

The Yorkshire Hub

An interim report
on the redevelopment
of Leeds station





Department for Transport

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Background

In January 2013 the Government launched a consultation on the route for Phase Two of HS2. This proposed a new HS2 station in Leeds at New Lane. During the consultation, Leeds City Council and representatives from across the region expressed serious concern about the quality of the linkage between HS2 services and existing national and regional rail services at Leeds station. Leeds City Council emphasised the importance of creating a hub that was in line with their ambition for Leeds and the ambitions of the wider Leeds City Region.



Leeds Dock



The National Media Museum in Bradford

Images L to R: iStockphoto, National Media Museum.

In November 2014, HS2 Ltd published *Rebalancing Britain*, which recognised this issue and the importance of reaching a solution which satisfied broader connectivity across the Leeds City Region, and enhanced the economic and regeneration aspirations for the area.

In February 2015, the Chancellor of the Exchequer, launching the Long Term Economic Plan for Yorkshire, asked David Higgins to prepare this interim report, looking specifically at the future of the HS2 station in Leeds.

“I have asked Sir David Higgins to produce an interim report, to present to me in the Autumn. I want this report to explore the options for a major redevelopment of Leeds station to prepare for the arrival of high speed rail.”

Rt Hon George Osborne MP, Chancellor of the Exchequer, 5 February 2015.

After continued engagement with Leeds City Council, local authorities across West Yorkshire, the Leeds City Region LEP, the West and North Yorkshire Chamber of Commerce, and Network Rail, a clear consensus around a single preferred option has now emerged.

This interim report is being submitted to the Chancellor of the Exchequer and the Secretary of State for Transport to consider, as a recommendation from HS2 Ltd. A full route decision on Phase Two of HS2 is expected later in 2016.



Work in progress. Design concept, view from Neville Street, Leeds

Image: Leeds City Council

Redeveloping Leeds Station

David Higgins, Chairman, HS2 Ltd

Leeds station is already the busiest station in the North of England, and also a major transport hub for the city, Yorkshire and the wider North of England as a whole.

HS2 will provide a step-change in rail capacity and connectivity on the corridor between Leeds and London. It will strengthen links between Leeds, as one of the largest UK financial and professional services centres outside the capital, and London's global city functions. It will bring together the city regions centred on Leeds, Sheffield, Nottingham and Birmingham into a coherent and integrated economic zone of over ten million people, five million jobs, and some of the UK's most significant manufacturing clusters.

As such, Leeds station will continue to be a major part of this country's national infrastructure, with anticipated passenger flows on a par with Gatwick Airport. Network Rail forecasts a 114% increase in passenger numbers over the next thirty years.

Leeds City Region has a population of three million, one-and-a-half million jobs, and an annual economic output of over £60 billion – over 5% of the UK economy.

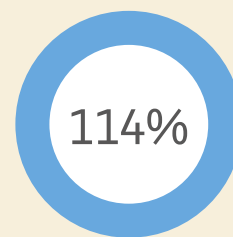
That means that any future plans to accommodate HS2's needs at Leeds station must take full account not only of HS2, but also continued growth in existing services and those anticipated to be added as a result of the Northern Powerhouse agenda, including HS3.

These plans need to ensure a step change in connectivity not only to Leeds, but to Bradford as a major city in its own right, as well as Wakefield, Huddersfield, and Halifax and the wider West Yorkshire region, while delivering improved links to Manchester and Liverpool to the West, and York, North Yorkshire, Newcastle and Hull to the North and East, and Sheffield and the East Midlands to the South.

We must ensure HS2 will build on the economic strengths of Leeds and Leeds City Region, maximising the benefits of connectivity, jobs and skills, and integrated into the City Council's vision for the Leeds South Bank, one of the largest regeneration schemes of its kind in Europe. The new station quarter will be a landmark development, creating in excess of 10,000 new jobs and attracting £400m of private investment, as has been seen by recent announcements. HS2 will also provide a boost to the regeneration of the wider South Bank, accelerating the delivery of thousands of new homes and jobs.

