HSUK TRANSPENNINE RAIL STRATEGY : WOODHEAD CORRIDOR RESTORATION

INTRODUCTION

The Pennine range represents probably the greatest physical obstacle to transport connectivity in the UK. Its roads and railways, vital for regional prosperity on both sides of the Pennines, are severely congested, and lack the capacity either to accommodate anticipated future growth, or to offer a resilient service when disruption occurs. All this has massive implications for both regional and national economic growth. This issue was ignored in the original (2010) HS2 proposals for the London-centric 'Y', and was only belatedly acknowledged (2014) with the launch of the HS3/Northern Powerhouse initiative. Proposals for Northern Powerhouse Rail, first released in January 2018 and confirmed in February 2019, fail to meet the journey time and routeing targets set by 'One North' in 2014; this leaves High Speed UK as the only credible proposals for improved trans-Pennine links. The abandoned Woodhead route presents a unique opportunity to transform transpennine and national rail connectivity; the following diagrams set out the HSUK vision for a multi-stakeholder restoration proposal that will cater for the multiple requirements of passengers and freight, on local and longer-distance journeys. For precise details of the core High Speed UK proposals (as included in the cost estimates), see the HSUK Regional Maps on www.highspeeduk.co.uk.

TPW1 : TRANSPENNINE RAIL SYSTEMS – PRE-1923 GROUPING

Northern communities to the east and the west of the Pennines were linked by 5 principal routes, all operated by separate companies, respectively (from south to north):

- Hope Valley (Midland, linking Sheffield Midland and Manchester Central),
- Woodhead (Great Central, linking Sheffield Victoria and Manchester Piccadilly),
- Diggle (London North-Western, linking Leeds New and Manchester Exchange),
- Calder Valley (Lancashire & Yorkshire, linking Leeds Central/Bradford Exchange and Manchester Victoria), and
- Skipton-Colne (Midland and Lancashire & Yorkshire, linking Leeds Wellington Street/Bradford Forster Square and East Lancashire towns).

Although the existence of multiple routes between the primary cities of the North was to be welcomed, connectivity was greatly compromised by the duplication of terminals (only partially mitigated by the fact that New and Wellington Street stations in Leeds were adjacent, likewise Exchange and Victoria stations in Manchester). With high demand from both passenger and freight traffic, capacity on these routes was enhanced by substantial 4-tracking; in the case of the London North-Western's Diggle route, most of its length comprised 4 tracks, achieved either by on-line widening or by the construction of parallel loops.

TPW2 : ORIGINAL ELECTRIFIED ROUTE & ONWARD LINK TO MERSEYSIDE

The Woodhead route comprised the first rail link between Manchester and Sheffield. It opened in 1846, long predating the present Hope Valley route (1894). It was electrified after the Second World War, and at the time comprised the primary passenger route (from Sheffield Victoria to Manchester Piccadilly) and freight route (from the Yorkshire coalfield to Lancashire power stations). The diagram illustrates the core electrified sections of route, and the onward freight route via the Tiviotdale line, following the Mersey Valley through Stockport. The Woodhead route was closed to passengers in 1970, and to freight in 1981.

TPW3 : EXISTING TRANSPENNINE RAIL ROUTES

This diagram shows the abandoned Woodhead corridor in relation to the 3 transpennine routes currently in operation. Trains on transpennine routes are slow and often crowded, and service levels compare poorly with intercity routes to London. Leeds and Manchester are still connected by the Calder Valley and Diggle routes, although the latter has been reduced to 2 tracks, with 4-track sections eliminated and both the Spen Valley loop (aka the Leeds New Line) and the Micklehurst loop abandoned. More critically, Sheffield and Manchester are linked only by the Hope Valley route. This 'single strand' connectivity is unique among close-spaced primary UK city pairs, and compels bus substitution whenever disruption occurs; it is self-evident that a restored Woodhead route would radically improve transpennine connectivity between Greater Manchester and South Yorkshire.

Transpennine connectivity has also been significantly reduced through the closure of the Skipton-Colne line (in 1970), and this has only partially been mitigated by the introduction (in the 1980's) of new Leeds-Bradford-Burnley-Blackburn-Preston services, routed via Hebden Bridge in the Calder Valley. It is significant to note that neither the Skipton-Colne nor the Woodhead routes were proposed for closure by the Beeching report; instead, closure can be attributed to the 'cross-border' nature of both routes, and the lack of a single local authority to champion them.

TPW4 & TPW5 : OFFICIAL PROPOSALS FOR NORTHERN HUB & HS2/NORTHERN POWERHOUSE RAIL

Network Rail's Northern Hub proposals comprise a suite of enhancements to existing routes radiating from Manchester. These are aimed at improving both line speed and line capacity, and will bring significant benefits to transpennine services. But aside from the new Ordsall Chord in central Manchester, no new connectivity will be created, and overall, it is reasonable to categorise the improvements achieved as 'incremental' and still excessively reliant on certain critical sections of existing route. Northern Hub does not represent the step-change enhancement that is proposed for London-centric high speed axes, and it is puzzling that in its supporting documentation for the HS2 project released in 2010, the Government offered Northern Hub as mitigation for the absence of any proposal for a transpennine high speed link. Northern Hub also provides no new cross-Manchester capacity for freight, which must still pass through either Victoria or Piccadilly stations.

Drawings TPW4 & TPW5 chart the development of Northern Powerhouse Rail (NPR), linking the principal cities of the Northern Powerhouse. As noted previously, transpennine NPR proposals are based on the HS2 'Y' configuration – which is focussed upon Birmingham and London, and lacks any transpennine dimension. This can be seen in HS2's current proposals for terminus stations, at both Leeds and Manchester; in both their configuration as termini, and in the alignment of the approach routes, these proposals introduce huge inefficiencies into the provision of efficient high speed links between the principal cities of the North. To meet the 30 minute journey time specification of the 'One North' initiative (originally promoted by the city councils of Liverpool, Manchester, Sheffield, Leeds and Newcastle and adopted by Transport for the North) on both Manchester-Leeds and Manchester-Sheffield routes, 2 separate new transpennine lines, each with tunnels over 30km long, will be required.

