

### **LEEDS HIGH SPEED RAIL STATION**

# A Paper from the West & North Yorkshire Chamber of Commerce

#### 1 Introduction

- 1.1 The West & North Yorkshire Chamber of Commerce supports, connects and represents a wide range of business interests throughout the sub-region.
- 1.2 The Chamber has been a longstanding supporter of HS2, which presents a fantastic opportunity both for Leeds and the wider city region. We recognise that HS2 will bring much needed additional capacity to the national rail network. The ability for HS2 to free up additional capacity on existing infrastructure should in turn benefit regional connectivity.
- 1.3 This paper has been prepared by a sub-group of the Property Forum of the Chamber in response to an invitation from HS2 Ltd to contribute to the development of plans for enhanced rail services to and across the North of England.

## 2 Background and Overview

- 2.1 In 2013, HS2 Ltd announced detailed plans for new rail infrastructure connecting London with the West and East Midlands, Manchester, Sheffield and Leeds.
- 2.2 The current published scheme envisages a new HS2 station in Leeds located south of the River Aire at New Lane (opposite Asda House and adjacent to Bridgewater Place).
- 2.3 The plans are for this to be a terminus located as a separate building roughly a quarter of a mile from the existing mainline City Station.
- 2.4 In order to ensure that all of the Leeds City Region benefits from high speed services, there will need to be additional investment into existing infrastructure and we acknowledge that good progress with this is being made through the LEP Strategic Economic plan and the West Yorkshire Combined Authority Plus Transport Plan.
- 2.5 In March 2014, Sir David Higgins was appointed as chair of HS2 Ltd and one of his first engagements was an event organised by the Chamber in Leeds at this meeting, he restated HS2's commitment to Leeds and the need for HS2 to form part of an integrated network rather than be a standalone piece of infrastructure.
- 2.6 In late 2014, Chancellor Osborne announced plans for HS3 (now TransNorth rail) as a solution for east-west rail connectivity (Liverpool to Sheffield, Hull and Newcastle via Manchester and/or Leeds) this brings with it additional implications for Leeds' city centre station and presents further opportunities to rethink its location and approaches.
- 2.7 In March 2015, David Cameron, speaking in Leeds, announced that Sir David Higgins had been tasked with relooking at Leeds station options and will be bringing his recommendations back to government in autumn 2015.
- 2.8 In response, the Chamber is keen to ensure that the views of businesses across our region are considered as part of the wider decision making process.
- 2.9 Leeds City Station is already the second busiest station in the country outside London, with 27.7 million users (2013/14) and, with very significant growth in passenger numbers, forecast to reach over 60 million by 2043.



2.10 Accommodating the consequent need for additional rail services and passenger capacity in the station, even without high speed rail, will be severe challenge within the current footprint – as a result, an investment and development plan for Leeds station needs to be produced urgently to meet future needs (both in advance of and alongside HS2).

# 3 Principles of Station Design and Location

- 3.1 The aspirations for a Leeds HS2 and/or TransNorth station must reflect the ambition to be the Best City in the UK and a transport hub for the whole sub-region through easy connections.
- 3.2 As highlighted by Sir David Higgins (March 2014), any high speed station must be fully integrated with the existing rail network to ensure the benefits of HS2 and TransNorth are spread throughout the sub-region.
- 3.3 The emerging Single Transport Plan for the West Yorkshire Combined Authority seeks a 30 minute journey time from District Hubs to the HS2 station, leading to a position where passengers from locations presently served by direct 'main line' trains (eg Harrogate, Skipton, Bradford, Wakefield, etc) will need to change to HS2 to gain a time saving we anticipate the 15% interchange figure will need to rise significantly to fill 3 trains per hour to London.
- 3.4 With the acknowledgement that Leeds lies at the heart of the UK, the High Speed Rail Service Specification should be revisited to stress the importance of services linking Leeds to the North East and Scotland it should be possible for trains from the South to run through Leeds and north to York, Newcastle and Edinburgh as classic-compatible services in the medium term (or HS services should the line be extended north in due course).
- 3.5 The construction of a link line across the Aire Valley to the east of Leeds would remove several services from the present station's western approaches, providing capacity for HS2 and TransNorth services and, by linking existing terminating routes, reduce platform requirements stations on the new link would serve the Aire Valley employment area and Enterprise Zone.
- 3.6 There is a recognition that the station will act as a catalyst for investment and regeneration over a wider area than the present station and rail viaducts.
- 3.7 The development of the station should not be constrained by short term thinking over funding, land ownership or existing buildings and/or structures (although we would not expect a blank cheque approach).
- 3.8 The surrounding public realm infrastructure should be revitalised to create a high quality arrival point within an 'iconic' complex e.g. removal of traffic from City Square to create a stunning piazza style welcome to Leeds and creation of a south side access to South Bank.
- 3.9 There should be minimal disruption to existing services throughout the redevelopment although it is acknowledged that some services will need to be decanted to different platforms in the short term.

