

Chapter 8



Capacity and Service Disbenefits

Prepared by Christopher Stokes

8 CAPACITY AND SERVICE DISBENEFITS

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8.1 This chapter relates to the following questions listed by the Committee:

- 2.2 – Implications on HSR on the funding of the classic network - impact of delays to investment in the existing network.
- 3.1 – Robustness of assumptions methodology - relationship between planned capacity and existing capacity, and forecast growth.
- 4.2 – Which cities should be served by the Y - identification of cities which are adversely affected by HS2.
- 5.1 – Economic regeneration and bridging the North-South divide - identification of cities which are likely to be adversely affected by HS2.

Introduction

8.2 This submission considers the following major issues:

- Inadequate planned capacity on HS2 for key flows.
- Delays to increases in capacity as a result of the project.
- The impact of reduced classic services.

Inadequate Planned Capacity

8.3 One of the key arguments put forward by the government in support of High Speed 2 (“HS2”) is that it is the only effective way of increasing capacity on the rail network.

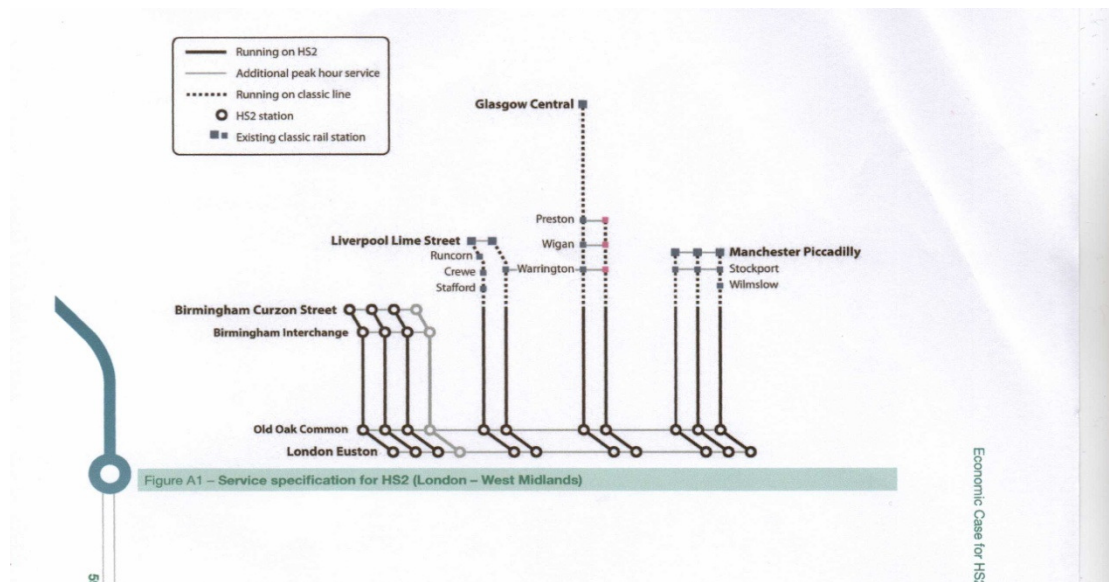
8.4 **However, detailed analysis of the service patterns published in the consultation documentation shows that for a number of key flows HS2 provides less capacity than now.**

Phase 1 Plans (2026)

8.5 The biggest passenger flow on the West Coast Main Line is between London and Manchester. There are three trains an hour today. The Government has already committed to lengthen 31 out of 52 Pendolino trains from 9 to 11 cars from 2012, also to buy 4 new 11 car trains. Each 11 car train will then have 589 seats, giving up to 1,767 seats per hour.

8.6 When HS2 Phase 1 is scheduled to be complete in 2026, the published plans still only show three trains per hour, as set in the supporting document “*The Economic case for HS2*”,¹ and shown in the following figure.