TPW6 : ALTERNATIVE TRANSPENNINE STRATEGY : HIGH SPEED UK 'TOTAL TRANSPORT SOLUTION' VIA THE WOODHEAD CORRIDOR

Although current Network Rail plans take no account of the potential of the abandoned Woodhead rail route, it is still evident that both as a route and as a wider development corridor, it offers the greatest possibilities for achieving step-change improvements in transpennine rail connectivity. The interests of the multiple stakeholders – passengers and freight, on local and longer-distance journeys – create a requirement for a balanced 'Total Transport Solution' addressing all needs. This diagram sets out the key strands of the Total Transport Solution:

- High speed intercity passenger services linking Liverpool and Manchester to other primary cities (ie London, Leicester, Nottingham, Sheffield, Leeds, Newcastle, Edinburgh and Glasgow) along east-sided Anglo-Scottish spine route, as per High Speed UK proposals.
- Lorry shuttles linking M60 to M1, to assist road haulage between Greater Manchester and South Yorkshire and thus eliminate HGV congestion on A628(T) Woodhead road (and other Trans-Peak routes).
- Longer-haul container flows from East and West Coast ports.
- Local passenger flows between Greater Manchester, Pennine and South Yorkshire communities.

TPW7 : WOODHEAD CORRIDOR RESTORATION : PROPOSED HIGH SPEED PASSENGER SERVICES

A transpennine high speed rail connection is crucial to creating a symmetric and comprehensive national network of high speed lines. It is the key differentiating element in the High Speed UK proposals, permitting multi-billion savings and radically improved rail connectivity, compared with the alternative HS2 proposals. HSUK's transpennine route is crucial in enabling all primary UK cities to be interlinked by hourly (or more frequent) high speed services.

The cost savings, amounting to over £20 billion pounds, circa 33%, accrue through High Speed UK's shorter overall route length, lesser need for tunnelled construction, and general avoidance of sensitive rural areas, in the Chilterns and elsewhere, through close adherence to existing transport corridors. It should be noted that these savings apply even with the major civil engineering works necessary to establish a high speed (ie 200/250km/h locally) route through the Pennines, with major upgrade to the existing Woodhead tunnels, and several kilometres of new tunnel and viaduct required where curves on the existing Woodhead route are too tight. There will be minor intrusion into adjoining areas of Peak District National Park, principally impacting upon the Victorian reservoirs in Longdendale; and this must be balanced against the major local environmental improvements achieved with other aspects of the proposal, in particular the M1/M60 lorry shuttle.

The HSUK proposals have now been developed to include a new through route via Manchester Airport, connecting the airport to HSUK and other trunk routes to east and west of the airport and giving direct airport access to most major communities of the North (see Diagram TPW13). These connections, together with HSUK's comprehensive intercity links, satisfy all the connectivity and journey time requirements of the 'One North' initiative promoted by the city councils of Liverpool, Manchester, Sheffield, Leeds and Newcastle. These journey time requirements have since been adopted in the Government's Northern Powerhouse initiative.

TPW8 & TPW9 : WOODHEAD CORRIDOR RESTORATION : PROPOSED LORRY SHUTTLE SERVICES & TRUNK HGV BANS ON TRANS-PEAK ROADS

With only the M62 providing a highly congested transpennine motorway link via West Yorkshire, lorry flows between Greater Manchester and South Yorkshire are compelled to use inadequate trunk roads, in particular the A628(T) Woodhead road. This causes major congestion and disruption in local communities, particularly in Longdendale; this in turn creates a demand for new road construction with the ultimate logical conclusion of a 'Trans-Peak' motorway to complement the M62 to the north. This can only be realised with huge environmental damage within the Peak District National Park. Restoration of the Woodhead route – to a structure gauge larger than that required for European double-decker rolling stock - offers a unique opportunity to transfer the critical lorry flows (and possibly cars also) onto a 'Shuttle' operation, similar to the Channel Tunnel or Alpine passes. This would connect a terminal at Bredbury on the M60 with Tinsley on the M1.

With this link in place, it would be possible to implement lorry bans (for trunk flows) on all Trans-Peak roads ie Greenfield-Holmfirth (A635), Woodhead (A628T), Snake (A57), Peak Forest (A623T) & Buxton-Matlock (A6). Aside from local economic and environmental benefits, this would also effect major reductions in transport CO_2 emissions.

TPW10 : WOODHEAD CORRIDOR RESTORATION : PROPOSED LONG-HAUL FREIGHT ROUTES

A restored Woodhead route will hugely benefit long-haul railfreight flows. Existing routes lack both the route capacity and the physical size (in tunnels and bridges) to accommodate 9'6" marine containers on standard wagons. This hugely limits the hinterland of Northern ports (Liverpool on the west coast, Immingham, Hull & Teesport on the east coast), with major impacts upon Northern economic activity. Restoration of Woodhead, along with restoration of routes bypassing Manchester along the Mersey Valley, will provide the required step-change enhancement in both line capacity and structure profile.

This raises the tantalising possibility of coast-to-coast freight links, with a 'land-bridge' operation in which containers on Transatlantic mega-carriers might be landed at Liverpool, transferred by rail to an east coast port, and loaded aboard smaller ships en route to Scandinavia and the Baltic. This 'bulk-breaking' operation normally takes place at Rotterdam, but could equally well occur in the UK, with major savings in shipping times and costs.

