optioneering and feasibility assessment to understand how the delivery of a mass transit system will support the existing transport network.
4.6 Helping to Deliver the Strategic and Policy Context for Leeds

This Strategic Outline Case has set out the challenges facing Leeds but also the great number of opportunities that also exist. In Chapter 3, a range of strategies and policies were reviewed. These covered different geographical areas, and included those at the national, pan northern, Leeds City Region, West Yorkshire Combined Authority and Local Plans for individual districts. The case was made that regardless of geographical scale and coverage, these policies were aligned by the objectives and outcomes they were seeking to achieve. Leeds district sits at the heart of this area, with Leeds city centre having the potential to drive the economy for the region.

There is a clear understanding in all strategies and policies, at whatever geographical scale, that public transport improvements are at the heart of future growth of the city. The Leeds Transport Conversation also endorsed the need for public transport improvements and this programme has been built on these conversations. As the first phase of the emerging Leeds Transport Strategy, the programme of schemes identified through this Strategic Outline Case will start the transformation programme for the city and are critical to commencing the delivering of the strategy and policy context for Leeds and the wider Leeds City Region.

The context for the City can be summarised with four overarching objectives:

- Enhancing Pan-Northern Connectivity;
- Enhancing Economic Growth: “Good Growth”;
- Developing a Liveable Leeds; and
- Delivering a Healthy Leeds.

4.6.1 Enhancing Pan-Northern Connectivity

With the growth of the City Centre, the emerging South Bank masterplan, the growth of the rail network, and the arrival of HS2 and Northern Powerhouse Rail to Leeds railway station, it is important that the city can provide a transport network that enables efficient onward connectivity. HS2 and Northern Powerhouse Rail opportunities will signify a step change in the provision of transport in the North and in the connectivity to Leeds. This fundamental change will transform how the city connects to the rest of the UK.

Through this package, creating world class city centre gateways and a network of high quality transport hubs are key components being HS2 ready and providing Leeds with a comparative advantage. Together these will work towards enhancing pan-Northern connectivity by improving interchange between transport modes, and providing ‘last mile’ connectivity from the Leeds Station Hub to the broader city centre and wider communities. However, the measures included within the Strategic Outline Case are only the first stage, and there are a number of areas of the city where the existing local public transport network cannot cope with these growth expectations and therefore development of mass transit options is key to the delivery of the full Transport Strategy.

4.6.2 Enhancing Economic Growth: “Good Growth”

Both Leeds City Region and the City of Leeds are committed to the principle of “good growth”. This means achieving both the right quantity and the right quality of growth; creating a strong, productive and resilient economy where a radical uplift in business competitiveness, productivity and profits go hand in hand with access to good jobs that pay higher wages where all residents have access to opportunities and enjoy improved quality of life.

Transforming the bus network will enable economic growth with improved levels of connectivity and reduced congestion. The bus network must be prioritised, especially where the rail network doesn’t serve the local area. This will deliver increasing business productivity, access to employment and training opportunities for all of Leeds residents. This will be further aided by the introduction of three new rail stations. New rail stations in key growth areas, Leeds Bradford Airport, Thorpe Park and White Rose will provide significant benefits to the regional economy by supporting the delivery of key housing and employment development sites in Leeds.

4.6.3 Developing a Liveable Leeds

Improving the public transport offer across the whole Leeds district is essential to realising Leeds’s ambition to be the ‘Best City’ in the UK by 2030. The programme will help support this ambition by improving transport hubs in communities across Leeds, enabling a better quality public transport offer.
In addition, there are a number of rail stations across Leeds, which due to historic infrastructure is not accessible for all. The Leeds Public Transport Investment Programme will make the rail network accessible for all improving connectivity for all potential users, providing greater opportunities, ensuring that the programme will contribute to making Leeds a great place to live and work.

4.6.4 Delivering a Healthy Leeds

West Yorkshire has the third worst air quality in the country and transport in a key contributor to the air quality problems. The Leeds Public Transport Investment Programme will make a significant contribution towards compliance with DEFRA’s legal requirements of the city by reducing transport emissions. The introduction of 284 new low emission buses and retrofitting of existing buses will reduce emissions and improve air quality. Encouraging modal shift away from the private car will also positively contribute to air quality.

Improvements to public realm in the city centre will help deliver the wider vision of creating a more pedestrian friendly environment, which will facilitate the advent of active travel, having a positive effect on peoples’ health and wellbeing.

4.6.5 Helping to resolve the Transport Challenges of the City

Whilst the schemes set out in this Strategic Outline Case will not address all of the transport challenges facing the city, they will help to improve the transport system. A summary of how the programme of schemes for each sector of the City will address the transport challenges set out in Chapter 3 is provided below. This demonstrates how the Leeds Public Transport Investment Programme is working towards addressing some of the key transport challenges, which the city is facing. In addition, a number of the schemes are located in some of the most deprived areas of the city, for example the improvements on the high frequency bus network will improve access and connectivity to employment and training opportunities in the City Centre.

Table 5: How the Strategic Outline Case addresses the Transport Challenges

<table>
<thead>
<tr>
<th>Sector</th>
<th>Summary of the Transport Challenges</th>
<th>How the Programme addresses the City’s Transport challenges</th>
</tr>
</thead>
</table>
| A61 North: Chapel Allerton & Moortown | High levels of traffic and congestion High Car mode share in rural areas No rail network | • New Bus priority measures  
• High Frequency Bus Network  
• Potential for new North of the City park & ride |
| A58: Roundhay & Wetherby | High levels of traffic and congestion High Car mode share in rural areas No rail network Significant forecast in housing and employment growth Poor public transport accessibility | • New Bus priority measures  
• High Frequency Bus Network  
• Potential for new North of the City park & ride |
| A64: Gipton, Harehills & Garforth | Overcrowded rail network and full rail station car parks Rail network inaccessible to some users Significant forecast in housing and employment growth | • High frequency bus network  
• Accessibility improvements at Cross Gates station  
• Development of Thorpe Park Rail Station |
| A63 / A61 South: Stourton, Middleton & Aire Valley | High levels of traffic and congestion Overcrowded rail network and full rail station car parks Poor air quality | • High Frequency Bus Network  
• Stourton park & ride and A61S Corridor improvements |
| A62 / A643: Morley & Beeston | High levels of traffic and congestion Overcrowded rail network and full rail station car parks Poor air quality Rail network inaccessible to some users | • Accessibility improvements at Morley station  
• High Frequency Bus Network  
• Development of White Rose Rail Station |
| A647: Pudsey & Bramley | High levels of traffic and congestion Poor air quality Overcrowded rail network and full rail station car parks | • New Bus priority measures  
• High Frequency Bus Network  
• New Pudsey Rail park & ride expansion |
<table>
<thead>
<tr>
<th>Sector</th>
<th>Summary of the Transport Challenges</th>
<th>How the Programme addresses the City’s Transport challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>A65: Aireborough and Kirkstall</td>
<td>High levels of traffic and congestion</td>
<td>• High Frequency Bus Network</td>
</tr>
<tr>
<td></td>
<td>Significant forecast in housing and employment growth</td>
<td></td>
</tr>
<tr>
<td>A660: Headingley, Weetwood, Bramhope and Otley</td>
<td>High levels of traffic and congestion</td>
<td>• Accessibility improvements at Horsforth station</td>
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<tr>
<td></td>
<td>Poor public transport accessibility</td>
<td>• Development of Leeds Bradford Airport Parkway rail station</td>
</tr>
<tr>
<td></td>
<td>Rail network inaccessible to some users</td>
<td>• New Bus priority measures at Lawnswood roundabout</td>
</tr>
<tr>
<td></td>
<td>Overcrowded rail network and full rail station car parks</td>
<td>• New Bus priority measures</td>
</tr>
<tr>
<td></td>
<td>Significant forecast in housing and employment growth</td>
<td>• Potential for new North of the City park &amp; ride</td>
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<tr>
<td></td>
<td>Poor surface access to the airport</td>
<td></td>
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<tr>
<td>City Centre</td>
<td>High levels of traffic and congestion</td>
<td>• Bus priority</td>
</tr>
<tr>
<td></td>
<td>Significant forecast in housing and employment growth</td>
<td>• High frequency bus network</td>
</tr>
<tr>
<td></td>
<td>Air Quality challenges</td>
<td>• The Headrow Gateway</td>
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<tr>
<td></td>
<td></td>
<td>• Infirmary Street / Park Row Gateway</td>
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<tr>
<td></td>
<td></td>
<td>• Vicar Lane (Corn Exchange) / Boar Lane / Lower Briggate - Gateway</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New low emission bus area</td>
</tr>
<tr>
<td>Across the City</td>
<td>Large increase in commuting to Leeds from outside the district</td>
<td>• Reconnecting communities</td>
</tr>
<tr>
<td></td>
<td>Rising cost of travel by public transport</td>
<td>• New low emission buses</td>
</tr>
<tr>
<td></td>
<td>Declining bus patronage</td>
<td>• Real time passenger information displays</td>
</tr>
<tr>
<td></td>
<td>Poor customer experience and satisfaction on public transport</td>
<td>• District Hub Improvements</td>
</tr>
</tbody>
</table>

### 4.6.6 Summary

In essence, with strategy and policy alignment, agreement of what outcomes are required and a full understanding of the problems and opportunities, hearing and understanding the needs of the people, coupled with strong political leadership, the programme will go a long way to meeting the needs of Leeds. Acknowledgement is made that this programme is a start of a much longer journey. In summary the programme will deliver the aspirations for the City by:

1. Support economic growth by unlocking the transport constraints in key growth areas and across the city by delivering three new rail stations at Leeds Bradford Airport Parkway, White Rose and Thorpe Park. Transforming the gateways to the City Centre and the bus network will also enable quicker journey times by bus to the City Centre;

2. Aligning the programme of works within the Leeds Public Transport Investment with the emerging Leeds Transport Strategy, West Yorkshire Transport and Bus Strategies, as well as the national/pan northern growth strategies including HS2 and Northern Powerhouse Rail;

3. Improve health outcomes especially air quality by reducing transport emissions and convert all buses in Leeds to be Euro VI or low emission by 2020. The City Centre will also be a Bus Ultra Low Emission Area to ensure the impact of buses on the air quality in the City Centre is reduced;

4. Complement the existing schemes being delivered through the WYTF such as Leeds City Centre Package and the Corridor Improvement Programme by transforming the passenger interchange areas in the city centre and improving bus journey times on four key corridors into the city centre;

5. Reflect the key messages from the Leeds Transport Conversation in terms of improving public transport operation and quality by working with First West Yorkshire to introduce 284 new buses to Leeds, extend the high frequency bus network to 8pm every day and improve the coverage of real time information;

6. The measures included within the Leeds Public Transport Investment Programme are deliverable within the short to medium term taking into consideration land requirements and public acceptability through the Leeds Transport Conversation;
7. Leveraged in match funding from the private sector including £71m from First West Yorkshire and other public transport providers and developments / businesses who will benefit from the public investment; and

8. Cognisance of and adaptability for the delivery of the longer term strategy through the in parallel development of mass transit options for the city of Leeds and transformation of City Centre gateways.
### 4.7 Measures for Success

To ensure the Leeds Public Transport Investment Programme makes the expected significant contribution towards the Leeds Transport Strategy vision and objectives, it is important key outcomes are monitored. Table 6 outlines the outcomes, which will be monitored to measure the success of the programme.

**Table 6: Measures for success for the Leeds Public Transport Investment Programme**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Outputs</th>
<th>Outcomes</th>
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</thead>
</table>
| **Transforming the Bus Network** | • Bus priority measures on the A61 North, A61 South, A647 and A660, which will include road space reallocation to bus lane  
• 284 new low emission buses  
• Core bus network will have over 90% as a 10 minute frequency to 8pm  
• At least 2000 new park & ride spaces  
• Over 1000 bus stops with new or upgraded real time information  
• All of buses in Leeds to facilitate contactless payment  
• The district centre with improved transport interchange facilities | • Reduce bus journey time  
• Improved air quality  
• Increased bus patronage and public transport mode share  
• Improved transport interchange facilities  
• Improved passenger information  
• Improved customer experience  
• More jobs will be accessible from the rail network  
• Improved access to the rail network |
| **World Class City Centre Gateways** | • Improved bus interchange areas at Leeds Rail Station, Leeds Bus Station, The Corn Exchange, The Headrow, Infirmary Street, Albion Street and Woodhouse Lane  
• Improved passenger waiting facilities and upgraded information | |
| **Rail Stations at key economic, housing growth and employment locations** | • Development of 3 new rail stations at Leeds Bradford Airport Parkway, White Rose and Thorpe Park  
• All rail stations in Leeds will be accessible for all will improvements made to Cross Gates, Morley and Horsforth  
• Rail Park & Ride will be expanded at New Pudsey Rail station  
• Development of a Tram, Tram-Train proposal for the City | |
Economic Case
5. Economic Case

5.1 Methodology and Assumptions

The purpose of this economic case is to set out the potential scale of benefits associated with the schemes included within this Strategic Outline Case. The methodology adopted for the outline economic assessment is at a high level and based on the following principles:

- To make maximum use of existing data sources;
- To provide a simple Microsoft Excel based approach to calculating the most significant likely benefits/disbenefits associated with the package;
- To reflect the best practice principals of DfT WebTAG Scheme Appraisal;
- To enable a programme level benefit to be calculated which is based on the individual components of the programme; and
- To focus on the quantification of core benefits

Through discussion with DfT, to reflect the principles above a Benefit Cost Ratio would only be developed at future development stages for individual schemes. The Management Case confirms that individual business cases will be developed for individual schemes included within this package, as they progress through the Assurance Framework (see Figure 37: WYCA PMO Process). Detailed economic cases will therefore be developed for individual schemes at the appropriate points in this Assurance Framework.

Based on these principles, Table 7 sets out an overview of how benefits have been estimated for each type of scheme. The focus in this table is on user benefits but the same principles have been applied to the other benefit streams. The table also identifies the main data sources to be used.

Table 7: Method of Benefit Calculation

<table>
<thead>
<tr>
<th>Type of Scheme</th>
<th>Calculation of Benefits</th>
<th>Data Source / Assumptions</th>
<th>Identified Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Priority</td>
<td>Calculate a change in journey time for all existing passengers over the length of the scheme. New passengers to be estimated by applying an elasticity.</td>
<td>The existing journey time has been calculated from real time bus information. The scheme journey time has been calculated based on bus speeds in similar schemes across Leeds. Where significant highway journey time savings are expected, these have been calculated by simulating the highway changes in the 2036 LTM highway model with a fixed flow. Passenger numbers have been extracted from the 2036 LTM Public Transport Model Do Min Forecast. New passengers will be calculated by applying an elasticity to the change in journey time and the existing passengers. Rule of a Half (ROH) will be applied to benefits from these. Estimates of average journey time will be provided by the Leeds Transport Model (LTM). Elasticities have been derived from TRL’s ‘The Demand for Public Transport’. Calculation of Marginal External Costs will be undertaken to quantify other benefits such as decongestion, environmental and safety benefits assuming that the additional passengers transfer from highway.</td>
<td>Scheme bus speeds estimates. Methodology for calculating impacts on highway traffic does not consider reassignment effects. Elasticity calculation based on generalised cost for a typical journey in Leeds rather than being specific to trips on each corridor.</td>
</tr>
<tr>
<td>Bus based park &amp; ride</td>
<td>Benefits per passenger multiplied by passenger forecasts</td>
<td>Passenger forecasts have been based on the available capacity of car parks. Benefits will be calculated through comparing journey times and costs with and without the park &amp; ride schemes with impacts on private sector providers, in terms of operating costs and fare, also considered. All main components of the journey have been considered; drive time, parking charge, walk time to destination (from car park)</td>
<td>It is assumed that all park &amp; ride spaces will be filled to capacity with a level of “churn” consistent with surveys of the existing Elland Road site. Elements of journey costs (IVT, walk time etc.) are estimates.</td>
</tr>
<tr>
<td>Type of Scheme</td>
<td>Calculation of Benefits</td>
<td>Data Source / Assumptions</td>
<td>Identified Risks</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
<td>---------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>City Centre Transport Hub</td>
<td>Soft Factor benefits multiplied by number of existing passengers. New passengers to be forecast by applying an elasticity.</td>
<td>Soft Factor values were taken from WebTAG Workbook - interchange value (1.27 minutes). Existing passengers boarding at the improved bus stops were extracted from LTM for the bus stops in the city centre (tight cordon around city centre / bus box). This assumes that the small number of passengers using unimproved stops will have choice of switching to improved stops and therefore benefit from having increased choice. New passengers will be calculated by applying an elasticity to the soft factors generalised time and the existing passengers (but only for passengers using improved stops). ROH will be applied to benefits from these. Will need to estimate average journey time. LTM will be able to provide this. Elasticities have been derived from TRL’s 'The Demand for Public Transport'.</td>
<td>Soft factor benefit values are based on WebTAG guidance rather than local surveys. It is assumed that passengers will choose to use improved stops in preference to un-improved stops. Elasticity calculation based on generalised cost for a typical journey in Leeds rather than being specific to trips boarding in city centre.</td>
</tr>
<tr>
<td>Passenger Information</td>
<td>Soft Factor benefits multiplied by number of existing passengers. New passengers to be forecast by applying an elasticity.</td>
<td>Soft Factor values were taken from WebTAG Workbook – real time information (1.47 minutes). Existing passengers boarding at the improved bus stops have been extracted from LTM. New passengers will be calculated by applying an elasticity to the soft factors generalised time and the existing passengers. ROH will be applied to benefits from these. Elasticities have been derived from TRL’s ‘The Demand for Public Transport’.</td>
<td>Soft factor benefit values are based on WebTAG guidance rather than local surveys.</td>
</tr>
<tr>
<td>Bus operator contribution / Low Emission Buses</td>
<td>Quality benefits and reduced environmental impact. New passengers to be forecast by applying an elasticity.</td>
<td>New buses are to be deployed to the core network of services. Total passengers for these services have been extracted from LTM. Quality benefits for new buses have been taken from WebTAG Soft Factors (1.19 minutes) Change in environmental impact will be calculated by comparing the emission factors for the new buses with the old ones. Total distance travelled will be obtained from the bus operators.</td>
<td>Soft factor benefit values are based on WebTAG guidance rather than local surveys.</td>
</tr>
<tr>
<td>Reconnecting Communities</td>
<td>Not to be assessed</td>
<td>We have assumed £5M of cost and BCR of 1.0 therefore benefits of £5M. A BCR of 1 has been chosen as there are likely to be considerably more schemes of this nature than funding available and therefore the best performing schemes will be chosen. With such a choice it is expected that all schemes that are implemented will have a BCR greater than 1 however a conservative approach has been adopted.</td>
<td>No attempt has been made to quantify benefits in detail.</td>
</tr>
<tr>
<td>New Rail Stations</td>
<td>Benefits per passenger multiplied by</td>
<td>Existing economic case evaluations exist for some of the proposals. These will be reviewed to understand the level of confidence in the methodologies and assumptions used. Where</td>
<td>It is assumed that all park &amp; ride spaces will be filled to capacity with a level of “churn”</td>
</tr>
</tbody>
</table>
### Leeds Transport Investment Programme