FIGURE 8.1 SERVICE SPECIFICATION FOR HS2



source: The Economic Case for HS2

8.7 The proposed high speed trains to Manchester run on HS2 as far as its junction with the existing route north of Lichfield, then on the existing network between Lichfield and Manchester. HS2 Ltd’s documentation states that the trains will be in units which each have 550 seats². On services which operate throughout on the new route (only London – Birmingham in Phase 1), these can be operated in pairs, giving 1,100 seats per train. But services which operate partly over existing routes will be formed of one unit only, as two unit trains would be much too long for all the stations, and could only be accommodated with massive expenditure and disruption. This is confirmed in HS2’s own documentation:

¹ <http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/hs2-economic-case.pdf>, pg. 59

²

<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2Ltd/technicalappendix/pdf/report.pdf> HS2 Technical Appendix December 2009, Appendix 2: Day 1 Train Service assumptions for demand Modelling para 3.2

“Under the provisional service specification ... classic-compatible high speed services would operate on HS2 and the classic network between London and destinations further north. All would be formed of 200m units, capable of carrying 550 passengers”³

- 8.8 So for Phase 1, from 2026 until at least 2032/3 (assuming Phase 2 is built), HS2 plan to provide 3 x 550 seats to Manchester, a total of 1,650 seats an hour, **a reduction of 6.6 per cent on the total from 2012** compared with the capacity provided by 11 car Pendolino sets. However, HS2 forecast passenger growth of 209% by 2043, which gives pro-rata growth of 107% by 2026, more than double the “base” number of passengers, whilst at the same time claiming HS2 reduces overcrowding. This is not credible.
- 8.9 The Department of Transport (DfT) may seek to argue that the service assumptions are only illustrative, and more trains could be operated to Manchester. In addition to the three trains routed via HS2, the documentation published in March 2010 indicated that there would be one train remaining on the existing route, to serve intermediate flows such as Milton Keynes to Manchester and Stoke-on-Trent to London. So there would be four London trains an hour to Manchester, but one will be much slower and is assumed only to carry intermediate traffic.
- 8.10 This part of the network is already heavily congested, and in its evaluation of alternatives for upgrading the existing network, DfT argue that it would be necessary to spend £1.6 billion on work to increase capacity north of Lichfield⁴ to enable operation of four trains an hour to Manchester, although HS2 explicitly state this isn’t needed for their four trains an hour, as no costs for this work are included in their estimates:

“[Stafford] It is assumed that some infrastructure/signalling works have taken place in the Stafford area to alleviate this known capacity constraint...[Manchester Hub] It is assumed that works have taken place in Manchester to alleviate the congestion of the rail routes into/through

³ High Speed Rail for Britain – a Report by High Speed 2 Ltd, Page 147, Para 3.10.17
<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2Ltd/hs2report/>

⁴ <http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/hsr-strategic-alternative.pdf>
Page 41, WCML scenario B items B1 and B4

Manchester, including the provision of additional capacity at Manchester Piccadilly.⁵

8.11 It is simply not credible for DfT to claim that the HS2 service to Manchester could be increased to the six or more trains an hour which would be needed to carry their forecast passenger numbers without major expenditure on the existing network.

8.12 HS2 Ltd's own documentation also makes clear that the proposed high speed service pattern for Preston and Glasgow does not provide sufficient capacity to meet their demand forecasts:

"In modelling these services we identified high levels of demand resulting in some severe crowding during the peak. In reality there would be a number of ways in which to deal with this, which could include a reconfiguration of the timetable or minor upgrades to the route. These options would require further detailed analysis and planning but for simplicity we have modelled 400m-long trains on this route⁶"

8.13 While the capacity shortfall to Manchester should be resolved when Phase 2 is completed, Glasgow services would continue to be operated by single unit trains.

Phase 2 Plans (2032/3)

8.14 While completion of Phase 2 would enable operation of two unit trains to Manchester, the Phase 2 plans are also fundamentally flawed. The "Service specification assumptions for the Y network" are set out in *The Economic case for HS2⁷*, as shown in Figure 8.2.

8.15 The specification shows a total of 18 trains an hour, which is above the realistic maximum capacity of the route, as set out in Chapter 4 "HS2 Route Capacity and Reliability".