TPW11 : WOODHEAD CORRIDOR RESTORATION : PROPOSED LOCAL PASSENGER SERVICES

The engineering works required to establish an enhanced Woodhead rail corridor will inevitably cause a degree of disruption and environmental nuisance to local residents, as well as some permanent intrusion arising from the operation of intensive rail traffic. Community support will be essential, and it is important to recognise that not all local residents suffer immediate impacts from traffic congestion along the route of the A628T. Community benefits will be maximised through reintroduction of local passenger services, linking east Manchester and Longdendale to employment opportunities in South Yorkshire, and likewise from Barnsley and Penistone to Greater Manchester. New passenger services, extending as far east as Barnsley, would act as a spur to the restoration of the abandoned Dearne Valley route from Barnsley to Mexborough; and with this link in place, a new transpennine link, running Manchester-Glossop-Penistone-Barnsley-Mexborough-Doncaster would become feasible.

TPW12 : KEY INFRASTRUCTURE WORKS ASSOCIATED WITH WOODHEAD RAIL CORRIDOR RESTORATION

Restoration of the Woodhead corridor will attract major new transpennine traffic flows to the railway, and this will create pressure for development elsewhere in the region. The greatest priority will be to facilitate east-west flows across Manchester, and to achieve superior intercity/high speed links to Manchester Airport. This diagram sets out the key rail infrastructure enhancements necessary to transform trans-Pennine rail connectivity:

- South Manchester freight bypass via Tiviotdale route through Stockport, and connecting back to Liverpool and Manchester route via Glazebrook.
- South Manchester Loop created by a) upgrading of existing Guide Bridge-Stockport line, b) new link to Manchester Airport from Stockport-Crewe line, following route of A555, c) new-build route west of airport to Altrincham, and d) returning via restored routes through Glazebrook to HSUK route to Liverpool. See below.
- Skipton-Colne restoration to create new transpennine link.

TPW13 : ENHANCED RAIL CONNECTIVITY TO MANCHESTER AIRPORT

To improve intercity access to Manchester Airport, a new link is proposed from the Stockport-Crewe line. This will extend to the west of the airport (thereby transforming the airport's terminus into a through station), and return via Altrincham and Glazebrook to the HSUK main route to Liverpool. This South Manchester Loop will enable direct access to Manchester Airport from all primary cities of the North (ie Liverpool, Manchester, Sheffield, Leeds and Newcastle, as required by the One North initiative) and also a large range of more local connections, with most second-tier cities also directly linked to Manchester Airport. These greatly increased train movements through Manchester Airport are of course only possible with through operation, rather than the terminating operation that currently applies.

The HSUK proposals for improved rail links to Manchester Airport will also have the highly beneficial effect of enhancing hub function at Stockport. The national intercity timetable developed by HSUK shows Stockport achieving 'Top 21' connectivity, with direct links to 20 other principal towns and cities including all 12 UK primary cities.

WOODHEAD RAIL CORRIDOR RESTORATION

TRANSPENNINE RAIL SYSTEMS – PRE-1923 GROUPING

KEY

- PRINCIPAL/SECONDARY
- TERTIARY/LOCAL STATION
- GREAT NORTHERN
- NORTH-EASTERN
- MIDLAND
- GREAT CENTRAL
- LONDON NORTH-WESTERN
- LANCASHIRE & YORKSHIRE
- CHESHIRE LINES COMMITTEE

DIAGRAM TPW 1

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BARNOLDSWICK
COLNE
SKIPTON
AIREDALE
OXENHOPE
GUISELEY
SHIPLEY
BRADFORD
FORSTER SQUARE
EXCHANGE
LEEDS
CENTRAL
WELLINGTON STREET
NEW
ORIGINAL MIDLAND TERMINUS AT HUNSLET LANE FROM 1840 TO 1846, THEN SUPERSEDED BY WELLINGTON STREET
LEEDS NEW LINE
SKIPTON COLNE ROUTE
BLACKBURN
ACCRINGTON
BURNLEY
HALIFAX
CALDER VALLEY ROUTE
HEBDEN BRIDGE
TODMORDEN
SPEN VALLEY
CASTLEFORD
WAKEFIELD
DEWSBURY
WESTGATE
KIRKGATE
PONTEFRACT
BRIGHOUSE
HUDDERSFIELD
KIRKBURTON
BOLTON
BURY
HEYWOOD
ROCHDALE
LEIGH
OLDHAM
CLAYTON WEST
DIGGLE ROUTE
WOODHEAD ROUTE
SALFORD
EXCHANGE/ VICTORIA
CENTRAL
PICCADILLY
STALYBRIDGE
MICKLEHURST LOOP
HYDE
PENISTONE
BARNSLEY
GLOSSOP
LONGDENDALE
MARPLE
VICTORIA
MIDLAND
SHEFFIELD
ROTHERHAM
ALTRINCHAM
STOCKPORT
CHAPEL en le FRITH
HOPE VALLEY ROUTE
BUXTON

TRANSPENNINE ROUTES

CALDER VALLEY	LANCASHIRE & YORKSHIRE
DIGGLE	LONDON NORTH WESTERN
WOODHEAD	GREAT CENTRAL
HOPE VALLEY	MIDLAND

DIAGRAM TPW 2
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WOODHEAD RAIL CORRIDOR RESTORATION

ORIGINAL ELECTRIFIED ROUTE & ONWARD LINK TO MERSEYSIDE (c. 1965)

CLITHEROE
BARNOLDSWICK
COLNE
SKIPTON
AIREDALE
OXENHOPE
SKIPTON COLNE ROUTE
GUISELEY
LEEDS BRADFORD AIRPORT
SHIPLEY
BRADFORD
FORSTER SQUARE
EXCHANGE
LEEDS
CENTRAL
CITY
BLACKBURN
ACCRINGTON
BURNLEY
HEBDEN BRIDGE
CALDER VALLEY ROUTE
HALIFAX
SPEN VALLEY
CASTLE -FORD
TODMORDEN
DEWSBURY
WAKEFIELD
WESTGATE
KIRKGATE
PONTEFRACT
BRIGHOUSE
BOLTON
ROCHDALE
BURY
HEYWOOD
HUDDERSFIELD
DIGGLE ROUTE
ELECTRIFIED WOODHEAD ROUTE LINKING SHEFFIELD VICTORIA TO MANCHESTER PICCADILLY & WATH YARD TO MOTTRAM EXCHANGE SIDINGS
OLDHAM
SALFORD
EXCHANGE/ VICTORIA
CENTRAL
PICCADILLY
STALYBRIDGE
WOODHEAD ROUTE
PENISTONE
BARNSLEY
WATH YARD
MOTTRAM EXCHANGE SIDINGS
HYDE
LONGDENDALE
GLOSSOP
ROTHERHAM
VICTORIA
SHEFFIELD
MIDLAND
MARPLE
HOPE VALLEY ROUTE
ALTRINCHAM
STOCKPORT
CHAPEL en le FRITH
FREIGHT ROUTE EXTENDING TO LANCASHIRE POWER STATIONS & PORTS
MANCHESTER AIRPORT
BUXTON