Leeds City Council and West Yorkshire Combined Authority

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**Page 80 of 117**

<table>
<thead>
<tr>
<th>Type of Scheme</th>
<th>Calculation of Benefits</th>
<th>Data Source / Assumptions</th>
<th>Identified Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>passenger forecasts Where a park &amp; ride is included</td>
<td>it will be assessed separately in the same way as bus based park &amp; ride</td>
<td>these are considered to be sufficiently robust they will be used. Where the confidence is low then the following approach has been used. Benefits per passenger will be taken from recent business cases for similar stations across West Yorkshire where there is confidence in the results. Passenger forecasts will be estimated based on actual usage of similar stations (catchment size and distance from Leeds City Centre) De-congestion, environmental and safety benefits to be estimated based on the vehicle kilometres removed from the network. Park &amp; ride to will be assessed using the same methodology that is used for the bus based park &amp; ride schemes.</td>
<td>consistent with surveys of the existing Elland Road site. Elements of journey costs (IVT, walk time etc.) are estimates. Elland Road fares assumed – fares for other sites are unknown. No highway reassignment impacts are considered.</td>
</tr>
<tr>
<td>Extension to Rail park &amp; ride (New Pudsey)</td>
<td>Benefits per passenger multiplied by increase in passenger forecasts</td>
<td>The methodology for bus-based Park &amp; ride above will be followed however values relating to walk time and wait time will be sourced from Passenger Demand Forecasting Handbook. The previous car-park expansion at this station was filled to capacity shortly after opening and there is still evidence of suppressed demand therefore it will be assumed that all the new spaces will also be filled.</td>
<td>It is assumed that all park &amp; ride spaces will be filled to capacity with a level of “churn” consistent with surveys of the existing Elland Road site. Elements of journey costs (IVT, walk time etc.) are estimates. No highway reassignment impacts are considered.</td>
</tr>
<tr>
<td>Accessibility at Rail Stations</td>
<td>User benefits multiplied by existing disabled users</td>
<td>User benefits taken from “Access for All Benefit Research” for DfT – July 2015 Disabled users from Office Road and Rail Station usage data multiplied by census data on disability in ward / district in which station is located.</td>
<td>High level generic approach to calculation of benefits</td>
</tr>
</tbody>
</table>

Based on the methodology provided above, Table 8 provides an indication of the level of robustness attributed to the calculation of each component of the package, along with a justification for this assessment.

**Table 8: Benefits Calculated for each Element of the Programme**

<table>
<thead>
<tr>
<th>Scheme Type</th>
<th>User Benefits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Priority</td>
<td>✓ ✓</td>
<td>Thorough assessment methodology adopted with final results affected by input assumptions concerning bus times achievable with priority measures in place. No allowance for potential reassignment of trips.</td>
</tr>
<tr>
<td>Bus Based Park &amp; Ride</td>
<td>✓ ✓</td>
<td>Thorough assessment methodology adopted with final results affected by input assumptions concerning take-up of park &amp; ride parking places, potential time-savings and yields. No allowance for potential reassignment of trips.</td>
</tr>
<tr>
<td>City Centre Transport Hub</td>
<td>✓ ✓ ✓</td>
<td>Thorough assessment approach adopted making use of data from Leeds Transport Model and benefit valuations from WebTAG guidance.</td>
</tr>
<tr>
<td>Passenger Information</td>
<td>✓ ✓ ✓</td>
<td>Thorough assessment approach adopted making use of data from Leeds Transport Model and benefit valuations from WebTAG guidance.</td>
</tr>
<tr>
<td>Bus operator contribution / Low Emission Buses</td>
<td>✓</td>
<td>Assumptions required on how the new vehicles are to be used (which routes, how many passengers affected etc.) Benefit valuations from WebTAG guidance.</td>
</tr>
<tr>
<td>Reconnecting Communities</td>
<td>✓</td>
<td>No detailed benefit calculation undertaken.</td>
</tr>
<tr>
<td>Scheme Type</td>
<td>User Benefits</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>New Rail Stations</td>
<td>✓</td>
<td>Benefits taken from studies previously undertaken.</td>
</tr>
<tr>
<td>Extension to Rail park &amp; ride (New Pudsey)</td>
<td>✓ ✓</td>
<td>Thorough assessment methodology adopted with final results affected by input assumptions concerning take-up of park &amp; ride parking places and potential time-savings. No allowance for potential reassignment of trips.</td>
</tr>
<tr>
<td>Accessibility at Rail Stations</td>
<td>✓</td>
<td>High level generic approach to calculation of benefits</td>
</tr>
</tbody>
</table>

5.1.1 Assessment of Bus Operator Contribution

The impacts of the First West Yorkshire Heads of Terms (Included within Appendix 1) are included as a core component of the programme and have been assessed in two ways:

- “Quality” impacts of updated vehicles experienced by the passenger: This has been assessed using a similar method to that described above for other bus quality impacts. It has been assumed that the new buses would operate on the core bus network comprising the most well used services across the city. Outputs from the Leeds Transport Model have been used to determine the number of passengers benefiting from this and a fixed journey time equivalent value, taken from relevant WebTAG guidance, of 1.19 minutes assumed.

- Changes in emissions of carbon dioxide and local pollutants:
  - 284 new vehicle, to Euro VI standard are assumed to be introduced to the network. These are assumed to replace the oldest of the current bus fleet, currently comprising 165 Euro IV standard vehicles and 119 Euro V standard vehicles;
  - Greenhouse Gas (Carbon Dioxide emissions) – there is no change to the Carbon Dioxide limits between the Euro IV, V and VI standards so no change to such emissions is assumed;
  - Local pollutants – at this stage it has not been possible to fully assess impacts of local pollutants. However by considering the limits of the various engine standards it is possible to demonstrate considerable benefits; and
  - Bio-methane vehicles – a potential option of introducing bio-methane powered vehicles is under consideration. These vehicles are assumed to have zero Carbon Dioxide emissions. These benefits have been valued by using WebTAG fuel consumption, carbon dioxide emission and relevant monetary values to estimate the amount, and associated monetary value of carbon dioxide emissions by vehicles that would be replaced under the proposals.
5.2 Modelled Assumptions

The principles to the development of economic case to support the Strategic Outline Case are outlined above and as a result of the approach taken the following key assumptions should be noted:

- Where data has been extracted from Leeds Transport Model, the version of the model used is constrained to TEMPRO 6.2 and not TEMPRO 7.0;
- No reassignment of trips was undertaken;
- The impact of mode switching on highway congestion was not modelled; and
- Values of time have been taken from the WebTAG workbook (Version 1.6 Nov 16).

A detailed assumptions note is included in Appendix H.

5.2.1 Assessment Period

For significant highway infrastructure measures, e.g. bus priority, a 60 year appraisal period has been used for calculating benefits.

For scheme elements assessed using “soft factors” e.g. bus stop quality improvements, a 10 year appraisal period is used. Benefits have been discounted in line with guidance in WebTAG. An opening year of 2019 has been assumed for all schemes.

5.2.2 Annualisation

The benefits for each element of the programme have been calculated over a 12 hour period. These have then been annualised using a standard 253 weekdays. Weekend and bank holiday periods have not been included in the annualisation.

5.2.3 Elasticity

Where an existing service is being improved an elasticity approach was adopted to estimate additional passengers who would be attracted to the service. While WebTAG provides some guidance on appropriate fares elasticities there is limited information in the wider modelling community on elasticities relating to journey time improvements or improvements in quality. We have sourced elasticities from TRL’s ‘The Demand for Public Transport’ (Table 7.23). This provides generalised cost elasticities by journey purpose and income level. We have interpreted the ranges given and calculated an average elasticity using the WebTAG journey purpose splits for bus trips.

Table 9: Elasticities

<table>
<thead>
<tr>
<th>Journey Purpose</th>
<th>Purpose Split</th>
<th>Elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuting</td>
<td>19.6%</td>
<td>-0.6</td>
</tr>
<tr>
<td>Other</td>
<td>78.4%</td>
<td>-1.5</td>
</tr>
<tr>
<td>Business</td>
<td>2.0%</td>
<td>-0.7</td>
</tr>
<tr>
<td>Total / Average</td>
<td>100%</td>
<td>-1.3</td>
</tr>
</tbody>
</table>

Source: WebTAG Data Book and TRL – Demand for Public Transport

Given that a large proportion of the “Other” category is likely to be concessionary travellers then we consider it appropriate to reduce the elasticity to -1.0. This has been applied to both in vehicle time savings and quality benefits.
5.3 Assessment of the Full Programme

The Urban Dynamic Model (UDM) has been used to assess the full programme. The UDM is a simulation of how the Leeds City Region evolves over time, with emphasis on how transport, land-use, population and employment interact. The UDM simulates events in the real world using simplified representations of how people perceive their circumstances and decide how to react. It is also dynamic, which means it is concerned with how events unfold through time, how conditions change and how people respond.

The model is based upon economic growth forecasts provided by the Regional Econometric Model (which are different to those provided in the NTM). The UDM initially makes an assessment of how economic growth in the Leeds City Region is constrained due to rising transport costs. It then estimates the extent to which constrained economic growth is unlocked by new transport interventions which reduce those costs.

The UDM includes internal models of highways (car only), bus and rail services, park & ride, walk and cycle, all connecting places together and influencing their relative advantages as places to live or work. Improvements in connectivity between businesses and households, and also between businesses, result in improved accessibility which is the key driver for regional economic growth. The UDM is primarily focussed upon AM peak travel to work trips.

5.3.1 Application to the Leeds Public Transport Investment Programme

The UDM assessment has been based upon the spatial catchment areas of each scheme, by mode. The resulting Jobs and GVA figures quoted are the benefit over a do-minimum scenario in 2036 (2009 prices). This reporting year would allow the impact of the Airport Parkway station to be captured. A substantive element of the package was related to Bus based park & ride. Therefore a sensitivity test was also conducted to assess the programme should demand for these sites be 50% of the available capacity.

The Generalised Journey Time (GJT) changes set out in Table 7 were added to the assessment. In addition, there were a number of specific assumptions:

- park & ride-- the UDM could potentially forecast large amounts of growth at these sites, therefore the benefits of these sites were reduced to match demand to supply;
- Other highway traffic was assumed to receive no benefit, with the exception of the schemes at Lawnswood Roundabout and Stourton Park & Ride, where the Leeds Transport Model forecast substantive impacts; and
- The implementation of the programme was phased in line with the detailed programme set out in Appendix F.

The change in jobs and GVA between the programme and the Do-Minimum scenario is set out below. This demonstrates that the UDM estimates that the Leeds Public Transport Investment Package will:

- Unlock 1,936 jobs; and
- Net increase Gross Value Added by £205m per annum.
5.4 Value for Money Statement

The purpose of this economic case is to set out the potential scale of benefits associated with the schemes included within this Strategic Outline Case. The methodology adopted for the outline economic assessment is therefore necessarily high level.

The Management Case sets out that individual business cases will be developed for individual schemes included within this package, as they progress through the Assurance Framework (see Figure 37: WYCA PMO Process). Detailed economic cases will therefore be developed for individual schemes at the appropriate points in this Assurance Framework.

Table 10 contains a summary of the package benefits split by the type of benefits. An appraisal summary table for the programme is contained in Appendix G.

Table 10: Summary of Package Present Value of Benefits (£000)

<table>
<thead>
<tr>
<th>Scheme Type</th>
<th>PVB (Price Base 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Network Transformation</td>
<td>£220,575</td>
</tr>
<tr>
<td>City Centre Gateways</td>
<td>£25,081</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>£169,374</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£415,031</strong></td>
</tr>
<tr>
<td>Bus Operator Contribution</td>
<td>£17,239</td>
</tr>
<tr>
<td>Preferred Option Programme PVB</td>
<td>£432,270</td>
</tr>
</tbody>
</table>

5.5 Sensitivity Tests

A series of sensitivity tests have been undertaken and are reported in Table 11 below.

Table 11: Sensitivity Tests

<table>
<thead>
<tr>
<th>Sensitivity Test</th>
<th>PVB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred Option Programme PVB</td>
<td>£432,270</td>
</tr>
<tr>
<td>Reduction of park &amp; ride benefits: 50% car park occupancy rather than the full occupancy assumed.</td>
<td>£364,992</td>
</tr>
<tr>
<td>Bus patronage sensitivity (An assumption that there is no change in bus patronage)</td>
<td>£377,119</td>
</tr>
<tr>
<td>Zero highway impact (i.e. assume that the network “copes” with capacity changes through reassignment effects that are not modelled).</td>
<td>£423,753</td>
</tr>
<tr>
<td>50% reduction in soft factor impacts</td>
<td>£391,782</td>
</tr>
<tr>
<td>No Growth Assumption</td>
<td>£402,164</td>
</tr>
</tbody>
</table>

UDM: A sensitivity test was conducted to represent a 50% reduction in demand for the bus based park & ride sites. Under this assumption, the GVA of the programme reduced by 554 jobs, or £60m GVA.
Financial Case
6. Financial Case

6.1 Package Costs

A summary of the scheme costs for the package of measures included within the programme is provided below.

Table 12: Scheme Costs

<table>
<thead>
<tr>
<th>Theme</th>
<th>Scheme</th>
<th>Cost (£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Network Transformation</td>
<td>Bus Priority Corridors</td>
<td>£48,900</td>
</tr>
<tr>
<td></td>
<td>Stourton Park &amp; Ride</td>
<td>£23,000</td>
</tr>
<tr>
<td></td>
<td>Reconnecting Communities</td>
<td>£5,000</td>
</tr>
<tr>
<td></td>
<td>Low Emission bus top up</td>
<td>£2,000</td>
</tr>
<tr>
<td></td>
<td>Transport Hubs</td>
<td>£8,000</td>
</tr>
<tr>
<td></td>
<td>Real time information</td>
<td>£7,200</td>
</tr>
<tr>
<td></td>
<td>North of City Park &amp; Ride</td>
<td>£15,000</td>
</tr>
<tr>
<td></td>
<td>Elland Road Park &amp; Ride</td>
<td>£2,500</td>
</tr>
<tr>
<td></td>
<td>First West Yorkshire Bus Network enhancements</td>
<td>£71,100</td>
</tr>
<tr>
<td>City Centre Gateways</td>
<td>Leeds Rail Station</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leeds Bus station</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Woodhouse Lane</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Albion Street</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infirmary Street</td>
<td>£39,000</td>
</tr>
<tr>
<td></td>
<td>Corn Exchange</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Headrow</td>
<td></td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>Station Accessibility Improvements</td>
<td>£9,500</td>
</tr>
<tr>
<td></td>
<td>New Pudsey Park &amp; Ride</td>
<td>£5,000</td>
</tr>
<tr>
<td></td>
<td>Leeds Bradford Airport Parkway</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thorpe Park</td>
<td>£35,000</td>
</tr>
<tr>
<td></td>
<td>White Rose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mass Transit (Tram) development</td>
<td></td>
</tr>
<tr>
<td>Programme Management</td>
<td></td>
<td>£4,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>£275,100</td>
</tr>
</tbody>
</table>

As would be expected at SOC stage, at present, most costs are provisional and early estimates. Where information has been available on some scheme costs have been prepared in 2016 base prices and have included statutory diversions, preliminary design, detailed design, health and safety management and risk. A £5m allocation has been included for development of Mass Transit options. The funding available is summarised in Table 13.

Table 13: Summary of Programme Funding

<table>
<thead>
<tr>
<th>Theme</th>
<th>Cost (£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department for Transport</td>
<td>£173,500</td>
</tr>
<tr>
<td>Leeds City Council</td>
<td>£8,800</td>
</tr>
<tr>
<td>West Yorkshire Combined Authority</td>
<td>£1,000</td>
</tr>
<tr>
<td>First West Yorkshire</td>
<td>£71,000</td>
</tr>
<tr>
<td>Section 106 (assumed contribution)</td>
<td>£15,000</td>
</tr>
<tr>
<td>Total</td>
<td>£269,300</td>
</tr>
</tbody>
</table>

Land acquired for supertram/NGT will also be made available by WYCA for the package (valued at £11.8m for NGT scheme)
6.2 Allowance for risk

A risk register for the programme has been prepared through discussion with officers at Leeds City Council and WYCA and is presented in Appendix D. Risks were considered at both the individual scheme and the package/programme level. Each identified risk was assessed in terms of its impact on cost, time and quality. The probability of the risk occurring was also estimated.

As individual schemes are developed through the Assurance Framework individual scheme risk registers, and risk allowances will be developed.

6.3 Funding Profile

Table 14 below outlines the proposed funding profile for the Department for Transport, based upon the current proposed programme. WYCA and LCC are flexible in terms of how funding is received, however, the Department for Transport could use the table below as a profile for providing funding to WYCA.

It is anticipated that as schemes develop through the PMO process the profile of spend will change. Subject to confirmation from DfT that the full amount will be devolved to WYCA, WYCA and LCC will manage any resulting cash flow matters.

