05

Surface access

The Airport sits at the heart of the UK's road and rail networks, less than two miles from M42 Junction 6 and two minutes on the Air-Rail link from Birmingham International Station on the West Coast Mainline railway line. This gives passengers potentially excellent access to and from the Airport by train, bus, coach and car.

Surface access

The Airport's peak vehicle traffic movements do not coincide with busy commuter traffic peaks and so while the Airport contributes to traffic generation on the local and strategic road network it is by no means the major contributor. Future growth in demand on the network is expected to come principally from regional housing and employment growth. Whilst vehicle access flows smoothly in optimum conditions there is little resilience as the road network is operating close to capacity during the peak periods. When disruption occurs access roads are becoming gridlocked with increasing frequency and this can mean vehicles are unable to reach the Airport and passengers often walk down the roads carrying their luggage to avoid missing flights.

Train services are more reliable but limited to core working hours so many shift workers at the Airport are unable to use them to travel to and from work. There are 6700 staff working on the site who travel to the Airport (in shift patterns) 24 hours a day, 365 days a year. Improving connectivity for our staff and encouraging them to use sustainable modes of transport is a key objective. This will be achieved by ensuring rail franchise and bus operators introduce timetables that deliver a broader range of early morning transport options. We set out more details on how we believe this can achieved in our Surface Access Strategy.

To ensure the Airport is not constrained by the capacity and resilience of its highways and public transport infrastructure it is vital that:

- Public transport connectivity is enhanced to increase the use of sustainable transport and reduce pressure on the surrounding road network and;
- The efficiency and capacity of the road network is improved to address current and future traffic demand.

Our existing transport modal share

The existing modal split of passengers travelling to the Airport is shown in the table on the right.

These figures demonstrate that the predominant method of travel to the Airport is by private car, with drop off / pick up and on / off-site parking accounting for some 44.3% of journeys. A further 21.5% of journeys were undertaken in taxis / minicabs, with some 6.2% in rental cars.

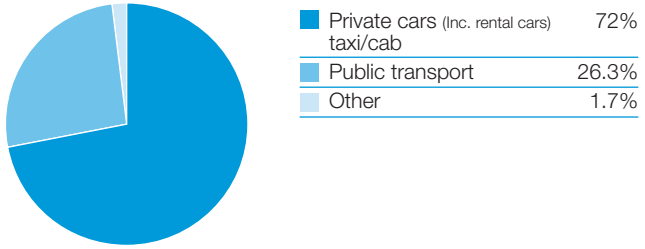
Public transport modal share accounted for just over 26% of journeys, with this being split between rail at 23.1% and buses at 3.2%.

Existing Passenger Modal Share

Mode of travel to Airport (expressed as percentages)	2016 11.6mppa
Bus/coach	3.2%
Rail	23.1%
Taxi/minicab	21.5%
Walk/cycle	0.6%
Private car (drop off/pick up)	28.8%
Private car (on site car park)	7.7%
Private car (off site car park)	7.8%
Rental car	6.2%
Other	1.1%
Total:	100.0%

[1]Million passengers per annum

Existing Passenger Modal Share 2016



HS2
We will be the only high-speed rail connected airport when HS2 opens

Royal Pump Rooms, Leamington Spa
We are a gateway to the region's rich tourism offer

Public transport connectivity

During the next 15 years, we will continue to work closely with the region to improve public transport access to the Airport to reduce reliance on the private car. In particular we will work with the relevant bodies to help them deliver the following rail, bus and metro enhancements:

Rail

HS2 is scheduled for completion by 2026 and will serve the Airport via a 2.4km Automated People Mover (APM) from the 'Interchange' station via Birmingham International Station to the Airport terminal. We are committed to working closely with HS2 to achieve their stated objective for the Interchange Station to be "the best-connected place in the UK by rail, road and air".

HS2 is expected to provide a valuable addition to the Airport's Surface Access Strategy. It is also expected to free-up capacity on the existing West Coast Main Line which can be re-deployed for an increased range and frequency of local train services. Both factors are anticipated to have a beneficial effect on public transport modal share for the Airport.

However, the specification of the APM's capacity and frequency must consider the demand that is generated by the Airport and other surrounding uses such as the NEC and Birmingham international Station, particularly at peak periods. It has been assumed that the opening of the APM will mean that the Airport's existing Air-Rail link will close to avoid confusion for passengers accessing the Airport from Birmingham International Station and both systems being under-utilised.

Changes are also proposed to the design and layout of Birmingham International Station, where a draft master plan layout has recently been produced by the Solihull Urban Growth Company (UGC) to develop an integrated transport hub. An improved Birmingham International Station with increased circulation space for passengers should have a positive impact on public transport modal share for the Airport.