KEY

PRINCIPAL/SECONDARY
TERTIARY/LOCAL STATION
SKIPTON-COLNE ROUTE
CALDER VALLEY ROUTE
DIGGLE ROUTE
WOODHEAD ROUTE
HOPE VALLEY ROUTE
ABANDONED ROUTE
MANCHESTER METROLINK

TRANSPENNINE
RAIL CONNECTIVITY

CURRENT & ABANDONED TRANSPENNINE ROUTES

DIAGRAM TPW 3
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BARNOLDSWICK
COLNE
SKIPTON
AIREDALE
OXENHOPE
GUISELEY
LEEDS BRADFORD AIRPORT
SHIPLEY
BRADFORD
FORSTER SQUARE
INTERCHANGE
LEEDS CITY
BLACKBURN
ACCRINGTON
BURNLEY
HEBDEN BRIDGE
TODMORDEN
HALIFAX
SPEN VALLEY
CASTLE-FORD
WAKEFIELD
WESTGATE
KIRKGATE
DEWSBURY
PONTEFRACT
BRIGHOUSE
HUDDERSFIELD
BOLTON
BURY
ROCHDALE
OLDHAM
SALFORD
VICTORIA
PICCADILLY
STALYBRIDGE
HYDE
GLOSSOP
MARPLE
ALTRINCHAM
STOCKPORT
MANCHESTER AIRPORT
CHAPEL en le FRITH
BUXTON
PENISTONE
BARNSLEY
WATH YARD
ROTHERHAM
SHEFFIELD
VICTORIA
MIDLAND

SKIPTON-COLNE ROUTE (ABANDONED)

CALDER VALLEY ROUTE

LEEDS NEW LINE (ABANDONED)

MICKLEHURST LOOP (ABANDONED)

DIGGLE ROUTE

WOODHEAD ROUTE (ABANDONED)

ELECTRIFIED WOODHEAD ROUTE LINKING SHEFFIELD VICTORIA TO MANCHESTER PICCADILLY & WATH YARD TO MOTTRAM EXCHANGE SIDINGS CLOSED IN 1981

ALL EAST-WEST ROUTES BYPASSING CENTRAL MANCHESTER ABANDONED

MOTTRAM EXCHANGE SIDINGS

PEAK DISTRICT NATIONAL PARK

HOPE VALLEY ROUTE

DIAGRAM TPW 4

TRANSPENNINE
RAIL CONNECTIVITY

OFFICIAL PROPOSALS FOR HS2 & NORTHERN HUB – DATED JUNE 2015

CLITHEROE
COLNE
SKIPTON
AIREDALE
OXENHOPE
GUISELEY
LEEDS BRADFORD AIRPORT
SHIPLEY
NORTH-EAST (projected future phase of HS2/NPR)
YORK & ECML
BLACKBURN
ACCRINGTON
BURNLEY
FORSTER SQUARE
INTERCHANGE
BRADFORD
LEEDS CITY
ROUTES PROPOSED FOR ENHANCEMENT UNDER 'NORTHERN HUB' PROGRAMME SHOWN GREEN
HALIFAX
HEBDEN BRIDGE
TODMORDEN
HS2 NEW LANE TERMINUS REMOTE FROM EXISTING LEEDS CITY STATION
SPEN VALLEY
CASTLE-FORD
WAKEFIELD
POTENTIAL NPR LINK ALONG MANCHESTER-LEEDS 'NORTH TRANSPENNINE' AXIS, EXTENDING TO LIVERPOOL AND TO NEWCASTLE/HULL
BRIGHOUSE
WESTGATE
KIRKGATE
DEWSBURY
PONTE-FRACT
BOLTON
ROCHDALE
BURY
HEYWOOD
HUDDERSFIELD
HS2 - DEDICATED HIGH SPEED ROUTE
POTENTIAL NPR LINKS FROM LEEDS & SHEFFIELD TO HULL STILL UNDEFINED
NEW ORDSALL CHORD
OLDHAM
SALFORD
VICTORIA
STALYBRIDGE
POTENTIAL NPR LINK ALONG LIVERPOOL-MANCHESTER AXIS
PENISTONE
BARNSLEY
12km LONG TUNNEL ON SOUTHERN APPROACH TO MANCHESTER
PICCADILLY
HYDE
POTENTIAL NPR LINK ALONG MANCHESTER-SHEFFIELD 'SOUTH TRANSPENNINE' AXIS
GLOSSOP
SCOTLAND
MEADOWHALL
ROTHERHAM
MARPLE
SHEFFIELD
ALTRINCHAM
HS2
MIDLAND
NPR LINK FROM MEADOWHALL TO CENTRAL SHEFFIELD
STOCKPORT
CHAPEL en le FRITH
HS2 MANCHESTER AIRPORT STATION LOCATED CIRCA 2km FROM TERMINALS. SHUTTLE CONNECTION PRESUMED
LONDON & BIRMINGHAM
BUXTON
LONDON & BIRMINGHAM

DIAGRAM TPW 5

TRANSPENNINE RAIL CONNECTIVITY

CURRENT PROPOSALS FOR HS2 & HS3/NORTHERN POWERHOUSE RAIL (2019)