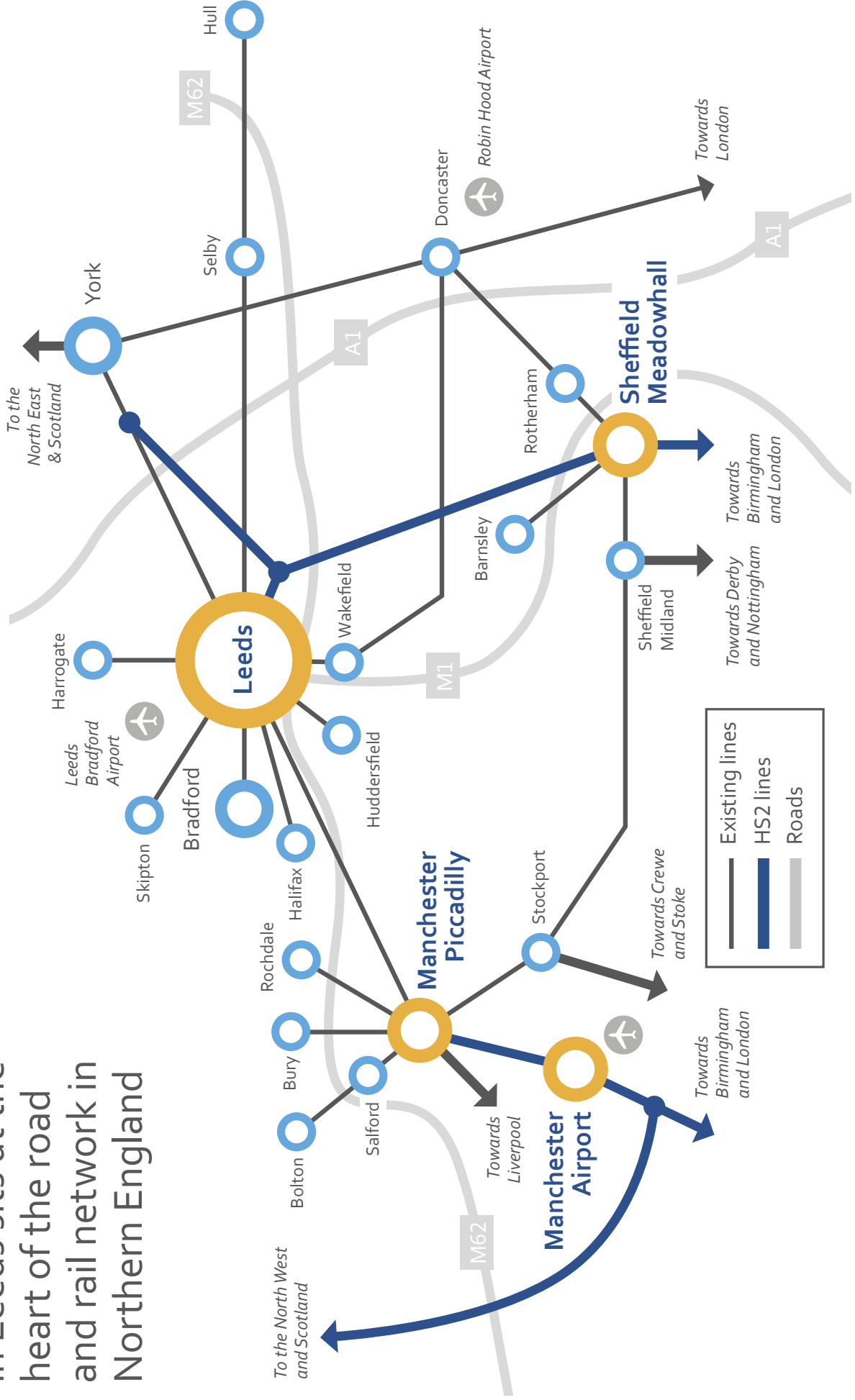


Image: HS2/Bob Martin



Increase in passenger numbers at Leeds station over the next 30 years

The Yorkshire Hub in Leeds sits at the heart of the road in and rail network in Northern England



The original New Lane proposals fulfilled HS2's brief, but did not sufficiently take into account the changing nature of the wider factors, either in terms of existing and future services or the Council's plans for the city centre. The danger was that the proposed station would have been too detached from the existing station and too isolated from the city centre. The sum would have been lesser than the parts. The hub effect would have been diminished.

Following representations from and detailed engagement with the Council, the Chamber of Commerce and representatives from the wider region on a range of potential approaches, HS2 selected three options from a longer list to prompt further discussion and analysis. These are set out in detail on the following pages.

As a result of that discussion, five principles have emerged by which to assess these options and to ensure the best outcome for Leeds, Yorkshire, the North and the country.

Those principles are:

1. that the existing station and the HS2 station should share a common concourse for passengers, to allow easy access between HS2 and other services. That concourse should have equally easy access to the city centre, the South Bank and the waterfront.
2. that the new combined station should have improved car and bus access, enabling it to become a properly integrated transport hub for the region.
3. that the new station should have sufficient capacity to allow for the anticipated two-thirds increase in traffic resulting from the Northern Powerhouse and HS3 initiatives.
4. that it should allow for through trains to enhance both the Northern Powerhouse rail plans as well as local services to the rest of the region.
5. that the design of the combined station should reflect the significance of its role and place not just for Leeds and Yorkshire, but as a major national landmark.

The detailed pros and cons of each option are set out on the following pages, but a clear and firm consensus has formed around Option Two, reflecting the views of the City Council, the Chamber of Commerce and representatives from the wider city region.

This consensus has taken account of not just the collaborative desire for the station to enhance the local economy and services, but also the physical constraints of the site which impose capacity limitations on the eastern route and ruled out alternative options such as double decking and tunnelling. It has also taken account of the need to keep within the overall Phase Two budget.