⁵ Technical Appendices, Appendix 2, para 2.20, 2.21

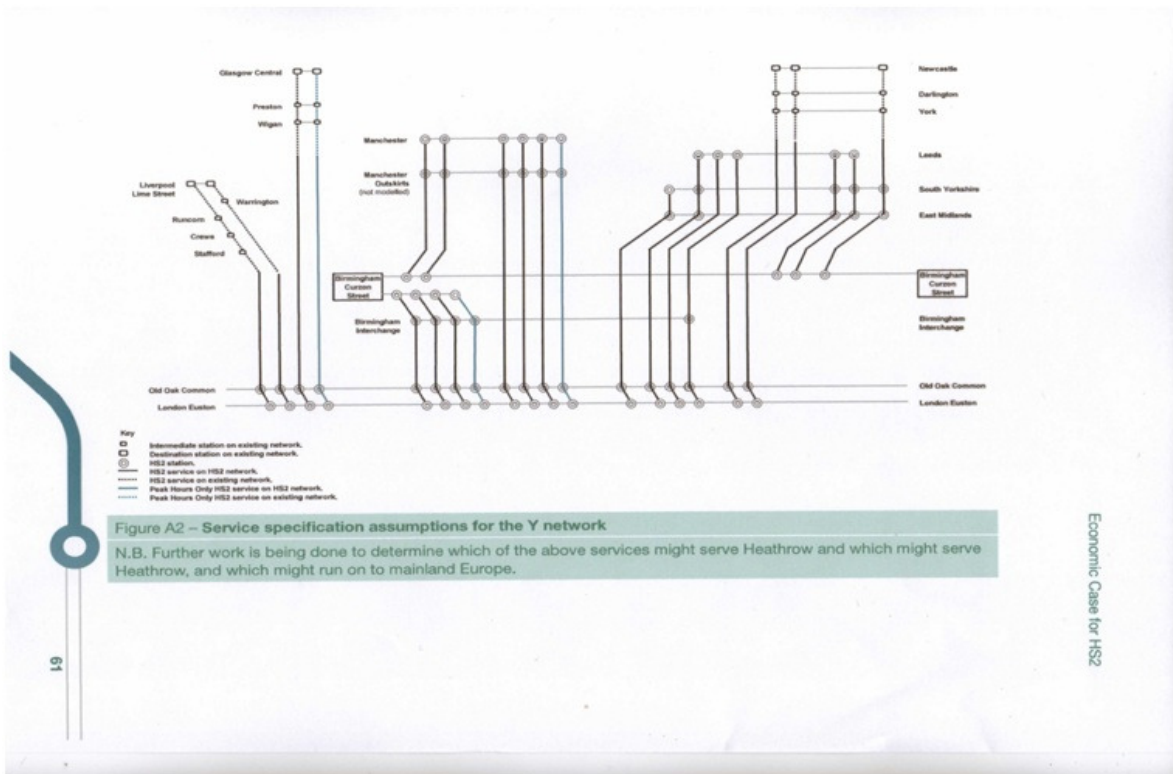
<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2ltd/technicalappendix/pdf/report.pdf>

⁶ High Speed Rail for Britain – a Report by High Speed 2 Ltd, Page 147, Para 3.10.17 c

<http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2ltd/hs2report/>

⁷ <http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/hs2-economic-case.pdf>, pg. 61

FIGURE 8.2 ECONOMIC CASE FOR HS2 (FEBRUARY 2011, PAGE 61)



- The main consultation document shows journey times from London to Edinburgh reduced to 3 hours 30 minutes (on page 20), but the service pattern shows no services to Edinburgh.
- The pattern only shows two trains an hour to York, Darlington and Newcastle. But there are two trains an hour today, and these are typically the busiest services on the East Coast Main line. When the new IEP trains recently announced by Philip Hammond are introduced, seating capacity per train will be 649 seats, giving 1,298 seats per hour, yet in 2033 DfT propose to have only 2 x 550 seat trains per hour, giving 1,100 seats, which is a **reduction of 15 per cent** on the IEP capacity, despite forecast growth of over 200 per cent.
- The actual number of London services overall will also ultimately be significantly less than set out in the service specification, as this doesn't take into account the proposed links to HS1 and Heathrow. This is clear from the note on the bottom of the annex:

“Further work is being done to determine which of the above services might serve Heathrow.....and which might run on to mainland Europe”.