We support the delivery of the Birmingham International Station Integrated Transport Hub project to ensure that the station can cope with increased rail passenger volumes expected from HS2.

Alongside seeking earlier train services, we will press for track doubling between Leamington and Coventry to provide new local and long-distance services to the Airport (via Birmingham International).

Finally, we will also support Midland Connect and their 'Midlands Rail Hub' project which aims to provide a rail network that has the capacity to accommodate the volume of passengers and freight required to support the region's growing economy. Without this capacity, rail connectivity across the region and with the Airport will be restricted. This will inevitably result in more people travelling by car which will exacerbate existing problems on the road network.

Bus

The provision of a Sprint rapid bus transit system is planned for 2022, in time for the opening of the Commonwealth Games. This will provide longer buses on dedicated bus lanes that will provide a faster service between the Airport, residential areas of East Birmingham and Birmingham city centre. This will provide an important additional means of fast public transport for both staff and passengers. The Airport is working closely with Transport for West Midlands to ensure that the longer sprint buses can be accommodated on the Airport site.

We will also support the provision of 24-hour buses serving the Airport to ensure that our staff and passengers do not have to rely on less sustainable modes of transport to access the Airport during the night.

Midlands Metro

A Midlands Metro extension from Birmingham city centre to Birmingham International Station and/or the HS2 Interchange Station will provide connectivity with the Airport by 2026. The proposed route through East Birmingham and North Solihull will also provide a convenient public transport route to the Airport from one of the region's most deprived areas, this will offer the opportunity of access to employment opportunities on and around the Airport site.

Road access

In addition to improving public transport access to the Airport, we must acknowledge that many passengers will continue to travel by car.

For the 2033 base case scenario, the highway modelling undertaken for the Airport shows improvements proposed to the strategic road network will largely cater for the increased traffic demand associated with the Airport. This is in part because the Airport's peak traffic movements do not coincide with demand generated in the morning and evening commuter peaks. However, the scale of development at close proximity to the Airport means there will be increasing pressure on the road network.

Highways England's proposal to provide a new junction on the M42 to the south of the Airport is welcomed, however, this should not result in the removal of any existing slip road access. It is proposed, as part of this scheme, to close the northbound free flow slip road from Junction 6 to the Airport which was part-funded by the Airport and which is key in delivering access to the Airport. All road infrastructure that delivers additional resilience to the network, such as this, should be maintained. Providing resilience, wherever possible, should be a priority.

Whilst work has been undertaken to assess the impact of traffic associated with developments such as HS2 and UK Central, there is also development that has not yet received planning permission that should be considered when designing and constructing new highway schemes. It is of concern that such schemes, that are part of the ambitious growth plans put forward by Solihull Council and the Urban Growth Company, have not been included in capacity modelling simply because they do not yet have planning approval. We ask that additional work is undertaken to assess all future scenarios not currently included in the modelling. If this is not taken into account it is highly likely that the road network will not be able to cope with the resultant increase in vehicular movements in the future.

Today, Airport related demand, while clearly contributing to traffic levels in the critical AM peak period, accounts for a comparatively small proportion of total demand, and even this demand dissipates relatively quickly with distance from the Airport. No significant highway improvements will be required solely as a direct result of the growth in demand for air travel through the Airport over the next 15 years.

Instead, non-Airport related demand associated with housing and employment growth will be the key driver for investment in the road network during this period. The impact of local commuter traffic on access to the Airport will depend on improvements to local infrastructure. The upgrading of the Damson Parkway/A45 junction and the Coleshill Heath roundabout is critical to managing growth in local traffic and provide the necessary resilience.

In summary, the regional road network is heavily congested, particularly during peak times, which has a significant impact on the contribution that the Airport and other businesses can make to the Midlands economy. This issue is recognised by Midlands Connect, who state in their Midlands Connect Strategy (2017) that;

> *"The strategic road network is not performing at the level we need to support our economy. Road connectivity is 'critical' or 'very important' to 80% of logistics firms, 60% of manufacturing firms and 45% of professional services firms in the Midlands. Some 60% of these businesses report that conditions on the major road network causes them problems…*
>
> *…Our own business research confirms that an effective, reliable and resilient road network is vital to our existing and future economy…."*

Birmingham Airport shares this view. The regional road network must be improved in terms of capacity, resilience and journey times if the region's growth and the Airport's contribution to the regional economy is to be maximised. We will therefore work closely with Midlands Connect and other stakeholders such as Transport for West Midlands to ensure this is achieved.