CLITHEROE
COLNE
SKIPTON
AIREDALE
OXENHOPE
GUISELEY
LEEDS BRADFORD AIRPORT
SHIPLEY
NORTH-EAST (projected future phase of HS2/NPR)
YORK & ECML
BLACKBURN
ACCRINGTON
BURNLEY
FORSTER SQUARE
BRADFORD INTERCHANGE
LEEDS CITY
NO OFFICIAL COMMITMENT TO NPR ROUTE AS SHOWN VIA CENTRAL BRADFORD STATION
ROUTES PROPOSED FOR ENHANCEMENT UNDER 'NORTHERN HUB' PROGRAMME SHOWN GREEN
HEBDEN BRIDGE
HALIFAX
ALTERNATIVE NPR ALIGNMENT c/w PARKWAY STATION NEAR LOW MOOR/M62
SPEN VALLEY
HS2 TERMINUS PLATFORMS INTEGRATED WITH EXISTING STATION
CASTLE-FORD
TODMORDEN
WAKEFIELD
BRIGHOUSE
WESTGATE
KIRKGATE
DEWSBURY
PONTEFRACT
REVERSE ENGINEERING BY HSUK INDICATES PRIMARY INTERVENTIONS AS FOLLOWS FOR 30 MINUTE NPR JOURNEY TIME FROM LEEDS TO MANCHESTER VIA BRADFORD:
a) AIRE VALLEY LINE 4-TRACKED
b) NEW 33km LONG TUNNEL WITH NEW UNDERGROUND BRADFORD STATION
c) ROCHDALE-MANCHESTER LINE 4-TRACKED
d) NEW WORKS IN MANCHESTER - EITHER CROSS-CITY TUNNEL OR SURFACE LINK TO HS2 TERMINUS - TO JOIN HS2 SPUR TO MANCHESTER
ROCHDALE
BOLTON
BURY
HEYWOOD
MIRFIELD
HUDDERSFIELD
HS2 DEDICATED HIGH SPEED ROUTE
CROSS-CITY TUNNEL NO LONGER PREFERRED
OLDHAM
4-TRACKING FROM SHEFFIELD TO THURNSCOE ESSENTIAL TO ACHIEVE 30 MINUTE SHEFFIELD-LEEDS JOURNEY TIME & MAINTAIN CAPACITY FOR LOCAL SERVICES & FREIGHT
POTENTIAL NPR LINKS FROM LEEDS & SHEFFIELD TO HULL STILL UNDEFINED
MOOR-THORPE
POTENTIAL NPR LINK TO LIVERPOOL SCHEMED TO RUN VIA MANCHESTER AIRPORT
SALFORD
VICTORIA
PENISTONE
THURNSCOE
12km LONG TUNNEL ON SOUTHERN APPROACH OF HS2 SPUR TO MANCHESTER
STALYBRIDGE
PICCADILLY
BARNSLEY
HYDE
ANALYSIS OF EXISTING HOPE VALLEY ROUTES (VIA BOTH MARPLE & STOCKPORT, SHOWN BLUE) INDICATES NO PRACTICABLE OPTION FOR ROUTE UPGRADES TO ACHIEVE 30 MINUTE NPR MANCHESTER-SHEFFIELD JOURNEY TIME OTHER THAN NEW TUNNEL 33km LONG
MEX-BORO'
CONIS-BRO'
GLOSSOP
MEADOWHALL
SCOTLAND
HS2
LIVER-POOL
ALTRINCHAM
MARPLE
HOPE VALLEY ROUTE
ROTHERHAM
SHEFFIELD
MIDLAND
MAJOR DEMOLITION OF RESIDENTIAL PROPERTY AT MEXBOROUGH
STOCKPORT
CHAPEL en le FRITH
HS2 MANCHESTER AIRPORT STATION LOCATED CIRCA 2km FROM TERMINALS. SHUTTLE CONNECTION PRESUMED
HS2 ROUTES TO LONDON & BIRMINGHAM
LONDON & BIRMINGHAM
BUXTON

KEY

EXISTING/NEW STATION

NEW WOODHEAD SERVICES:

LOCAL PASSENGER

HIGH SPEED PASSENGER

M1-M60 LORRY SHUTTLE

TRANSPENNINE RAILFREIGHT

DIAGRAM TPW 6

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WOODHEAD RAIL CORRIDOR RESTORATION

ALTERNATIVE TOTAL TRANSPORT SOLUTION

NEW TRANSPENNINE TUNNEL IN UPGRADED ROUTE OFFERING 30 min BRADFORD-MANCHESTER TIMING

LOCAL PASSENGER SERVICES

HIGH SPEED RAIL ROUTE

LORRY SHUTTLE SERVICES

RAILFREIGHT

(ONLY PRINCIPAL FEEDER ROUTES HIGHLIGHTED)

HSUK TUNNELS (OTHER THAN WOODHEAD & CROSS-MANCHESTER) NOT ILLUSTRATED, FOR CLARITY

WOODHEAD TUNNELS

SKIPTON

AIREDALE

COLNE

LEEDS BRADFORD AIRPORT

SHIPLEY

BRADFORD

LEEDS CITY

BLACKBURN

ACCRINGTON

BURNLEY

HALIFAX

HEBDEN BRIDGE

TODMORDEN

SPEN VALLEY

CASTLE-FORD

WAKEFIELD KIRKGATE

WESTGATE

DEWSBURY

BRIGHOUSE

PONTEFRACT

BOLTON

BURY

ROCHDALE

HUDDERSFIELD

OLDHAM

SALFORD

VICTORIA

PICCADILLY

HYDE

PENISTONE

BARNSLEY

BREDBURY LORRY SHUTTLE

GLAZEBROOK

GLOSSOP

LONGDENDALE

MARPLE

STOCKPORT

ALTRINCHAM

MANCHESTER AIRPORT

BUXTON

SHEFFIELD

ROTHERHAM

TINSLEY LORRY SHUTTLE

WOODHEAD RAIL CORRIDOR RESTORATION

PROPOSED HIGH SPEED PASSENGER SERVICES

DIAGRAM WCR 7

KEY

- HSUK NETWORK & HUBS WITH HS LINKS TO LONDON AT HOURLY OR BETTER FREQUENCY
- HSUK SERVICE OPERATING AT 2-HOURLY FREQUENCY