8.16 Services to HS1 and Heathrow cannot, of course, serve Euston as well.

Delays to Increased Capacity

- 8.17 DfT's consultation documents make clear that the case for HS2 is based on an assumption that no further investment is made to enhance capacity on any of the routes ultimately affected beyond schemes which are already committed.
- 8.18 This approach condemns existing passengers to progressively increasing overcrowding on specific parts of the network where this is already a problem. A prime example is the commuter service between Northampton, Milton Keynes and Euston, where there is high growth and already significant overcrowding – in the evening peak period, it is necessary to join fast services up to fifteen minutes before departure to be certain of getting a seat, with passengers standing for a minimum of thirty minutes, often longer. Yet there is potential to implement improvements on an incremental basis, for example by construction of a grade separated junction south of Milton Keynes which, together with higher performance new rolling stock, would allow commuter capacity to Milton Keynes and Northampton to be doubled.
- 8.19 Action is urgently needed on these flows. DfT's own documentation ("Rail Package 2") demonstrates that this approach is realistic and deliverable, and improvements could be delivered in about five year's time if the decision to do so was taken now. But with HS2, there will be no capacity increase until 2026.
- 8.20 The position on the Midland and East Coast Main Line Routes is much worse: no capacity increase until 2032/3 at best. For the Midland Main Line, Network Rail's "Network RUS – Electrification"⁸, published in October 2009, claims that there is a financial case for electrification, the only route evaluated for which this was claimed. But the Secretary of State has already indicated his approach in answer to questions in the House of Commons from Members with constituencies served by the Midland Main Line following his statement on electrification of the Great Western Main Line:

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http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/network/working%20group%204%20-%20electrification%20strategy/networkrus_electrification.pdf

“The announcement today does not include provision for the Midland Main Line. The hon. Gentleman mentioned bi-mode trains, and I am sure that he has also been lobbying for the electrification of the line, as have many other midlands Members. The debate about the line’s future also has to take account of the implications of High Speed 2, however. Once the High Speed 2 consultation, which began yesterday, has been completed and the Government have announced their definitive plans later this year, it will be much easier to plan for the long-term future of the midland main line.”

- 8.21 It is important to recognise that if promises are made to address this lack of investment in capacity in the classic network, the cost, benefits and implications should be included within the HS2 base case, which will have a detrimental effect on the overall business case.

Reductions to Classic Services

- 8.22 It is not possible to be definitive on the impact of HS2 on the train services on individual towns and cities at this stage, but it is clear from experience in other countries such as Japan, France and Spain that train services on the “classic” main lines affected will be reduced (see chapter 3). Given that the HS2 business case assumes that all long distance travel between the cities served by HS2 transfers to the high speed line, this is inevitable: it would clearly not be sustainable to continue to operate a twenty minute frequency service between Manchester and London on the existing route when the trains no longer carry end to end traffic.

- 8.23 This is confirmed in the HS2 consultation documentation:

“we have also assumed an adjusted service pattern on the WCML, with the withdrawal and adjustment of some long distance services...”⁹

and

“In addition we can reasonably assume that there would be a reduction in long distance services on the Midland and East Coast Main Lines as the new high speed services were introduced”¹⁰

and significant savings in operating costs as a result of these service reductions are included in the overall business case for the Y network, at a total Net Present Value of £5.4 billion¹¹.

⁹ Economic Case for HS2 February 2011 Page 27 para 4.2.4

¹⁰ Economic Case for HS2 February 2011 Page 11 para 2.2.7

8.24 The current consultation document is silent on the detail of the services to be operated on the classic routes after HS2 is opened. However, this information was provided for Phase 1 in documents published by the previous government in March 2010¹² (Figure 9.2). It is unlikely that there has been any change to the assumptions used in the business Case for Phase 1 since then.