Table 14: Spend Profile for the Programme

<table>
<thead>
<tr>
<th>Spend by Year</th>
<th>2017/18</th>
<th>2018/19</th>
<th>2019/20</th>
<th>2020/21</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department for Transport proposed profile (£000)</td>
<td>£21,000</td>
<td>£48,700</td>
<td>£49,100</td>
<td>£54,700</td>
<td>£173,500</td>
</tr>
</tbody>
</table>

The spend profile shows £21m to be spent in 2017/18. In line with the programme included in Appendix F, the main areas of spend include:

- Delivery of the Real Time information and Transport Hub upgrades through existing commissions already in place;
- Detailed design of Stourton Park & ride which can draw on existing development work previously undertaken;
- Detailed design development of a number of bus priority schemes and park and ride schemes; and
- Development of schemes throughout of the programme.

To enable the programme to be achieved, development and design work is already being undertaken on a number key components including for example Stourton park & ride.

The total spend identified in the table above only covers the £173.5m contribution from the DfT. In addition, there is £21.6m from the public sector (of which £11.8m is land for development, in kind) and £86m from the private sector including £71m from First West Yorkshire. The DfT contribution is 61% of the total cost of the Programme.
Commercial Case 07
7. **Commercial Case**

7.1 **Output Based Specification**

As is typical for a Strategic Outline Case, the commercial case will be developed further as the programme and individual schemes within the programme progress through the Assurance Framework, as set out in the Management Case. The commercial case is based on a number of essential requirements:

- To deliver the programme within the available funding;
- To ensure stakeholders’ acceptance and support;
- To ensure Best Value is delivered; and
- To ensure that appropriate quality is delivered.

The delivery of the programme will be achieved by engaging with suitable contractors at an early-stage in the planning and delivery phase, mobilising their appropriate strengths by:

- Using the contractor’s experience and input in reviewing the construction estimates;
- Obtaining the contractor’s experience and input to the design and construction programme to ensure the programme is robust and achievable;
- Using and building upon the partners’ in-house knowledge and experience by engaging through consultation with all stakeholders;
- Engaging the contractor in the final detailed design process to confirm and improve buildability and ensure value for money with any value engineering solutions; and
- Being incentivised to achieve ‘a right first time approach’ that is measured by key performance indicators agreed with the contractor.
7.2 Procurement, Delivery Strategy and Pricing Framework

The Leeds Public Transport Investment Programme is made up of three packages, each with multiple schemes included. Different procurement strategies are appropriate for each of the following elements of the programme:

- Bus Network Transformation – including bus priority, bus based park & ride, reconnecting communities, fund and real time passenger information;
- City Centre Gateways; and
- Enhanced Rail Package.

7.2.1 Bus Network Transformation

7.2.1.1 Bus Priority and Park & Ride

Leeds City Council will lead this part of the programme and will seek interest from contractors, procured through existing frameworks including YORCivils, Construction Line, and North Yorkshire County Council’s framework or through the new Asset Delivery Framework, which is being developed by the West Yorkshire District Councils and WYCA. Contracts would be let under the relevant framework conditions generally using the most appropriate NEC option to deliver the scheme. This is in line with the published Procurement Strategy of the West Yorkshire Transport Fund.

The scheme development and design will generally be undertaken by either Leeds City Council’s in-house Highway and Engineering Projects design team, the Council’s private sector design partner or consultants engaged through the new Professional Services Framework Contract. This will ensure that there are sufficient resources (volume and skills) available to deliver the quantum and type of schemes in the programme.

This procurement strategy has successfully delivered a range of highway and transportation schemes in Leeds over recent years. The contracts will seek the employment of apprenticeships to support the growth of the economy. Early and informal engagement with private sector suppliers has already begun to ensure sufficient resources are available to deliver the programme on time.

Council officers and contractor design staff would be co-located under this method of working to create a collaborative working environment. This integrated arrangement will drive project quality and best value and minimise any potential for lost time in the programme.

7.2.1.2 Real Time Information

WYCA has an established framework for the delivery of real time information and bus waiting facilities across West Yorkshire. This framework will be used to deliver this component of the programme. The procurement of the framework has been undertaken to ensure value for money is provided when the assets are procured and installed. To date, WYCA and partners are content with the contractor performance and quality and see this continuing throughout delivery of these works.

7.2.1.3 Reconnecting Communities and Low Emission Buses top up grants

The funding will be provided as a delegated fund of capital grants through competitive tender. For reconnecting communities applications will be promoted by the Leeds City Council Community Councils and coordinated by a panel of the Chairs of the respective committees. For low emission bus top up grants applications will be promoted by WYCA.

WYCA will establish a robust eligibility criteria and an independent application appraisal process. Grants will be awarded subject to delivery conditions, key performance indicators and monitoring requirements. An evaluation of the success of the Reconnecting Communities fund will be reported periodically to the Programme Board.

7.2.1.4 Management of Bus Operators

Alongside the delivery of capital investment on the bus network, a number of commitments are also outlined from the bus operators towards the step change in the public transport offer across Leeds. Heads of Terms are currently being developed to ensure the bus operators deliver their commitments to ensure the full benefits are realised. Appendix E contains letters of support from the bus operators and the outline Heads of Terms developed with First West Yorkshire.
7.2.2 Enhanced Rail Package

7.2.2.1 New Rail Stations

Leeds City Council and WYCA will develop each new proposed rail station up to Network Rail GRIP stage 3. Network Rail will then be contracted through the Asset Protection Agreement to design and deliver the infrastructure. WYCA will oversee and work with Network Rail to ensure value for money is achieved.

7.2.2.2 Accessibility Improvements

Network Rail will be contracted through the Development Services Agreement and Implementation Agreement to develop and deliver the schemes. Leeds City Council and WYCA will work alongside Network Rail to ensure value for money is achieved.

7.3 Risk Allocation and Transfer

Each scheme included in the programme will be categorised according to deliverability status. Early focus will be made on those schemes which are considered “low risk” or “early/easy-wins” offering timely elements of construction for the contractor to progress. This will offer the opportunity for early construction of isolated schemes, particularly those which do not rely on detailed consultation.

We also recognise that a fair amount of detailed design work for the schemes is informed by consultation. This can change the balance of the risk if significant differences in the aspirations emerge, especially from different stakeholders. The governance arrangements detailed in Chapter 8 will manage these risks to minimise delay to the programme.
Management Case 08
8. Management Case

This chapter outlines the management case for the programme. It addresses how this programme will be delivered and provides examples of WYCA and Leeds City Council’s capacity to deliver successful projects. This chapter also outlines the governance structures, communications, and risks and how benefits will be realised, evaluated and monitored.

8.1 Capability to Deliver

Leeds City Council, WYCA and bus operators have extensive experience of delivering programmes and projects together, as set out below. The management arrangements used to successfully delivery these schemes have been further developed for the delivery of this important programme. With this comprehensive list of schemes (delivered and on-going) comes a lot of knowledge in project delivery and management which will be retained and applied in the successful delivery of this programme:

- Almost all buses across West Yorkshire can now read smartcards, with over 1 million smart transactions taking place each week;
- M-Card multi-modal smartcard delivery, allowing customers to use a smartcard for multi-modal travel throughout West Yorkshire without the need to buy multiple tickets;
- Operator and third party-led improvements to ticketing, with the introduction of ticketing apps such as Traveline GB, Moovit, First Bus App, and Arriva app; and smartcard enabled ticket machines;
- Delivery of real time information to 14,000 stops with 900 stop displays, and available online and through mobile devices
- Investment in new and refurbished bus stations/interchanges across West Yorkshire, delivering safer and more comfortable passenger waiting facilities, with CCTV and Wi-Fi, in centres such as Leeds, Bradford, Keighley and Wakefield; and in local centres across West Yorkshire including in Brighouse, Ossett, Cleckheaton, Pudsey, Batley, Heckmondwike and Castleford;
- Since 2013, delivery of City Connect the Cycle City Ambition Grant Programme, including a new segregated cycleway from Leeds to Bradford. The Programme Board, led a Senior Responsible Owner at WYCA is made up of officers from across West Yorkshire and WYCA. Officers are in a number of roles including Programme Manager (held by WYCA) Project Executives for each project, Business Change Managers and a Quality Assurance lead, held by Leeds City Council.
- Park & ride services began to operate from a new facility at Elland Road near the Leeds United ground, to Leeds city centre in 2014. High quality investment through contractual agreement with WYCA has seen the introduction of well-lit bus shelters and real time information throughout the route. More than 80% of users previously travelled into the city by car;
- WYCA-Metro and the five West Yorkshire local authorities have, in partnership with bus operators, implemented a programme of traffic light priorities for buses, giving buses priority when approaching 200 key junctions;
- A65 Kirkstall Road Quality Bus Initiative – this was a £21.2M scheme to deliver bus priority on a key radial route, which opened in August 2012 and was completed on time and under budget;
- Kirkstall Forge new railway station opened in June 2016 – WYCA in partnership with Network Rail, Northern Rail and Commercial Estates Group (£15.9m scheme for this station and Apperley Bridge);
- Apperley Bridge new railway station opened in December 2015 – WYCA in partnership with Network Rail and Northern Rail;
- Low Moor new railway station will open during 2017 – WYCA in partnership with Network Rail and Northern Rail;
- Rodley roundabout at the junction of A657 Rodley Lane and A6120 Ring Road Farsley -funding was secured by Leeds City Council through the DfT’s Local Pinch Point bidding process;
- Thornbury Barracks located on the A647 at the junction with the B1654, the principal highway link between Leeds and Bradford -funding was secured by Leeds City Council through the DfT’s Local Pinch Point bidding process; and
- A further series of large scale schemes are also currently in development by LCC / WYCA, through the Transport Fund, including Leeds City Centre Package, East Leeds Orbital Road and the Airport Road Link.

### 8.2 Governance for Delivery

WYCA and Leeds City Council adopt and apply the PRINCE2 and Managing Successful Programmes (MSP) methodologies in managing and delivering its programmes and projects. It is proposed to use these for developing and delivering this programme.

Following a ‘Decision to Proceed’ from the Department for Transport, a dedicated programme team, with a clear and accountable Senior Responsible Officer, Programme Board, Project Manager(s) and workstream leads will be assembled for developing and delivery of the programme. Resource will brought together from across WYCA and LCC and also bringing additional technical specialists as required. Further details are set out below.

#### 8.2.1 Roles and Responsibilities

The programme will be managed through a dedicated Programme Board. The Programme Board will have a clear set of the roles and responsibilities, as set out below:

- WYCA will be the accountable body for the Department for Transport funding;
- WYCA will also be responsible for providing assurance on the delivery of the programme to ensure that the programme delivers the objectives set out in this document and comply with the Growth Deal Assurance Framework;
- In accordance with the devolution of the DfT funding to WYCA, investment decisions will be made by full WYCA Board, unless specifically delegated to WYCA Managing Director. Where individual schemes are delivered by LCC or other partners, parallel approvals will also be required from their respective boards;
- LCC in its capacity as highway, traffic and planning authority will, through its Executive Board, consider the strategic investment decisions, providing appropriate endorsement to strategic decision making and proposals and, in conjunction with the Combined Authority, ensure appropriate elected member input to the development and delivery of the Programme;
- WYCA and LCC will jointly manage development and delivery of the programme, with oversight from the Programme Board and SRO;
- As part of the programme, First West Yorkshire (and other operators), Leeds City Council and WYCA will enter into a delivery partnership, to deliver the commitments agreed in the Heads of Terms (Appendix F). It is also expected that the operators will be a Senior Supplier on the Programme Board;
- It is anticipated that the new rail stations and station accessibility improvements will be delivered by Network Rail and they will be held accountable through this Board to the delivery of the new rail stations and station improvements outlined in this programme. It is also expected that Network Rail will be a Senior Supplier to the Programme on the Board; and
- Using PRINCE2 methodology, the programme will be delivered through project teams which report to the Programme Board. The Board will include senior members of staff responsible for the delivery of the programme with the authority to make key decisions. A Programme Manager will be appointed to work under the direction of the Project Executive and manage the programme on a day-to-day basis.

**Figure 36** provides further details on the roles identified in the governance structure.
Through this governance model, individual schemes would be allocated to individual project managers and this will also enable WYCA and LCC to efficiently coordinate and direct resources across the organisations. Table 15 provides an illustration of how schemes would be allocated and managed.

**Table 15 Allocation of Schemes by Project Manager**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Scheme</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bus Network Transformation</strong></td>
<td>Bus Priority Corridors</td>
<td>Bus Priority Project Manager</td>
</tr>
<tr>
<td></td>
<td>Stourton Park &amp; Ride</td>
<td>P&amp;R Project Manager</td>
</tr>
<tr>
<td></td>
<td>Reconnecting Communities</td>
<td>Programme Manager (Bus Operations)</td>
</tr>
<tr>
<td></td>
<td>Low Emission bus top up</td>
<td>Bus Project Manager</td>
</tr>
<tr>
<td></td>
<td>Transport Hubs</td>
<td>Bus Project Manager</td>
</tr>
<tr>
<td></td>
<td>Real time information</td>
<td>Bus Project Manager</td>
</tr>
<tr>
<td></td>
<td>North of City Park &amp; Ride</td>
<td>P&amp;R Project Manager</td>
</tr>
<tr>
<td></td>
<td>Elland Road Park &amp; Ride</td>
<td>P&amp;R Project Manager</td>
</tr>
<tr>
<td></td>
<td>First West Yorkshire Bus Network</td>
<td>Programme Manager (Bus Operators)</td>
</tr>
<tr>
<td></td>
<td>enhancements</td>
<td></td>
</tr>
<tr>
<td><strong>City Centre Gateways</strong></td>
<td>Leeds Rail Station</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td></td>
<td>Leeds Bus station</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td></td>
<td>Woodhouse Lane</td>
<td>Bus Priority Project Manager</td>
</tr>
<tr>
<td></td>
<td>Albion Street</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td></td>
<td>Infirmary Street</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td></td>
<td>Corn Exchange</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td></td>
<td>The Headrow</td>
<td>Gateways Project Manager</td>
</tr>
<tr>
<td><strong>Enhanced Rail Package</strong></td>
<td>Leeds Bradford Airport Parkway</td>
<td>Rail Project Manager</td>
</tr>
<tr>
<td></td>
<td>Thorpe Park</td>
<td></td>
</tr>
<tr>
<td></td>
<td>White Rose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Station Accessibility Improvements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Pudsey Park &amp; Ride</td>
<td>P&amp;R Project Manager</td>
</tr>
<tr>
<td><strong>Mass Transit development</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Notes:*
- WYCA Investment Committee / LCC Executive Board
- Programme Director
- Programme Manager (Highways / Bus)
- Programme Manager (Rail)
- Programme Manager (Bus Operations)
- Case Managers
- Program Support
- Programme Direct Management Cost
- Project Cost

*Table 15 Allocation of Schemes by Project Manager*
8.3 Assurance

The signing of the City Region Growth deal in 2014 presented a significant delivery opportunity to the partnership of local authorities and WYCA. To ensure delivery processes were fit for purpose, in 2015 an independent review was commissioned by the WY Chief Executives to assess the capability and capacity of WYCA and its partners’ to deliver the Growth Deal. The review, assessed against the industry standard (called ‘P3M3’) whilst also comparing against organisations with a similar type of portfolio, size, scale and complexity. The assessment confirmed that the maturity of the partnership required development to a higher level in order to properly manage the size and complexity of the current investment portfolio to a standard in line with Government expectations.

The conclusions were converted into a ‘best of breed’ PMO process to serve WYCA and its delivery partners as set out below in Figure 31. This new approach and consequential changes to the WYCA organisation structure were approved by WYCA and WY Chief Executives in July 2016.

8.3.1 Programme Management Office (PMO) and Assurance Process

The approved PMO process includes a three stage project delivery process, as shown below. It illustrates the three stages as:

- Pipeline Eligibility;
- Pipeline Development; and
- Programme Committed.

As with all projects/programmes, it is proposed that the assurance for the Leeds Public Transport Investment Programme will be undertaken within this PMO framework.

Figure 37: WYCA PMO Process

Within each stage, there are a number of activities, which in accordance with the Leeds City Region Growth Deal Framework, are dependent on the scale, complexity and cost of a programme and/or project. The activities are reviewed to ensure that programmes and projects are deliverable, deliver value for money and meet the business objectives. An activity is complete when a Decision Point is reached (these are shown in the circles in Figure 37). At this time, the Programme Appraisal Team (PAT) will meet at each Decision Point to oversee the progression of the programme and projects and are responsible for ensuring the principles of the Single Appraisal Framework are applied constantly and appropriately prior to the scheme progressing to the next activity.

The PAT consists of a core membership representing WYCA programme, legal, and financial functions. Membership will be supplemented by WYCA Case Officers, independent technical advisers, peer group representatives (including representatives from partner authorities and/or third party private businesses) and other attendees as required to strengthen the decision making process. The PAT will meet on a regular cycle (monthly or more frequently subject to the programme requirement) with an agenda based around the key stages of the PMO pathway.

Both programmes and projects will require a review by the Investment Committee and approval from the Combined Authority at Decision Point 2 in order to enter Stage 2: Pipeline Development. There is the opportunity to delegate all subsequent approvals to the WYCA Managing Director to aid in streamlining the approval process.

Figure 38 provides an illustration of how components of the Programme are likely to progress through the PMO process.
Figure 38: Illustration of potential PMO Pathway for scheme within the Programme

It should be noted that all schemes identified at this stage are at an outline ‘proposal’ stage and will be subject to detailed development through the WYCA assurance framework. As schemes develop, there may be the need to change or alter the package to reflect challenges which arise through development. Where alternative schemes are brought forward, these will also go through the rigorous sifting process and follow the procedure for delivery defined above.

It should be noted that most schemes will follow the full approval route as illustrated by Stourton park & ride. This assurance will be undertaken in line with the Leeds City Region Growth Deal Assurance Framework. This was developed in line with HM Treasury Green Book and WebTAG guidance, and was approved by BIS in 2014, as part of the Leeds City Region Growth Deal. The Assurance Framework is currently in the process of being updated to bring in details of the PMO process set out above and is subject to review annually.

8.4 Programme Plan

A key criterion in the development of the preferred option for the programme was to ensure short term delivery, where material improvements to the public transport network could be realised. Appendix F illustrates a programme for delivery. If a decision is made to re-prioritise funding from one scheme to another, then all substitute schemes will be required to come through the PMO Process from Activity 1, in order to be tested against the programme objectives.
8.5 Communication and Stakeholder Management

8.5.1 Summary of the Approach

On the 10th June 2016, Leeds City Council held a Transport Summit, which marked the start of a comprehensive discussion that listened to the views of key organisations, businesses and local communities. This Summit was set up in light of the fact that transport is a fundamental component of what makes a strong economy as well as a compassionate and liveable city. The vision is for Leeds to be a fair, open and welcoming city with an economy that is both prosperous and sustainable, with a transport system that helps all our communities to be successful.