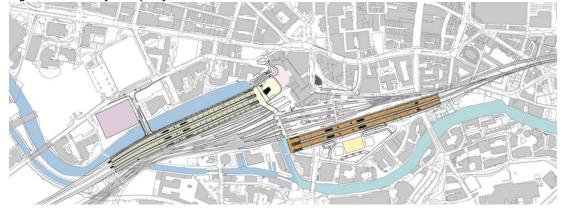
# 4 Preferred Leeds Station Form and Function

4.1 In recognising there are many factors which will influence the final station solution, the Chamber's preferred option is for high speed services to be co-located with existing rail services.



- 4.2 A station which is able to accommodate HS2 and/or TransNorth rail services running through and onto the East Coast Mainline towards Northeast England and Scotland is essential it is acknowledged that there will be a direct London and Sheffield to York line but a through route at Leeds would support development of the Northern Powerhouse by enabling high speed Midlands-Sheffield-Leeds-Newcastle-Scotland services and take trains from the Northwest through Leeds to reach the Northeast.
- 4.3 The single station environment should be as close as possible to the city centre there is no wish to see the station moved from its present location.
- 4.4 Although other routes are being explored, it is assumed that HS2 from the south will approach Leeds alongside the line from Woodlesford through Hunslet as presently envisaged although the discussion below also applies to other access routes from the south or west.
- 4.5 The HS2 line should be extended through Holbeck and run into Leeds City station from the west rather than operate to a terminus at New Lane this would stop east-west severance within Leeds South Bank, allow for through services and enable TransNorth integration (the cost of CPO and site assembly at New Lane can be balanced against additional engineering costs to enable this to happen).
- 4.6 A single station solution would require incoming HS2 lines to be aligned along the same axis as the existing station we recognise this presents significant engineering challenges and the need to operate within extremely tight corridors but there would be crucial operational benefits and reduced severance issues.
- 4.7 There are implications for major new track infrastructure coming in from the west of the station but such an alignment would ensure Leeds is part of a network rather than being at the end of a branch line currently undeveloped land alongside the existing western approach tracks (now available prior to implementation of extant planning consents) could be utilised for additional capacity.
- 4.8 The "Engineering Options Report" produced by HS2 in March 2012 included two plans for a terminus station aligned east-west (see Figure 1) this combined drawing shows the scale of the platforms required to serve a terminating HS2 service. Could a variation on one or both of these proposals be achieved to provide the through capacity needed?

Figure 1: Scale of HS2 platforms



4.9 A new station access should be provided via new river crossing either as a continuation of Northern Street (between Novotel and Whitehall Riverside – a substation will require relocation) or a new position to the west of Whitehall Riverside – the space underneath the



- current Leeds Station should be utilised to provide quality public realm and station services (as at St Pancras International) rather than be used for car parking.
- 4.10 The new station should integrate with other public transport networks for connections to out-of-centre business and residential locations. A bus interchange and allowances for NGT (New Generation Transport a trolleybus route from NW to SE Leeds) should also be considered. It is recognised that a potential bus interchange could not accommodate all routes and that consideration should be given for those of a strategic nature, e.g. to Leeds Bradford International Airport, universities and other areas of volume employment.
- 4.11 An HS2 and TransNorth combined station would be a significant addition to Leeds City Centre and provide an arrival point on a scale with an international airport or other Core City locations.