8.25 Nevertheless, the broad direction of changes is clear:

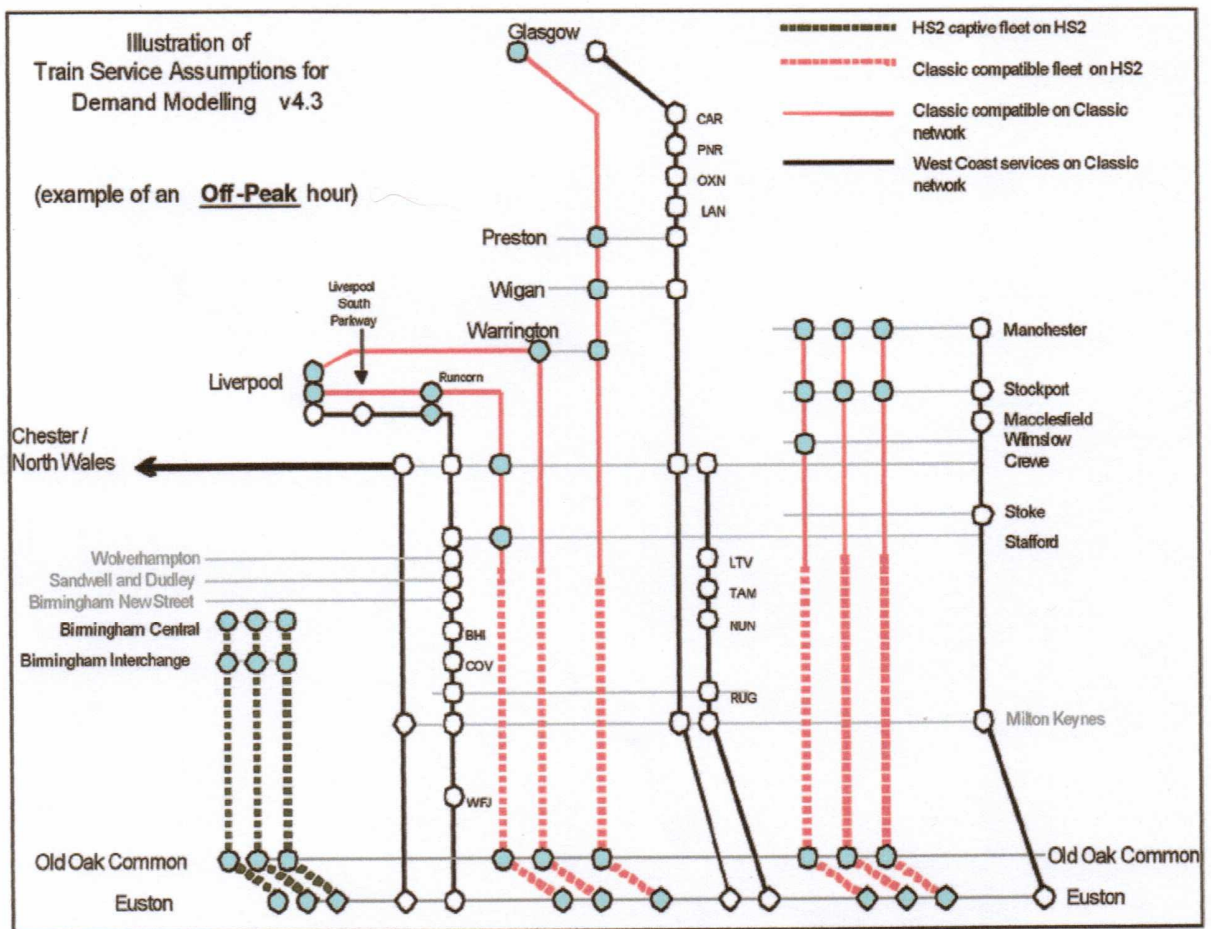
- The cities directly served by HS2 (Birmingham, Manchester and Leeds) will benefit from faster journey times. Similarly, passengers able to access HS2's Parkway stations will also benefit.
- Some major stations on existing routes are certain to see a reduction in frequency in their services to and from London, and also in many cases slower journey times as a result of additional intermediate stops. Examples are Coventry, Wolverhampton and Stoke-on-Trent (Phase 1) and Leicester, Chesterfield, Peterborough and Doncaster (Phase 2)
- Whilst London, Birmingham, Manchester and Leeds are planned or expected to have city HS2 stations close to the city centre, Sheffield and Nottingham/Derby will only have "Parkway" stations. For many passengers, the additional access time to reach these stations will dilute the time savings as a result of HS2. In addition, the Parkway stations will inevitably be less well integrated with the cities' local public transport networks (bus, tram and rail).
- Towns which are served by interchange at key city centre stations will in many cases have a disbenefit, either as a result of less frequent and slower connecting services to London, or the need to transfer between stations to access the HS2 network. For example, passengers on the West Midlands suburban network will have the choice of either using the remaining London services on the existing route or making a transfer between Birmingham New Street and the new HS2 Curzon Street terminus, a walk of about ten minutes.