Principles to ensure the best outcome for Leeds, Yorkshire, the North and the country

1

A common concourse

2

A properly integrated transport hub

3

A new station with sufficient capacity to support the Northern Powerhouse

4

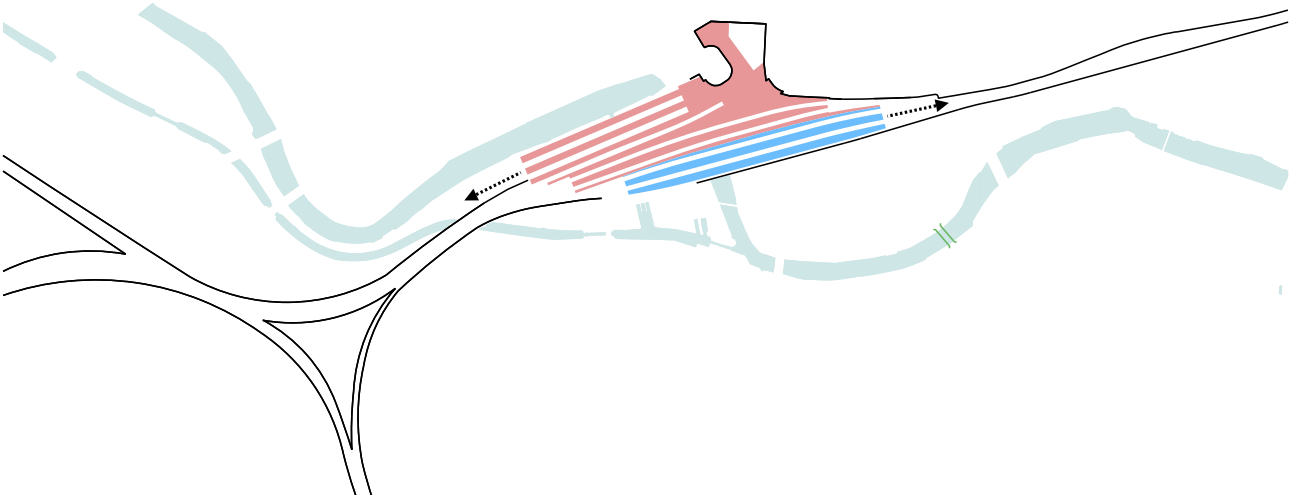
A station allowing for through trains to enhance local services

5

A major national landmark

Option 1

Approaching from the east,
with HS2 platforms parallel
to existing platforms



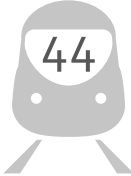
Potential number of classic platforms required, according to capacity analysis



Potential number of services required from the West (per hour) required to meet future growth
(Source: Advised by Transport for the North)



Number of classic platforms that can be provided



Services from the West (per hour) that can be accommodated

Benefits and drawbacks

While this offers the prospect of a more compact and integrated station, it does so at the expense of future local services and eight years of disruption during construction.

Pros:

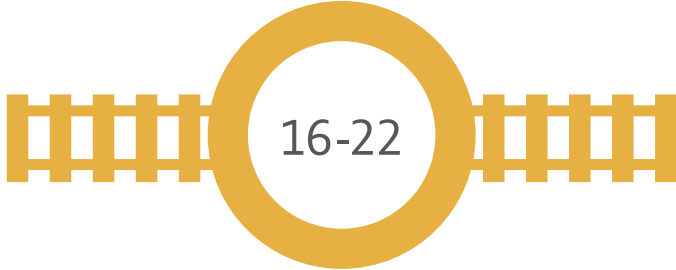
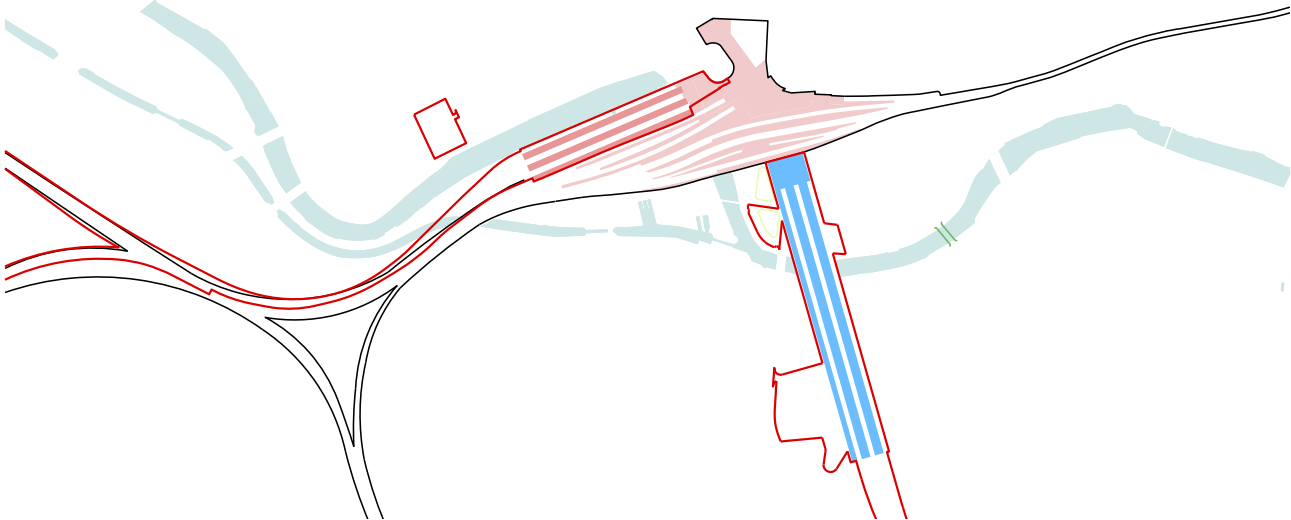
- Easy connectivity between the high speed and classic services. The “cross-platform” connectivity concept is maximised by incorporating the high speed platforms within the existing station footprint.
- Supports the concept of more integration between the classic and high speed operation. The east-west alignment of the high speed lines supports the ability to provide connections on and off the existing classic network.
- The east-west alignment of the high speed lines supports the ability to run through services, particularly for Northern Powerhouse rail.