# 5 Route to East of Leeds Station

- 5.1 To relieve present congestion, accommodate forecast growth and enable through HS2 classic-compatible and/or TransNorth services to operate effectively, additional tracks are required to the east of Leeds City station.
- 5.2 Figure 2 shows how these tracks could be delivered (generally on the south side of the present lines) between the station and the proposed HS2 'main line' alongside the M1 motorway near Garforth:
  - four/five tracks are available from Manor Road (Quarry Hill) to Neville Hill yards, albeit some of these are presently unused
  - from Manor Road to west of Crossgates, any widening would require some property
    purchase although there are significant areas of little used railway yards and open land
    (some subject to future development proposals eg Seacroft Hospital) which could be
    allocated for rail use
  - the previous four tracks can be restored through Crossgates station
  - some property acquisition will be required east of Crossgates and currently vacant land here is yet to be developed for housing under the Thorpe Park masterplan
  - a link to HS2 could pass under or over the motorway and existing Garforth lines.

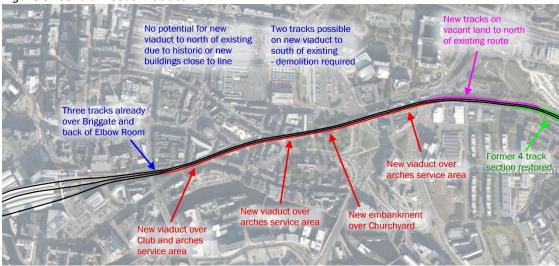
Figure 2: Route through East Leeds Restore forme Two additional tracks through open development site four track section route to through station Link to HS2 CROSSGATES **LEEDS** Two additional tracks CITY CENTRE through built up area NEVILLE GARFORTH may be required Two tracks on new Two additional tracks existing route Two additional tracks Proposed through railway yards through Thorpe Park development site HS2 route Restore forme Link to Castleford & open land four track section & Wakefield lines

5.3 The existing viaduct from Leeds City station to Manor Road already creates significant severance through the city centre but, in most places, there is space for an independent new two-track viaduct to be constructed on its southern side (see Figure 3).



- 5.4 While much of the route could be built above what is at present railway arch business access areas, some demolition will be required the impact on the Minster churchyard could be minimised if traffic on The Loop were to be diverted to create a more extensive garden area.
- 5.5 Construction of the eastern viaduct to HS2 dimensions would allow both High Speed captive and classic-compatible trains to use the route albeit at slower speed than on newly built HS2 lines the key is to deliver greater connection opportunities between Midland, Northern and Northeastern cities.

Figure 3: Central Leeds Viaduct



### 6 Leeds HS2 Station

- 6.1 The Chamber has a preference for a single co-located station complex as outlined above and it is acknowledged that its delivery will require significant operational, constructional and financial obstacles to be overcome:
  - rebuilding such a busy station whilst it remains operational
  - physically creating space for sufficient 400 metre long straight platforms for HS2 captive London trains
  - working on top of and alongside a Victorian viaduct built over roads and rivers
  - the financial penalties which the above may impose.
- 6.2 The key to such a project is to reduce the number of trains terminating in the existing station and Figure 4 shows how an inter- and intra-regional rail network could be developed for West Yorkshire, focussed on Leeds for connections to HS2 services:
  - HS2 runs as proposed to Hunslet but then continues on the existing Holbeck Curve into new through platforms on the south side of the station
  - through HS2 services would continue to the Northeast via a new East Leeds viaduct and link to HS2 main line near Garforth
  - a link from the Stourton area through the Aire Valley development zone to the East Leeds line would remove Pontefract and Hallam line services from the west end of City Station, providing through journey opportunities if linked to western routes (eg Skipton or Braford Interchange) and space for HS2 on lines through Holbeck



- local services are concentrated on the existing city centre viaduct, including the
  introduction of more intensive 'cross-city metro' through services linking lines in the west
  (Ilkley, Skipton and Bradford, including via the Airport) to those to Garforth, a potential
  East Leeds Parkway (and/or Scholes P&R), York and Selby
- TransNorth through services are concentrated on the south side of City Station so as to feed into the HS2 East Leeds viaduct, arriving from the west on a re-opened Holbeck High Line Viaduct
- future TransNorth services could be enhanced by four-tracking to beyond Dewsbury, allowing fast trains to pass stopping services and the provision of additional stations in locations such as the White Rose Centre – a new Morley tunnel may be required to attain significantly higher speeds on this route.