11 Confirmed by email from HS2 Ltd to HS2 Action Alliance 12th April 2011

12 Day 1 train service assumptions for demand modelling, High Speed " technical appendices 11th March 2010

FIGURE 8.3 DAY 1 TRAIN SERVICE ASSUMPTIONS FOR DEMAND MODELLING

Appendix A: Illustration of off-peak hour services



source: High Speed 2 "Technical Appendices" 11th March 2010

Potential Impact on Great Western Main Line Services

- 8.26 It is likely that all GWML trains will have to call at Old Oak Common as a consequence of the proposed stops in Heathrow Express services. This would increase **all** journey times to and from Paddington by 4/5 minutes, but would have limited value for interchange for long distance services. For example, after completion of Phase 1, Bristol – Birmingham journeys would still be very much faster by the half hourly direct service (86 minutes against 158 minutes, allowing 20 minutes for interchange at Old Oak Common). Even after completion of Phase 2, the hourly direct Bristol – Manchester service is still faster than interchanging at Old Oak Common (179 minutes against 182 minutes).
- 8.27 This issue is discussed in more detail in Chapter 9.

Impacts by Station

- 8.28 The impacts by station for those parts of Britain which are directly affected in one way or another by HS2 are set out in the following tables. For Phase 1, the service patterns are based on the March 2010 documentation (Table 8.1); for phase 2, the indicative HS2 pattern has been taken as a base (Table 8.2), with judgements made on the likely pattern of residual services.

Conclusions

- On the basis of the published documentation, cities such as Manchester (Phase 1), and Newcastle will have the capacity of their London train services reduced when HS2 is completed.
- HS2 also acknowledge that capacity on the Preston/Glasgow route is inadequate to meet forecast demand.
- The documentation shows that some of the services specified to and from London will in fact be diverted to Heathrow or HS1, reducing the actual capacity available to London.
- The assumed route capacity is unrealistically high, as set out in Chapter 4. This will further reduce the available capacity.
- The above capacity reductions will inevitably massively reduce the claimed revenue and transport user benefits for HS2.
- Towns and cities not directly served by HS2 can expect to see a deterioration in their London InterCity services, reflecting the major

savings for classic route service reductions included in the HS2 business case. Any replacement of these services would have a significant impact on the £5.4 billion operating cost saving assumed in the HS2 business case.

TABLE 8.1 ALTERNATIVE HS2 IMPACTS – PHASE 1

All services will be subject to disruption during the reconstruction of Euston station and its approaches; there will be no capacity increases before 2026 other than for already committed schemes. Major “losers” highlighted in yellow.

Station	Impact
Milton Keynes Northampton	<ol style="list-style-type: none"> 1. Potential Doubling of Commuter Capacity from C2016 not Taken Forward in Advance of HS2 2. Significant Capacity Improvement from 2026, Subject to Affordability
Rugby	<ol style="list-style-type: none"> 1. Potential Service Improvements on the Existing Route not Taken Forward in Advance of HS2 2. Possible Capacity and Frequency Improvements from 2026, Subject to Affordability 3. Present Hourly Non-Stop Service Replaced by Two Trains An Hour, but Making 1/2 Stops
Coventry	Frequency Reduced from 3 to 1 Train per Hour from 2026, with Journey Times Extended by 10 Minutes, as Trains Stop At Rugby, Milton Keynes and Watford Junction
Birmingham International	<ol style="list-style-type: none"> 1. “Parkway” Function Effectively Taken Over by Birmingham Interchange from 2026 2. Frequency Reduced from 3 to 1 Train per Hour from 2026, with Journey Times Extended by 10 Minutes, as Trains Shown to Stop At Rugby, Milton Keynes and Watford Junction
Birmingham Curzon Street	<ol style="list-style-type: none"> 1. High Speed Service with 33-35 Minute Journey Time Saving. 2. 3 Trains per Hour
West Midlands Suburban Network Via Birmingham New Street	<ol style="list-style-type: none"> 1. Implications For Connections with the West Midlands Suburban Network - Frequency Reduced from 3 to 1 Train per Hour from 2026, with Journey Times Extended by 10 Minutes, as Trains Stop At Rugby, Milton Keynes and Watford Junction. 2. High Speed Alternatives Available by Transfer to the HS2 Curzon Street Terminus

