

Leeds Bradford International Airport

Surface Access Strategy

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Draft



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1 Introduction

Good transport connections are vital to the effective functioning of any airport. All air transport trips will start and end with a connection to the point of departure and arrival, whatever their purpose. Similarly, all airport and associated business employees require access to the site. So the provision of surface access infrastructure that supports the connections necessary for travellers and employees is a fundamental part of any growth strategy.

Leeds Bradford International Airport (LBIA) is the international gateway for the Leeds City Region, and much of neighbouring North Yorkshire. It has a crucial role to play in supporting the economic growth potential of the City Region, as well as satisfying the increasing demand for leisure trips from City Region residents, and those who are drawn to the Airport due to its range of destinations.

The Airport currently serves in the region of 3.3 million passengers per annum (mppa), of which approximately 75% are from within the Leeds City Region. The Airport has performed well over the last five years with passenger growth of 3.8%, compared to a reduction at other adjacent airports, such as Doncaster Sheffield and East Midlands. However, LBIA captured only 32% of the short haul and 4% of the long haul demand generated by Yorkshire and the Humber area. Adding business growth potential, this represents a huge opportunity for local growth, if the right routes and appropriate infrastructure are offered.

The Airport is continuing to grow, and the Government's own UK Aviation Forecasts (January 2013) state that by 2030, passenger numbers could increase by 114% to 7.1 mppa. This supports the positioning of the Airport as an economic 'hub' as well as an international gateway, and has led to the agreed position that LBIA has great potential to support the stated economic objectives of the City Region if individual development plans are integrated.

One such plan will be the Airport Surface Access Strategy (ASAS). There is no doubt that surface access infrastructure improvements will be necessary to support an airport of the size forecast by the Department for Transport (DfT). As part of the new integrated planning approach, defining the necessary surface access improvements, in line with other transport improvements being taken forward in the City Region, is a critical part of ensuring that the Airport can play its full role in the growth of the Leeds City Region.

This ASAS forms part of the LBIA Masterplan for TBC, ensuring there is a joined up approach to airport operations, land use planning and transport. The Masterplan and the ASAS together provide a clear statement of intent to enable future development of the Airport to be given due consideration in local planning processes. Together they also provide transparency and aid long term planning for other businesses within the Leeds City Region.

Since 1998, the government has required most airports within the UK to prepare an ASAS. The first ASAS for LBIA was produced in 2000, and was compliant with the local and national government objectives at the time. An update of the ASAS was published in 2006 and this took on board the objectives of the 2003 Aviation White Paper, particularly the requirement to increase the proportion of passengers who travel to and from airports by public transport. This version of the ASAS also recognised the link between surface access infrastructure and airport and economic development.

There is now a need to produce a further revised ASAS to feed into a new Masterplan for LBIA. This will take on board the requirements of the Government's Aviation Policy Framework (March 2013) that fully replaces the 2003 Air Transport White Paper. Furthermore, it will reflect the changes to the planning system introduced by the National Planning Policy Framework and the Planning Act 2008.

The Aviation Policy Framework sets out what the Government expects to see covered in surface access strategies. Accordingly, this ASAS will:

- Review the current surface access infrastructure and a snapshot of its usage;
- Identify the drivers of change for airport surface access over the coming years and discuss what impact these drivers may have on demand and behaviour;
- Present a new vision for surface access for the Airport and the development of surface access measures and infrastructure over the short, medium and long term;
- Identify committed/planned and possible surface access improvements both for the Airport and also those that offer the opportunity to provide much improved connectivity between the main settlements in the Leeds City Region;
- Set out challenging and ambitious targets for increasing the proportion of journeys made to the Airport by public transport for both employees and passengers, in order to reduce the carbon and air quality impacts of the Airport;
- Outline the arrangements to oversee implementation of the strategy and how its performance will be measured against the targets in a clear and transparent way;

The ASAS will also seek to coordinate with, and influence, local planning and economic strategies so that a collaborative approach is taken to the development of a successful and vibrant airport for the Leeds City Region.

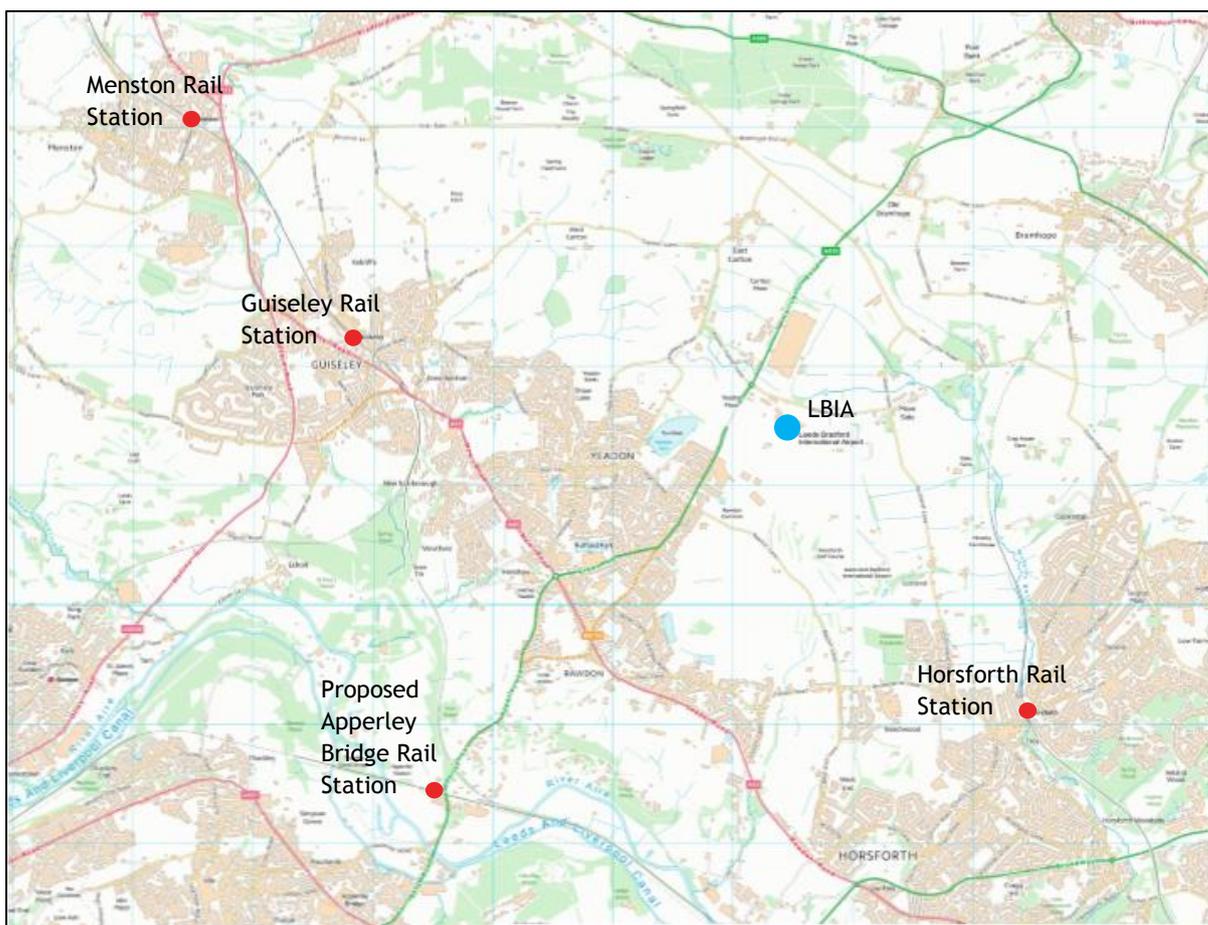
It is intended that this ASAS should be read in conjunction with the Airport Masterplan, as well as the City Region Aviation Strategy, published by the Local Enterprise Partnership (LEP) in Autumn 2013.

2 Surface Access Infrastructure and Services

2.1 Rail

There are currently no direct rail services to LBIA. The two nearest railway stations to LBIA are Guiseley and Horsforth, as shown in Figure 1.

Figure 1: Nearest Rail Stations to LBIA



Horsforth rail station is 3.0km to the south east of the Airport on the Harrogate Line. A half hourly service is provided between Leeds and Harrogate with alternate trains travelling to York. Car parking and taxi facilities at Horsforth are limited and no public transport services link the station to the Airport. Bus service 757 from Leeds to the Airport provides a service between the Airport and New Road Side in Horsforth where further changes can be made with service(s) 31 and 32 to connect with Horsforth railway station (Monday to Saturday, daytime).

Guiseley rail station is 3.7km west of the Airport on the Wharfedale Line. This station is served by services between Leeds and Ilkley and Bradford and Ilkley, both of which operate

half hourly. Again, car parking and taxi facilities are constrained, but there is a direct bus link via the 737 Bradford-Airport bus from the Airport to Guiseley.

A new rail station is to open at Apperley Bridge, 4.1km south west of the Airport on the Airedale Line, in Autumn 2015, again shown in Figure 1. The station will be served by services between Leeds and Bradford which operate half hourly. Car parking facilities will be provided at the station for 300 cars, and there is a direct bus link via the 747 Bradford-Airport bus from the A658 at the end of the station access road.

The nearest mainline rail stations to the Airport are Leeds and Bradford Interchange, both of which are connected to the Airport by direct bus services described in the following section. One of the Bradford services also links to Harrogate, providing an onward link to the mainline rail station at York.

There is also a local bus connection between the Airport and Menston rail station, the next stop to Guiseley on the Wharfedale Line, also shown in Figure 1.

2.2 Bus

LBIA is served by direct, frequent bus services from Leeds, Bradford, Harrogate and Otley. Services to Bradford and Leeds link the Airport with the national rail network via Bradford Interchange, Leeds and Harrogate rail stations, and connect with long distance coach services at Bradford Interchange and Leeds City bus station. A summary of current bus services serving LBIA is set out in Table 1.

Table 1: Existing Bus Services to/from LBIA

Service Number	Operator	Frequency	Route
737	Yorkshire Tiger	Daytime: hourly Evenings & Sundays: hourly	Bradford - Shipley - Guiseley - Yeadon - Airport - Harrogate
747	Yorkshire Tiger	Daytime: hourly Evenings & Sundays: hourly	Bradford - Apperley Bridge - Yeadon - Airport
757	Yorkshire Tiger	Daytime: every 20 minutes Evenings: hourly Sundays: every 30 minutes	Leeds - Kirkstall - Horsforth - Airport
967	TLC Travel	Daytime: every 30 minutes Evenings & Sundays: hourly	Menston Rail Station - Otley - Pool - Airport

The 737, 747 and 757 services were rebranded in April 2014 as the Flying Tiger services. The 757 service now operates on an increased frequency offering three rather than two buses per hour between Leeds City Centre, rail and bus stations to the Airport. This service is operated using five new high specification buses that offer seats trimmed in leather, charging points beneath eleven seat pairs, specially designed racks for luggage, free wi-fi and audio/visual next stop announcement facilities. Other ‘Flying Tiger’ buses operated by Yorkshire Tiger (737/747) have been refurbished - these buses are usually low floor, easily accessible vehicles with additional space for luggage.