Cons:

- This option offers significantly less overall capacity. It is not practically possible to provide sufficient platforms (in addition to the HS2 platforms) within the existing station footprint to operate the level of services predicted to meet the future growth in demand. Capacity analysis shows that this could require around 18 platforms, but only 11 would be provided.
- Incorporating the HS2 platforms within the existing station envelope would reduce the number of services that could run on the existing network in the future. Whilst a maximum of 44 services an hour could enter Leeds station from the West under this option, Transport for the North believe it is likely that more may be necessary to meet future growth.
- Using the eastern approach for HS2 would limit the capacity for growth of regional services.
- Disruption during construction would be significant and would result in 5-8 years’ worth of impact on existing services. The entrance to Leeds station is already constrained, the concourse is overcrowded at peak times and is in need of modernisation.
- It would bring more cars further into the centre of the city to access the station. The already congested road network would be loaded with even more cars accessing the city centre.
- An eastern approach has a significant impact on the surrounding environment and heritage, with local stakeholders raising specific concerns about Leeds Minster. It would also have a significant impact on the existing Leeds City Region Enterprise Zone in the Aire Valley, and would risk deterring business investment in that area.

Option 2

Approaching from the south, with HS2 platforms reaching directly into existing Leeds station, creating a common concourse between services



Number of regional and classic platforms that will remain available in the existing station

Benefits and drawbacks

This connects HS2 and existing rail services through a common concourse, allows for the growth in Northern Powerhouse rail and local services, and provides easy access to the city centre and motorway network, whilst creating the potential for a landmark architectural statement.

Pros:

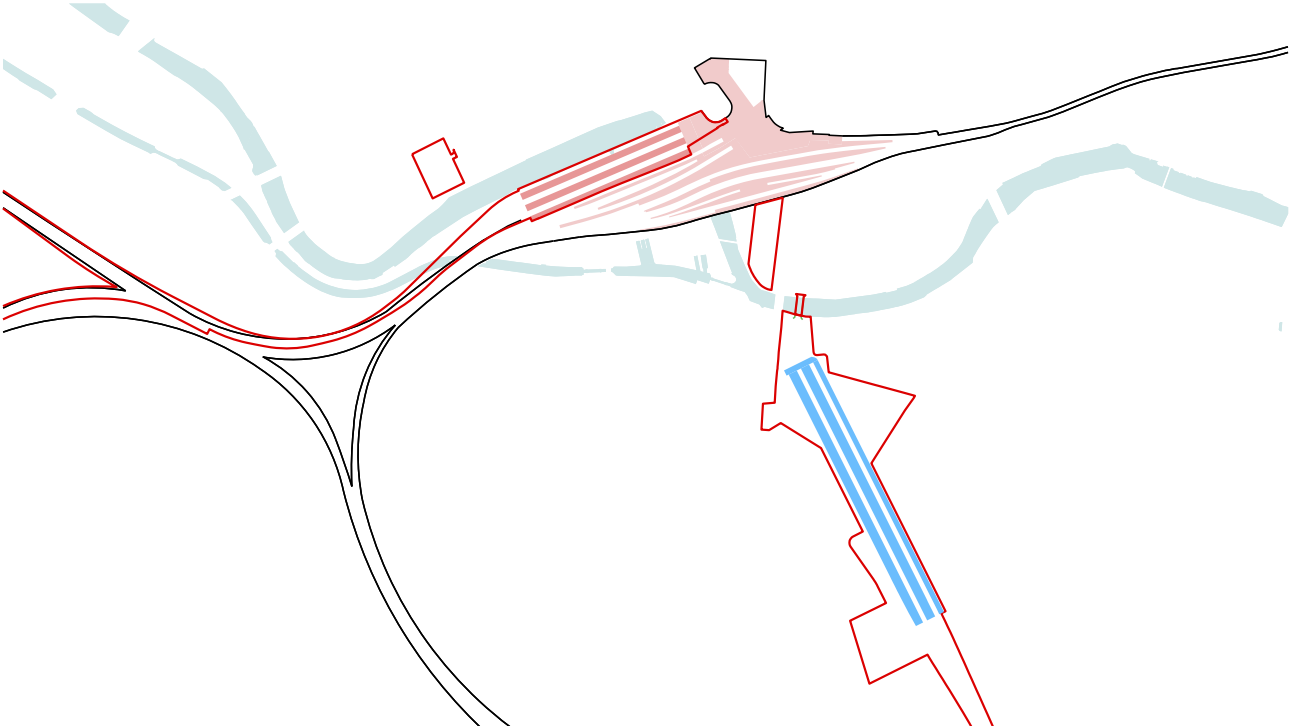
- Can facilitate Northern Powerhouse rail services to run through the existing station via a connection from HS2 to the existing rail corridor into the west side of the station.
- Provides easy connectivity with existing classic services by allowing the high speed platforms to be positioned adjoining the existing station and forming a common concourse area.
- Does not compromise the future capacity of the existing station. The provision of the new high speed platforms via a southern approach maximises the space available for new and existing platforms in the current station to cater for the growth in Northern Powerhouse regional services and local classic services which may require a minimum of 16-22 platforms.
- Allows easy pedestrian access and permeability between the city centre to the North and the South Bank regeneration area.
- Supports regeneration of the South Bank area. The southern approach for HS2 enters Leeds via the South Bank area of the city and, as such, is able to act as a catalyst for the redevelopment of the area.
- Easy access from the M621. The southern approach for HS2 would be supported with car parking at the southern end of the new high speed section of the station, which would be within a few hundred yards of the M621.