Two additional tracks east of Leeds for classic-compatible HS2 south/Leeds/NE/Scotland Link to HS2 'main line' for TransNorth services to York services and east-west TransNorth services NE & Scotland Removal of east-west TransPennine Potential Neville Hill to services to new lines allows more stations (O) on cross-city 'metro Lower Aire Valley & convert Pontefract & Hallam line services to through routes Use Holbeck High Line to bring TransNorth service to south side of station. Link to platforms on south side of station for through HS2 services - capacity provided by removal of Woodlesford Widen to four tracks or ervices from west throat short-term installation of passing loops at stations (including new White Rose). Long term aspiration Widen to four tracks o for new Morley Tunnel short-term installation of passing loops at stations.

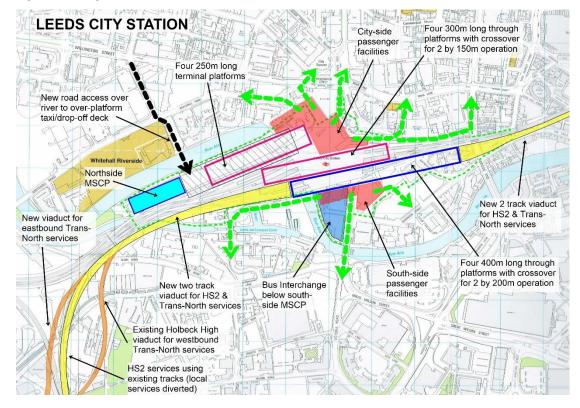
Figure 4: HS2, TransNorth and West Yorkshire metro

- 6.3 Key features of a station suitable for such a scheme are shown in Figure 5 and include:
  - HS2 lines utilising the existing link through Holbeck (local trains would be removed to the Aire Valley link) to four 400m through platforms on the site of platforms 12-17 and an extended viaduct on its southern side – with halfway cross-overs these could also be used by 200m regional HS2 and TransNorth services passing through Leeds
  - four 300m long through platforms (with cross-overs) on the site of platforms 6-11 would provide for many of those services now terminating in Leeds which would pass through the city as part of a West Yorkshire metro
  - four/five 250m terminus platforms on the site of platforms 1-5 and the present station car park – this would be covered by a road vehicle platform accessed from Northern Street (taxis and drop-off) and provision for a north side MSCP
  - passenger facilities could be provided with the 'Dark Arches' below the station, opening
    up to both north and south sides of the station in line with aspirations for a more
    permeable layout a public transport hub could be on Neville Street alongside the station
    facilities and under a south side MSCP



• redevelopment would be phased so as to minimise impact on existing users – new north side terminal platforms first, followed by south side through platforms with associated viaducts and finally central rebuild.

Figure 5: Integrated Station



### 7 Further Considerations

- 7.1 The overall cost of delivering such comprehensive revitalisation of the region's rail services will need to spread over a number of years, implying several phases however, this is a once in 100 years opportunity to undertake such an exercise and plans should be made for an aspirational scheme which will support transformation of the City Region economy.
- 7.2 To that end, there are implications for development sites to west and east of the station as space for extra rail tracks needs to be reserved do sites in and around South Bank, Holbeck Urban Village, Whitehall, the existing City Station, Seacroft and Thorpe Park need to be reserved now or could short/medium term use options be encouraged?
- 7.3 The development of any high speed rail station has major regeneration potential and, in Leeds, there are significant areas of vacant and underused land to the south of the present station the development of these areas, with their easy connections to other parts of the sub-region, has potential to bring many jobs within easy reach of all West Yorkshire residents. A Regeneration Company may be an appropriate vehicle to capture values and ensure the appropriate development of the area around any HS2 station.

## 8 Summary

8.1 The West & North Yorkshire Chamber of Commerce urges a speedy commitment to the enhancement of rail services to and within the City Region as a key element in facilitating the economic growth of the Northern Powerhouse. Figure 6 illustrates a network that could be



- delivered with a small number of key interventions alongside the HS2 and TransNorth proposals discussed above some of these such a line to the airport are already under consideration.
- 8.2 The final station solution needs to acknowledge growth in existing rail services whilst ensuring that HS2 feels part of an integrated rail network, not one just facing to London and the South.
- 8.3 The Chamber feels that the greatest economic advantage to the West and North Yorkshire businesses and communities would be gained from co-locating any HS2 station with that for Trans North expresses and local trains so as to provide a seamless interchange between rail services, and onto other modes of public transport this will minimise travel times from outlying locations and ensure the benefits of High Speed Rail are spread as widely as possible.

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Figure 6: West Yorkshire Metro