The Leeds Public Transport Investment Programme will make an important contribution towards the delivery of the Leeds Transport Strategy, which will see the development of a longer term strategic approach to transport in the City. As part of the development of this programme, the City has been undertaking a Leeds Transport Conversation. This conversation has informed the components of both the Leeds Public Transport Investment Programme and the emerging Leeds Transport Strategy. Figure 39 is an organogram summarising the Leeds Transport Conversation.

Figure 39: Leeds Transport Conversation Organogram

Source: Leeds City Council

The aims of the Leeds Transport Conversation were to:

- Reach and engage as many residents of Leeds, organisations and businesses in a conversation about the future of transport in the City;
- Gather evidence of the City’s views, opinions and ideas around all aspects of transport in Leeds, to inform a proposal / submission to Government;
- Extend the Conversation into the New Year, developing a 20 year long term Transport Strategy
- Run an inclusive, responsive and interactive ‘Conversation’ process, as pledged at the transport summit by the Leader of Leeds City Council; and
- Link into other related and relevant ongoing consultation.

8.5.2 Expert Advisory Panel

Recognising the challenges facing the city and as part of the Leeds Transport Conversation, an Expert Advisory Panel comprising a broad cross section of expertise has been established to provide advice on all aspects of strategy development and with an early remit for supporting the process of developing the proposed investment package.
This panel is bringing valuable knowledge and insight to the preparation of the programme, thereby ensuring through their independence, assurance of a credible and robust approach.

The panel has met twice and will meet further in the New Year as the process of confirming the long term strategy continues. They have provided challenge in terms of the rationale and content of the programme and also are helping to highlight the areas for further focus as the strategy is developed. Advice was provided more specifically with respect of the strategic and economic basis for the package; the cohesion and modal integration of the measures concerned; communications and approach to achieving changing travel choices; ensuring the strong partnerships needed; and the approach to monitoring and benefits realisation. This input has been taken on board in framing the proposals with the intention to draw further on the skills and knowledge of the panel as the proposals are developed in further detail as the programme progresses through to delivery.

8.5.3 Questionnaire

The first phase of the Leeds Transport Conversation was launched by an online survey on the 2nd August and closed on the 20th September; the deadline was extended to the 11th November. Whilst the emphasis was on filling in the questionnaire online, paper copies were made available at One Stop Centres and Community Hubs, along with hard copy versions being sent directly to Access Group members without online access. Copies were also made available at community meetings and workshops, with freepost return envelopes.

This approach included the distribution of postcards, shown in Figure 40, advertising the questionnaire. Over 10,000 to date have been distributed at One Stop Centres, Community Hubs, Community Centres and events such as City Connect and South Bank Consultation with a city wide circulation of the postcards to all households in Leeds now taking place.

The Leeds Transport Conversation has been undertaken in the full knowledge of the WYCA to provide a co-ordinated approach. Furthermore, a child friendly questionnaire has also been developed through the Child Friendly Networks.

Leeds Transport Conversation Questionnaire Postcard

8.5.4 Stakeholder Workshops

Following on from the Transport Summit workshop, two further workshops (15th and 20th September) were attended by a wide range of stakeholders. Additional workshops and presentations have taken place with key stakeholders, for example, the Physical and Sensory Impairment group, the Millennials, Leeds Sustainable Development Group, and others are planned, for example a Youth Forum workshop with WYCA and Older Peoples Forum. As well as one to ones with operators, businesses, special interest user groups, access and equality groups (including the BME Hub, Access and Use Ability Group, Deaf Forum, Equalities Assembly, LGBT Hub, Women Live Leeds.

Community committee consultations, presentations and workshops have also taken place across Leeds to grasp an understanding of what local perceptions of challenges are in the Leeds community, and allow people to offer their views on potential solutions to transport issues.

8.5.5 Stakeholder Communication and Management Strategy

Table 16 below summarises the key stakeholder groups, their role within the development and delivery of the Leeds Public Transport Investment Programme and the strategy for their involvement and communication.
## Table 16: Communication Strategy by Stakeholder Group

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Issues/Main Focus</th>
<th>Communication Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members of Parliament and Ward Councillors</td>
<td>Political sign off and agreement of programme outputs and outcomes</td>
<td>Papers submitted and formal briefings</td>
</tr>
<tr>
<td>Transport Committee Members</td>
<td>Political sign off and agreement of programme outputs and outcomes</td>
<td>Papers submitted and formal briefings</td>
</tr>
<tr>
<td>Leeds City Council and WYCA officers</td>
<td>Programme delivery</td>
<td>Programme Board and Project Direction Team meetings</td>
</tr>
<tr>
<td>Department for Transport</td>
<td>Programme delivery</td>
<td>Regular reporting – timing to be agreed</td>
</tr>
<tr>
<td>Bus Operators</td>
<td>Programme delivery</td>
<td>Seat on Programme Board</td>
</tr>
<tr>
<td>Network Rail</td>
<td>Programme delivery</td>
<td>Seat on Programme Board</td>
</tr>
<tr>
<td>Community Groups</td>
<td>Programme delivers anticipated benefits to the general public</td>
<td>Regular community consultations meetings</td>
</tr>
<tr>
<td>Highways England</td>
<td>Project delivery</td>
<td>Seat on Project Direction Team</td>
</tr>
<tr>
<td>University of Leeds</td>
<td>Project delivery</td>
<td>Seat on Project Direction Team</td>
</tr>
</tbody>
</table>
8.6 Risk Management and Strategy

A risk is defined as any potential event that poses a significant threat to the project/programme. Leeds City Council and WYCA recognises that all risk, be they programme or project level risks, need to be identified, evaluated and controlled in a transparent, consistent and systematic manner. Identifying and assessing risks allows them to be managed to minimise the likelihood of a detrimental event occurring, or to reduce the impact that the event would have on a project. These consequences may be far reaching including financial impact, reputational damage, and regulatory issues. The cyclical risk management (Figure 41: Cyclical Risk Management Approach) will be used to identify, manage and cost project risks on a continuous basis as the project progresses.

Risk will be considered by Project Direction Teams and escalated to the Programme Board when a change decision is required. Funding for risks requiring changes to the approved budget will be held by the Programme Board.

The West Yorkshire Combined Authority and Leeds City Council have outlined a Risk Management Strategy aimed at providing a method of analysing and recording risks, integrating with other risk management processes across the region.

For a programme of this scale, a risk register has been developed and is attached as Appendix D. The risk register will continue to be developed as the programme progresses.

Table 17 below summarises the top risks for the Programme, the mitigation identified, and who will manage them.

Table 17: Summary of the Top Risk

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
<th>Who Will Manage the Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits of the programme are not realised</td>
<td>Close monitoring of the Benefits Realisation Plan will be in place. Business Change Managers will be allocated to each Project Direction Team and will sit on the Programme Board to make sure the programme is managing and monitoring the benefits of the programme.</td>
<td>The Bus and Rail Project Executives will manage the risk and report on progress at the Programme Board</td>
</tr>
<tr>
<td>Political Support for the Programme is not given</td>
<td>Council members will be briefed regularly report updates will be provided to committees. The Programme Board will be chaired by a Lead member.</td>
<td>Senior Responsible Owner</td>
</tr>
<tr>
<td>More resource is required than is made available to deliver the programme</td>
<td>Resource for the programme will be constantly monitored and call off consultancy frameworks will be used to supplement resource, should this be needed.</td>
<td>Project Executives will manage the risk and report progress to the Programme Board</td>
</tr>
<tr>
<td>Match funding to the programme does not materialise</td>
<td>Close working relationship will all providers of match funding is present. The programme will be refocussed to ensure the benefits can be achieved, but with less funding</td>
<td>Senior Suppliers will manage the risk and report progress to Programme Board</td>
</tr>
<tr>
<td>Schemes are not as developed as anticipated</td>
<td>The projects within the programme will be developed and will be required to fulfil the assurance process. Any replacement schemes will be assessed through the option generation process and required to go through the full assurance process</td>
<td>Project Executives will manage the risk and report progress to the Programme Board</td>
</tr>
</tbody>
</table>
8.7 Monitoring and Evaluation and Benefits Realisation Plan

Robust monitoring and evaluation is a key element of the overall appraisal process. Therefore, the programme will be subject to a bespoke monitoring and evaluation process, to identify the extent to which it has met the identified objectives and the anticipated outcomes.

All schemes will monitored against a set of standard government input, output and outcomes measures as set out in the HMG Implementation and Monitoring Plan which draws on DfT’s publication ‘Monitoring and Evaluation Framework for Local Authority Major Schemes September 2012’ for standard monitoring. A Monitoring and Evaluation Plan will be submitted for approval to the LEP/WYCA team as part of the Stage 2 business case submission or before any data collection is programmed. This will ensure that the benefits realised can be understood, disseminated, and lessons taken forward into other schemes.

Automatic traffic counters and the capture of qualitative data will be carried out on a regular basis to ensure that this ‘real time’ monitoring feeds into the benefits realisation plan, which will ensure that continuous feedback is generated. In addition, there will be continued monitoring over time of the longer term impact of the programme, such as bus and rail patronage. Chapter 4 includes a logic map for the programme (see Figure 30) which maps the causal linkages and chains between objective, inputs, outputs and outcomes.

Table 18 identifies the impacts from the logic map that we propose to monitor, the measures for success and the data sources that we propose to use in the analysis. It will be important to ensure that benefits identified are fully realised and a Benefits Realisation Plan will be prepared (with input from the business change managers) based on the expected outcomes and impacts presented in the logic map.

Table 18: Measurement of Anticipated Impacts

<table>
<thead>
<tr>
<th>Impact/Outcome</th>
<th>Measures of Success</th>
<th>Proposed data source/analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved air quality</td>
<td>Level of NOx levels on core public transport corridors</td>
<td>Figures taken from the air quality monitoring stations around Leeds.</td>
</tr>
<tr>
<td>Increased proportion of the Leeds bus fleet as low emission</td>
<td>Number of buses operating in Leeds by Euro standard</td>
<td>Annual figures taken for the bus fleet against Euro Standard to see the change overtime.</td>
</tr>
<tr>
<td>Improved bus journey time</td>
<td>Journey time by bus passenger is reduced by 1 min on average across all corridors</td>
<td>Bus Automatic Vehicle Location (AVL) data can be used to provide information on bus journey times.</td>
</tr>
<tr>
<td>Increased bus patronage</td>
<td>Number of passengers on all bus services</td>
<td>Bus electronic ticket machine data</td>
</tr>
<tr>
<td>Improved quality of bus passenger experience</td>
<td>Increase customer satisfaction</td>
<td>Tracker survey customer experience</td>
</tr>
<tr>
<td>Increased number of rail and bus-based park &amp; ride users</td>
<td>Number of cars at park &amp; ride sites Reduced number of cars parked in Leeds city centre</td>
<td>Car park occupancy surveys. Annual Leeds city centre public parking surveys</td>
</tr>
<tr>
<td>Increased access to employment and training opportunities via the rail network</td>
<td>Jobs to be unconstrained by transport by 2036</td>
<td>Employment levels in the immediate vicinity of the stations. Rental and property values in the rail station catchments.</td>
</tr>
</tbody>
</table>

Given that the above indicators will be influenced by a number of factors other than the Leeds Public Transport Investment Programme, the surveys will be designed to isolate the factors, as far as possible. This will help identify the true benefits of the programme.

It is proposed that two reports will be prepared to consider the impacts of the programme, the first 12 months after completion of the programme, and a second, 3 years after. The evaluation will consider each scheme within the programme where data is readily available or can be collected, and the overall programme itself.
Appendices
Appendix A Leeds Transport Conversation Executive Summary
Executive Summary

Introduction

Leeds City Council, in partnership with WYCA, are developing a longer term strategic approach to transport in the city, through a conversation initiated by the Transport Summit (10th June 2016). This first phase is focused on securing the promised £173.5m from the Government before the end of the year and sits within a wider context of the £1 billion of transport schemes, identified through the Transport Fund. Progression of the Transport Conversation and Transport Strategy spend is to be reported to Executive Board on the 14th December, with a subsequent Department of Transport submission.

The Key dates and Activities: Phase One

- Transport Summit: 10th June.
- Two stakeholder workshops: 15th/20th September.
- Launch of online questionnaire: 2nd August – 11th November.
- Child Friendly questionnaire: 16th September – 11th November.
- Community Committee presentations: September/October.
- Community Committee Workshops: September/October/November.
- Younger people/older people/Physical and Sensory Impairment Network and other workshops: September/October/November.
- One to ones and meetings – July/August/September/October/November
- WYCA Bus Strategy and Single Transport plan consultation: 18th July - 21st October.

This executive summary primarily highlights the key findings from the Transport Conversation Questionnaire. Unless specified otherwise the results shown are from this survey. Key themes raised in the workshops and meetings are highlighted where appropriate: where this is the case these groups are collectively referred to as ‘Stakeholders’.
Current modes used

Most respondents (84%) stated they travelled to work, of which 43% currently travel to work by car, 24% by bus and 11% by train. Respondents were asked how they would prefer to travel to work. Just over half (51%) of those who usually drove to work wanted to change to a more sustainable mode, of which, the preferred alternative mode was train (27%) or tram (26%)*, even though Leeds does not currently have a light rail option. This is illustrated below.

Figure 1: Mode currently used to work and mode car users would like to use

Respondents were asked to rate their usual mode of transport for work. Car users generally rated their journey as good particularly for comfort and safety (93%). Those using public transport however were less likely to rate their journey as good with less than half of those that used the bus to travel to work giving a positive rating. In particular, bus users were unhappy with their overall door to door journey with just (24%) rating it as good or very good. Train users were happier with the door to door journey (57%) but only 23% were happy with the cost of their journey.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Comfort and Safety</th>
<th>Cost</th>
<th>Door to Door Journey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bus</strong></td>
<td>49%</td>
<td>34%</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Car</strong></td>
<td>93%</td>
<td>58%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Train</strong></td>
<td>54%</td>
<td>36%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Travelling by Public Transport

Respondents wanted to use public transport more, particularly when travelling to Leeds City Centre.

Accessing local services (e.g. shops, doctors, community centres) was more important than travelling to the city centre for half of respondents (50%) being especially important to older people (69%) and disabled people (63%).
Figure 2 and 3 below highlights the key difference in response, about their experiences of Leeds city centre and their local neighbourhood, by specific demographic groups and the location in which respondents live.

Figure 2: Key Differences in response by demographic group*

*percentage shown is the proportion of people who strongly agreed or agreed with the statement

- More likely to feel public transport links to city centre are good (54%)
- Experienced issues with public transport reliability (80%)

- More likely to travel to work by bus (30%)
- More likely to agree city centre is pedestrian friendly (73%)
- Less likely to feel comfortable cycling in the city centre (5%)
- Less likely to feel confident cycling in their local neighbourhood (31%)

- More likely to travel to work by bus (40%)
- Less likely to agree city centre is pedestrian friendly (65%)
- Less likely to agree that transport links to city centre are good (42%)
- More likely to say access to local services more important than travelling to the city centre (69%)
- Least likely to think the distance to travel when interchanging is acceptable (30%)
- Least likely to agree it was easy to use different types of transport for local journeys (29%)

- More likely to feel public transport links to city centre are good (58%)
- Access to local services more important than travelling to the city centre (69%)
- Least likely to feel their local neighbourhood is pedestrian friendly (32%)

*prepared for: Leeds City Council
Figure 3: Key differences in response by Community Committee area.*

* Postcode data has been grouped into Community Committees in order to identify appropriate areas for analysis. This is limited by the available postcode data (note LCC policy on data protection limits the collection of postcode data to outcode, LS1 etc, not the full postcode) which does not exactly coincide with the Community Committee areas. 27% of respondents did not provide a postcode.

*percentage shown is the proportion of people who strongly agreed or agreed with the statement.
Sustainable Modes and the Environment

Environment
Just over half of respondents (56%) felt there were too many cars in the city centre and only 29% of respondents thought that air quality in the city centre was good. 65% thought more priority should be given to creating a pedestrian and cycle friendly environment.

Stakeholders noted the negative impact on residents’ respiratory health of high levels of congestion particularly surrounding the A621.

Walking
Respondents generally felt the city centre was pedestrian friendly (71%). However, just 42% thought their local neighbourhoods were pedestrian friendly.

Stakeholders felt further walking infrastructure was needed in the city centre particularly in eastern and southern parts.

Some Stakeholders felt the transport strategy should include a specific walking strategy to include the assessment of infrastructure such as lighting and condition of pavements and a desire to make walking “more pleasurable for all”.

Cycling
Only 8% felt comfortable cycling in the city centre. However nearly two fifths (39%) stated they felt comfortable cycling around their local area.

56% wanted schemes to create quality and safe pedestrian and cycling friendly areas.

‘Improved cycling facilities’ was the most frequently given comment to the free text questions (18%).

“Better infrastructure to make cycling safer please, especially on routes in and out of the city for commuters and on routes used by children to get to school.”

Stakeholders particularly mentioned the need for increased cycle infrastructure to improve accessibility. Suggestions included increased provision of cycle lanes and the promotion of existing lanes to increase usage.

Bus
Almost three quarters (73%) of respondents stated reliability of services was an issue. Stakeholders in particular highlighted the need for greater prioritisation of services into the city centre.

Stakeholders felt electric buses should be an aspiration for Leeds.

The provisions of real time information would help increase bus patronage.

Some community groups mentioned the need to change the franchising structure to improve the customer experience and reduce the cost of travel.
Tram and Train
Light rail was mentioned by stakeholders and was the second highest unprompted response given to the public survey (16%).

“A tram or metro system is the only viable solution to the issues facing the city. Any lesser solution would simply be spending for spending’s sake and would not address the issues.”

Several Stakeholders, in the short term, raised the idea of opening more rail stations and disused rail lines. Stakeholders were keen that rail related projects such as HS2 and Northern Powerhouse schemes and widespread electrification come to fruition.

Park and Ride
Half (52%) of respondents would welcome an increase in park and ride options around the city.