All of the buses serving the Airport drop-off and pick-up passengers outside the terminal building (four stands with real time information provided). Table 2 presents a summary of typical bus fares for the Flying Tiger services.

Table 2: Flying Tiger Bus Service Fares

Journey	Ticket Price	
	Single	Return
Leeds - Airport	£3.60	£6.00
Bradford - Airport	£3.60	£6.00
Harrogate - Airport	£5.00	£8.00

2.3 Coach

There are no direct coach services to the Airport at present. Connections with long distance coach services can be made at Bradford Interchange and Leeds City bus station.

2.4 Walk/Cycle

There are very few walk trips to the Airport, and there is limited footway provision along Whitehouse Lane, the main access road. There are numerous signed walking routes from the Airport’s car parks to the terminal building.

Cycle connectivity to LBIA is available via Leeds City Council ‘advisory routes’. Bicycles may be left chained-up in any of the Airport’s public car parks. However, local topography represents a major barrier to encouraging both walking and cycling from some directions.

Motorcyclists are permitted to take up a car parking bay in the most appropriate car park for their visit.

2.5 Taxi

Arrow Cars is the official private hire company at LBIA. The company has an office just outside the main terminal building, where passengers can book and pay for their taxi in advance. A selection of single taxi fares for journeys to the Airport is presented in Table 3.

Table 3: Selected Arrow Cars Taxi Fares

Origin	Typical Single Fare
Bradford	£22.00
Harrogate	£27.00
Halifax	£35.30
Huddersfield	£43.60
Leeds	£21.50
Wakefield	£41.80
York	£61.40

Other taxi companies can also use the Airport, dropping off and picking up passengers at the terminal front, but these companies cannot actively seek business at the Airport.

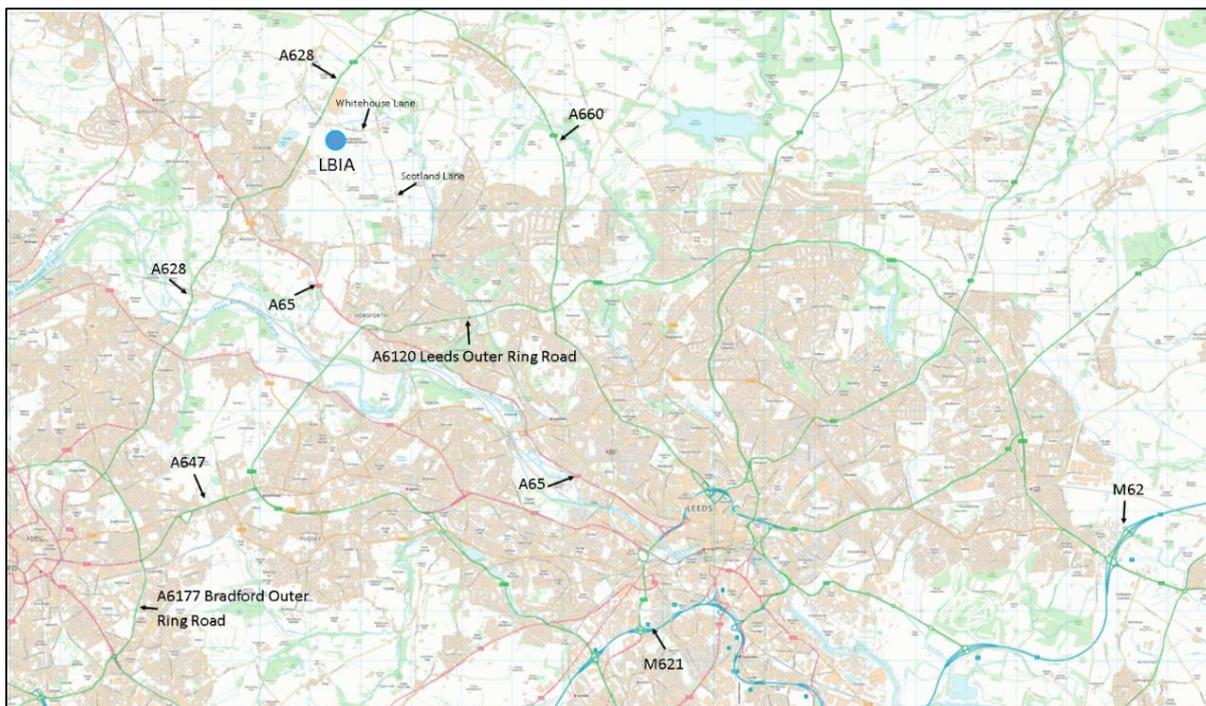
2.6 Car

Highway access to the Airport can be gained from the national motorway network (M62, the M1, or the A1(M)) by using either the Leeds Outer Ring Road (A6120), and the local road network surrounding the Airport (A658, A6177 and the A65) as shown in Figure 2 overleaf.

The Airport is primarily accessed via Whitehouse Lane, from a roundabout on the A658, to the west of the Airport. The access road comprises a lit single carriageway. It is also possible to access the Airport via Scotland Lane to the east. On average, 82% use the A658 to access the Airport, with the remaining 18% using Scotland Lane.

Many of the routes that provide access to the Airport are congested, particularly during the peak periods and especially the AM peak period between 0730-0930. Average speeds on some of the routes are less than 10mph, specifically the radial corridors towards Leeds and Bradford City Centres. Parts of the M62 and M1 motorways are also congested, even though speeds are generally higher.

Figure 2: LBIA Highway Access Links



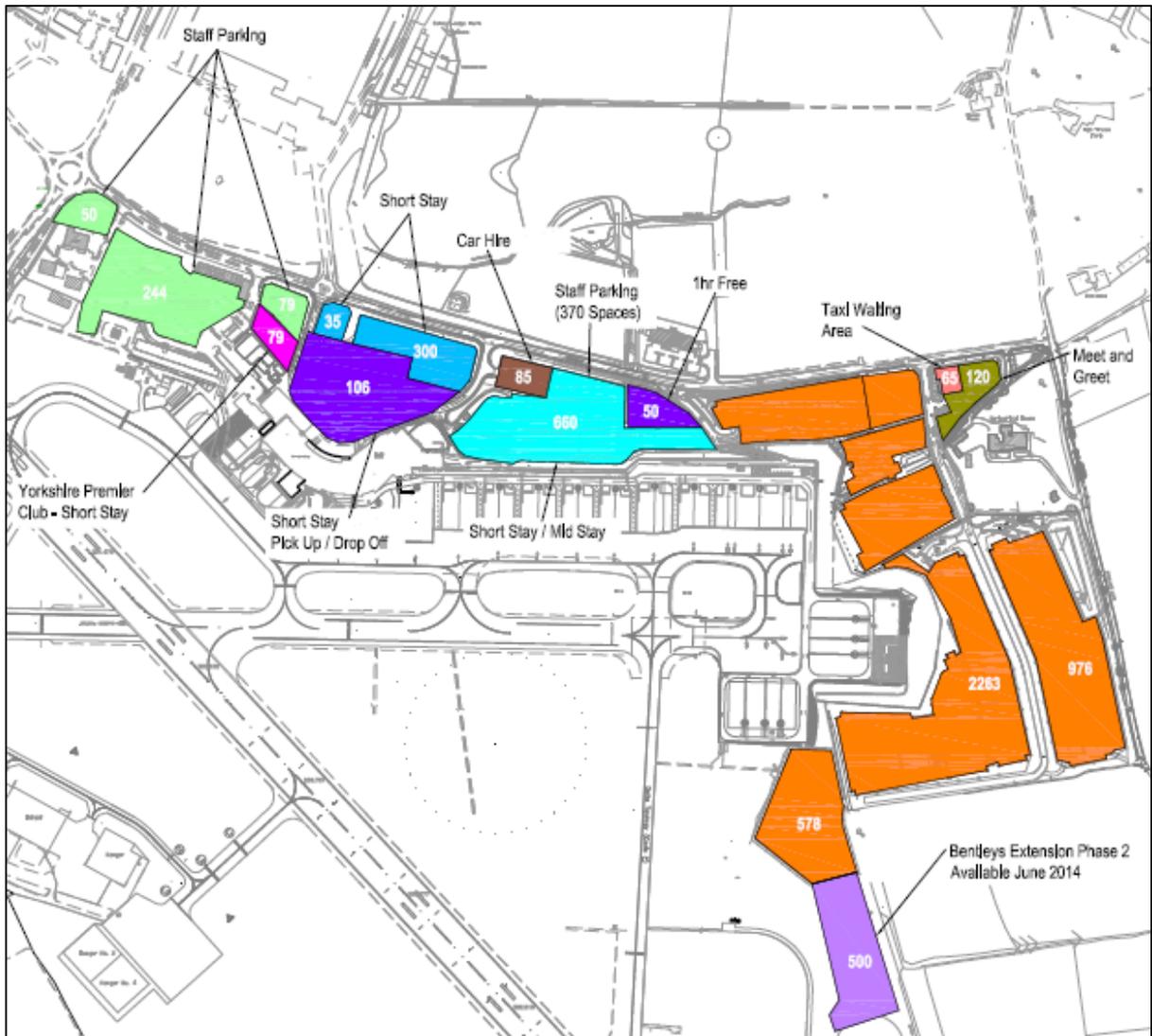
2.7 Car Parking

There are numerous on-site car parking facilities at the Airport, as shown in Figure 3 overleaf. The existing on-site car parking provision at the Airport is summarised in Table 4.

Table 4: Existing On-Site Car Parking Provision at LBIA

Type	Total Spaces	Number of Disabled Spaces	Number of Staff Spaces
Short Stay/Mid Stay	660	48	370
Short Stay	335		0
1 Hour Free Zone and DOPU	156	5	0
Yorkshire Premier Club	79	0	0
Long Stay	3,817	49	0
Long Stay Extension	500	0	0
Total	5,547	102	370

Figure 3: Location of Existing On-Site Car Parks at LBIA



Not all car parks are used throughout the year - the more remote long stay car parks tend to be opened up as demand requires in the peak summer period.

A parking fee is charged for cars dropping-off and picking-up passengers at the terminal front. Free drop-off and pick-up provision is available for up to an hour in the short/mid-stay car park, with a free shuttle bus to the terminal.