HSUK AIREDALE SERVICE EXTENDS TO EAST LANCS & PRESTON VIA RESTORED SKIPTON-COLNE ROUTE

HIGH SPEED UK TRANS-PENNINE SERVICES VIA SKIPTON AND HEBDEN BRIDGE OPERATE ALTERNATELY AT 2-HOUR FREQUENCY

BRADFORD CROSSRAIL IMPLEMENTED WITH NEW CENTRAL STATION

HSUK SERVICES TO HARROGATE AT 2-HOUR FREQUENCY

SCOTLAND & NORTH-EAST

HULL

PRESTON & FYLDE

HIGH SPEED UK APPROACHES MANCHESTER PICCADILLY ALONG UPGRADED EXISTING RAIL ROUTES WITH ONWARD ROUTE TO LIVERPOOL VIA TUNNELLED PLATFORMS AT PICCADILLY

LIVERPOOL & N.WALES

SOUTH MANCHESTER LOOP TO MANCHESTER AIRPORT VIA STOCKPORT & ALTRINCHAM

BIRMINGHAM & LONDON

DONCASTER

LONDON, BIRMINGHAM & NOTTINGHAM

SKIPTON
AIREDALE
COLNE
SHIPLEY
LEEDS BRADFORD AIRPORT
BRADFORD
LEEDS
BLACKBURN
ACCRINGTON
BURNLEY
HEBDEN BRIDGE
TODMORDEN
HALIFAX
SPEN VALLEY
CASTLE-FORD
WAKEFIELD
KIRKGATE
WESTGATE
DEWSBURY
KIRKLEES INTERCHANGE
BRIGHOUSE
PONTEFRACT
HUDDERSFIELD
BOLTON
BURY
ROCHDALE
OLDHAM
SALFORD
VICTORIA
PICCADILLY
STALYBRIDGE
GUIDE BRIDGE
HYDE
PENISTONE
BARNSLEY
GLAZEBROOK
GLOSSOP
LONGDENDALE
MEADOWHALL
VICTORIA
ROTHERHAM
MARPLE
SHEFFIELD
MIDLAND
STOCKPORT
ALTRINCHAM
BUXTON

KEY

- DEDICATED HIGH SPEED LINE
- LORRY SHUTTLE SERVICE & TERMINALS (BREDBURY & TINSLEY)
- MOTORWAY
- RESTORED/NEW/UPGRADED ROUTE

DIAGRAM TPW 8

WOODHEAD RAIL CORRIDOR RESTORATION

PROPOSED LORRY SHUTTLE SERVICES

SKIPTON
AIREDALE
COLNE
LEEDS BRADFORD AIRPORT
SHIPLEY
BRADFORD
LEEDS
BLACKBURN
M65
ACCRINGTON
BURNLEY
M1
HALIFAX
HEBDEN BRIDGE
SPEN VALLEY
CASTLE-FORD
M62
TODMORDEN
DEWSBURY
WAKEFIELD
KIRKGATE
WESTGATE
BRIGHOUSE
PONTEFRACT
BOLTON
ROCHDALE
M62
HUDDERSFIELD
BURY
M60
OLDHAM
A635
PENISTONE
BARNSLEY
SALFORD
VICTORIA
PICCADILLY
HYDE
M67
A628T
BREDBURY
LORRY SHUTTLE
GLAZEBROOK
GLOSSOP
LONGDENDALE
MEADOWHALL
VICTORIA
M60
MARPLE
A57
ROTHERHAM
ALTRINCHAM
STOCKPORT
SHEFFIELD
TINSLEY
LORRY SHUTTLE
M18
MIDLAND
M56
A623T
BUXTON
M1

KEY

- DEDICATED HIGH SPEED LINE
- LORRY SHUTTLE SERVICE & TERMINALS (BREDBURY & TINSLEY)
- MOTORWAY
- RESTORED/NEW/UPGRADED ROUTE

DIAGRAM TPW 9

WOODHEAD RAIL CORRIDOR RESTORATION

TRUNK HGV BANS ON TRANSPEAK ROADS

SKIPTON
AIREDALE
COLNE
BLACKBURN
M65
ACCRINGTON
BURNLEY
SHIPLEY
LEEDS BRADFORD AIRPORT
BRADFORD
LEEDS
M1
HALIFAX
HEBDEN BRIDGE
TODMORDEN
SPEN VALLEY
M62
CASTLE-FORD
DEWSBURY
WAKEFIELD
KIRKGATE
WESTGATE
PONTEFRACT
BRIGHOUSE
BOLTON
BURY
ROCHDALE
M62
HUDDERSFIELD
TRUNK HGV BANS ON ALL TRANS-PEAK ROADS
M60
OLDHAM
A635
PENISTONE
BARNSLEY
SALFORD
VICTORIA
PICCADILLY
HYDE
M67
A628T
BREDBURY LORRY SHUTTLE
GLAZEBROOK
GLOSSOP
LONGDENDALE
MEADOWHALL
VICTORIA
M60
MARPLE
A57
SHEFFIELD
ROTHERHAM
TINSLEY LORRY SHUTTLE
M18
ALTRINCHAM
STOCKPORT
MIDLAND
M56
A623T
BUXTON
M1

WOODHEAD RAIL CORRIDOR RESTORATION

TRANSPENNINE FREIGHT ROUTES VIA WOODHEAD

KEY
- DEDICATED HIGH SPEED LINE
- TRUNK FREIGHT ROUTE & YARD
- FREIGHT ROUTE CAPABLE OF UP-GRADE TO CONTINENTAL GAUGE
- RESTORED/NEW/UPGRADED ROUTE