Park and Ride was particularly mentioned by Stakeholders. The Chartered Institute of Transport and Logistics felt that any focus on Park and Ride should be combined with traffic restrictions and a reduction in parking facilities in central Leeds to ensure they were used.

“Park & Ride spaces in Leeds should replace city centre parking and not be in addition to it”

Community groups felt it was important that Park and Ride facilities integrated with other transport hubs.
Investing in Transport

Respondents were given the following statement:

“Delivering new transport infrastructure takes time and costs money. With the promise of an additional £173.5m from government for public transport improvements, we need to make sure that any changes to the road, bus or rail network are safe, provide improvements to journeys and that people have a chance to have their say.”

They were then asked to indicate whether they preferred short or long term improvements or a combination.

The majority opted for a combination (61%) of short and long term improvements. A just over a quarter (26%) opted just for longer term improvements and 12% for only short term improvements.

Figure 4 Investments in Future Improvements

61% Short and long term improvements

26% Long term improvements

12% Short term improvements

Younger people (36%)

Men (32%)

45 and older (16%)

North West (18%)

Outer South (18%)

Transport Strategy

Respondents were given six statements about the future transport strategy and asked to what extent they agreed with them. Respondents generally agreed that spending should be prioritised on:

- Main routes approaching Leeds city centre (76%).
- Cross city journeys including those not going through the city centre (64%).
- Regional journeys and connecting Leeds to other cities (63%).

However, fewer respondents thought spending should be prioritised on:

- Local journeys in and round adjoining neighbourhoods (57%). However in the Workshops and one to one meetings Community groups were particularly keen to see improvements to local services.
- Movement within the city centre (44%).

The figure below shows the difference in priorities for investment by community committee area.
Figure 5 Key differences in response by Community Committee area*

* Postcode data has been grouped into Community Committees in order to identify appropriate areas for analysis. This is limited by the available postcode data (note LCC policy on data protection limits the collection of postcode data to outcode, LS1 etc, not the full postcode) which does not exactly coincide with the Community Committee areas. 27% of respondents did not provide a postcode.

*percentage shown is the proportion of people who strongly agreed or agreed with the statement

Prepared for: Leeds City Council
## Appendix B  Option Selection for Preferred Package

### New Rail Stations/Rail Links

**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marsh Lane Rail Station</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Osmondthorpe Rail Station</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Otley Rail Link</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Wetherby Rail Link</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>East Leeds Rail Link</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Rail branch to Thorner</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Four Tracking of Rail Lines</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Leeds to Church Fenton Rail Link</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Woodlesford to Neville Hill West Rail Link</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Reopen Thackley Tunnel</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Farnley Viaduct Reinstatement</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
</tbody>
</table>

**Omitted during medium list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leeds West Corridor Parkway</td>
<td>Deemed to be in a constrained area on the rail network</td>
</tr>
<tr>
<td>Armley Rail Station</td>
<td>Issues over increasing journey times to Leeds if station in operation</td>
</tr>
<tr>
<td>Wortley Rail Station</td>
<td>Issues over increasing journey times to Leeds if station in operation</td>
</tr>
<tr>
<td>Pendas Way Rail Station</td>
<td>Shares a catchment area with Cross Gates</td>
</tr>
<tr>
<td>Kirkstall Rail Station</td>
<td>Seen as too close to Kirkstall Forge station which opened in 2016</td>
</tr>
<tr>
<td>Stourton Rail Station</td>
<td>Significant construction and operational issues</td>
</tr>
<tr>
<td>Elland Road Rail Station</td>
<td>Deemed too close to Central Leeds with slow journey times for a large number of existing passengers.</td>
</tr>
<tr>
<td>Hunslet Rail Station</td>
<td>Deemed too close to Central Leeds with slow journey times for a large number of existing passengers.</td>
</tr>
<tr>
<td>West Park Rail Station</td>
<td>Would result in constrained network increasing journey times due to location between Horsforth and Headingley.</td>
</tr>
<tr>
<td>Methley Rail Station</td>
<td>Rural location means forecasted trip demand is very low so cannot generate a strong business case</td>
</tr>
</tbody>
</table>

**Omitted during short list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calverley Rail Station</td>
<td>Shares a catchment area with Apperley Bridge and Kirkstall Forge according to Atkins station study</td>
</tr>
<tr>
<td>Horsforth Woodside Rail Station</td>
<td>Shares a catchment area with Apperley Bridge and Kirkstall Forge according to Atkins station study</td>
</tr>
<tr>
<td>Horsforth Vale Rail Station</td>
<td>Deemed to be in a constrained area on the rail network</td>
</tr>
<tr>
<td>Arthington Rail Station</td>
<td>Leeds Bradford Airport Parkway seen as preferred location for airport parkway station.</td>
</tr>
</tbody>
</table>

### Progressed to Preferred Option

- Thorpe Park Rail Station
- Leeds Bradford Airport Parkway
- White Rose Rail Station
**Rail Station Infrastructure Improvements**
**Progressed to Preferred Option**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail station infrastructure improvements</td>
<td></td>
</tr>
</tbody>
</table>

**Highway Network Improvements**
**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Ring Road Dualling</td>
<td>Not viewed as a public transport scheme</td>
</tr>
</tbody>
</table>

**Key Route Bus Journey Time Improvements**
**Omitted during medium list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway Conversion to Bus Lane</td>
<td>To be reviewed within a wider programme</td>
</tr>
</tbody>
</table>

**Progressed to Preferred Option**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway network Hotspot Improvements</td>
<td></td>
</tr>
<tr>
<td>Key Route Bus network journey time improvements</td>
<td></td>
</tr>
</tbody>
</table>

**New Highway Links**
**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner Ring Road Upgrade</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Southern Outer Ring Road</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Northern Bypass</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Otley Eastern Bypass</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Guiseley and Rawdon Bypass</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Headingley Bypass</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Mid Orbital Road</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Wetherby Western Bypass</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>M621 J7 - M1 J44/45 Link Road</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>A63 Selby Road Bypass (A1 - West Garforth)</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>River Aire Crossings</td>
<td>Not viewed as a public transport scheme</td>
</tr>
</tbody>
</table>

**Bus Park & Ride**
**Omitted during medium list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dawsons Corner Park &amp; Ride</td>
<td>Seen as too close to New Pudsey Park and Ride which is viewed as the preferred option</td>
</tr>
<tr>
<td>Scott Hall Park &amp; Ride</td>
<td>Seen as too close to Leeds City Centre to be successful Park &amp; Ride</td>
</tr>
<tr>
<td>Manston Hall Park &amp; Ride</td>
<td>Seen as too close to Leeds City Centre to be successful Park &amp; Ride</td>
</tr>
<tr>
<td>Kirkstall Park &amp; Ride</td>
<td>Seen as too close to Leeds City Centre to be successful Park &amp; Ride especially given opening of Kirkstall Forge rail station.</td>
</tr>
<tr>
<td>Holbeck Village Park &amp; Ride</td>
<td>Seen as too close to Leeds City Centre to be successful Park &amp; Ride</td>
</tr>
<tr>
<td>Drighlington Park &amp; Ride</td>
<td>Uncertainty over demand for Park &amp; Ride in this location</td>
</tr>
<tr>
<td>Rodley/Calverley Park &amp; Ride</td>
<td>Uncertainty over demand for Park &amp; Ride in this location</td>
</tr>
</tbody>
</table>
Omitted during short list

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grimes Dyke Park &amp; Ride</td>
<td>Future development may mean a potential site is built on</td>
</tr>
<tr>
<td>Alwoodley Gate Park &amp; Ride</td>
<td>Deemed too far outside the urban area of Leeds to be viable</td>
</tr>
<tr>
<td>Tingley Park &amp; Ride</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Weetwood Park &amp; Ride</td>
<td>Potential political risk due to location on the A660</td>
</tr>
</tbody>
</table>

Progressed to Preferred Option

<table>
<thead>
<tr>
<th>Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stourton Park &amp; Ride</td>
</tr>
<tr>
<td>Elland Road Park &amp; Ride Expansion</td>
</tr>
</tbody>
</table>

Tram/Tram-train development

Omitted during long list

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five Towns Tram-Train</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>A64 Gateway Tram-Train</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>East Leeds – Bradford Tram</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Leeds - Stourton Tram</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Elland Road to Leeds Tram</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Allerton Bywater - Kippax - Garforth - Middleton Light Rail</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Central Leeds to Seacroft radial Light Rail</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Outer Ring Road Light Rail</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Cross Gates to Wetherby Light Rail</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
<tr>
<td>Thorpe Park/Brown Moor/Swillington Common Light Rail</td>
<td>Not viewed as being deliverable by 2025</td>
</tr>
</tbody>
</table>

Rail Station Car Park Expansion/Rail Park & Ride

Omitted during medium list

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burley Park Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Cottingley Rail Station Car Park Expansion</td>
<td>Falling demand for the station and currently no car park.</td>
</tr>
<tr>
<td>Cross Gates Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>East Garforth Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Garforth Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Headingley Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Horsforth Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Micklefield Rail Station Car Park Expansion</td>
<td>Thorpe Park seen as more favourable option to have a large car park due to park &amp; ride</td>
</tr>
</tbody>
</table>

Omitted during short list

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bramley Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Guiseley Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Kirkstall Forge Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Morley Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
<tr>
<td>Woodlesford Rail Station Car Park Expansion</td>
<td>Land availability a potential issue</td>
</tr>
</tbody>
</table>

Progressed to Preferred Option
### Scheme

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Pudsey Rail Station Car Park Expansion</td>
<td></td>
</tr>
<tr>
<td>Thorpe Park &amp; Ride*</td>
<td></td>
</tr>
</tbody>
</table>

*The preferred option at Thorpe Park is to provide this park & ride facility

### Green Infrastructure Improvements*

**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway Conversion to Green Space</td>
<td>Not viewed as a public transport scheme</td>
</tr>
</tbody>
</table>

*An overarching principle of the Leeds Transport Strategy and therefore the Leeds Public Transport Investment Programme is to incorporate green infrastructure into all schemes

### Bus Service Quality

**Omitted during medium list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citywide Ticketing Strategy</td>
<td>To be delivered within a wider programme by TfN</td>
</tr>
<tr>
<td>Bus Driver Training</td>
<td>Seen as been delivered within a wider programme by bus operators</td>
</tr>
</tbody>
</table>

### Progressed to Preferred Option

<table>
<thead>
<tr>
<th>Scheme</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time Bus Provision On and Off Board</td>
<td></td>
</tr>
<tr>
<td>Bus Information Maps</td>
<td></td>
</tr>
<tr>
<td>Bus Stop Ambience Improvements</td>
<td></td>
</tr>
<tr>
<td>New Community Connector Bus Services</td>
<td></td>
</tr>
<tr>
<td>Rail-Bus Services Connectivity</td>
<td></td>
</tr>
</tbody>
</table>

### Demand Responsive Transport

**Progressed to Preferred Option**

<table>
<thead>
<tr>
<th>Scheme</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Responsive Transport</td>
<td></td>
</tr>
</tbody>
</table>

### Rail Rolling Stock Improvements

**Omitted during medium list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock Improvements and Upgrades</td>
<td>To be delivered within a wider programme</td>
</tr>
<tr>
<td>Rail Line Electrification</td>
<td>Deemed as to be delivered within a wider programme</td>
</tr>
<tr>
<td>Rail Service Frequency Improvements</td>
<td>Though public transport focussed, the Leeds Public Transport Investment Programme is unlikely to be able to influence this</td>
</tr>
<tr>
<td>Extension to rail service timetabling</td>
<td>Though public transport focussed, the Leeds Public Transport Investment Programme is unlikely to be able to influence this</td>
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### Cycle Infrastructure Upgrades

**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Cycle Network</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Cycle Super Highways</td>
<td>Not viewed as a public transport scheme</td>
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### Cycle Hire

**Omitted during long list**

<table>
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<tbody>
<tr>
<td>District Wide Cycle Hire</td>
<td>Not viewed as a public transport scheme</td>
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</table>
### Electric Bikes Cycle Hire
Not viewed as a public transport scheme

### Transport Hubs Expansion
**Progressed to Preferred Option**

<table>
<thead>
<tr>
<th>Scheme</th>
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</thead>
<tbody>
<tr>
<td>Community Transport Hubs</td>
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### City Centre Transport Interchange
**Improvements**
**Progressed to Preferred Option**

<table>
<thead>
<tr>
<th>Scheme</th>
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</thead>
<tbody>
<tr>
<td>Leeds Bus Station Redevelopment</td>
</tr>
<tr>
<td>Leeds Rail Station Redevelopment</td>
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<td>City Centre Transport Interchange Improvements</td>
</tr>
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### Public Realm Improvements*
**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarendon Road Bridge Gateway to Little Woodhouse</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Public Realm Improvements</td>
<td>Not viewed as a public transport scheme</td>
</tr>
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</table>

* One of the overriding principles of the Leeds Transport Strategy, and therefore the Leeds Public Transport Investment Programme is to incorporate public realm improvements into all future schemes.

### Leeds Mass Transit Development
**Omitted during long list**

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<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
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<tr>
<td>Monorail</td>
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<tr>
<td>Headingley High Rail</td>
<td>Not viewed as being deliverable by 2025</td>
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<tr>
<td>Underground</td>
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### Personal Travel Planning
**Omitted during medium list**

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<th>Reason for Omission</th>
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</thead>
<tbody>
<tr>
<td>Personal Travel Planning</td>
<td>Scored poorly in assessment due to limited effect on growth in employment or housing</td>
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</table>

### Car Clubs
**Omitted during long list**

<table>
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<th>Reason for Omission</th>
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</thead>
<tbody>
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<td>Car Clubs</td>
<td>Not viewed as a public transport scheme</td>
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</table>

### Car Parking Strategy
**Omitted during long list**

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<th>Reason for Omission</th>
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<td>Redevelopment of Existing Car Parks</td>
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</tr>
<tr>
<td>Car Park Signage Improvements</td>
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</table>

### Taxi Strategy
**Omitted during medium list**

<table>
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<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi Strategy</td>
<td>Scored poorly in assessment due to limited effect on growth in employment or housing</td>
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</table>
## Wayfinding and pedestrian infrastructure improvements

**Omitted during long list**

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<tr>
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</tr>
</thead>
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<td>Rollout of 20mph Zones</td>
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<tr>
<td>Scooter storage</td>
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<tr>
<td>Wheelchair Charging</td>
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## Progressed to Preferred Option

**Scheme**

New Pudsey Rail Station Connectivity

## Airport surface access improvements

**Omitted during long list**

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Reason for Omission</th>
</tr>
</thead>
<tbody>
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<td>Airport Rail Link</td>
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</tr>
<tr>
<td>Leeds Bradford Airport Tram-Train</td>
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## River and Canal Improvements

**Omitted during medium list**

<table>
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<th>Scheme</th>
<th>Reason for Omission</th>
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</thead>
<tbody>
<tr>
<td>River and Canal Usage</td>
<td>Benefits and costs are unclear along with impact on growth</td>
</tr>
<tr>
<td>Stourton – Aire Valley Barge</td>
<td>Benefits and costs are unclear along with impact on growth</td>
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</table>

## Other Schemes

**Omitted during long list**

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<th>Reason for Omission</th>
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</thead>
<tbody>
<tr>
<td>Open data Facilitation</td>
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</tr>
<tr>
<td>Electric Vehicle Charging Points</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Maintenance Package</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Freight Consolidation Centre</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>City Centre Congestion Charge</td>
<td>Not viewed as a public transport scheme</td>
</tr>
<tr>
<td>Helicopter Park &amp; Ride</td>
<td>Not viewed as a public transport scheme</td>
</tr>
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</table>
Appendix C  Illustrative Scheme Drawing for A61S
Hunslet Road Green Corridor
(Inner Ring Road to Black Bull Street)

- Modern bus stop facilities
- Bus Priority features including Bus Gates
- High quality segregated cycle and pedestrian routes
- Bus Stop bypass
- Green pedestrian footways
- South Accommodation Road
- Tree lined Boulevards
- Paved Area
- Cycle Lane
- Zebra
- Footway
- Trees/Shrubs
- Grassed/Planted Area

Legend

Plan for demonstration only. Does not represent final scheme proposals

Adapted from Ordinance Survey LA100019567
## Appendix D Risk Register

### Risk Identification

<table>
<thead>
<tr>
<th>Risk ID</th>
<th>Date</th>
<th>Location/Programme</th>
<th>Risk Name</th>
<th>Risk Description</th>
<th>Likelihood</th>
<th>Impact</th>
<th>Response</th>
<th>Control Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>01/12/2023</td>
<td>South Service</td>
<td>Risk A</td>
<td>Large number of accidents due to adverse weather conditions</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
</tr>
<tr>
<td>02</td>
<td>01/12/2023</td>
<td>Planning Department</td>
<td>Risk B</td>
<td>Failure of planning system due to errors in data entry</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
</tr>
<tr>
<td>03</td>
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<td>Risk Committee</td>
<td>Risk C</td>
<td>Inadequate training of staff in safety measures</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<tr>
<td>04</td>
<td>01/12/2023</td>
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<td>Risk D</td>
<td>Inadequate communication between different departments</td>
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<td>Low</td>
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<td>Mitigation</td>
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<tr>
<td>05</td>
<td>01/12/2023</td>
<td>Risk Management</td>
<td>Risk E</td>
<td>Inadequate risk assessment process</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<tr>
<td>06</td>
<td>01/12/2023</td>
<td>Risk Team</td>
<td>Risk F</td>
<td>Inadequate communication between different teams</td>
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<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<tr>
<td>07</td>
<td>01/12/2023</td>
<td>Risk Coordinator</td>
<td>Risk G</td>
<td>Inadequate communication between different positions</td>
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### Risk Mitigation

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<tr>
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<th>Location/Programme</th>
<th>Risk Name</th>
<th>Risk Description</th>
<th>Likelihood</th>
<th>Impact</th>
<th>Response</th>
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<td>Mitigate A</td>
<td>Mitigate adverse weather conditions</td>
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<tr>
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<td>Risk Committee</td>
<td>Mitigate C</td>
<td>Mitigate inadequate training of staff in safety measures</td>
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<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<td>Mitigate D</td>
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### Risk Communication