Short, mid and long stay parking charges fluctuate during the year, and also depend on the advanced nature of any booking.

The majority of staff parking is accommodated in dedicated staff parking areas to the west of the terminal building. When these areas become full, an area adjacent to the car hire parking area is available as an overflow car park.

There are also a number of off-site car parks offering parking for the Airport, with shuttle buses provided to the terminal building. Parking provision at Sentinel, Leeds Car Parks Ltd and LBA Car Watch suggests that a further 2,958 spaces may be provided off-site, although a recent Planning Inquiry decision will increase the volume of off-site parking available by a further 275 spaces in 2014. LBIA has objected to applications to increase the volume of off-site car parking available as this undermines attempts to encourage public transport use and is contrary to the Airport's assessment of long term need.

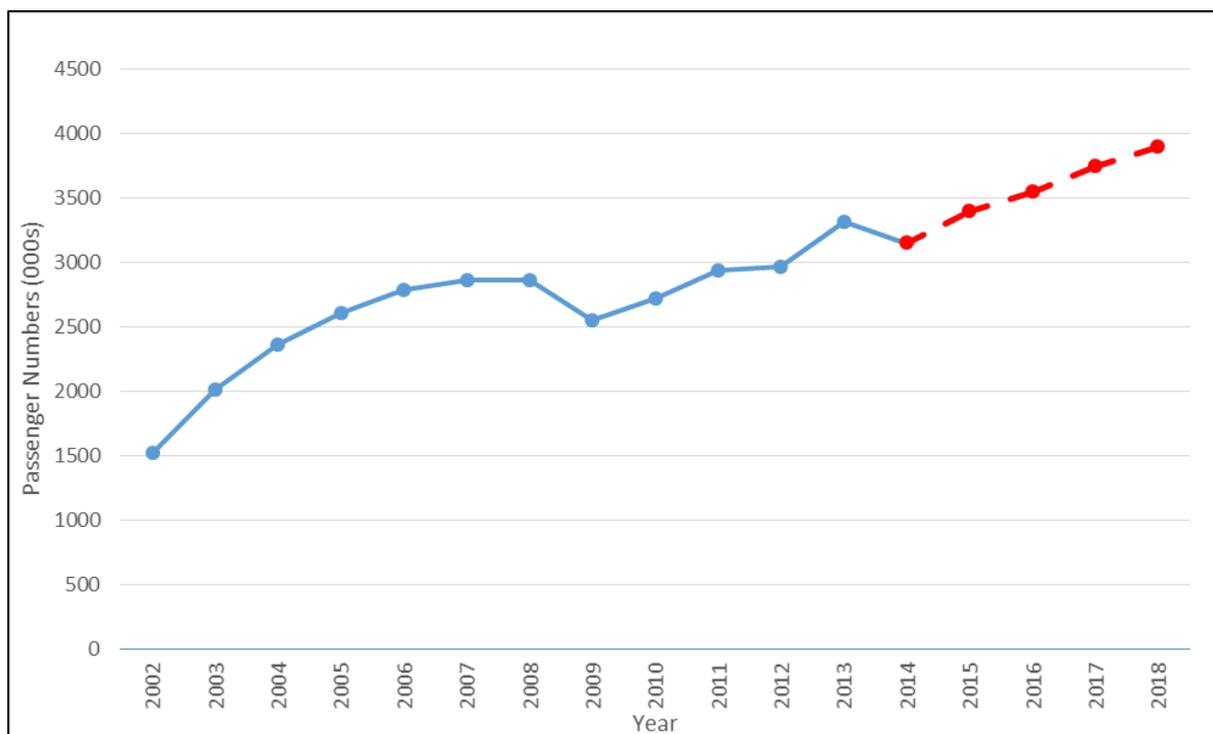
Evidence presented to the Planning Inquiry suggests that these car parks are generally less expensive than on-site Airport car parks. None of the revenue generated by off-site car parks is returned to enhance passenger infrastructure at the Airport save for some Section 106 contributions towards public transport services, which are of a significantly lower value than the contributions routinely made by LBIA.

3 Surface Access Trends and Usage

3.1 Airport Passengers

The Airport currently serves in the region of 3.2mppa. Figure 4 illustrates how passenger numbers have changed over time and how they are forecast to grow in the future.

Figure 4: LBIA Passenger Numbers – Historic Trends and Future Forecasts (CAA data)



3.1.1 Passenger Origins

Approximately 75% of passengers come from within the Leeds City Region, with approximately 87% from the wider Yorkshire and the Humber area.

At a district level, Table 5 overleaf indicates that nearly half (approximately 46%) of passengers using the Airport are from Leeds or Bradford. Harrogate and York are more significant passenger origins than the other West Yorkshire districts of Wakefield, Kirklees and Calderdale, providing between them around 13% of passengers.

Table 5: LBIA Catchment by District

District	2010 Passenger Numbers (%)
Leeds District	31.6
Bradford District	14.9
Harrogate District	7.5
City of York	5.4
Wakefield District	5.0
Kirklees District	3.4
Calderdale District	2.9
Sheffield District	2.2
East Riding of Yorkshire	2.2
City of Kingston upon Hull	2.1

3.1.2 Passenger Mode Share

Passenger mode share has been monitored on an annual basis through terminal frontage forecourt surveys which record the number of passengers and mode used to travel to the Airport within a one week period each August.

The percentage of air passengers using each mode of surface transport between 2005 and 2013 is shown in Table 6 overleaf.

The table illustrates that the private car has remained the dominant mode for accessing the Airport with generally only small fluctuations in mode share over time, until the last two years, when there has been a shift to off-site car parks as the number of spaces available has increased. Public service bus mode share increased from a lower base in 2005 and 2006 to above 6%, although in the most recent surveys it appears bus use has dropped in favour of minibus and off-site car parks. Taxis remain a popular choice for accessing the Airport, and the most recent surveys indicate their usage has increased recently after a reduction in the past few years.

Table 6: Passenger Mode Share Breakdown

Mode	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Private Car	63.1%	61.7%	56.5%	55.5%	60.0%	62.4%	65.3%	63.9%	60.5%	56.3%
Taxi	16.0%	16.1%	19.2%	19.7%	17.5%	15.4%	12.4%	11.8%	11.7%	14.5%
Minibus/Coach	7.0%	7.8%	9.1%	8.3%	8.5%	8.8%	8.0%	8.5%	10.0%	10.6%
Public Service Bus	4.4%	4.7%	6.3%	6.2%	5.5%	6.4%	6.6%	6.9%	5.8%	5.1%
Off-site Car Park	9.5%	9.7%	9.0%	10.3%	8.5%	7.0%	7.8%	8.9%	12.0%	13.4%

According to CAA 2010 survey data, Liverpool, Manchester and Birmingham airports have a higher percentage of trips made by public transport modes than LBIA. LBIA performs similarly to East Midlands and Doncaster Sheffield airports, with between 6% and 8% of passengers travelling to the Airport by public transport modes. For Liverpool Airport, the opening of Liverpool South Parkway rail station in 2006 and regular bus services to and from the airport have boosted public transport mode share, whilst Manchester and Birmingham (being significantly larger airports) benefit from direct rail links and multi-modal transport interchanges. These results suggest that LBIA needs to continue to make improvements to surface access in order to reduce the private transport mode share in line with the principles of the previous ASAS.

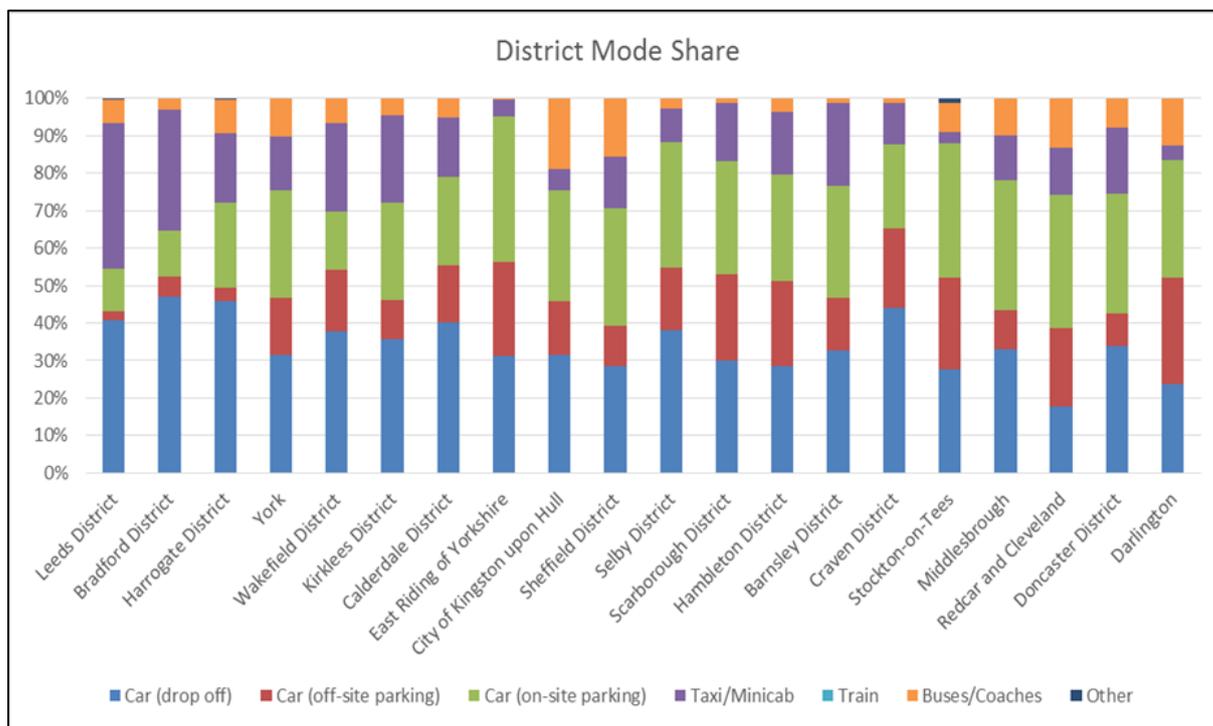
3.1.3 Mode Share by Passenger Origin

Passenger mode share varies by catchment area, reflecting both the nature of the passengers and the transport options available in each area.

Figure 5 overleaf shows the mode share data at district level for the top 20 districts. Taxi use is unsurprisingly strong in Leeds and Bradford districts given that the proximity of the Airport that makes this a more affordable option. The strength of taxi use has meant that less car trips (that park on or off-site) are made to the Airport.