Cons:

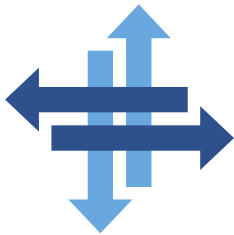
- In adjoining the existing station, the new high speed platforms will need to cross the River Aire. Assessments will need to be carried out with the Environment Agency to understand the impact this structure will have on (a) the flood alleviation schemes that are currently being implemented and (b) the water quality and work aimed at improving the river habitat.
- The presence of the new high speed platforms in the centre of the city will need to be integrated into Leeds's vision for the city. By fully incorporating the station into the fabric of the city, the impact of the new station on the public realm can be managed.
- The new platforms would cover the northern end of Neville Street and add to the "dark arches" that are already a concern from a public realm perspective. However, the opportunity to address both the area caused by the new platforms and the existing underpass beneath the station creates the potential to take the traffic off Neville Street and provide opportunities for retail, commercial and leisure use.
- The alignment of the new platforms would be adjacent to the Canal Wharf and the Leeds City Centre conservation areas, requiring sympathetic design to mitigate any impact on these areas.

Option 3

Approaching from the south, with HS2 platforms creating a new station south of the river, requiring passengers to transfer by foot to the existing Leeds station



Connectivity compromised with walk between high speed and classic platforms



No common concourse and outside city centre

Benefits and drawbacks

Like Option Two, this retains the capacity to expand local services, but the lack of a shared common concourse will make moving between them and HS2 more difficult and make the HS2 station more isolated from the city centre.

Pros:

- Can facilitate the Northern Powerhouse rail services to run through the existing station via a connection to the existing rail corridor into the west side of the station.
- Does not compromise the future capacity of the existing station. The provision of the new high speed platforms via a southern approach maximises the amount of platforms that remain available in the existing station to cater for the growth in Northern Powerhouse regional services and local classic services.
- Supports regeneration of the South Bank area. The southern approach for HS2 enters Leeds via the South Bank area of the city and as such is able to act as a catalyst for the redevelopment of the area.
- Easy access from the M621. The southern approach for HS2 would be supported with car parking at the southern end of the new high speed section of the station, which would be within a few hundred yards of the M621.

Cons:

- The walking distance between the new high speed platforms and the existing classic platforms is 5-10 minutes and makes connectivity with classic services more difficult, and will make HS2 more difficult to access for those people starting in the existing city centre area. It is unlikely to be judged to have stood the test of time.
- Passengers potentially exposed to the elements when moving between stations. The provision of a covered walkway would be required to provide a suitable environment for passengers moving between the two stations.
- Too isolated from the existing city centre core. The location of the new high speed platforms, south of the river and separated from the existing city centre, means that the HS2 station would be too detached from the city centre.
- No common concourse. Unlike Option Two, this option does not easily support the creation of a common concourse and would be seen as a separate station to the existing classic station.
- Lack of support from the regional authorities. For the above reasons, many of the surrounding local authorities have indicated that they would not be supportive of this option, as it would be a constraint to the benefits of HS2 reaching the wider region.

Conclusion

David Higgins, Chairman, HS2 Ltd

The process of engagement we have gone through, in partnership with the region, to decide the best option for the Yorkshire Hub has been a model of its kind.