DIAGRAM TPW 10
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SKIPTON
AIREDALE
COLNE
SHIPLEY
LEEDS BRADFORD AIRPORT
BRADFORD
LEEDS
BLACKBURN
BURNLEY
ACCRINGTON
HEBDEN BRIDGE
HALIFAX
TODMORDEN
SPEN VALLEY
CASTLE-FORD
EUROPORT
WAKEFIELD
KIRKGATE
WESTGATE
DEWSBURY
BRIGHOUSE
PONTEFRACT
BOLTON
BURY
ROCHDALE
HUDDERSFIELD
OLDHAM
SALFORD
VICTORIA
PICCADILLY
STALYBRIDGE
LONGDENDALE
PENISTONE
BARNSLEY
TRAFFORD PARK
GLAZEBROOK
HYDE
GLOSSOP
MARPLE
MEADOWHALL
VICTORIA
ROTHERHAM
STOCKPORT
ALTRINCHAM
MIDLAND
SHEFFIELD
BUXTON

SKIPTON-COLNE RESTORATION CREATES NEW LOW-LEVEL TRANS-PENNINE FREIGHT ROUTE WITH NO CRITICAL TUNNELS

NOTE CAPACITY PROBLEMS AT LEEDS WEST JUNCTION

EXISTING TRANSPENNINE ROUTES ALL W7/W8 GAUGE HENCE UNSUITABLE FOR W10/ W12 CONTAINER TRAFFIC ON STANDARD FLATBED WAGONS

SOUTH MANCHESTER FREIGHT BYPASS LINKING TO WOODHEAD CORRIDOR & ALSO TO CLASSIC HOPE VALLEY & DIGGLE ROUTES

POTENTIAL N-S EUROGAUGE FREIGHT SPINE VIA REDUNDANT YORKSHIRE MIDLAND MAIN LINE & CHESTERFIELD-ROTHERHAM 'OLD ROAD'

TEESPORT & HULL

PRIMARY TRANSPENNINE FREIGHT ROUTE VIA RESTORED WOODHEAD LINE @ EUROGAUGE

RESTORED WOODHEAD ROUTE FORMING COAST-TO-COAST LIVERPOOL TO IMMINGHAM FREIGHT LINK

WCML

LIVERPOOL

HULL & IMMINGHAM

IMMINGHAM

STONE FLOWS FROM PEAK FOREST QUARRIES

SOUTH MANCHESTER FREIGHT BYPASS VIA WOODLEY JN, TIVIOTDALE & MERSEY VALLEY

POTENTIAL MAJOR FREIGHT FACILITY IN TINSLEY AREA???

KEY

DEDICATED HIGH SPEED LINE

TRANSPENNINE LOCAL SERVICE VIA RESTORED WOODHEAD ROUTE

EXISTING/NEW STATION

RESTORED/NEW/UPGRADED ROUTE

DIAGRAM TPW 11

© NETWORK 2020 MAPPING 2021

WOODHEAD RAIL CORRIDOR RESTORATION

LOCAL SERVICES VIA RESTORED WOODHEAD

SKIPTON

EARBY

KELBROOK

FOULRIDGE

COLNE

AIREDALE

LEEDS BRADFORD AIRPORT

SHIPLEY

BRADFORD

LEEDS

CITY

MINSTER

STANNINGLEY

LAISTERDYKE

ARMLEY

BLACKBURN

ACCRINGTON

BURNLEY

HALIFAX

HEBDEN BRIDGE

TODMORDEN

CLECKHEATON

LIVERSEDGE

HECKMONDWIKE

SPEN VALLEY

CASTLE-FORD

WAKEFIELD

KIRKGATE

WESTGATE

PONTEFRACT

DEWSBURY

KIRKLEES INTERCHANGE

BRIGHOUSE

HORBURY BRIDGE

HUDDERSFIELD

BOLTON

BURY

ROCHDALE

LOCAL CROSS-MANCHESTER SERVICES ALSO USE NEW CROSS-MANCHESTER TUNNEL & UNDERGROUND PLATFORMS AT PICCADILLY

DEARNE VALLEY COMMUNITIES RECONNECTED TO RAIL NETWORK

OLDHAM

SALFORD

VICTORIA

PICCADILLY

STALYBRIDGE

DUNFORD BRIDGE

BARNSLEY

WOODHEAD

PENISTONE

STOCKSBRIDGE

DEEPCAR

OUGHTIBRIDGE

MEADOWHALL

HILLSBOROUGH

VICTORIA

ROTHERHAM

SHEFFIELD

MIDLAND

WARRINGTON

GLAZEBROOK

HYDE

HADFIELD

GLOSSOP

LONGDENDALE

DONCASTER

MARPLE

CHAPEL en le FRITH

CHINLEY

STOCKPORT

ALTRINCHAM

BUXTON

HOPE VALLEY LOCAL SERVICES REROUTED VIA CHAPEL-E-L-F, WITH ENHANCED LOCAL/ REGIONAL HUB AT CHINLEY

FOR FULL DETAILS OF NEW STATIONS IN SHEFFIELD AREA SEE HSUK YORKSHIRE RAIL STRATEGY

WOODHEAD RAIL CORRIDOR RESTORATION & ASSOCIATED KEY INFRASTRUCTURE WORKS

KEY
- DEDICATED HIGH SPEED LINE
- UPGRADED EXISTING ROUTE
- NEW ROUTE & NEW STATION
- RESTORED ROUTE
- #24 LINK TO EXISTING NETWORK