Station	Impact
Sandwell and Dudley Wolverhampton	Frequency Unchanged. Journey Times Extended by 10 Minutes
Shrewsbury, Wrexham and Mid Wales	<ol style="list-style-type: none"> Journey Time For Connecting Services from Wolverhampton and Birmingham New Street Increased by 10 Minutes, and Frequency from Birmingham New Street Reduced from 3 to 1 Trains an Hour. Transfer from New Street to Curzon Street Available as a Faster Alternative
Nuneaton, Tamworth, Lichfield	<ol style="list-style-type: none"> Potential Service Improvements on the Existing Route not Taken Forward in Advance of HS2 Possible Journey Time Improvements from 2026, as Trains Are Shown to Make Fewer Stops En Route
Stafford Crewe	<ol style="list-style-type: none"> Potential Service Improvements on the Existing Route not Taken Forward in Advance of HS2 C20 Minute Journey Time Improvement from 2026
Stoke-on Trent	<ol style="list-style-type: none"> No High Speed Service Proposed Frequency Reduced from 2 to 1 Train per Hour Average Journey Time Lengthened Slightly
Macclesfield	Average Journey Time Lengthened Slightly
Wilmslow	<ol style="list-style-type: none"> Frequency Hourly, as Now Journey Time Reduced by C20 Minutes
Manchester Stockport	<ol style="list-style-type: none"> C20 Minute Reduction in Journey Times Three Trains an Hour Via HS2, One Via the Classic Route A Reduction in Overall Capacity on the Route, from 1767 Seats to 1650 Seats per Hour, Despite Network

Station	Impact
	Rail's Forecasts That This Route Would Have the Highest Growth. ¹³ 4. Issues of Access to the Local Transport Network Unclear Until Station Site is Determined
Runcorn	1. Frequency Hourly, as Now 2. Journey Time Reduced by C20 Minutes
Liverpool Lime Street Warrington	1. C15 - 20 Minute Reduction in Journey Times 2. Frequency Increased to Two Trains per Hour
Wigan	1. Frequency Hourly, as Now 2. Journey Time Reduced by C20 Minutes
Preston	1. Hourly HS2 Service, with Journey Time Reduction of C20 Minutes 2. Hourly Classic Service
Lancaster, Oxenholme, Penrith, Carlisle	1. No Through Service Via HS2 2. Hourly Classic Service 3. HS2 Can be Used by Interchange At Preston
Glasgow	1. Hourly HS2 Service, with Journey Time Reduction of C20 Minutes 2. Hourly Classic Service
North Wales Via Crewe	No Significant Change – Existing Through Services Shown to Continue

¹³ This assumes 550 seats for HS2 units, as set out in the consultation documentation, and 589 seats for 11 car Pendolino sets

TABLE 8.2 ALTERNATIVE HS2 IMPACTS – PHASE 2

No additional capacity provided on either the Midland main line or the East Coast Main line prior to completion of Phase 2 in 2032/3 at the earliest - major “losers” highlighted in yellow.

	Station	Impact
West Coast Main Line	Milton Keynes, Northampton Rugby Coventry Birmingham International West Midlands Suburban Network Sandwell and Dudley Wolverhampton Shrewsbury, Wrexham and Mid Wales Nunueaton, Tamworth, Lichfield Stafford, Crewe Stoke-on-Trent Macclesfield	No Change to Phase 1 Impacts
	Wilmslow	Parkway Function Effectively Taken Over by “Manchester Outskirts” Station – Impact Dependent on Location of this

	Station	Impact
	Stockport	<ol style="list-style-type: none"> 1. “Manchester Outskirts” Station Potentially Substitutes For Stockport Stops 2. Loss of Local Transport Interchange
	Manchester	<ol style="list-style-type: none"> 1. Three High Speed Trains an Hour (Four In Peak Periods) 2. Potential Major Capacity Increase Using Dedicated High Speed Sets (Can be 1100 Seats Per Train) 3. c55 Minute Journey Time on Present Times (c35 Minute Reduction on Phase 1) 4. Issues of Access to the Local Transport Network Unclear until Station Site is Determined
	Runcorn Liverpool Lime Street	No Change to Phase 1 Impacts (Main Consultation Paper Implies A Further Reduction In Journey Times to Liverpool, but the Service Specification Assumptions Show Liverpool Services Still Leaving HS2 at Lichfield and Calling at Stafford)
	Warrington	<ol style="list-style-type: none"> 1. <i>Possible Reduction In Frequency – Service Specification Assumptions Show Only One Train an Hour</i> 2. Journey Times Unchanged From Phase 1
	Wigan	<ol style="list-style-type: none"> 1. Frequency Hourly, as now 2. Journey Time Reduced by c55 Minutes
	Preston	<ol style="list-style-type: none"> 1. Hourly HS2 Service, with Journey Time Reduction of c55 Minutes 2. Assumed Hourly Classic Service, as For Phase 1
	Lancaster, Oxenholme,	<ol style="list-style-type: none"> 1. No Through Service Via HS2