Off-site car parking appears to be utilised more by those passengers travelling from districts further away from the Airport and, as to be expected, taxi use declines for those travelling from districts located further away from the Airport.

Figure 5: Passenger Mode Share by Catchment (District)



The districts with lower public transport shares tend to be those which are more rural in nature and consequently are less well connected by bus and coach services, such as East Riding of Yorkshire and districts within North Yorkshire. Public transport mode share is stronger for trips from Hull and Greater Manchester. This may be related to the direct and good quality train links between Hull and Greater Manchester to Leeds, with passengers transferring to local service buses for the last part of their journey to the Airport.

3.1.4 Mode Share by Journey Purpose

Mode choice also varies by journey purpose. For example, the CAA data in Figure 6 overleaf shows that the majority of business passengers using LBIA access the Airport by taxi (34%) although car drop-offs and on-site car parks are also important modes for business passengers (56% combined).

Figure 7 overleaf indicates that the majority of leisure passengers using LBIA tend to be dropped off by car (40%) although taxis and on-site parking are also important (43% combined). Off-site parking is less important for business passengers than leisure passengers although interestingly the levels of bus/coach travel are not dissimilar between leisure and business passengers.

Figure 6: Business Passenger Mode Share

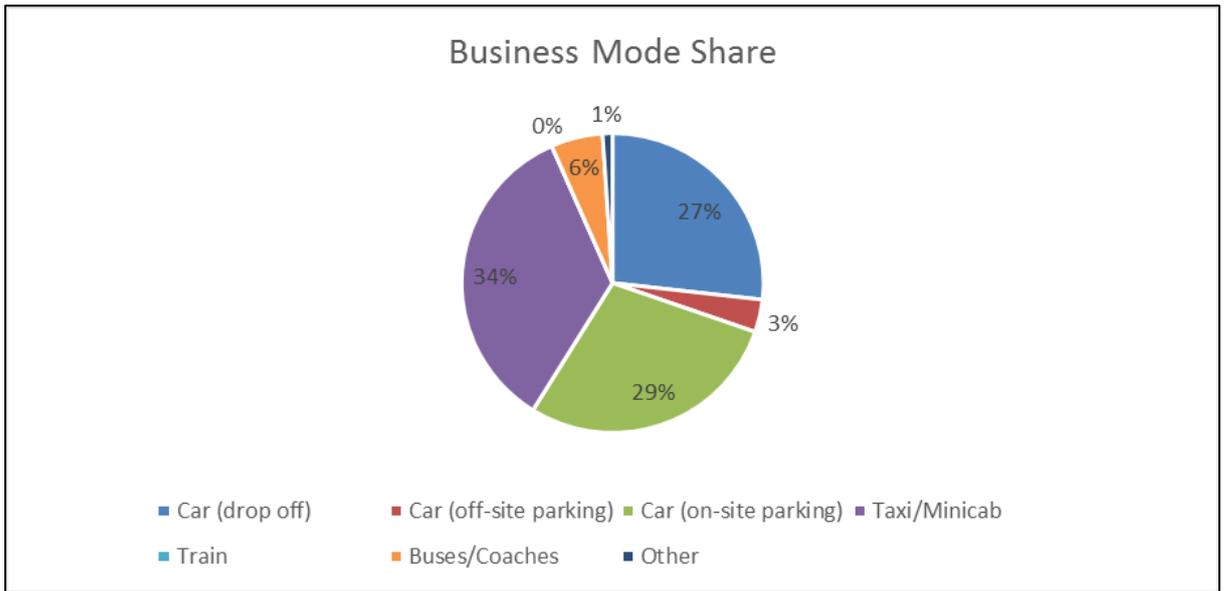
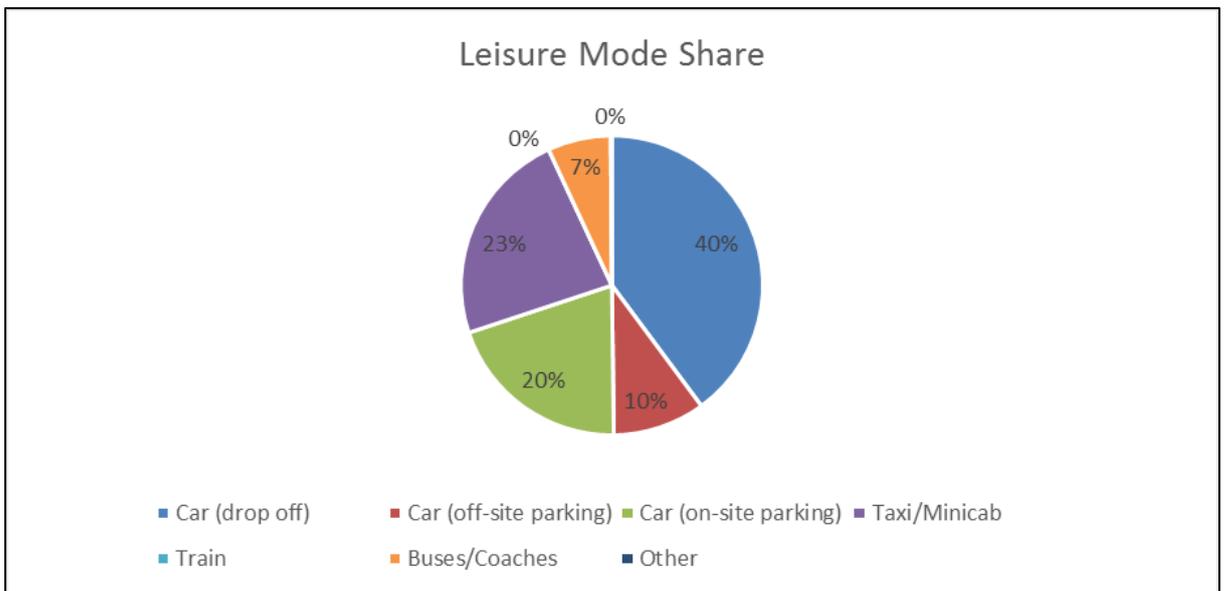


Figure 7: Leisure Passenger Mode Share



3.2 Airport Employees

The Airport is a seasonal operation and as such the numbers of employees varies throughout the year. There are approximately 1,500 (winter) to 2,700 (summer) people currently employed at the Airport, with jobs being spread across a wide variety of companies, including the Airport Company, the airlines and the service providers within the Airport. The Airport Company itself currently employees approximately 210 staff.

3.2.1 Employee Origins

Figures 8 and 9 illustrate the location of employee residence based upon a sample of data from staff surveys undertaken by LBIA. Figure 8 shows that employees come from a wide catchment area, although most live within West and North Yorkshire. A small number of employees live as far afield as Southport, Hull, and Stockton-on-Tees. These tend to be specialist professional staff or flight crew. The majority of Airport employees live in Leeds, Bradford, Harrogate and York as shown in more detail in Figure 9 overleaf.

Figure 8: LBIA Employee Catchment

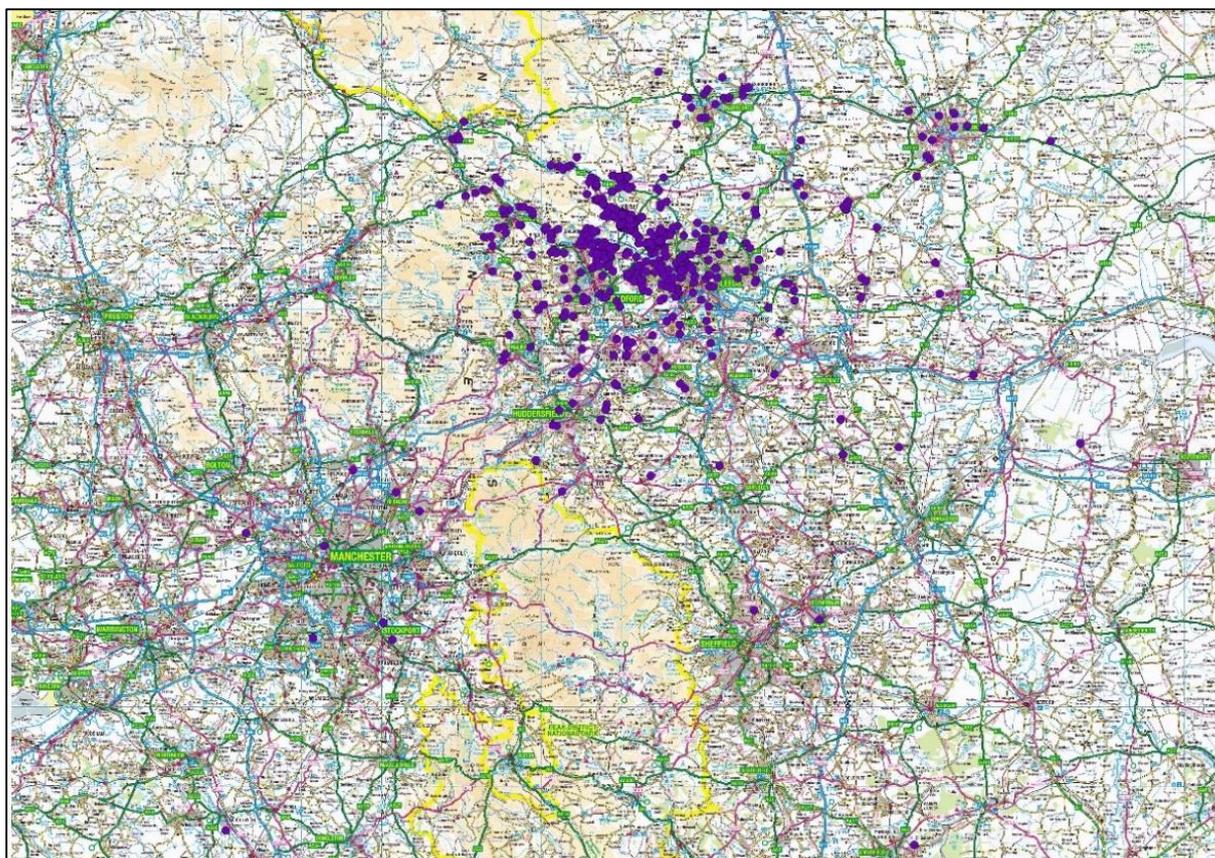
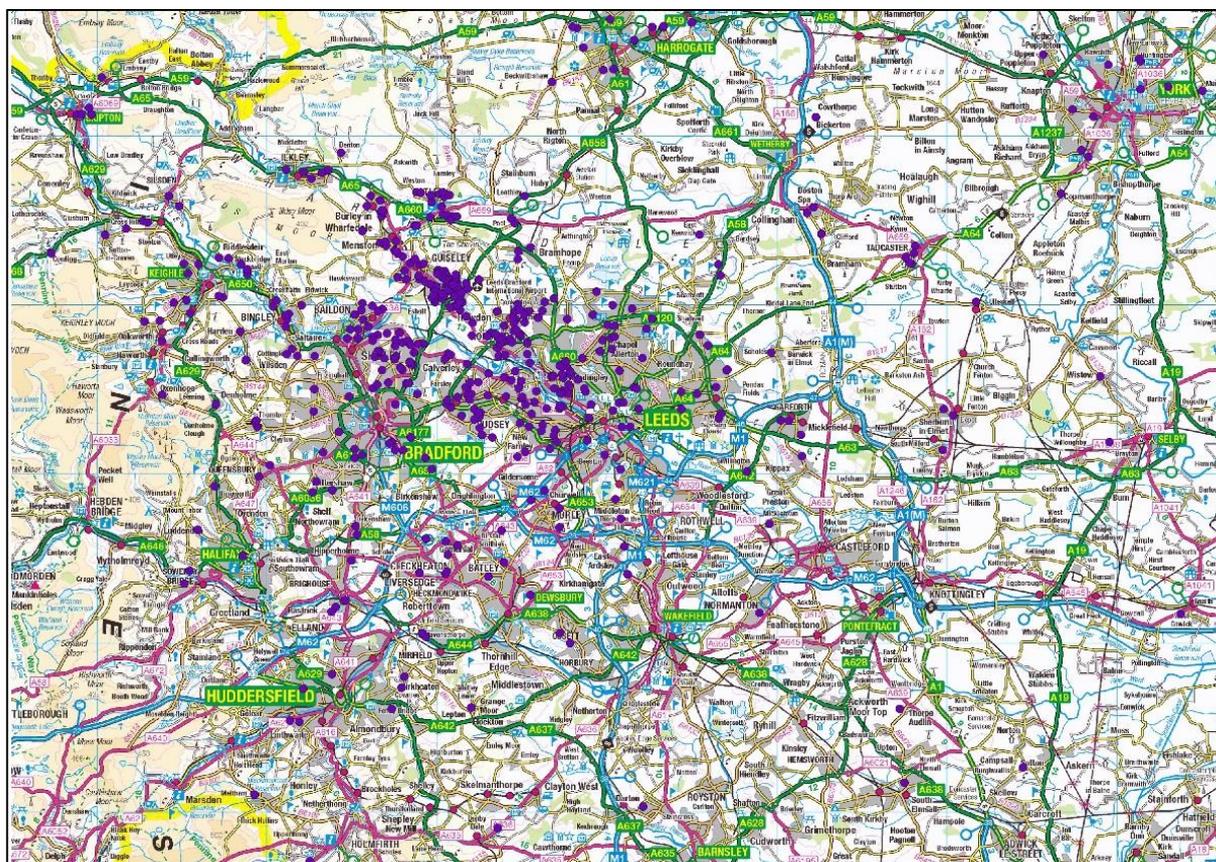