> Transport investment spearheaded by HS2 offers endless possibilities for our region and very soon more people will view Birmingham as their preferred airport.
>
> **Hamza Waris**
> Commercial Director, Pak Travels

Maximising HS2

The only airport linked directly to the high speed rail network

Rolls-Royce has a long history in the Midlands and is a major investor and employer in the region. As a leading industrial technology company, connecting with our customers and supply chain regionally and globally is critical to our success. We therefore welcome increased transport infrastructure investment in the Midlands that enables increased capacity, faster connections and improved journey reliability. Plans for expansion at the regions airports, investment in HS2 and improved road connectivity as recommended by Midlands Connect are all necessary to release the growth potential of the region. In addition, new forms of electric, hybrid and autonomous technologies in aviation in which Rolls-Royce is investing can also improve regional connectivity and growth further into the future.

Paul Harris
Rolls-Royce Director of Economic Development

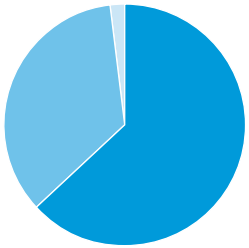
Our modal split in 2033

As can be seen, there are a number of proposed improvements to surface access together with numerous regional strategies that support enhanced connectivity with the Airport. We are therefore confident that our public transport modal split will increase over the next 15 years as more passengers and staff use the train, bus and metro to access the Airport. The table below sets out our targets compared to our current modal split:

Mode of travel to Airport (expressed as percentages)	**2016** 11.6 mppa	**2033** 18 mppa
Bus/coach	3.2%	4.2%
Rail	23.1%	30.8%
Taxi/minicab	21.5%	18.9%
Walk/cycle	0.6%	0.6%
Private car (drop off/pick up)	28.8%	25.3%
Private car (on site car park)	7.7%	6.8%
Private car (off site car park)	7.8%	6.8%
Rental car	6.2%	5.5%
Other	1.1%	1.1%
Total:	100.0%	100.0%

[1]Million passengers per annum

Passenger modal share 2033



Private cars (Inc. rental cars) taxi/cab	63.3%
Public transport	35%
Walk/cycle/other	1.7%

To achieve these ambitious targets, we will continue to work with our partners and transport providers to deliver the surface access improvements that are needed not only to increase the use of sustainable transport to the Airport, but also to help drive the Midlands economy.

One surface access improvement that we require to help achieve our modal share targets is the provision of improved night and early morning train and bus services.

Birmingham Airport is a 24/7 operation with many early morning flights where passengers need to arrive at least two hours in advance to check-in. Indeed, our busiest period for departing flights is in the early morning between 0600 and 0800. Many stores within the Airport also open at 0330 to coincide with early check-ins and staff working within these areas will be rostered to work early shifts accordingly. Likewise, catering, cleaning and security staff also work an established shift pattern which will include early starts.

However, the last train arrives at Birmingham International Station from Birmingham New Street just past 0000 and the first train in the morning arrives at about 0530. In the opposite direction, the last train arrives at Birmingham International Station from Coventry at about 0130 and the first train in the morning arrives just after 0600. This means many passengers and staff cannot use the train to travel to the Airport to catch their flights or work their shifts.

Improved public transport connectivity during the night and early morning is therefore vital if we are to increase our public transport modal share and encourage people to use more sustainable modes of transport.

Airport Surface Access Strategy

More detailed information on our objectives for surface access and how we intend to deliver them can be found in our Surface Access Strategy (SAS) that is published for consultation alongside this Master Plan.

Developed in partnership with our key stakeholders, the Surface Access Strategy provides a high-level framework to inform the enhancement of surface access to the Airport over the next five years and supports the transport improvements that the region is proposing to deliver. To achieve this, it will complement and support longer-term regional spatial and transport strategies including the following:

- The West Midlands Combined Authority's 'Strategic Economic Plan' (2016) which sets out its vision for the West Midlands by 2030. This includes improving connectivity and enhancing the environment;
- The West Midlands Mayor's 'Renewal Plan for the West Midlands' (2017) which seeks to encourage people to use public transport and active modes of travel, and ensure the Airport is properly connected to HS2;
- The West Midlands Strategic Transport Plan 'Movement for Growth' and corresponding 'Delivery Plan for Transport' (2017) which sets out the approach to transport improvements over the next 20 years. In line with this plan, the Surface Access Strategy seeks to provide efficient access to the Airport at a local, metropolitan and regional/national level;
- The Urban Growth Company's (UGC) Hub Growth and Infrastructure Plan (2017) which sets out the growth ambitions and infrastructure requirements for the Hub and the Airport to 2032 and beyond;
- The Midlands Connect Strategy 'Powering the Midlands Engine' (2017) which sets out a framework for strategic transport investment in key growth areas across the Midlands, including the Airport and surrounding area.
- Existing and future rail franchises including West Midlands, East Midlands, InterCity West Coast, West Coast Partnership, Cross Country, Chiltern and Wales and Borders.
- Network Rail's 'West Midlands and Chilterns Route Study' (2017) which identifies options to meet forecast rail demand up to 2043.