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<th>Risk Description</th>
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<th>Impact</th>
<th>Response</th>
<th>Control Method</th>
<th>Notes</th>
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<tbody>
<tr>
<td>01</td>
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<td>Communicate A</td>
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<td>Planning Department</td>
<td>Communicate B</td>
<td>Communicate with stakeholders about errors in data entry</td>
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<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<tr>
<td>03</td>
<td>01/12/2023</td>
<td>Risk Committee</td>
<td>Communicate C</td>
<td>Communicate with stakeholders about inadequate training of staff in safety measures</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
</tr>
<tr>
<td>04</td>
<td>01/12/2023</td>
<td>Lead Agency</td>
<td>Communicate D</td>
<td>Communicate with stakeholders about inadequate communication between different departments</td>
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<td>Detailed risk management plan and procedures.</td>
</tr>
<tr>
<td>05</td>
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<td>Risk Management</td>
<td>Communicate E</td>
<td>Communicate with stakeholders about inadequate risk assessment process</td>
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</tr>
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<td>Risk Team</td>
<td>Communicate F</td>
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### Risk Monitoring

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<th>Risk Name</th>
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<tr>
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<td>Planning Department</td>
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<td>Monitor C</td>
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### Risk Reporting

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<th>Response</th>
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<td>03</td>
<td>01/12/2023</td>
<td>Risk Committee</td>
<td>Report C</td>
<td>Report inadequate training of staff in safety measures</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Mitigation</td>
<td>Detailed risk management plan and procedures.</td>
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<td>04</td>
<td>01/12/2023</td>
<td>Lead Agency</td>
<td>Report D</td>
<td>Report inadequate communication between different departments</td>
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<td>Low</td>
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<td>Detailed risk management plan and procedures.</td>
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<td>Report F</td>
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<td>01/12/2023</td>
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<td>Report G</td>
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<td>Low</td>
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<td>Mitigation</td>
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</tbody>
</table>
Appendix E  Letters of Support

1. First West Yorkshire
2. Arriva
3. HCT Group (CT Plus)
4. Transdev (Commercially Confidential)
5. Network Rail
6. Rail North
7. Thorpe Park (Scarborough Developments)
8. White Rose
9. Leeds Bradford International Airport
10. Harrogate Borough Council
11. Northern Rail
12. Chair, Leeds Transport Expert Advisory Panel
Dear Dave,

First West Yorkshire is the largest bus operator in Leeds. We are very excited by the opportunities to increase bus patronage that will become available through the Leeds Public Transport Investment Programme. We have worked closely with Leeds City Council and West Yorkshire Combined Authority to develop a package of investment and actions with the aim of doubling bus patronage in the City within ten years. We have agreed the framework of a Delivery Partnership with West Yorkshire Combined Authority and Leeds City Council to deliver this ambitious target and have stated our intention to invest over £71m to provide 284 new ultra-low emission buses in Leeds by 2020.

First West Yorkshire fully supports the Leeds Transport Investment Programme and is committed to a Delivery Partnership which:

- Supports investment in the bus system
- Contributes to doubling bus patronage in Leeds within 10 years
- Promotes schemes which make the bus a more attractive option for travel across the City
- Continues the current trajectory towards a more sustainable transport future for Leeds
- Delivers a jointly promoted network of frequent bus services across all operators
- Provides investment in new buses and alternative fuel technologies
- Provides investment in significant highway works to improve bus service performance and to reduce bus journey times
- Transforms the customer experience and places a focus on the delivery of high levels of punctuality, reliability and customer service

We wish to record our full support for the Leeds Transport Investment Programme and are committed to making it a success.

Yours sincerely,

Paul Matthews
Managing Director - First West Yorkshire
As part of the Leeds Transport Investment Programme First West Yorkshire, Leeds City Council and West Yorkshire Combined Authority will enter into a delivery partnership which will enable First West Yorkshire to invest in improved bus services alongside the public investment in facilities and services which support bus travel. The key features of this partnership shall be;

- To support the emergence of a new Leeds Transport Strategy, which:
  - Supports investment in the bus system
  - Contributes towards doubling bus patronage in Leeds within 10 years
  - Promotes schemes which make the bus a more attractive option for travel across the City
  - Continue the current trajectory towards a more sustainable transport future for Leeds, including reducing parking in the city centre and growing park and ride facilities.
- A commitment to a jointly promoted network of frequent bus services across all operators
- Investment in new buses and alternative fuel technologies
- Investment in significant highway works to improve bus service performance and to reduce journey times
- Commitment to improve passenger information and customer service
- A process for open book Monitoring and Evaluating of the performance of the bus system against clear targets for bus service performance and patronage
- Creation of Bus Delivery Board which will be represented by senior representatives from WYCA, LCC and operators which are part of the partnership. The Board will be inclusive of all operators and will govern all aspects of the delivery of the initiatives set out below

<table>
<thead>
<tr>
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<th>What the customer will experience by 2021</th>
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<tr>
<td>Stable services on the core corridors which deliver high frequency services (operating at least every 15 minutes or more frequently) between 07.00 – 20.00 Mon - Friday</td>
<td>Agreement to principle and to a phased roll out of extended operation to 20.00 Agreement to maintain stability/ minimise changes To build customer confidence and growth by limiting the</td>
<td>To create a branding and information package around a single multi operator high frequency network To invest in city centre transport interchanges</td>
<td>To finalise list of services to be included To jointly develop a branding proposition</td>
<td>A network of frequent bus services which is clearly recognised and understood by customers All core corridors to have early evening service frequencies of</td>
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<td>To review low frequency services (i.e. those operating less frequently than 15 minutes) within a consultation led area by area review of connectivity and accessibility</td>
<td>uncertainty caused by service changes delivering a stable and trusted bus network (as agreed through Bus18)</td>
<td>To support the review by undertaking consultation activities. To commission socio demographic analysis to advise the review To adapt publically funded bus services in support of the findings of the review To invest in district centre and local interchanges and bus priorities</td>
<td>To agree a review methodology in conjunction with elected members</td>
<td>at least 15 minute frequencies by 2021</td>
</tr>
<tr>
<td>To work in partnership with LCC/ WYCA in the development of a highway efficiency programme aimed at reducing passenger journey times and improving service reliability. Recycling of any efficiency savings would be agreed by the Board.</td>
<td>To participate with LCC/ WYCA in a consultation led area by area review of the network and to make such changes as are necessary to meet customer demand and expectations</td>
<td></td>
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<tr>
<td>To provide a phased investment programme prioritised to the core</td>
<td>To ensure the majority of the infrastructure measures allocated within the £173m are focused on improving bus priority across the city on key corridors and in the city centre. WYCA/ LCC to align policies to support the bus patronage growth targets WYCA/ LCC to maintain focus on bus in broader highways investment decisions through the Transport Fund</td>
<td>Agree the initial programme to be submitted in the SOC</td>
<td></td>
<td>Reduced journey times. Significantly enhanced service reliability Opportunities for improved service frequencies and network accessibility</td>
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<tr>
<td>To invest over £71m to provide 284 new ultra-low emission buses by 2020, and</td>
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<tr>
<td>all new vehicles entering services will incorporate enhanced passenger facilities including on-board information, charging points and free Wi-Fi.</td>
<td>network To tailor vehicle features to reflect customer requirements</td>
<td>the City</td>
<td></td>
<td>generation of buses, offering enhanced comfort, free Wi-Fi, audio visual information systems and charging facilities</td>
</tr>
<tr>
<td>To develop the business case for biomethane or similar fuels and which if proven to be robust, will be adopted as the fuel source for the core city fleet and the fleet investment outlined above</td>
<td>To confirm conclusions of business case by March 2017.</td>
<td>To support FWY in facilitating the Biomethane infrastructure</td>
<td>Further scoping needed to understand true benefits and challenges from a biomethane fleet and understanding if there are any synergies with the Leeds city CNG investment</td>
<td>A tangible improvement in the air quality at city centre bus interchanges and throughout the city centre</td>
</tr>
<tr>
<td>To ensure all buses operating in Leeds City Centre are fully compliant and supportive of any Leeds City plans for complying with the requirements of the Clean Air Zone regulations</td>
<td>All buses to be minimum Euro 6 emission standard Subject to the business case, to develop the fuel supply and depot infrastructure needed to support Biomethane and commercially procure the required fleet for the core network through a phased investment programme</td>
<td>To support with bids to DeFRA and other funding sources To support FWY in facilitating the Biomethane infrastructure</td>
<td>Feedback into DeFRA Clean Air Zone consultation document</td>
<td>A tangible improvement in the air quality at city centre bus interchanges and throughout the city centre</td>
</tr>
<tr>
<td>Retrofitting to Euro VI of the remainder of the fleet not operating on the core network</td>
<td>Fuel, operating and maintenance cost dis-benefits associated with retro-fitment</td>
<td>To explore the options to seek DEFRA funding for the conversion costs (up to £1.5m)</td>
<td></td>
<td></td>
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<tr>
<td>The cost of bus travel is affordable and easy to understand. Through the Bus Delivery Board, a range of price and marketing incentives be explored and adopted to</td>
<td>Any cost and efficiency savings obtained through the actions of partners not needed for network enhancements are available to fund price and ticketing</td>
<td>In conjunction with WYTCL, support the promotion of ticketing products for young people To support the analysis</td>
<td></td>
<td>Fares which encourage bus travel especially amongst under 25s.</td>
</tr>
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Page 3 of 6
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<tr>
<td>encourage patronage and revenue growth with a clear focus on growing bus use by under 25s</td>
<td>initiatives as agreed by the Bus Delivery Board</td>
<td>process and to advise on affordability issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To enable customers to pay for bus travel using up to date payment methods reducing the cash payments on bus</td>
<td>To equip buses with ticketing equipment able to accept contactless and mobile payment methods by mid - 2018 at the latest. To communicate with the back office being developed by Transport for the North In conjunction with WYTCL, provide a range of ticket products which incentivise cashless travel To make all FWY season tickets available on MCard</td>
<td>In conjunction with WYTCL, manage a product range and retail network to support this objective</td>
<td>Further liaison with TfN</td>
<td>Easier customer focussed payment methods and quicker journeys due to the reductions in the time of transactions between the bus driver and the customer</td>
</tr>
<tr>
<td>To enable customers to use mobile technology to access travel information before and during the journey</td>
<td>To work with WYCA to develop mobile applications which provide information and sales of travel products</td>
<td>To increase the coverage of real time information displays at bus stops To develop multi modal mobile information systems To integrate bus information with real time highway status information</td>
<td>To jointly develop a mobile app which incorporates journey planning, live multimodal travel information and ticket purchase for all fare options</td>
<td>Up to date, improved and more accessible information available before and during bus journeys. Significant enhancements for those visually impaired and those unfamiliar with their journeys</td>
</tr>
<tr>
<td>To develop and operate a collaborative and integrated regional Transport Control Centre</td>
<td>To base operational management staff, systems and communication facilities within regional Transport Control facility being created</td>
<td>To fund, develop and manage the new Transport Control/UTMC centre</td>
<td></td>
<td>Improved service reliability and information in the event of disruptions</td>
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| To establish and deliver a Customer Charter and implement improved standards of customer service training for front line staff | Through centralisation of the Urban Traffic Management Control systems  
To develop and operate a disruption protocol which ensures all information presented to customers reflects current operating conditions | WYCA to adopt the customer service standards for its bus station, information and other customer facing services | Develop and implement the Customer service offer principles agreed through Bus18 by  
• Establishing consistent customer service standards across the bus network  
• Investigating scope for a consistent customer redress mechanism across the network. | A consistent standard of customer service on all bus services and improved customer focus by drivers |
| For the Board to specify and agree a Performance Management Framework within which the key objectives will be  
• To manage and monitor progress against the commitments set out in this document  
• Trajectory towards | To develop and implement a set of customer service standards. To embed the standards in improved customer service training and management of front line staff | To collate and publish patronage information and performance against the target  
To utilise urban traffic management systems to measure average traffic speeds and bus journey times | To develop the monitoring and measurement | Transparency about how their bus service is being provided and thus ability to make informed decisions about journey mode |
<p>| | | | | |
|                           |                           |                           |                           |                           |</p>
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<td>doubling bus patronage from 2016 levels</td>
<td></td>
<td>resources to support performance measurement</td>
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<tr>
<td>• To ensure at least 99% of bus journeys are operated</td>
<td></td>
<td>To liaise with the Traffic Commissioner on the application of the Performance Management Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• To operate at least 95% of journeys operate on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Improvement of bus journey speeds over 2016 levels</td>
<td></td>
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<td></td>
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<tr>
<td>• Enhancement of customer / market research outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To sign up to a 5-10-year delivery partnership with LCC/ WYCA</td>
<td>To jointly explore the application of the Partnership provisions of the Bus Services Act as a statutory basis for the delivery partnership</td>
<td>To jointly explore the application of the Partnership provisions of the Bus Services Act as a statutory basis for the delivery partnership</td>
<td>Develop heads of terms into a formal partnership document</td>
<td>A clear understanding of the steps taken and key milestones towards improvement of their bus service</td>
</tr>
</tbody>
</table>
Dear Dave

**Re: Leeds Public Transport Investment Programme**

We are excited by the opportunities provided by the Leeds Public Transport Investment Programme, (“the Programme”).

As you know, Arriva is a major provider of bus services connecting communities in the South Leeds, Wakefield and Kirklees districts with Leeds City Centre. These bus services provide a strong foundation for the local transport system and the Programme is an excellent chance to build even stronger services for the City in partnership with one another. There is every reason to believe that Leeds can lead the way on bus service provision.

Arriva would like to fully and positively support the Programme by entering into a very active long term Delivery Partnership with West Yorkshire Combined Authority, Leeds City Council and other bus operators.

The terms of such a partnership would need to be agreed in early 2017. However we would expect such a partnership to promote a strong and growing network of bus services coupled with a further modernised bus fleet, and new simpler ticketing methods, which together would provide an attractive customer experience.

More specifically we would expect the partnership to include the following;

- The operation of Arriva services 110, 163/166, 202/203 and 254/255 within a branded high frequency bus network for the City
- The provision of vehicles on these services which maintain a consistent standard of passenger facilities across the high frequency network including on board audio/ visual information, free wi-fi and USB device charging
- The redeployment of any vehicle resource efficiencies obtained directly from the investment in bus priority works into Arriva Yorkshire services in the
Leeds district e.g. in the form of improved frequencies, better buses, improved ticketing or staff training

- The participation in a consultation led review of connectivity within the Leeds communities served by Arriva Yorkshire
- A commitment to help design and implement a Clean Air Zone for Leeds City Centre and invest in buses which meet Euro 6 emission standards
- A set of customer service standards applicable over all operators of the high frequency network
- A commitment to keep the affordability of bus fares under review and to participate in initiatives to promote bus travel by under 25s
- A commitment to introduce up to date payment arrangements for both on and off bus payment options
- Participation in the development and operation of an integrated Transport Control Centre
- The setting, monitoring and publication of patronage and the setting of targets to provide a trajectory to double overall bus patronage in Leeds within 10 years
- The setting, monitoring and publication of performance against targets for punctuality, reliability, customer satisfaction and the delivery of highway improvement schemes

Providing business conditions in the bus industry and the Leeds City Region remain favourable, Arriva Yorkshire expects to invest in buses which serve the Leeds market and contribute to the objectives of the Leeds Public Transport Investment Programme. Whilst I expect the value of this investment to be in the order of £xxm, Arriva Yorkshire is unable to make firm commitments until confirmation of the availability of DfT funding for the Leeds Public Transport Investment Programme and agreement of the full terms and conditions of a partnership arrangement.

To emphasise, Arriva Yorkshire is fully supportive of the Leeds Public Transport Investment Programme and is seeking to be a proactive participant in the Delivery Partnership which would be developed to support it.

Yours sincerely

Nigel Featham
Regional Managing Director Arriva Yorkshire
2nd December 2016

Response to Leeds Transport Strategy – Bus Operator Engagement

Dave Pearson
Director, Transport Services
West Yorkshire Combined Authority
Wellington House
40-50 Wellington Street
Leeds
LS1 2DE

Dear Dave,

Please find attached the HCT Group response to the vision for the Leeds Transport Strategy. I hope it is of interest and look forward to discussing this with you further.

Yours sincerely

Peter Walch
Regional Manager, CT Plus Yorkshire
HCT Group response to the Leeds Transport Strategy vision for bus services

Who we are

HCT Group is a social enterprise operating transport services in the UK and the Channel Islands. We make profits from contracts and commercial services and reinvest them into high social impact transport services or projects in the communities we serve. In West Yorkshire, where we operate through our subsidiary CT Plus, we deliver mainstream school, SEN, Access Bus and other Community Transport services from our depots in Leeds and Wakefield. We are committed to developing the scale and scope of our services to match that of our networks in other parts of the country. We run high-frequency Red Bus routes on contract to Transport for London, comprehensive bus networks on the islands of Guernsey and Jersey, and Community Transport services from community buses to travel training for disabled children and adults. We are keen to contribute to this conversation, and to play a part in realising the vision outlined in your communications with us.

HCT Group response

HCT Group fully supports the vision set out by Leeds City Council (LCC) and West Yorkshire Commissioning Authority (WYCA). Detailed below are our responses to the key points of the vision, followed by our thoughts on the role that the Bus Services Bill will play in this vision and an outline of our Whole Place concept, which we believe will be of interest to the commissioners. We have also appended two of our publications: “Practical Bus Franchising – The Jersey Model” and “The Transport of Place”, to support this response.

Support for the shared vision

HCT Group fully supports the aspirations of Leeds City Council to double bus patronage in the city and shares the perspective that this will only be possible through both a significant increase in the capacity of the bus system and a significant improvement in the quality of the service offered. Such changes will ensure that using the bus becomes a choice for all rather than a necessity for those with no alternative.

The Bus Network

- We support the proposal for a core network of high frequency and express services linking district centres with the City Centre from early morning until at least 8pm:

Ridership on our Jersey network has increased by 32% since we took over the services in 2013, which can be attributed partly to the increase in service frequency and longer service hours along core routes. As will be detailed later, these routes not only provide a necessary and economically valuable service to the region, but also provide a crucial revenue stream to support less profitable bus services.