Figure 9: LBIA Employee Catchment (Immediate Vicinity)



3.2.2 Employee Mode Share

Since the introduction of the LBIA Travel Plan in 2009, which has recently been updated, employee travel by single occupancy vehicle has been measured on an annual basis through the West Yorkshire Annual Travel to Work snapshot survey undertaken by Leeds City Council and staff surveys undertaken by LBIA.

The percentage of employees travelling to work by means other than a single occupancy car over time is shown in Table 7 overleaf.

As can be seen from the table, the percentage of employees travelling to work by means other than a single occupancy car has significantly increased over the past three years. The increase is related to the measures that have been introduced to encourage staff to make more sustainable travel choices.

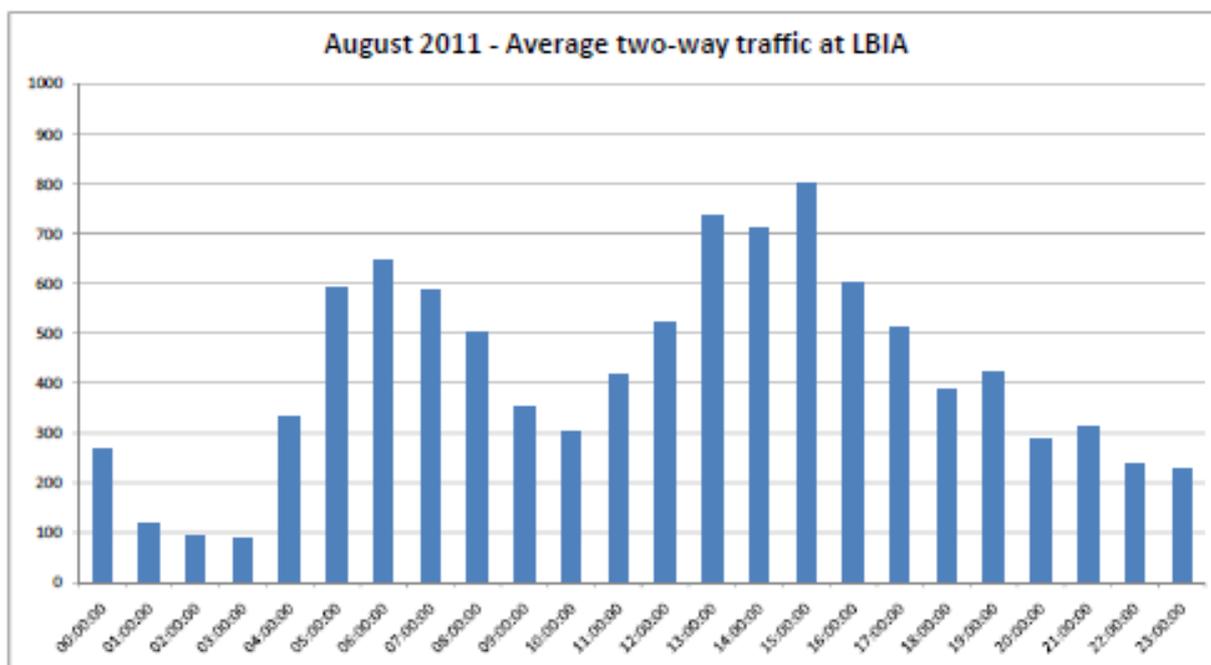
Table 7: Proportion of Multiple Occupancy Car Journeys over Time

Employee Type	Year	Mode share of staff travelling to work by means other than single occupancy vehicles (%)
Airport Company Staff	2010	13
	2011	22
	2012	26
Non Airport Company Staff	2010	32
	2011	17.4
	2012	26

3.3 Traffic Flows

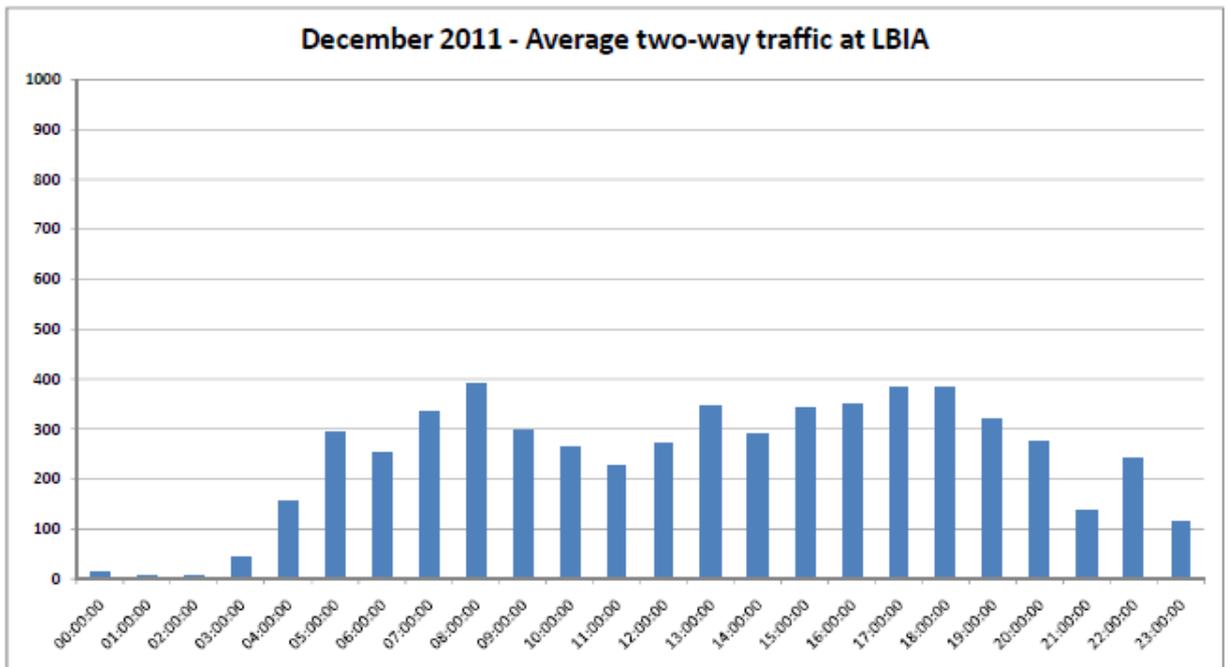
Figures 10 and 11 illustrate the profile and level of two-way vehicle trips accessing the Airport for August 2011 and December 2011. These graphs indicate that there are significant seasonal variations in traffic demand accessing the Airport.

Figure 9: Average Two-Way Traffic at LBIA in August 2011



Over the day, traffic levels fluctuate in response to flight schedules, particularly during the summer months with an early morning peak between 0500-0700 prior to the traditional highway peak hour of 0800-0900. There is also an afternoon peak between 1300-1500.

Figure 10: Average Two-Way Traffic at LBIA in December 2011



In December traffic demand is lower and the profile is much flatter as demand is more consistent over the day.