Quite rightly, local and civic leaders made clear their view of the limitations they saw in our original proposals, in particular its failure to connect local, regional and HS2 services and to connect into the existing city centre, and the plans for its expansion.

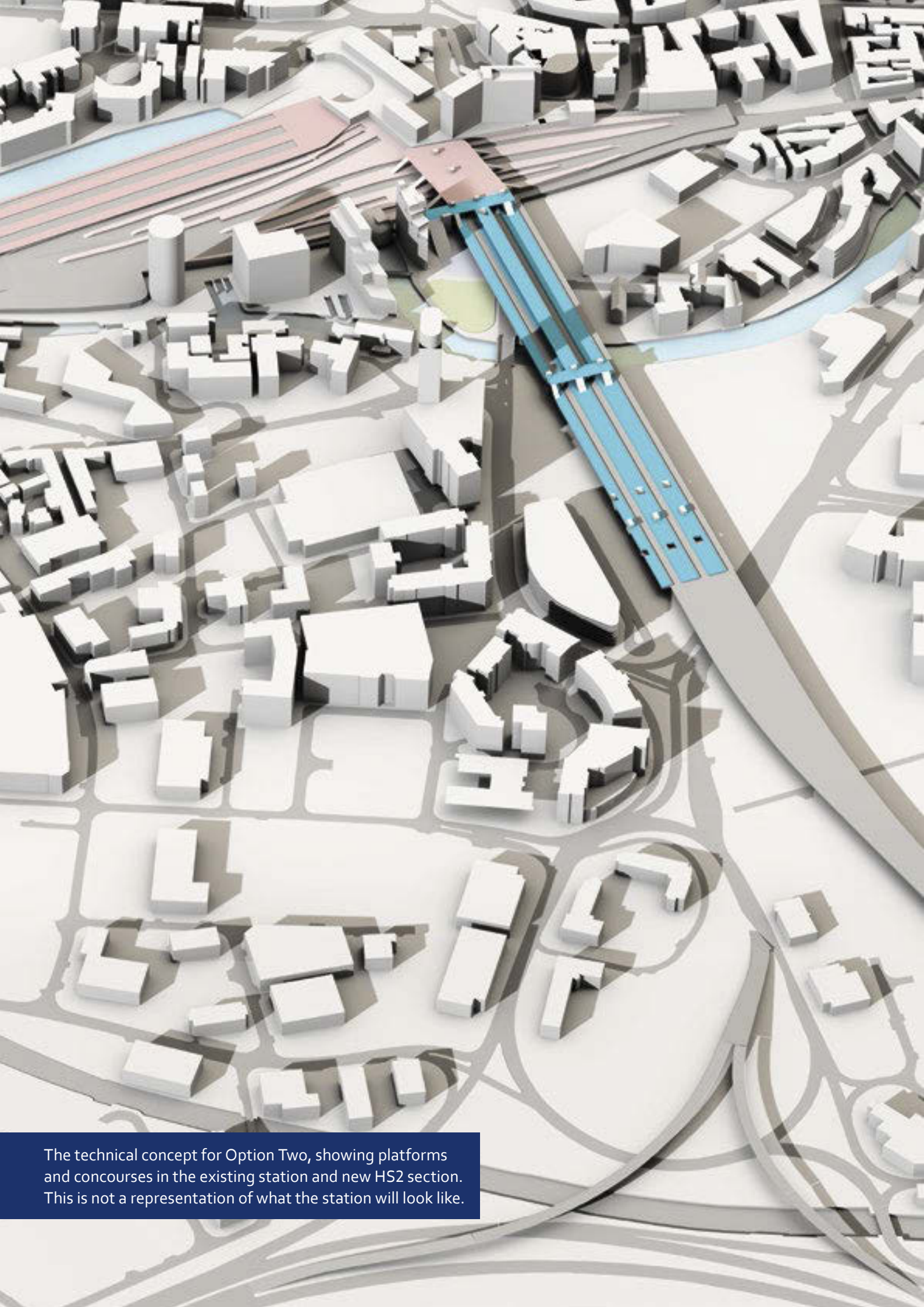
Given the physical constraints of the existing station, and the rising level of demand for services, coming up with a solution that meets all those needs has not been easy. But thanks to the efforts of the Council, the city region and the Chamber of Commerce, as well as HS2 and Network Rail experts, we have reached a consensus.

In short, because of both the heavy and growing demand and the constricted site – particularly at the station entrance – Option One was seen as not sufficiently flexible to cope with both HS2 and the anticipated increased traffic the Northern Powerhouse will deliver in the longer term. Whilst this more compact solution was superficially attractive, it does not stand the test of time, as the medium to long-term impact would be a limit on the ability to further extend or enhance the station to handle increased pressure on local services. The result would be detrimental to the transport needs and the wider economic aspirations of the city and the region, as would the disruption of construction in the midst of a working station.