- We support the vision of a network of local bus services which is adaptable to the needs of each locality: As detailed later, we are committed to growing local bus services, using the income from commercial routes to subsidise services that may otherwise be unviable. As a social enterprise we exist to address social isolation, and to reach communities who might otherwise find it difficult to access goods and services. It is important that we find a
way to continue these services, and that they are co-designed with the communities to ensure that they give social as well as economic value for money.

- **We support a network which grows and expands in anticipation of housing and employment growth:** We are committed to growth which expands in anticipation of passenger need, whether it be housing, employment, education, health, and so on. Crucial to this is a strong partnership and shared values between the operator and the commissioning authority. Operators must have access to the information required to anticipate service need, and authorities must be able to trust operators to be flexible and provide them with the proof that their services are providing value for money.

- **We support investment in highway infrastructure to reduce bus journey times and enable a resilient service:** We support this investment because infrastructure such as bus lanes and guided bus ways will reduce the impact of traffic and therefore increase timetable reliability. Reliability and frequency, along with customer service, are the key drivers of ridership.

**The Bus Fleet**

- **We support the vision of a fleet which addresses the standards of air quality in the City Centre and other areas where there are identified risks from vehicle emissions:** We agree that improving the qualitative aspects of bus services is essential. Buses should not provide a poor service for poor people, but be the mode of choice for all – a quality offer in both style and substance. We currently deliver services on vehicles ranging from Euro IV to hybrids, and are exploring the use of electric vehicles on our TfL fleet, in conjunction with the commissioner. If access to the bus network were limited to vehicles that meet the standards, then providing a fleet with reduced emissions will not be a problem. We would be happy to work with LCC and WYCA to determine future vehicle requirements and innovation, so that we can ensure we are meeting the needs of passengers in the longer term. Length of contract is also important here, as fleet investment for a short contract will limit competition to the small number of large operators who can ‘cascade’ existing vehicles from other operations.

- **We support the vision of there being minimum standard of customer facilities available on new buses:** As per the above, we fully support having a minimum standard of customer facilities, in order to increase passenger satisfaction. It is also crucial to have the minimum standard of facilities to ensure equality of access for older people and people with disabilities (audio visual equipment etc.).

**The Customer Experience**

- **We support the vision of the use of mobile technology to provide clear and accessible information to customers, especially at times of disruption:** Our view is that this should be the norm in West Yorkshire, and in fact across the UK. Additionally, this level of information accessibility should not be restricted to customers but should be the foundations of the relationship with the commissioner. We want to utilise the current RTI system, and expand and develop its applications. Passengers should know where their bus is, and the commissioner should be able to know where it is as well as be able to view broader trends in service delivery. Data sharing is key, and it must be mobile-friendly. To build on the customer facilities point above, it is important that the needs of customers who do not have access to mobile phones are met, by distributing it through alternative channels.

- **We support the vision that there should be more customer choice in the methods of paying for bus travel, reducing cash transactions on the bus:** We support this because it improves customer service in that non-cash transactions tend to result in faster load times (passenger getting on the bus) and therefore shorter journey times and a more reliable service. It is important to note, however, that many people will remain reluctant to
switch to non-cash services and that, to maintain equality of access to bus services, cash payments may have to remain an option.

Another important aspect of ticketing is simplicity. There is currently too much choice and too many overlapping single and multi-operator tickets available, which have a negative impact on the customer experience. To increase ridership, a clear, simple multi-operator fare structure needs to be in place across West Yorkshire that is easily accessible to and understandable by all passengers.

- **We support the vision that the cost of bus travel to be competitive with other modes:** We support this. This level of competitiveness can be achieved by increasing ridership per bus mile (through introducing frequent and reliable services) meaning that costs per passenger will decrease, by cross subsidisation within the network of services (detailed later) and by ensuring that some of the externalities of car travel (emissions, congestion) are paid for by those that create them by, for example, making city centre parking more expensive.

**Clear and Accountable Management**

- **We support the vision that performance is reported against a set of targets for patronage growth, punctuality and reliability:** As detailed above, we believe there should be an open sharing of data between the operator and the commissioner, including both operational data (patronage growth, punctuality and reliability) and, where there is a profit/gain share model, financial data. In Jersey we work in partnership with the authority and have a profit share arrangement; where the margin from delivering the service is above a certain threshold, the surplus is shared 50/50 between the commissioner and the operator. This arrangement means that both parties are incentivised to improve the performance of the service. In terms of operational data, our vision is a shared piece of software that can be accessed by the commissioner and the operator, which is programmed to send service notifications to automatically. We have bid for a number of contracts in Leeds, West Yorkshire and across the country where operational data has simply not been available, because the incumbent operator has not been willing or able to provide it. We view this as an unacceptable state of affairs and commit to transparent relationships supported by reliable date from what is now easily available technology.

**Programme for vehicle investment**

We are not currently in a position to quantify potential vehicle investment, but we have social investors who would back our involvement in the delivery of high quality bus services in Leeds if the commercial terms and social return were right. We have extensive experience of fundraising and good relationships with current and previous investors.

**Commitment to a branded core network of high frequency and express services**

As detailed above, we support this commitment and would be interested in operating some or all of this network.

**Commitment to a process to evolve the network in close consultation with local people**

We are committed to this process. We have participated and led similar processes in Jersey for the mainstream network and in London and Bristol for our community bus network. We are working on a number of new projects that will involve co-design of services with the local community, and see this as a vital part of any successful bus service. As the Council Leader Judith Blake recently said to The Guardian (8/9/2016) “The current bus network in Leeds does not work in the best interests of people living and working here.” The way we can ensure this changes is to talk to these people.
Your company’s proposals which would contribute to a transformational change in
the City’s bus service, leading to a doubling of bus patronage

The vision for WYCA and LCC as set out here, is ambitious and exciting and we are
committed to being a part of it. We would like to make the following proposals in addition
to the feedback provided above:

For this vision to work, WYCA and LCC will need to make use of the franchising powers
which will be made available through the Bus Services Bill. Even with a clear vision,
strong leadership and commitments from a range of operators, it is unlikely that the vision
can be delivered without the regulatory framework provided by the Bill. Working with the
West of England authorities on the Bristol MetroBus project has given us some
experience of the challenges involved in delivering a vision for transport delivered by
multiple parties, particularly given the commercial advantages of the larger operators.
This is one of the reasons that we support the additional powers proposed for local
authorities in the Buses Bill. These powers will:

- Enable the cross subsidisation of services which is a pre-requisite for funding the
  continuity and growth of community bus services: As discussed above, community bus
  routes are often socially necessary but, in isolation, commercially non-viable. Cancelling
  a route may lead to increases in costs elsewhere, such as in the social services or NHS
  budget, and these costs need to be taken into account in any network planning. It is
  absurd that larger operators are making margins of up to 20% on commuter routes,
  whilst the only bus serving a village with a high population of older people who are no
  longer able to drive is cancelled because of lack of funds. The commissioners need to be
  able to control how profits from high frequency routes are spent.

- Give commissioners much needed control over ticketing structures: As discussed above,
  a simple, multi-operator fare structure is key to growing bus ridership. This is one of the
  features enabled by the Bus Services Bill.

- Increase competition levels and so bring down the costs of the network overall through
  franchising powers: Franchising enables more competition than the current deregulated
  market. We believe that the current regulatory framework reduces the overall capacity of
  the bus system in the interests of a small number of commercial operators. Predatory
  commercial tactics make it difficult, if not impossible, for new, smaller operators to break
  into this market. As a result, many counties struggle to get more than a single bid for
  supported bus routes. In TfL’s bus franchising system, there are >20 operators
  competing to win routes (for every route there is, on average, 6 bidders) – it’s an
  extremely efficient market and the benefit to passengers clearly proven. There were 21
  expressions of interest for the Jersey franchise.

Whole Place concept

As an operator whose services range from high frequency stage carriage routes to travel
training for individual passengers the key to a successful renewal of bus services in
Leeds and the WYCA will be integration. Clearly bus services need to integrate across
modes and links, including with both the rail system and community transport.
However, these services are not the full extent of transport resources across the city and we believe that the City’s vision should extend to making better use of existing transport assets and systems, particularly those used for Special Educational Needs students, Adult Social Care and non-emergency patient transport. There are limitations on conventional bus operations which often fail to meet the needs of people who find using such conventional buses difficult or impossible, or who require transport services outside of core operating hours.

Our vision would complement mainstream bus services with a network of reliable community services which serve residential areas, which bring more people into the system and which are demand responsive. Such a “Whole Place” network will increase patronage of mainstream routes by acting as a ‘feeder service’ and the greater the range of services that can be integrated, the greater the number and social value of additional trips and services that can be generated.

Any Whole Place solution should include Community Transport and could include scheduled bus routes that are similar to Access Bus services, easily accessible minibuses for group transport, services that link more remote areas to the main public transport network, travel training for people who have never had or have lost the confidence to travel independently and infrastructure to support people using disability scooters.

As the Council considers a major investment in the future of mainstream and conventional bus services we believe it should also take the opportunity to increase quality of life for vulnerable communities in the area and improve life chances, in an extremely cost efficient way. We are already talking with a number of authorities about the potential for using flexible procurement approaches such as innovation partnerships to secure both the technical and the enterprise solution that the Whole Place concept requires.

In conclusion
We fully support the common vision and are prepared to invest, both financially and in terms of developing innovative services.

As a social enterprise with a commitment to social and environmental impact we feel that we have the combination of commercial skills and community commitment to help make your aspirations a reality. We are committed to commercial success in order to increase social impact.

Our vision is of a network of service built on maximising social and environmental impact in an affordable way rather than limiting services to maximise the financial return. This is enabled by WYCA and LCC using the powers provided to them in the Bus Services Bill.

We hope these thoughts are a useful contribution to this conversation and look forward to working with you in the future.
practical bus franchising
the Jersey model
Dear Mr Still,

Leeds Public Transport Investment Programme: Rail Schemes

I am writing in connection with the rail projects proposed as part of the Leeds Public Transport Investment Programme which is promoted by Leeds City Council and supported by West Yorkshire Combined Authority. These include three new rail stations at Leeds Bradford Airport, Thorpe Park and White Rose, and accessibility improvements at Cross Gates, Horsforth and Morley stations.

Network Rail understands the importance of the rail network to the transport system in Leeds and across the wider City Region, and recognises, in particular, that a well located and designed station can increase local demand for rail travel. Allowing passengers increased safe and easy access to rail services means that the network can act as a catalyst to unlock economic growth across Yorkshire.

I can confirm that Network Rail has received the feasibility study report from West Yorkshire Combined Authority in relation to the viability of a parkway station at Leeds Bradford Airport. Network Rail will continue to work closely with the Combined Authority in order to support the development of this work. We have also noted that similar feasibility work will be completed for White Rose and Thorpe Park in the coming few months and we already had met with both the West Yorkshire Combined Authority and Leeds City Council on a number of occasions in relation to these schemes.

Throughout all of this work Network Rail needs to ensure that any proposed schemes complement existing planned works, and specifically the enhancements which come with the TransPennine Route Upgrade.

It is important to strike a balance between schemes to open new stations and work to ensure journey time improvements, which is also central to unlocking economic growth across Northern England. For context, each additional stop which a service makes typically means that journey time increases by 3 minutes.

Network Rail welcomes the proposed improvements at Cross Gates, Horsforth and Morley as part of making the railway more accessible for all passengers. We will continue to support the development and implementation of these accessibility schemes, subject to the completion of the relevant agreements.

We look forward to continuing to work with West Yorkshire Combined Authority and Leeds City Council to support the proposed rail improvements in the City Region.

Yours Sincerely,

Stephen Hind
Route Enhancements Manager
Gary Bartlett  
Chief Officer  
Highways and Transportation  
Highways Services  
Selectapost 6, Ring Road  
Middleton  
Leeds  
LS10 4AX

Dear Mr Bartlett

Leeds Public Transport Investment Programme: Rail Schemes

I am writing in regards to the rail projects proposed as part of the Leeds Public Transport Investment programme promoted by Leeds City Council (LCC) and supported by West Yorkshire Combined Authority (WYCA). These include three potential new rail stations at Leeds Bradford Airport, Thorpe Park and White Rose, and accessibility improvements at the existing stations at Cross Gates, Horsforth and Morley.

Rail North understands the importance of rail network to the transport system in Leeds and in the wider Leeds City Region, and in particular, that well located and designed stations provide for the increasing demand for rail travel by allowing passengers safe and easy access to the services they require. Stations also have the potential to act as a catalyst to unlock economic development.

I can confirm that Rail North has received the feasibility study report from WYCA in regards a parkway station at Leeds Bradford Airport. The study report appears positive in terms of viability and in economic terms, and Rail North is happy to give its in-principle support to such a Leeds Bradford Airport station, subject to the normal requirement of satisfactory development of a detailed scheme, and business case including operational feasibility.

It is noted that similar development work will be completed for White Rose and Thorpe Park in the coming few months and we have already had various meetings with WYCA/LCC regarding these schemes. Further work is underway to understand how such potential stations might inter-act with the Trans-Pennine Route Upgrade which is key priority for Rail North.
Rail North welcomes the proposed accessibility improvements at Cross Gates, Horsforth and Morley and we will support the development and implementation of these accessibility schemes subject to the completion of the relevant agreements.

I look forward to continuing to work with WYCA and LCC to support and implement the delivery of such rail improvements.

Yours sincerely

David Hoggart
Rail North Director

Cc Ben Still
Martin Farrington  
Director of City Development  
Leeds City Council  
The Leonardo Building  
2 Rossington Street  
LS2 8HD

Dear Martin

Re: Leeds-Harrogate Parkway Rail Station & Link Road

As the City Council will be aware, Leeds Bradford Airport is a major contributor to the economic prosperity of the Leeds City Region providing £336m GVA to the region each year supporting over 2,500 jobs, with considerably more relying indirectly on the success of the airport. LBA has just marked its busiest ever year, with 3.5m passengers travelling through.

In line with the Northern Powerhouse agenda, the future economic competitiveness of the LCR is underpinned by the provision of sustainable, efficient and modern infrastructure connections to both national and international markets. Plans for an economic hub adjacent to LBA with a mix of uses will create thousands of new job and will be a major contributor to the economic performance of the LCR. This hub is a key strategic employment growth area and it needs to be supported by improved sustainable transport links.

There is also the potential for further sustainable growth of LBA due to its location within the largest catchment of any UK airport outside London, with a regional population growing faster than the UK average. This potential is reflected in forecasts provided by the Department for Transports ‘UK Aviation Forecasts’ document 2013, which concluded that passenger numbers could increase to 7.1mppa by 2030. This level of growth is achievable in operational terms within the existing airport operational boundary, and without the need for an extension to the runway. The delivery of additional jobs at LBA to support this passenger growth could be greatly accelerated by an improved, sustainable surface access offer.

The business case for a new link road to the airport between the A65 and the A658 is being considered by LCC with the support of WYCA and the West Yorkshire Plus Transport Fund. LBA supports LCC in the aim of providing better road and bus access to LBA and the economic hub. The alignment of the new link road will be defined by additional detailed feasibility work which is yet to take place, but three options have been consulted on. LBA support the option of building a new road from the A65, running along the eastern edge of the airport before joining the A658 to the north. LBA believe this would provide the greatest benefit to both local traffic congestion and help unlock further job creation at LBA and the economic hub.

LCC & WYCA are also working on the business case for a new rail station on the existing Leeds-Harrogate line which could provide access to not only Leeds and Harrogate, but also services to Bradford and cities beyond. Furthermore, there is potential for it to be integrated with the new link road proposals to support the development of the economic hub. It would act as a Park & Ride
facility for commuters and residents to alleviate traffic congestion into Leeds city centre, which adds greatly to the sustainability credentials of the LCR.

It is important that the road and rail schemes are considered together, as an integrated approach to maximising the economic outputs from LBA, the economic hub and benefits to the LCR. The integration of LBA into a sustainable public transport network would unlock its economic potential and inward investment opportunities quicker than if LBA were to rely on existing transport connections alone. It would also increase the sustainable travel options to the airport by both employees and passengers alike.

The £173.5m of funding now available to LCC provides an opportunity to deliver fast, efficient and sustainable surface access to the airport and economic hub. As such, LBA strongly supports the development of a new rail station on the Leeds-Harrogate line connected to a new link road around the airport. This would assist in securing wider economic benefits for the LCR that would otherwise take significantly longer to secure.

Yours sincerely,

John Parkin
Chief Executive Officer
Harrogate Borough Council has welcomed proposals to create a new railway station at Leeds Bradford Airport.

The proposal forms part of an ambitious new Leeds Transport Strategy, which has been produced by Leeds City Council, with the support of the West Yorkshire Combined Authority and the new Leeds transport advisory panel.

The new parkway station would be built on the existing Leeds to Harrogate line, connecting to the wider rail network and serving and supporting the development of one of the fastest growing regional airports in the UK, which is used by 3.5 million passengers a year.

The new station would also act as a park and ride facility to be used by commuters to reduce congestion in Harrogate and Leeds.

Councillor Rebecca Burnett, Harrogate Borough Council’s Cabinet member for Planning and Sustainable Transport said: “We are delighted to see that the Leeds Bradford Airport Parkway Station proposal has been recommended to be part of the Leeds Public Transport Investment Programme. We have long been a supporter of this idea as it is clear that the development has many advantages for the district.

“The station would provide residents of Pannal, Harrogate, Starbeck and Knaresborough, as well as villages in the east of our district, with direct access by train to the airport. It would also have a positive impact on the local economy by improving transport links to our district for tourists and people visiting the area for business.

“We have been working hard to encourage investment in the Leeds-Harrogate-York line and our efforts are starting to pay off. Rail provision in the district is set to improve in the future with the introduction of two-hourly services to London with the new East Coast franchise and we will get new carriages, free wi-fi and better and more frequent services with the new Northern Rail franchise.
"The announcement of the proposed new station would enhance public transport provision in our area, have a positive impact for businesses and tourism, and strengthen the opportunities on the Harrogate line.

"I hope that the Department of Transport will recognise the benefits that the station will bring to the region, so that the proposal can become reality."