4 Drivers of Change

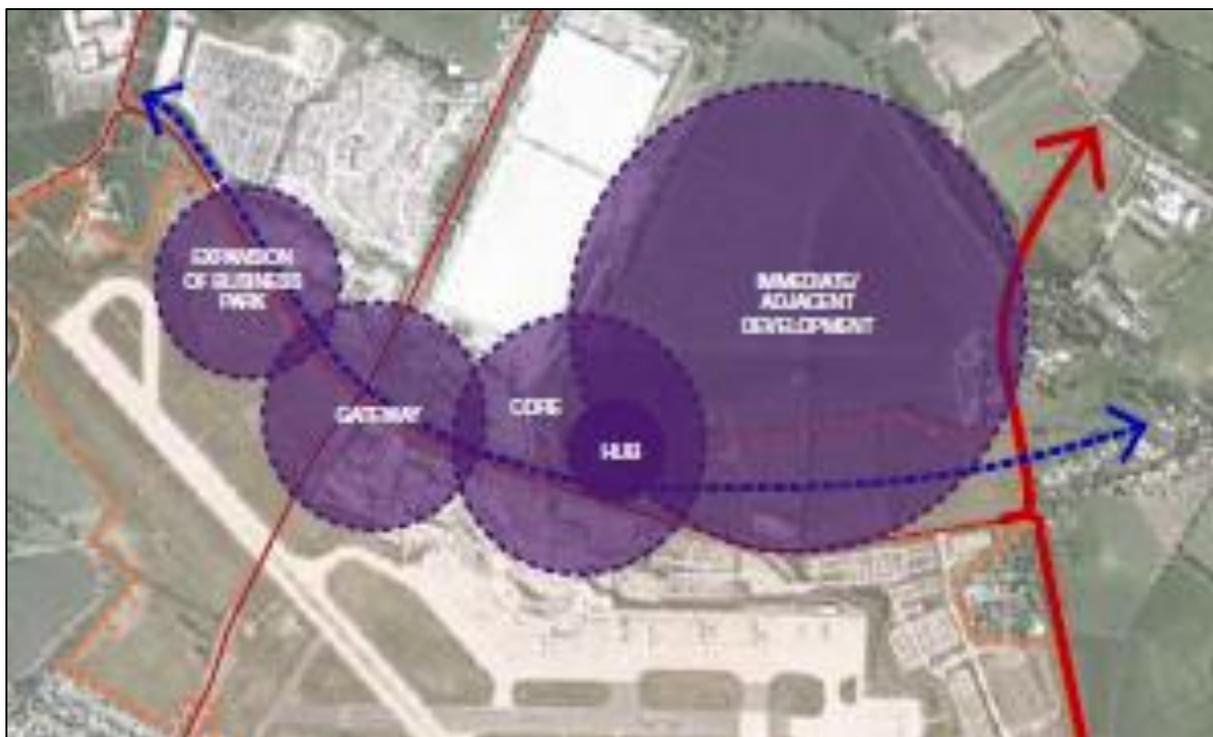
In looking forward to enable the development of the required surface access infrastructure, the primary driver of change will be the nature of the Airport itself - hence the importance of the revised Masterplan.

The City Region Aviation Strategy explores the key role that the Airport has to play in supporting the existing and new economy of the Leeds City Region and asks a number of questions about what sort of airport, and consequently what type of surface access infrastructure, is needed to fulfil this potential.

Globalisation and growing demand for air travel mean that 21st Century airports have evolved from transport gateways to much wider economic hubs. The evolution of airports complement their surrounding city regions, by not only offering a gateway for travel, connecting city regions together and internationally, but also by providing modern facilities and services that raise the profile of city regions and create positive first impressions, critical when seeking to attract new inward investment.

Working with Leeds City Region partners, LBIA started to put forward the concept of the Airport as an economic 'hub' for the City Region in 2013, and this is a theme that runs through the revised Masterplan. It is based on viewing the future development of the Airport in the context of its surroundings and what it has to offer, rather than just the confines of its operational boundary. The economic 'hub' concept is shown in Figure 11.

Figure 11: Outline Economic 'Hub' Concept for LBIA



In terms of surface access, the economic ‘hub’ concept suggests a number of aspects that will be important for the future infrastructure and services to support this ambition, including:

- A wider range of surface access mode opportunities will need to be developed;
- Connections to other key drivers of the Leeds City Region economy will be crucial;

- Reliability and resilience of surface access connections will be vital for businesses.

The need to improve surface access to the Airport has been recognised by Government, through its commitment to fund feasibility work to identify short and long term surface access improvements. It has also been recognised by the Leeds City Region with the inclusion of both a new road link and a new rail link within its programme of schemes within the recently established West Yorkshire Plus Transport Fund.

Taking note of these commitments will be important, but the timing and phasing of their implementation needs to be complementary to the Airport's growth if the economic opportunities are to be maximised.

The future development of the global aviation sector and how this impacts on surface access requirements remains difficult to predict. In recent years market liberalisation and technological change have together fundamentally changed the structure of the industry. However, there are a number of other drivers of change that can be identified and will impact on surface access need and provision, such as:

- Political - EU and Government regulations, national and local planning policy, the role of regional airports within a national strategy;
- Environmental - desire to reduce carbon emissions from car-borne and air travel;
- Social - population changes, travel behaviour, increased demand for air travel;
- Technological - smart ticketing, online check-ins.

The first category is somewhat outside the control of the Airport, but as capacity at UK airports becomes more scarce in the immediate future, the role of regional airports within a national strategy will become more important, and hence demand will continue to increase, possibly widening the existing catchment area.

Environmental constraints will lead LBIA and the aviation industry as a whole to look at new ways of reducing emissions, primarily through new aircraft technology, but also in terms of building materials and how the Airport operates. Increasing the proportion of passengers using public transport, as well as considering car parking pricing and provision as a fundamental part of an integrated strategy, will help minimise the environmental impacts of car traffic.

There have been considerable social changes over the period since the previous ASAS was prepared, with the advent of low-cost airlines and a growth in city breaks driving an overall growth in demand. Whilst this may not increase at the same pace over the next 5-10 years, the UK Aviation Forecasts suggest that population and economic growth in the Yorkshire and Humber area will see a continued growth in air travel at LBIA at a faster

pace than at other airports in the North of England. Price sensitivity is likely to continue to be important to the majority of passengers, however, awareness of environmental factors may well allow greater opportunity to influence travel behaviour to/from airports.

Technological advances in web bookings and smart ticketing may also help with behavioural change and mode shift. Other lifestyle areas such as health and leisure facilities are starting to link appointments with travel opportunities so as to provide customers detailed travel option information at the point of booking, and the airline industry could do something similar, assisted by airports. The increase in online check-ins may mean that passengers will arrive much closer to the flight time than before, meaning that they will be much more reliant on surface access infrastructure that is both reliable and resilient.

From these drivers of change, it is clear that there are a number of themes emerging, some of which are similar to the themes arising from the economic ‘hub’ concept being promoted through the revised Masterplan. These themes include:

- Increased demand for greater mode choice;
- Reliability of journey times;
- Opportunity to influence travel behaviour; and
- Price sensitivity.

This collection of themes, mindful of the existing and committed situation, gives the Airport the chance to set out its new vision for surface access and the means by which this vision will be achieved.

5 A New Surface Access Strategy

5.1 Vision

The Airport's vision for taking forward its surface access infrastructure is:

“To improve surface access to the Airport by sustainable transport modes so it can better perform its function as a key gateway and thereby raise the profile of the Leeds City Region as a location for business and tourism.”

In support of this vision, the Airport has identified a number of high level objectives for this ASAS and a set of related principles for future investment, both set out below.

5.2 Objectives

The objectives for this ASAS, and in particular for examining and addressing future surface access needs, are as follows:

- To enhance the economic and social development of the Leeds City Region by planning for growth collaboratively with local partners;
- To ensure that, as a gateway, the first impression of the Leeds City Region is of a well-connected, positive, thriving, and sustainable centre for business and culture;
- To target investment in surface access to support the Airport's defined role as a sustainable economic hub for the growth sectors of the Leeds City Region, as well as a tourist destination;
- To provide a significant contribution to a package of investment to address the leakage of passengers to competitor airports;
- To function as an attractive and sustainable local employment centre;
- To build the Airport's role as a potential regional interchange centre to further improve public transport services in the area.

5.3 Principles

The principles to be used to guide any investment in surface access infrastructure at the Airport are that any infrastructure measures must:

- Align with local and national policy including transport, economic and planning policy;
- Prioritise investment in measures in accordance with a hierarchy of transport choices to maximise the use of non-car modes;
- Support the Airport's corporate values and objectives;
- Offer good value for money and as wide a distribution of benefits as possible.

It is also the Airport's intention to inform and consult local stakeholders, employees and passengers as any surface access infrastructure measures are developed and implemented.

6 Short Term Measures

For the purpose of this ASAS, “short term” is defined as up to 2018, which takes in current committed funding and schemes, as well as planning horizons. These will also be the measures that will make best use of the existing infrastructure to encourage greater use of sustainable modes in this time period.

The following outlines the opportunities and threats over this time period, and sets out the range of measures proposed by LBIA.

Opportunities	Threats
Opening of Apperley Bridge and Kirkstall Forge rail stations in Autumn 2015	Increasing traffic congestion affecting journey time reliability, particularly for bus services
The main airport traffic flows occur outside the main traffic peaks on the local highway network	Increase in number of off-site car parks not within Airport control - uncertainty and lack of control of car parking supply
West Yorkshire Bus Partnership/Quality Contracts can help enhance bus services to the Airport	Airport services often depend on public transport operators’ wider networks
Smartcard ticketing rollout underway (anticipated completion in 2015)	Staff shift patterns undermine attractiveness of public transport for trips to work
DfT Feasibility Study on Surface Access Improvements to report to Ministers in Autumn 2014	
West Yorkshire Plus Transport Fund - funding confirmed for next 20 years via Local Growth Deal for Leeds City Region	
Possible local junction improvements to reduce congestion and improve network reliability	
Consider funding bids for future rounds of LSTF and Local Pinch Point Fund	
Areas for new car parking identified	
Strategy Measures	
Passengers	
Support bus and rail operators to deliver an improved offer for passengers to travel via rail to a local station and then by bus to the Airport (eg through ticketing) in line with opening of Apperley Bridge and Kirkstall Forge rail stations	

<p>Improve wayfinding and onward travel facilities for passengers inside and outside the terminal building</p>
<p>Agree and initiate a sustained marketing campaign to raise the profile of public transport to/from the Airport, to include promotions aimed at target passenger groups</p>
<p>Provide a journey planning page/link on Airport website to give passengers point to point journey plan, focusing on sustainable travel options</p>
<p>Consider how new media channels and technologies can assist with journey planning, with a particular link to airline ticket websites</p>
<p>Work with public transport operators and the airlines to deliver improvements in the cross selling of public transport tickets</p>
<p>Provision of new on-site long stay car parking areas to satisfy anticipated demand, but as part of a balanced approach to promoting public transport</p>
<p>Staff</p>
<p>Provide sustainable travel information for new members of staff as well as a “taster” ticket for local public transport services</p>
<p>Update the Airport Staff Travel Plan and ensure at least TBC of Airport Corporate Partners are committed to delivering the measures identified</p>
<p>Introduce incentives for staff to make more sustainable travel choices, eg priority car sharing spaces, discounted tickets and products, prize-draws</p>
<p>Develop a specific plan for employee car parking provision that supports the objective of reducing single occupancy vehicle trips to the Airport</p>
<p>All</p>
<p>Develop a standalone strategy for improving walking and cycling access to the Airport - this should, as a minimum, include undertaking an audit of existing facilities to identify areas for improvement and the production of a cycle map for the area around the Airport</p>
<p>Assist bus operators and the Combined Authority in delivering smartcards and bespoke airport ticketing products that can be supported by such a platform</p>
<p>Strengthen partnerships with bus operators and the Combined Authority to identify any further improvements to bus services, eg frequency and reliability improvements</p>
<p>Look to introduce additional bus services to areas not currently served based upon analysis of Airport passenger and employee origins - this should include identifying and promoting alternatives to conventional buses for times or areas of low demand</p>
<p>Pursue further improvements in real time passenger information, providing door-to-door information for passengers</p>

Continue further feasibility and design work into the new road and rail links within the West Yorkshire Plus Transport Fund

Continue to closely monitor the balance between public transport usage and car parking demand in order to adjust the focus of the strategy measures as appropriate

The first principal short term improvement will be to on-site car parking to reflect future demand, and Figure 12 shows the areas identified by the Airport for future car parking.