Option Three, on the other hand, while feasible, was seen to suffer from drawbacks at the other end of the spectrum as there was too great a distance between HS2 and local services with passengers being exposed to a longer walk, often in bad weather and the lost opportunity to create a common concourse for the first time. It was not seen as an improvement on the original HS2 New Lane proposal.

Option Two, however, was seen to offer:

- easy access from HS2 to local services, and vice versa, on a par with that experienced at any other global transport hub;
- a common concourse creating the space for seamless passenger movement, and for retail and service facilities;
- easy access to the city centre, the South Bank and the waterfront helping to make the combined station an integral part of the developing city, rather than an adjunct;
- much easier car and bus access linking up to the urban and motorway hub, allowing the station to become an integrated transport hub for Yorkshire and the wider region;
- the capacity to allow local services to grow as HS3 and the Northern Powerhouse develops;



The technical concept for Option Two, showing platforms and concourses in the existing station and new HS2 section. This is not a representation of what the station will look like.

- the ability to allow through trains for local services and Northern Powerhouse rail services to improve links to York, Newcastle and Hull in the East, as well as Manchester and Liverpool in the West, and Sheffield and the Midlands to the South.
- the opportunity to create a landmark architectural statement, fitting with the role of Leeds station as a piece of national infrastructure, that Leeds, the city region, Yorkshire and the nation can be proud of.

The national significance of the Yorkshire Hub means it is essential that the quality of the design of the station and the surrounding public realm are world class. Network Rail is working with Leeds City Council and West Yorkshire Combined Authority on plans for upgrading the existing concourse areas in the short to medium term. We recognise the importance of securing these improvements and will do all we can to support that work.

The station needs to work for rail passengers, for people interchanging to other services, and for car and cycle users. It also needs to be permeable to ensure a pleasant experience for pedestrians walking through and around the station when moving across Leeds City Centre. Leeds City Council is developing a scheme to reduce through car traffic and enhance the area for pedestrians, and this will be important for the city to make the most of the HS2 opportunity.

The consensus is, that Option Two meets each of the five principles set out in the introduction above. Clearly there is much work to be done to translate those principles into reality, not least on the design element, which is at a very early stage.

As the attached letter signed by representatives from Leeds City Council, the city region and the Chamber of Commerce makes clear, the consensus is that now is the time to move from debating the options to discussing in detail how Option Two can be delivered. We also recognise there is consensus on the need to develop proposals for Northern Powerhouse rail, and achieving a step-change in capacity and connectivity on the existing city region rail network. HS2 has committed to working in close partnership with Leeds City Council, the West Yorkshire Combined Authority, Transport for the North, the Department for Transport, Network Rail and the West and North Yorkshire Chamber of Commerce to secure support for this option and undertake the further technical work and engagement needed to ensure it is part of future route announcements.

There is a clear desire, however, to give a clear signal of intent that gives all involved, including potential investors, the certainty needed to go ahead with the confidence that the process for delivering the Yorkshire Hub has begun.

Much work remains to be done, not least on design and finalising the business case, but now I believe is the time to begin that work.



David Higgins **Chairman**

Creating national and city region transport hub in Leeds

As civic and business leaders for Leeds, West Yorkshire and Leeds City Region, we support the proposals from Sir David Higgins to create a single integrated transport hub in Leeds.

The original proposal of a separate HS2 terminus at New Lane, some distance from the existing station, was not commensurate with our ambitions for Leeds and the City Region. Those original proposals would not have created a single hub. Interchange between HS2 and other services would have been difficult, limiting the benefits of HS2 to the city region.

We welcomed Sir David's previous recommendation to review those original proposals and work with us to ensure that the future plan for Leeds station was in line with our vision for Leeds and the city region. From this work, a number of issues have become clear.

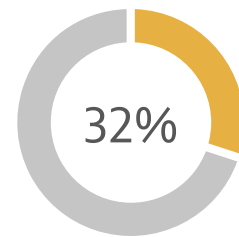
We need to plan for significant future growth in rail use into Leeds and across the city region. Leeds station is a major part of our national infrastructure. It is already the busiest station in the north of England. It is a major transport hub for Leeds, the city region and Yorkshire. Passenger numbers using Leeds station are forecast to more than double over the next thirty years, reaching a level similar to those at Gatwick Airport.

To ensure all of the city region benefits fully from HS2, people should be able to interchange quickly and easily between HS2 and other rail services, as well as other transport links. The station needs to be able to accommodate improved services on our city region rail network, as well as the planned high speed Northern Powerhouse rail network.

The station design should reflect the position of the city region as an economic powerhouse, and support our plans for development and regeneration in the South Bank area of Leeds City Centre. It should provide a high quality sense of arrival and passenger experience.

As a result of our work with HS2 over the past year, five principles have emerged by which to assess these options and to ensure the best outcome for Leeds and the city region.