	Station	Impact
	Penrith, Carlisle	2. Assumed Hourly Classic Service, as For Phase 1 3. HS2 Can be Used by Interchange at Preston
	Glasgow	Hourly HS2 Service, with Journey Time Reduction of c55 Minutes
	North Wales Via Crewe	No Change to Phase 1 Impacts
Midland Main Line	Station	Impact
	Luton Luton Airport Parkway Bedford	No Significant Impact – Significant Additional Capacity Provided as a Result of the Thameslink Project
	Wellingborough Kettering Corby	1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2 2. Potential Capacity Improvements From 2032/3, Reflecting Transfer of Longer Distance Journeys to HS2
	Market Harborough	1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2 2. Potential Capacity Improvements From 2032/3, Reflecting Transfer of Longer Distance Journeys to HS2
	Leicester	1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2 2. Service Frequency and Journey Times Likely to Deteriorate on Completion of Phase 2 – Leicester Currently Has Four London Trains an Hour, Two of Which are Non-Stop
	Loughborough	1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken

	Station	Impact
		<p>Forward In Advance of HS2</p> <p>2. Service Frequency and Journey Times Likely to Deteriorate on Completion of Phase 2 – Loughborough Currently has Two London Trains an Hour, One of which only Stops at Leicester</p> <p>3. HS2 East Midlands Station Potentially Substitutes For Loughborough Stops</p>
	Nottingham Derby	<p>1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2</p> <p>2. Significant Journey Time Improvements From HST East Midlands Station</p> <p>3. Reduced Frequency and Increased Journey Times For Existing City Centre Stations</p> <p>4. Loss of Local Transport Interchange</p>
	Sheffield	<p>1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2</p> <p>2. Significant Journey Time Improvements From HST South Yorkshire Station (C52 Minutes)</p> <p>3. Reduced Frequency and Increased Journey Times For Existing City Centre Station</p> <p>4. Loss of Local Transport Interchange</p>
	Chesterfield	<p>1. Electrification, Journey Time Reductions and Increase In Capacity Not Taken Forward In Advance of HS2</p> <p>2. Service Frequency and Journey Times Likely to Deteriorate on Completion of Phase 2 – Chesterfield Currently has Two Trains an Hour, Non-Stop between Leicester and London</p>
East Coast Main Line Note: The Journey Time Savings For ECML Claimed In the Consultation Document	Peterborough	Service Frequency Likely to Deteriorate on Completion of Phase 2 –Peterborough Typically has Three/Four Fast Trains an Hour
	Grantham	Possible Frequency and Capacity Improvements Following Transfer of Longer Distance Passengers to HS2

	Station	Impact
Are Overstated, as These Do Not Reflect the Acceleration to be Implemented In May 2011	Newark	
	Doncaster	<ol style="list-style-type: none"> 1. Service Frequency and Journey Times Likely to Deteriorate on Completion of Phase 2 2. South Yorkshire HS2 Station may be an Attractive Substitute, Depending on Its Location
	Wakefield	Service Frequency and Journey Times on the Existing Route Likely to Deteriorate on Completion of Phase 2
	Leeds	<ol style="list-style-type: none"> 1. Three High Speed Trains an Hour 2. Potential Major Capacity Increase Using Dedicated High Speed Sets (can be 1,100 Seats Per Train) 3. c55 Minute Journey Time Reduction on Present Times 4. Issues of Access to the Local Transport Network Unclear Until Station Site is Determined
	York Darlington Durham Newcastle	<ol style="list-style-type: none"> 1. Two High Speed Trains an Hour –No Capacity Increase on Present Service 2. c15 Minute Journey Time Reduction to Newcastle on May 2011 Times
	Berwick on Tweed Edinburgh	<ol style="list-style-type: none"> 1. Service Assumption Does Not Show any Trains North of Newcastle, Despite Journey Time Reductions Claimed In the Main Consultation Paper 2. No Capacity Increase on Present Service 3. C50 Minute Journey Time Reduction on Present Times¹⁴

¹⁴ The basis of the journey time savings claimed to Edinburgh are unclear, and inconsistent with the times to Newcastle. The timings may assume operation by WCML, although DfT's service specification assumptions do not show trains to Edinburgh by either route