Figure 12: Possible Future Off-Site Car Parking Areas
TBC

The continued growth in off-site car parking will pose a threat to a balanced car parking strategy, and the mode split trends suggest that these are already having an adverse impact on public transport use. Without specific policies in place to restrict the level of off-site car parking provided, public transport mode split will be under increasing pressure, and the ongoing ability of LBIA to support public transport services will be compromised.

A second concentration of the short term measures will be the attempt to influence travel behaviour by passengers, building on the lessons learnt elsewhere in the City Region from travel behaviour programmes and using new technologies.

7 Medium Term Measures

For the purpose of this ASAS, “medium term” is defined as up to 2025, which takes in first 10 year period of the West Yorkshire Plus Transport Fund. It also reflects the fact that some elements will require longer planning and delivery timescales than the short term measures and will also necessitate working with a range of partners and funding bodies to drive them forward.

The following outlines the opportunities and threats over this time period, and sets out the range of measures proposed by LBIA.

Opportunities	Threats
Funding identified for a new road link to the Airport through the West Yorkshire Plus Transport Fund	Cost, time and risk of delivering new infrastructure schemes
Funding identified for the A6120/A65 and A658 New Line junction improvements through the West Yorkshire Plus Transport Fund	Continued capacity restraints on the rail network (eg Leeds Rail Station)
Potential to develop a Transport Hub to provide for Airport and other local services opportunities	
Largely untapped coach market and potential to extend bus services to areas not currently served	
Medium term rail developments, such as Northern Hub (2018), trans-Pennine electrification (2018), tram-train trial (operating from 2016)	
New technological product development will assist with promotion of sustainable modes	
Areas for new car parking identified	
Strategy Measures	
Passengers	
Work with airlines, transport operators and tour operators to develop and promote integrated ticketing, particularly through online channels	
Consider opportunity to develop links to the Airport from Park and Ride sites, eg Elland Road, Aire Valley, East Leeds Parkway	
Provision of new on-site long stay car parking areas to satisfy anticipated demand, but as part of a balanced approach to promoting public transport	

All
Deliver the first phase(s) of a new highway link to the Airport in line with economic growth opportunities identified in the Masterplan
Work with the new Northern Rail franchisee, Network Rail and the Combined Authority to undertake detailed design and costing work on a new rail link to the Airport as part of the new Northern Rail franchise
Support bus operators to promote journey opportunities involving bus to bus transfers at the Airport as part of the developing Transport Hub
Work with the Combined Authority to ensure bus service subsidies complement investment in other airport related transport schemes to ensure a coherent and effective bus network is delivered for the Airport
Provide an e-commerce sales route for Airport public transport travel tickets
Liaise with coach and taxi operators to develop innovative, bespoke and smaller scale services to underserved public transport markets, eg shared minibus taxi services
Develop an Airport Cycle Centre for use by both passengers and staff as part of the developing transport hub

Central to the package of medium term measures is the completion of a new link road to the Airport between the A65 and the A658, as shown in Figure 13.

Figure 13: Indicative Alignment of New LBIA Road Link
 TBC

The new link road will connect the A65, south of Layton Lane and Gill Beck, with the A658 at the existing junction with Otley Old Road, and provide traffic relief to local residents as well as better access to LBIA. It will be of single carriageway standard, with a new roundabout on Layton Road and additional junctions providing access to Airport facilities as required. Initial business case work suggests that the scheme has a positive benefit: cost ratio and would represent good value for money.

8 Long Term Measures

For the purpose of this ASAS, “long term” is defined as beyond 2025, which will coincide with the second 10 year period of the West Yorkshire Plus Transport Fund. Although there is much more uncertainty at this stage about this time period and the surface access infrastructure required, it needs to be considered as the delivery timescales for some elements will involve development work much earlier than this time period.

The following outlines the opportunities and threats over this time period, and sets out the range of measures proposed by LBIA.

Opportunities	Threats
Funding identified for a new rail link to the Airport through the West Yorkshire Plus Transport Fund	Managing balance between car parking and public transport usage
Long term rail developments, such as HS2 (2033)	
Areas for new car parking identified	
Could use new rail station to provide park and ride facilities for surrounding residential areas and this part of the City Region	
Strategy Measures	
Deliver any further phases of the new highway link to the Airport	
Deliver the first phase(s) of a new rail link to the Airport	
Provision of new on-site long stay car parking areas to satisfy anticipated demand, but as part of a balanced approach to promoting public transport	

If the Airport is to fulfil its role as an economic hub, provision of a rail link to Leeds and Bradford is crucial. Some initial development work has already been undertaken, with an indicative alignment prepared suggesting that a new link could be developed in phases, with a possible first phase providing connectivity to Leeds via Horsforth, a second to Harrogate, and a third link, via Guiseley, direct to Bradford. This is shown in Figure 14 overleaf.

Figure 14: Indicative Alignment of New LBIA Rail Link
TBC

The new rail link will provide a significantly enhanced public transport link to both Leeds and Bradford (as well as other locations within the LBIA catchment area), and will be used by local residents, employees and potentially park and ride users as well as airport passengers. Initial business case work suggests that the scheme has a positive benefit: cost ratio and would represent value for money.

9 Monitoring the Strategy

The overall vision, as outlined in Chapter 5, sets out the need to improve surface access by sustainable modes whilst supporting the Airport in developing its function as a key gateway for the Leeds City Region for both business and tourism. It is crucial that progress towards the achievement of this vision is monitored throughout the life of the ASAS.

LBIA will therefore produce an annual performance report. This document will track progress against a number of targets described in more detail below. The report will also identify what actions and measures have been implemented, their success and any lessons that have been learned with respect to the implementation of future elements of the ASAS.

The performance report will be presented to stakeholders and local partners whose contribution to the ASAS will be key to its success. Furthermore, to ensure transparency and accountability, the report will be placed on the Airport's website.

LBIA is also committed to reviewing the ASAS should local and national strategies and policies fundamentally alter the context of it, and within five years of its publication at the very least. When the document requires alteration, this will be done in an open and transparent manner by LBIA.

9.1 Indicators and Targets

A set of indicators and targets has been developed in order to monitor progress towards delivering the vision. These targets are summarised in Table 8 and discussed in greater detail below. The targets will be reviewed regularly during the life of the ASAS as part of the performance monitoring regime.

Table 8: ASAS Indicators and Targets

Indicator	Target
Passenger Public Transport Mode Share	TBC
Staff Vehicle Occupancy	TBC
Vehicle Trips per Passenger	TBC
Long Stay Parking Spaces per Passenger	TBC

9.1.1 Passenger Public Transport Mode Share

Modal share targets for public transport are a robust method to monitor the success of the ASAS, given the emphasis on promoting sustainable modes.

The previous ASAS included the following targets:

- To achieve a public transport mode share of 40% (under the DfT definitions which include taxis) by 2011 - this would have necessitated achieving a public service bus mode share of 10% by 2011;
- To achieve a public transport mode share of 50% by 2016.

The first of these targets has unfortunately not been met given that bus services from Leeds City Centre to the Airport have only recently been improved, the A65 Quality Bus Initiative only opened in 2012 (three years later than envisaged at the time of the previous ASAS) and there remains no public transport fixed link to Airport. Furthermore, additional off-site car parks have opened in the intervening period, and these appear to have attracted some passengers away from public transport modes.

Therefore, whilst the measures set out within the previous ASAS have improved surface transport connectivity, they have not managed to have the level of impact required to deliver the first of these targets.

The 2014 baseline figure for Passenger Public Transport Mode Share is 30.2%, based the most recent terminal frontage forecourt survey in August. Through the measures and opportunities set out within this revised ASAS, the Airport has a long term ambition, in view of the likely delivery timescales for certain measures, that TBC of passengers will use public transport to access the Airport by 2025.

In the intervening period, LBIA's ambition is that TBC of passengers will use public transport to access the Airport by 2020. This represents a challenging but achievable target, and will require inputs from all partners to help achieve it.

LBIA will monitor its progress towards meeting this target through the continued use of the annual terminal frontage forecourt survey.

9.1.2 Staff Vehicle Occupancy

LBIA is keen to take the lead in promoting the increased use of public transport and other sustainable modes, but there needs to be a recognition that the shift patterns and times of some employees do not readily lend themselves to use of public transport. In such cases, greater use of car sharing would achieve a similar objective, and so it is considered that

vehicle occupancy is a more suitable measure for Airport staff than public transport mode share.

LBIA will seek to reduce single occupancy staff vehicle movements to and from the Airport, thereby reducing the impact of the Airport's staff on the local road network. The 2014 baseline figure for Staff Vehicle Occupancy is TBC of staff travelling to work in single occupancy vehicles. The target for such a reduction is to achieve no more than TBC of Airport staff coming in single occupancy vehicles by end of 2020.

LBIA will monitor its progress towards meeting this target through the use of annual employee surveys, which measure and analyse travel to work data.

9.1.3 Vehicle Trips per Passenger

The total number of vehicles entering and leaving the Airport site (including passengers, employees, visitors and goods deliveries) can be accurately measured using existing automatic traffic counters and car park entry data. As such, a measure of the number of vehicle trips per passenger (excluding air to air transfers) can be calculated. This high level measure is a useful indicator of monitoring trends in the overall volume of road traffic, mindful of the predicted growth in passenger numbers to place it in context.

Over time, it would be desirable that as the number of passengers rises, road traffic should increase at a slower rate. Monitoring of this measure will encourage the development of both public transport and non-public transport measures to improve sustainable access to the Airport including, car share schemes, car parking strategies, walking and cycling measures and other incentives.