1. The existing station and the HS2 station should share a common concourse for passengers to allow easy access between HS2 and other services, including improved city region services and Northern Powerhouse rail. The concourse should have easy access to the city centre, the South Bank and the waterfront.
2. The new combined station should have good quality car and bus access enabling it to become a fully integrated transport hub for the region.



Employment growth Leeds is forecast to generate in the Yorkshire & Humber region



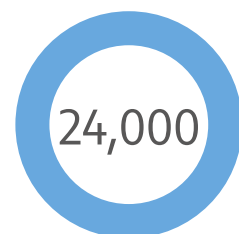
138,000

Predicted number of jobs in the Yorkshire & Humber region



44,600

Predicted number of jobs in region generated by Leeds



Growth in employment base in Leeds City Centre (Holbeck Urban Village, Central South Bank and Leeds Dock)

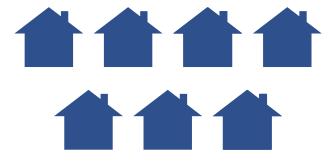
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3. The new station and its approaches should have sufficient capacity and be future proofed to allow for the improvements needed to accommodate significant increases in rail services resulting from the Northern Powerhouse rail network, and on city region rail routes. This should include four tracking to the east of the existing station.
4. The station and its approaches should allow for through trains to enhance local services to the rest of the city region. This should include a connection between HS2 and the existing network, to enable some classic compatible HS2 trains to run through the existing station to and from York and beyond. This combined with the connection between HS2 and the East Coast Main Line would deliver substantial benefits for York Central, one of the most significant Northern Powerhouse projects.
5. The design of the combined station (including the existing concourse areas) should reflect the significance of its role and place not just for Leeds and Yorkshire, but as a major national landmark. It should be a world class iconic design, surrounded by outstanding public realm, in line with the masterplan for development and growth of Leeds South Bank, one of the most significant regeneration projects in Europe. The station needs to create an attractive environment for all users of the city centre, including pedestrians moving across the city centre who need to walk through and around the station but may not be rail users.

We believe that the option for Leeds station recommended by Sir David Higgins meets these requirements better than the alternatives.

The proposed station will be an integrated hub based on a T-shape configuration, with HS2 platforms on a north south alignment adjacent to and with a shared concourse with the existing station. It will enable seamless interchange between HS2 trains, the proposed Northern Powerhouse rail services, and local and regional trains. This will spread the benefits of HS2 and, along with the improvements we are proposing to the local rail network, will provide faster and better rail journeys for the three million people who live in Leeds City Region. It will connect the major cities of Bradford, York and Wakefield, and significant towns such as Halifax, Huddersfield, Dewsbury, Harrogate, and Selby into the national high speed network. It will enable future increases in capacity for city region services and Northern Powerhouse rail, and provide the potential for a connection the enable some HS2 services to run through Leeds station.

We believe it is important for Leeds City Council, the West Yorkshire Combined Authority, Leeds City Region LEP, the Chamber of Commerce, Transport for the North, Department for Transport, Network Rail and HS2 Ltd to continue to work together to progress rapidly the work on the detailed design for the Leeds Hub. As Sir David's previous report



70,000

Additional (net) dwellings targeted by The Leeds Core Strategy between 2012 and 2028

Adjacent local authorities planning



42,000

Additional dwellings planned by Bradford between 2013 and 2030



29,000

Additional dwellings planned by Wakefield between 2008 and 2026



11,300

Additional dwellings planned by the site allocations process in the city centre

Rebalancing Britain indicated, we need to make our transport network and Leeds station HS2 ready. We need a clear commitment from Government and Network Rail to fund not only HS2 to Leeds, but also the improvements to the existing city region rail network, as well as Northern Powerhouse rail.

We need to progress at pace and with a high level of ambition the plans for improving the existing station concourse and its environs, and these need to be implemented in the short to medium term. We also need to ensure we have the funding and powers and resources to remodel our local transport network and public realm in Leeds City Centre to make the most of the opportunity.

The proposed Leeds hub station, integrating HS2, Northern Powerhouse rail and improved local and regional rail services will transform the economy of Leeds and the city region. We now need to make this a reality and create a transport hub the nation can be proud of.



Councillor Judith Blake
Leader of the Council,
Leeds City Council



Councillor Peter Box
Chair of West Yorkshire Combined Authority
and Leader of Wakefield City Council



Councillor Richard Cooper
Leader of the Council,
Harrogate Borough Council



Councillor Mark Crane
Leader of the Council,
Selby District Council



Councillor Richard Foster
Leader of the Council,
Craven District Council



Councillor David Green
Leader of the Council, City of Bradford
Metropolitan District Council



Councillor Sir Stephen Houghton CBE
Leader of the Council, Barnsley
Metropolitan Borough Council



Gerald Jennings
President of Leeds Chamber
of Commerce



Councillor Carl Les
Leader of the Council,
North Yorkshire County Council



Roger Marsh OBE
Chair of Leeds City Region
Enterprise Partnership



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Councillor Tim Swift
Leader of the Council,
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Councillor Keith Wakefield
Chair of Transport Committee of
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