DIAGRAM TPW 12
© NETWORK 2020 MAPPING 2021

SKIPTON-COLNE LINE RESTORED TO CREATE NEW TRANSPENNINE RAIL CROSSING

COLNE-BURNLEY LINE RESTORED TO DOUBLE TRACK

SKIPTON
AIREDALE
COLNE
BURNLEY
BLACKBURN
ACCRINGTON

CROSS-BRADFORD RAIL LINK ESTABLISHED WITH NEW CENTRAL STATION

BRADFORD
NEW RAIL LINKS TO LEEDS-BRADFORD AIRPORT
LEEDS BRADFORD AIRPORT
SHIPLEY

4-TRACKING EAST OF LEEDS CITY STATION
SCOTLAND & NORTH-EAST
LEEDS CITY
#58
HULL
MINSTER
#57
#56
NEW NEVILLE HILL - STOURTON LINK TO RELIEVE CONGESTION AT LEEDS CITY STATION

HALIFAX
HEBDEN BRIDGE
TODMORDEN
14km LONG TRANS-PENNINE TUNNEL
CLECKHEATON
LIVERSEDGE
HECKMONDWIKE
SPEN VALLEY
CASTLE-FORD
WAKEFIELD KIRKGATE
#
DEWSBURY
#55
KIRKLEES INTERCHANGE
WESTGATE
PONTEFRACT
BRIGHOUSE

UPGRADES/NEW ROUTES MARKED # TO BE CONSTRUCTED TO ACCOMMODATE CONTINENTAL-SIZED 'EUROGAUGE' ROLLING STOCK

SPEN VALLEY LINE & HORBURY CHORD RESTORED
#54
HUDDERSFIELD
HUDDERSFIELD-PENISTONE LINE REDOUBLED
YORKSHIRE MIDLAND MAIN LINE RESTORED AS PART OF EUROGAUGE FREIGHT SPINE

BOLTON
BURY
ROCHDALE
CROSS-MANCHESTER TUNNEL ALSO USED BY LOCAL SERVICES
VICTORIA-ROCHDALE LINE 4-TRACKED
HIGH SPEED UK APPROACHES MANCHESTER PICCADILLY ALONG UPGRADED EXISTING RAIL ROUTES WITH ONWARD ROUTE TO LIVERPOOL VIA TUNNELLED PLATFORMS AT PICCADILLY
OLDHAM

HIGH SPEED UK ON CLASSIC ALIGNMENT OR NEW ALIGNMENT SPANNING RESERVOIRS
#61
BARNSLEY
DEARNE VALLEY ROUTE RESTORED
SCOTLAND & NORTH-EAST
#19
DONCASTER
PENISTONE
#62
#63
1839 WOODHEAD TUNNELS ENLARGED TO ACCOMMODATE HIGH SPEED TRAINS & LORRY SHUTTLES, NEW TUNNEL ALSO POTENTIALLY REQ[D]
CLASSIC WOODHEAD ROUTE RESTORED
WORSBROUGH VALE ROUTE RESTORED
MEADOWHALL
VICTORIA
#53
#52
ROTHERHAM
SHEFFIELD
MIDLAND
#51
NEW HIGH SPEED STATION AT VICTORIA C/W INTERCHANGE PLATFORMS ON MIDLAND APPROACHES
NOTTINGHAM, LONDON, BIRMINGHAM

LIVERPOOL
SALFORD
VICTORIA
PICCADILLY
#68
#67
#66
#65
#64
NEW TUNNELS BYPASSING BROADBOTTOM & HADFIELD
HYDE
GLAZEBROOK
SOUTH MANCHESTER FREIGHT BYPASS VIA GLAZEBROOK & CULCHETH BRANCH
GUIDE BRIDGE-STOCKPORT ROUTE UPGRADED FOR PRIMARY TRANSPENNINE ROUTE TO MANCHESTER AIRPORT, WITH IMPROVED LOCAL SERVICES ALSO
SOUTH MANCHESTER FREIGHT BYPASS VIA TIVIOTDALE
GLOSSOP
MARPLE
CHAPEL en le FRITH
STOCKPORT
ALTRINCHAM
MANCHESTER AIRPORT TRANSFORMED INTO THROUGH STATION
DIRECT LINK FROM WCML TO MANCHESTER AIRPORT
NEW PASSENGER SERVICES TO CHAPEL-en-le-FRITH FROM HOPE VALLEY ROUTE ALONG UPGRADED FREIGHT LINES
BUXTON

WOODHEAD RAIL CORRIDOR RESTORATION

ENHANCED RAIL LINKS TO MANCHESTER AIRPORT

KEY

- DIRECT SERVICE TO MANCHESTER AIRPORT ON HIGH SPEED LINE/ OTHER ROUTE
- STATION DIRECTLY LINKED TO MANCHESTER AIRPORT

SKIPTON

AIREDALE

COLNE

LEEDS BRADFORD AIRPORT

SHIPLEY

BRADFORD

BRADFORD CROSSRAIL IMPLEMENTED WITH NEW CENTRAL STATION

LEEDS

SCOTLAND & NORTH-EAST

HULL

BLACKBURN

ACCRINGTON

BURNLEY

HALIFAX

HEBDEN BRIDGE

TODMORDEN

SPEN VALLEY

CASTLE-FORD

WAKEFIELD

KIRKGATE

DEWSBURY

KIRKLEES INTERCHANGE

WESTGATE

BRIGHOUSE

PONTEFRACT

PRESTON & FYLDE

BOLTON

BURY

ROCHDALE

TUNNELLED PLATFORMS AT PICCADILLY ALSO ACCESSIBLE TO TRAINS APPROACHING FROM STOCKPORT

HUDDERSFIELD

WIGAN & SOUTHPORT

OLDHAM

LIVERPOOL & N.WALES

SALFORD

VICTORIA

PICCADILLY

STALYBRIDGE

GUIDE BRIDGE

HYDE

PENISTONE

BARNSLEY

GLAZEBROOK

GLOSSOP

LONGDENDALE

MEADOWHALL

VICTORIA

ROTHERHAM

MARPLE

SHEFFIELD

MIDLAND

SOUTH MANCHESTER LOOP TO MANCHESTER AIRPORT VIA STOCKPORT & ALTRINCHAM

ALTRINCHAM

STOCKPORT

CREWE, STOKE & BIRMINGHAM

BUXTON

NOTTINGHAM