The 2014 baseline figure for Vehicle Trips per Passenger is TBC. In line with proposed Passenger Public Transport Mode Share targets set out above, the long term ambition is for this figure to be TBC by 2025. In the intervening period, LBIA will seek a figure of TBC by 2020.

9.1.4 Long Stay Parking Spaces per Passenger

As part of a balanced approach to surface access infrastructure, LBIA is aware that it needs to provide sufficient long stay car parking to meet demand whilst continuing to encourage the use of public transport. Therefore, monitoring the number of long stay parking spaces provided on-site as a ratio against passenger numbers will provide an indication of how this balance is maintained.

The 2014 baseline figure for Long Stay Parking Spaces per Passenger is TBC. In line with proposed passenger growth forecasts and the availability of parking spaces, the long term ambition is for this figure to be TBC by 2025. In the intervening period, LBIA will seek a figure of TBC by 2020.

10 Delivering the Strategy

The UK Aviation Framework emphasises the importance of collaboration, noting that local stakeholders have the experience and expertise to identify solutions to a wide range of issues tailored to their specific circumstances. LBIA recognises that the policies and actions of other partners will impact upon the success of this strategy, especially as for some elements, partners' assistance will be required to deliver and fund the proposed measures.

From planning to funding bids, from delivery to monitoring and review, there needs to be a new, improved partnership between the Airport, the LEP, local authorities, the businesses that drive the City Region, service providers and the local community.

The following sections outline the key partnerships, potential sources of funding, proposed delivery programme and potential risks.

10.1 Partnerships

10.1.1 Airport Consultative Committee/Surface Access Forum

The Leeds Bradford Airport Consultative Committee Meeting (ACC) is held quarterly and acts as a formal link between LBIA and its neighbouring communities. The Committee is made up of representatives from the Airport, the local community and local trade and industry bodies.

The Airport Surface Access Forum meets around twice each year to consider surface access issues.

10.1.2 LEP

The LEP promotes the Leeds City Region's interests on a national and international scale, helping business and enterprise to thrive by unlocking potential through partnership. The LEP's vision is to unlock the potential of the City Region, developing an economic powerhouse that will create jobs and prosperity. The UK Aviation Framework states that scope exists for LEPs to develop local strategies to maximise the catalytic effects of airports to attract business and support growth, and that there could also be scope for LEPs to take a more active role in feeding into airports' plans for surface access.

The Leeds City Region LEP has already endorsed the key role that the Airport has to play in its growth strategy as well as producing an Aviation Strategy in 2013, and so relationships with the LEP will be fundamental to taking forward the economic 'hub' concept and the required surface access improvements.

Given the current and widened catchment area for LBIA, the Airport will also use the revised Masterplan and ASAS to establish links with the neighbouring LEPs of North Yorkshire and East Riding, Hull and The Humber and South Yorkshire.

10.1.3 Combined Authority

The West Yorkshire Combined Authority (CA) is the driving force for economic growth across the Bradford, Calderdale, Kirklees, Leeds and Wakefield districts and the City of York Council area. The CA brings together key decision-making powers into a single body, putting West Yorkshire and the wider Leeds City Region, including the City of York, in a much stronger position to tackle its shared economic challenges - including improving transport - by boosting jobs and growth. The CA Board is made up of the leaders of each of the five West Yorkshire Councils, plus the chair of the Leeds City Region LEP, and the leader of York City Council.

The CA is responsible for the £1 billion West Yorkshire Plus Transport Fund, and will work closely with business through the Leeds City Region LEP to ensure that business and the regional economy is at the heart of the decisions taken. Given the inclusion of the proposed new road and rail links within the West Yorkshire Plus Transport Fund, the CA will be a critical partner in delivering the required surface access improvements.

As the CA also owns the Local Transport Plan and has responsibility for public transport across the Leeds City Region, LBIA will also work closely with the CA to bring forward continued improvements in bus services in the shorter term, and on wider initiatives such as smart ticketing.

10.1.4 Local Authorities

LBIA is the principal airport serving the Leeds City Region. As such the Local Authorities within the Leeds City Region (Barnsley, Bradford, Calderdale, Craven, Harrogate, Kirklees, Leeds, Selby, Wakefield and York) will be involved as Partners in taking forward the Airport's economic 'hub' concept.

Leeds and Bradford in particular will be important partners in developing a highway network that provides the required resilient and reliable surface access connections, as as the Local Planning Authority, Leeds City Council is fundamental to supporting the growth plans of the Airport and realising the economic potential for the City and the wider City Region.

10.2 Funding Sources

10.2.1 West Yorkshire Plus Transport Fund

As part of the package of investments, the Government has confirmed a Local Growth Deal with Leeds City Region that will provide £180 million over six years (2015/16 to 2020/21) to support the West Yorkshire Plus Transport Fund. This agreement could be worth up to £600 million over 20 years, dependent on the economic impact of local investments. This agreement, when combined with local commitments, could deliver a £1 billion Transport Fund in the Leeds City Region.

As indicated previously, the Transport Fund has already identified both a new road link and a new rail link to LBIA, with the former included as a named scheme within the initial 10 year programme, and the latter identified within the “Development Pool” of schemes. More detailed business case development work on the road link will commence in late 2014, with the current Transport Fund programme showing a delivery date for the new road of 2019/20.

Funding is identified within the initial Transport Fund programme for further feasibility work on “Development Pool” schemes, and LBIA will be working with the City Region partners to establish what funding will be required to take forward the design work on the new rail link over the next few years.

In addition, there are other schemes within the Transport Fund programme that will help improve surface access to the Airport, including the A6120/A65 junction and A658 New Line junction improvements, both of which are identified as early priorities for delivery.

10.2.2 West Yorkshire/North Yorkshire Local Transport Plan

The Government currently provides funding to local transport authorities in England to help them develop their local transport services and improve and maintain their infrastructure following strategies set out in the relevant Local Transport Plan.

Much of this funding is for the provision and maintenance of infrastructure such as road improvements, although some funding is provided for ongoing services, including buses. The integrated transport (IT) block provides funding support for transport capital improvement schemes costing less than £5 million.

In the short term, LBIA will work with the CA in particular (but also North Yorkshire County Council) to examine the opportunities to fund improvements to bus services and the local highway network through the IT block, for so long as this funding source is available.

10.2.3 Rail Franchise/Network Rail

The main committed expenditure in the local rail network are the new rail stations at Apperley Bridge and Kirkstall Forge. In both cases, the existing Airport bus services run close to the location of the new stations, and so there are opportunities to promote rail/bus interchange to access the Airport in the shorter term.

Major investment by Network Rail coupled with the re-franchising of Northern Rail and TransPennine Express networks means that this is a period of significant opportunity for the North of England's rail network, with the potential help transform rail travel for the increasing number of passengers in the North of England. The local authorities across these rail networks, working together as Rail North, are exploring with the DfT options for further devolution of specification and control over future rail franchises.

The new franchises are due to commence in February 2016 and a consultation has recently closed that sought the views of stakeholders on certain specification matters affecting the public that will be provided to shortlisted bidders for the franchises. LBIA made representation to this consultation process, setting out the work done to date on a new rail link, with the aim of it being included as a costed option within the new Northern Rail franchise specification.

In any event, LBIA will work with the new franchisee, the Government and Rail North throughout the next franchise period to enhance the rail offer to the Airport and seek to use available rail industry funding where possible.

10.2.4 Central Government Grants

Over the last few years, the Government has attempted to reduce the large number of funding streams for transport improvements, with the result that, aside from the Local Growth Fund and the Local Transport Fund, much of the remaining funding is allocated on the basis of competitive bidding rounds. Two of the most prominent are the Local Sustainable Transport Fund (LSTF) and the Local Pinch Points Fund.

LSTF schemes are aimed at promoting sustainable modes of travel and contributing to economic and environmental objectives, and it may be possible to develop a specific LBIA package of measures to be put forward by the CA if there are any future bidding rounds. An early scheme could be the one described previously to better link the online ticket booking of passengers to travel opportunities.

Similarly, future bidding rounds for the Local Pinch Point Fund, aimed at small scale traffic improvements to support economic development, may be suitable for some of the junctions on the local highway network that could constrain growth at the Airport in the future.

10.2.5 Private Sector

Private sector funding will be essential to complement almost all of the other funding sources described, and it would be expected that CA, the LEP and Leeds City Council would seek to use Section 106 Agreements and Section 278 Agreements to gather contributions to transport improvements where these facilitate development.

The CA is currently considering alternative options to deliver its bus strategy - Quality Bus Partnerships and Quality Contracts. Under either circumstance, there is the potential to embed enhanced bus services to LBIA as part of the future bus network needs across the City Region.

Finally, there are the contributions from the Airport itself, which already underwrites a number of the existing surface access opportunities and is committed to significant investment in internal transport improvements and car parking as part of the revised Masterplan.

There is an implicit assumption within the appraisal process for West Yorkshire Plus Transport Fund schemes that third party contributions will be maximised for all schemes that come forward for funding, and both the new road and rail link will be no exception to this. Therefore, it is expected that there will be some element of third party funding for these schemes, as well as some of the others suggested, but it is not possible for the level of any contribution to be confirmed at this stage.

10.3 Outline Programme

An outline delivery programme has been produced which sets out the phasing of individual elements of the strategy in greater detail. This programme clearly identifies where there are scheme linkages and dependencies. It is included here as Figure 15 overleaf.

The programme has been developed so that elements which are within the control of the Airport are to be delivered early on, with others programmed for later in Masterplan period to allow for the appropriate planning and scheme development processes to take place. The measures have also been programmed in such a way so as to meet the targets set out in Chapter 9. LBIA will monitor the delivery programme as the ASAS is implemented, and revise as necessary in consultation with the delivery partners.

Figure 15: Outline Delivery Programme for the ASAS
TBC

10.4 Delivery Risks

Risk can be defined as the effect of uncertainty on objectives. The following delivery risks have been identified by partners and stakeholders during the development of this strategy:

- Failure to secure the necessary statutory approvals;
- Gaps in available funding;
- Statutory undertakers' equipment diversions;
- Delays during construction due to unforeseen circumstances;
- Cost increases;
- Project management failures.

In order to manage these and any other risks that are identified by delivery partners, LBIA will compile a risk register alongside the ASAS and update this on a regular basis. This risk register will quantify the likelihood and impact of each risk and identify how the risk will be managed and by who. For larger schemes within the ASAS, a Quantified Risk Analysis (QRA) will be conducted at the appropriate time to provide further clarity on the risks involved and how these should be managed.

Figures

Drawings

Appendix A

Appendix Title

Appendix B

Appendix Title

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