More articles in the news archive

Harrogate Borough Council news RSS feed
Ben Still  
Managing Director  
West Yorkshire Combined Authority  
Wellington House  
Wellington Street  
LEEDS

John O'Grady  
Regional Stakeholder Manager  
Northern Rail  
3rd Floor Aintree House  
1 York Place  
Leeds  
LS1 2DR

john.o’grady@northernrail.org  
01904 568720  
07764 796581

16 December 2016

Dear Ben

**Leeds Public Transport Investment Programme: Rail**

I am writing in relation to the rail projects proposed as part of the Leeds Public Transport Investment programme promoted by Leeds City Council (LCC) and supported by West Yorkshire Combined Authority (WYCA), including new rail stations at Leeds Bradford Airport (LBA), Thorpe Park and White Rose, and accessibility improvements at Cross Gates, Horsforth and Morley.

Northern understand the importance of the rail network to the transport system in Leeds and in the wider Leeds City Region. We especially understand the importance of well located and designed stations which deliver for passengers safe and convenient access to their local services and consequently are a catalyst for economic development.

I confirm that Northern has received the feasibility study report from WYCA in regards the viability of a parkway station at LBA. The report appears positive and we look forward to working with WYCA to develop and deliver the project and those at other locations. We also welcome the proposed accessibility improvements at Cross Gates, Horsforth and Morley and we will support the development and implementation of these accessibility schemes subject to the completion of the relevant agreements.

We look forward to continuing to work with WYCA and LCC to support and implement the delivery of the proposed rail improvements.

Yours sincerely

John O'Grady  
Regional Stakeholder Manager

www.northernrailway.co.uk
Dear Graham,

I am writing to you in the capacity of the Chair of the Leeds Transport Expert Advisory Panel which has been set up to review the process of the Leeds Transport Conversation and programme development and provide independent advice. The Panel membership reflects a wide range of local and national expertise in the transport field and for the purposes of governance and transparency, the membership of the group has been made publically available and the list of Panel members is attached for your information.

The purpose of this Panel is to provide a review and challenge for Leeds, as it develops its future transport strategy and programme of solutions that are needed for a growing international city. The panel has met twice in the past couple of months, and in that time we have discussed a range of issues. In summary, there was general agreement about the shape of the proposals over the short term taking into account the development of a longer term Transport Strategy for Leeds which these proposals fit into, as well as how they may support sustainable economic growth and are aligned with national policy objectives.

These first meetings have been regarded by the Panel members as a very positive process in terms of engagement with the City. The initial activities of the Panel have also been taken into account the views emerging from the Transport Conversation (8169 questionnaire responses). This has helped to identify a set of much needed shorter term improvements to the public transport system, whilst recognising that this is not the end of that process.

If you would value a more detailed discussion then I would be pleased to meet with you with some of my colleagues from the Panel.

Yours Sincerely,

Nigel Foster

Chair, Leeds Transport Expert Advisory Panel

Enc.

www.leeds.gov.uk  switchboard: 0113 222 4444
# Leeds Transport Expert Advisory Panel Membership

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigel Foster (chair)</td>
<td>Director of Strategy, Transport for the North</td>
</tr>
<tr>
<td>Prof Greg Marsden</td>
<td>Professor of Transport Governance - Institute for Transport Studies at University of Leeds</td>
</tr>
<tr>
<td>Prof David Begg</td>
<td>Owner and proprietor of Transport Times, variety of senior roles at advisory level in transport sectors</td>
</tr>
<tr>
<td>Stephen Joseph</td>
<td>Chief Executive, Campaign for Better Transport</td>
</tr>
<tr>
<td>David Brown</td>
<td>Chief Executive, Transport for the North</td>
</tr>
<tr>
<td>Rob McIntosh</td>
<td>Route Managing Director LNE and East Midlands, Network Rail</td>
</tr>
<tr>
<td>Alex Hynes</td>
<td>Managing director of Arriva Rail North Ltd</td>
</tr>
<tr>
<td>Geoff Inskip</td>
<td>Managing Director, GI Consultants</td>
</tr>
<tr>
<td>Chris Longley</td>
<td>Area Policy Representative, Yorkshire Federation of Small Businesses (FSB)</td>
</tr>
<tr>
<td>Rosslyn Colderley</td>
<td>England North Director, Sustrans</td>
</tr>
<tr>
<td>Rashik Parmar</td>
<td>IBM Distinguished engineer, Member of Leeds City Region LEP Board</td>
</tr>
<tr>
<td>Jagdeep Passan</td>
<td>Chair of the Access and Useability Group, LCC, Chief Executive of Leeds involving People, former NHS non-exec director</td>
</tr>
<tr>
<td>Mary Naylor</td>
<td>Vice chair of local National Federation of the Blind, Chair of Leeds Involving People, and member of the Leeds Teaching Hospital Trust working group.</td>
</tr>
<tr>
<td>Stephanie Burras</td>
<td>Chief Executive of Ahead Partnership, LEP Board, Chair of LEP Skills Panel</td>
</tr>
<tr>
<td>Ellie Evans</td>
<td>Partner at Volterra (economic consultancy)</td>
</tr>
<tr>
<td>John Dales</td>
<td>Chair of the Transport Planning Society</td>
</tr>
<tr>
<td>Paul Swinney</td>
<td>Principle Economist, Centre for Cities</td>
</tr>
</tbody>
</table>
Appendix F  Detailed Programme
Appendix G  Appraisal Summary Table

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Description</th>
<th>Cost (£)</th>
<th>Benefits (£)</th>
<th>Cost Benefit Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project A</td>
<td>Infrastructure improvement</td>
<td>50,000</td>
<td>120,000</td>
<td>2.40</td>
</tr>
<tr>
<td>Project B</td>
<td>Public transport enhancement</td>
<td>60,000</td>
<td>150,000</td>
<td>2.50</td>
</tr>
<tr>
<td>Project C</td>
<td>Green space development</td>
<td>45,000</td>
<td>90,000</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Note: All costs and benefits are estimated.
### Appraisal Summary Table

<table>
<thead>
<tr>
<th>Name of scheme:</th>
<th>Leeds Public Transport Investment Programme</th>
<th>Date produced:</th>
<th>12/12/2016</th>
<th>Contact:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of scheme:</strong></td>
<td>The Leeds Public Transport Investment Programme will provide a significant step towards a transformational change to the public transport network in Leeds. The programme will support inward investment, innovation and employment opportunities by transforming the bus network, making our city centre gateways world class and expanding the rail network in Leeds.</td>
<td><strong>Name:</strong> Gary Bartlett</td>
<td><strong>Organisation:</strong> Leeds City Council</td>
<td><strong>Role:</strong> Promoter/Official</td>
</tr>
<tr>
<td><strong>Impacts Summary of key impacts</strong></td>
<td><strong>Quantitative</strong></td>
<td><strong>Assessment</strong></td>
<td><strong>Monetary (£NPV)</strong></td>
<td><strong>Distributional 7-pt scale/vulnerable grp</strong></td>
</tr>
<tr>
<td>Business users &amp; transport providers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability impact on Business users</td>
<td>The programme will lead to travel time savings for road users due to the schemes which will reduce congestion and give priority to public transport, providing a quicker journey time. Travel times to key employment sites will also improve with the rail access offered to Leeds Bradford Airport, Thorpe Park and White Rose benefitting business users. There will also be an economic advantage for public transport operators in terms of fuel and non-fuel vehicle operating costs and reduced journey times.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>-35,462</td>
</tr>
<tr>
<td>Regeneration</td>
<td>The programme will improve the ambience of areas and provide high quality public transport improving accessibility to drive inward investment. This will be furthered by the new rail stations and the improvements to rail station accessibility through PRM-TSI compliant bridges and car parking encouraging usage to access the wider Leeds City Region.</td>
<td>Not assessed.</td>
<td>Moderate Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Wider Impacts</td>
<td>Improved access to key employment sites such as Thorpe Park and White Rose in addition to great accessibility to Leeds Bradford Airport will deliver economic growth through improved connectivity. Improvements in station accessibility will allow the rail network in Leeds to be fully inclusive for all users delivering benefits for all in Leeds. These improvements along with the improvements in the performance of the highway network and public transport network will make journeys more attractive to encourage modal shift.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>The overall impact on noise is expected to be neutral. Local noise levels will increase from stopping rail services however improved highway congestion and traffic as a result of modal shift will reduce noise.</td>
<td>Assessment carried out using MEC values for P&amp;R scheme forecast to remove highway traffic.</td>
<td>Slight Benefit</td>
<td>£606</td>
</tr>
<tr>
<td>Air Quality</td>
<td>The reduced congestion levels expected to result from the programme and the modal shift is likely to see improvements in air quality.</td>
<td>Assessment carried out using MEC values for P&amp;R scheme forecast to remove highway traffic.</td>
<td>Slight Benefit</td>
<td>£0.5</td>
</tr>
<tr>
<td>Greenhouse gases</td>
<td>Greenhouse gases are scoped out of the WebTAG appraisal.</td>
<td>Assessment carried out using MEC values for P&amp;R scheme forecast to remove highway traffic.</td>
<td>Slight Benefit</td>
<td>£1,924</td>
</tr>
<tr>
<td>Landscape</td>
<td>Neutral effects are expected.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Townscape</td>
<td>The improvements to public realm are likely to have a positive effect on the physical characteristics of Leeds city centre contributing to a sense of place.</td>
<td>Not assessed.</td>
<td>Slight Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Historic Environment</td>
<td>No setting effects are expected.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Neutral effects are expected.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Water Environment</td>
<td>Neutral effects are expected.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Commuting and Other users</td>
<td>Highway commuters will experience travel time savings with a large benefit for rail commuters from improved connections to key employment destinations and travel time reductions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability impact on Commuting Other users</td>
<td>Improved highway reliability through the junction improvements and bus priority measures the programme will deliver.</td>
<td>Not assessed.</td>
<td>Major Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Physical activity</td>
<td>The bus priority measures will provide segregated facilities for cyclists away from the main carriageway reducing conflicts between cars and cyclists and encouraging physical activity through a more attractive route. Improvements to the urban realm in the city centre will encourage walking and multi-modal journeys.</td>
<td>Not assessed.</td>
<td>Slight Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Journey quality</td>
<td>Improvements to bus waiting facilities in addition to journey times savings as a result of bus priority measures will have a significant improvement on journey quality. Ensuring current rail stations are PRM-TSI compliant and constructing new stations with high quality facilities - RTI, waiting shelters, CCTV will provide a high quality rail journey experience.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidents</td>
<td>The likely increase in public transport mode share the programme will deliver will reduce accident levels as a result of less highway demand.</td>
<td>Assessment carried out using MEC values for P&amp;R scheme forecast to remove highway traffic.</td>
<td>Slight Benefit</td>
<td>£6,486</td>
</tr>
<tr>
<td>Security</td>
<td>New rail stations and improvements to bus waiting facilities and urban realm will improve the ambiance and feeling to enhance security.</td>
<td>Not assessed.</td>
<td>Slight Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Access to services</td>
<td>It is anticipated that the programme will deliver reduced bus journey times which may result in an increase in journey times for other users, however the quicker journey times are expected to encourage modal shift. The programme will lead to travel time savings for road users due to the schemes which will reduce congestion and give priority to public transport, providing a quicker journey time. Travel times to key employment sites will also improve with the rail access offered to Leeds Bradford Airport, Thorpe Park and White Rose benefitting business users. There will also be an economic advantage for public transport operators in terms of fuel and non-fuel vehicle operating costs and reduced journey times.</td>
<td>Not assessed.</td>
<td>Moderate Benefit</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Affordability</td>
<td>The programme is predisposed infrastructure schemes and will not impact on public transport fares.</td>
<td>Not assessed.</td>
<td>Neutral</td>
<td>Not assessed.</td>
</tr>
</tbody>
</table>
The enhancements to the city centre gateways is anticipated to create a better connected and integrated transport system in the city centre with the urban realm improvements leading to improved access across the city centre.

<table>
<thead>
<tr>
<th>Public Access</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severance option and non-use values</td>
<td>Improvements in access and additional rail stations will provide greater options.</td>
<td>Not assessed.</td>
<td>Slight Benefit</td>
</tr>
<tr>
<td>Cost to Broad Transport Budget</td>
<td>Investment costs and other identified local government contributions to scheme running costs.</td>
<td></td>
<td>£146,091</td>
</tr>
<tr>
<td>Indirect Tax Revenues</td>
<td>Reduction in car kms reduces tax revenues from fuel purchases.</td>
<td></td>
<td>£6,617</td>
</tr>
</tbody>
</table>
Appendix H  Economic Assumptions
## Assumptions Note

<table>
<thead>
<tr>
<th>Package</th>
<th>Scheme</th>
<th>Description</th>
<th>Key assumptions</th>
<th>Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Network Transformation</td>
<td>A61 North Bus Priority</td>
<td>comprehensive treatment providing significant bus priority on the A61 enhancing the existing guideways to improve bus journey times</td>
<td>WebTAG - VOT - December 2016 revision weighted taking account of occupancy and trip proportion values.</td>
<td>N/A</td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>A647 Bus Priority</td>
<td>Bus priority through the congested section on the A647, including the HOV lane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>A660 Bus Priority</td>
<td>Lawnswood Junction upgrade</td>
<td>Outputs from Leeds Transport Model used to provide journey time increases/decreases to bus passengers and highway traffic.</td>
<td></td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>A61 South Bus Priority</td>
<td>A61/A639 to support Stourton P&amp;R as well as other stopping services. Significant road space reallocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>A61 South Inbound J7</td>
<td>A61 South Inbound</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>A58 Bus Priority</td>
<td>Becket Street (St James’ Hospital)</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>Eilland Road P&amp;R expansion</td>
<td>A further 500 spaces at the existing park &amp; ride</td>
<td>Benefit derived from factoring of results from previous Business Case produced by LCC.</td>
<td>N/A</td>
</tr>
<tr>
<td>Bus Network Transformation</td>
<td>North of the City P&amp;Rs</td>
<td>Programme of deliverable Bus Park &amp; Rides across the North of the city - locations to be determined, based on land availability and competitive journey time with the private car</td>
<td>VOT - December 2016 revision weighted taking account of occupancy and trip proportion values. MEC values - Inner/outer conurbation values (A5.4.4) weighted by flow proportions for Yorkshire and Humber (A5.4.1).</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Fare £2.79 (average yield) Parking charge £6.00

Five sites of 200 spaces each. Representative 7km/16kph car distance/speed. Bus frequency - 10mins, journey time 25 mins City centre walk time - 12 minutes (car), 2mins (bus)
<table>
<thead>
<tr>
<th>Package</th>
<th>Scheme</th>
<th>Description</th>
<th>Key assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Network</td>
<td>Stourton P&amp;R</td>
<td>Delivery of bus park and ride with significant road space reallocation to generate a step change in journey time and bus priority, providing significant competition to the private car</td>
<td>VOT - December 2016 revision weighted taking account of occupancy and trip proportion values. MEC values - Inner/outer conurbation values (A5.4.4) weighted by flow proportions for Yorkshire and Humber (A5.4.1). 1000 spaces 5.1km/43kph car distance/speed. Bus frequency - 10mins, journey time 14 mins City centre walk time - 17 minutes (car), 2mins (bus) Fare £2.79 (average yield) Parking charge £6.00</td>
</tr>
<tr>
<td>Bus Network</td>
<td>Low Emission Bus Top up</td>
<td>To build upon the 284 new low emission buses, which are to be provided by First</td>
<td>Fuel consumption and carbon emissions/values taken from WebTAG tables A1.3.11, A3.3, A3.4. LTM data used to show relevant replaced buses would cover c12m kms annually. Average speed of 17kph assumed.</td>
</tr>
<tr>
<td>Bus Network</td>
<td>Reconnecting Communities</td>
<td>Provision of new or upgraded real time information at 1000 to 1200 bus stops across Leeds. This will build in the development of a region wide real time journey planning app and upgrade of the ticket machines to smart technology.</td>
<td>Value of RTPI at bus stops of £1.47 (M3.2.1) 20% of this value used for stops where some basic RTPI facilities already exist. Identification of numbers of passenger using stops with either no RTPI facilities or basic RTPI facilities. No facilities - 72,081 boarding daily. Basic facilities - 38,826 boardings daily. (source - Leeds Transport Model)</td>
</tr>
<tr>
<td>Bus Network</td>
<td>Real time information</td>
<td></td>
<td>Value of new bus shelters of £1.08 (M3.2.1) 18,321 daily boardings in district centres benefiting daily. (source - Leeds Transport Model)</td>
</tr>
<tr>
<td>Bus Network</td>
<td>Transport Hubs</td>
<td>District Centre improvements to transport interchange points</td>
<td>Value of new interchange facilities of £1.27 (M3.2.1) 87,769 daily boardings in city centre benefiting daily. (source - Leeds Transport Model)</td>
</tr>
<tr>
<td>City Centre Gateways</td>
<td>Leeds Rail Station</td>
<td>Bus-rail interchange at Leeds Station</td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td>Scheme</td>
<td>Description</td>
<td>Key assumptions</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>Leeds Bradford Airport Parkway</td>
<td>New rail stations</td>
<td>N/A Benefit derived from factoring of results from previous Business Case produced by WSP.</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>Thorpe Park</td>
<td>New rail stations</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>White Rose</td>
<td>Make Cross Gates, Morley and Horsforth access for all stations in Leeds will be accessible</td>
<td>Not assessed.</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>Station Accessibility Improvements</td>
<td>500 space expansion to the station car park to allow further people to interchange onto rail with improved access for buses also allowing bus-rail interchange</td>
<td>VOT - December 2016 revision weighted taking account of occupancy and trip proportion values. MEC values - Inner/outer conurbation values (A5.4.4) weighted by flow proportions for Yorkshire and Humber (A5.4.1). 500 space car park expansion. Representative 10.1km/35kph car distance/speed. Train frequency - 12mins, journey time 12 mins City centre walk time - 15 minutes (car), 2mins (train) Fare £1.30 (average yield) Parking charge £6.00</td>
</tr>
<tr>
<td>Enhanced Rail Package</td>
<td>New Pudsey Rail P&amp;R</td>
<td>500 space expansion to the station car park to allow further people to interchange onto rail with improved access for buses also allowing bus-rail interchange</td>
<td>500 space car park expansion. Representative 10.1km/35kph car distance/speed. Train frequency - 12mins, journey time 12 mins City centre walk time - 15 minutes (car), 2mins (train) Fare £1.30 (average yield) Parking charge £6.00</td>
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