

# 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 released in January 2018 fail to meet the journey time and routing 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](http://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 Spenn 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.

HS2 proposals are also shown indicatively; as noted previously, these comprise a 'Y', focussed upon Birmingham and London, and lacking 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 journey time specification of 30 minutes 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<sub>2</sub> 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.

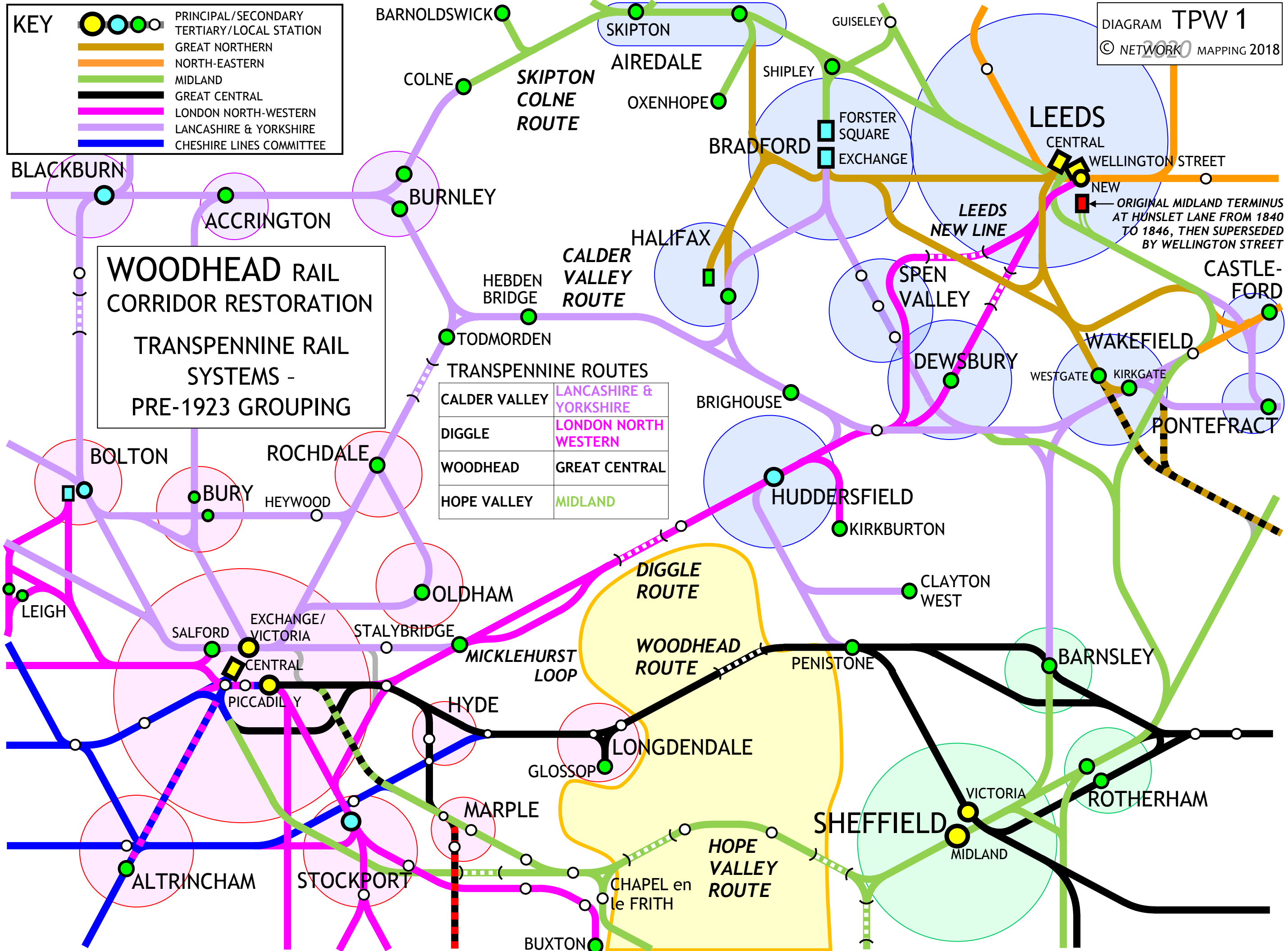
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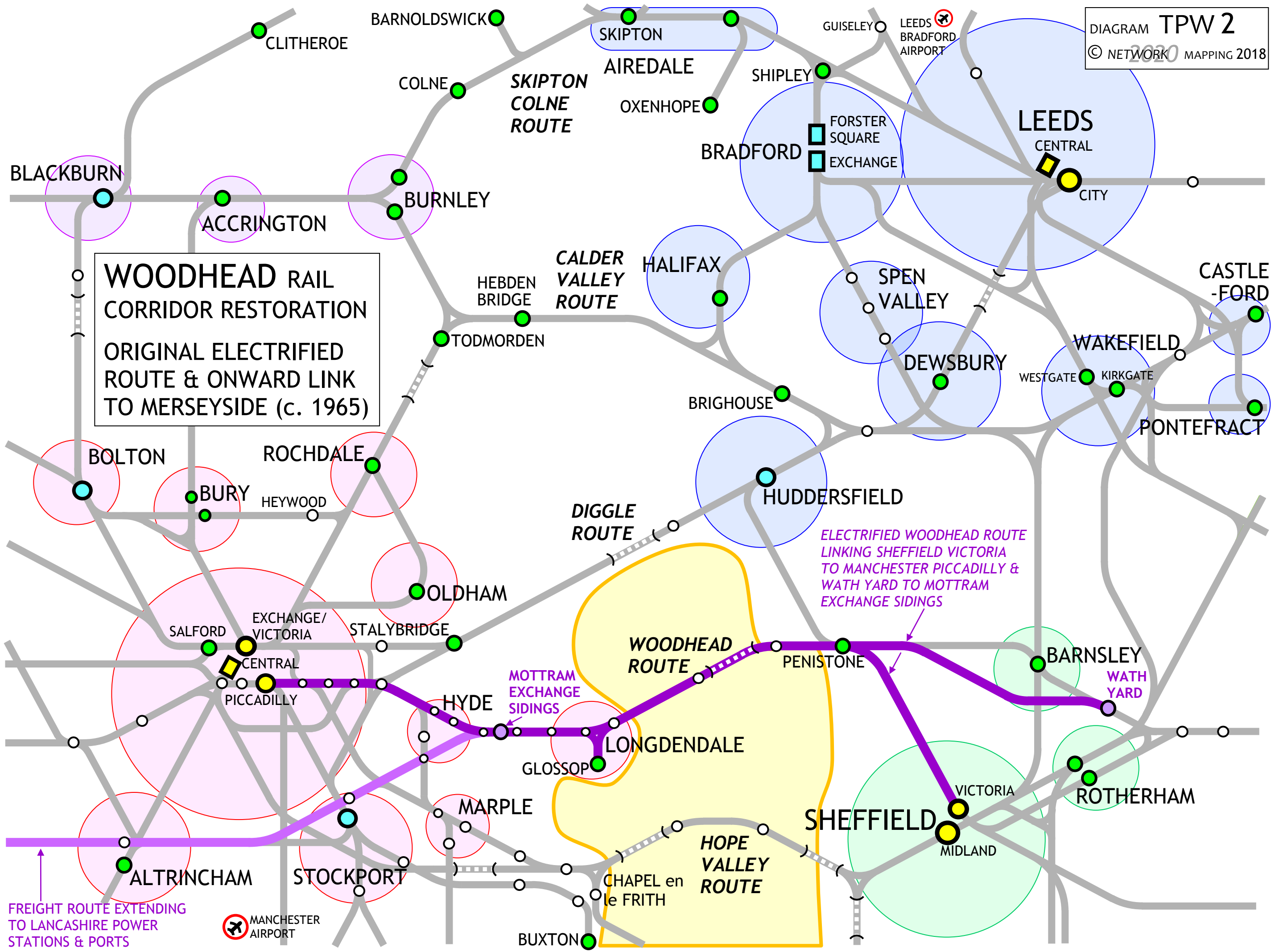
- PRINCIPAL/SECONDARY
- TERTIARY/LOCAL STATION
- 
- 
- 
- GREAT NORTHERN
- NORTH-EASTERN
- MIDLAND
- GREAT CENTRAL
- LONDON NORTH-WESTERN
- LANCASHIRE & YORKSHIRE
- CHESHIRE LINES COMMITTEE

**WOODHEAD RAIL CORRIDOR RESTORATION**  
**TRANSPENNINE RAIL SYSTEMS - PRE-1923 GROUPING**

**TRANSPENNINE ROUTES**

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





**WOODHEAD RAIL CORRIDOR RESTORATION**  
ORIGINAL ELECTRIFIED ROUTE & ONWARD LINK TO MERSEYSIDE (c. 1965)

*ELECTRIFIED WOODHEAD ROUTE LINKING SHEFFIELD VICTORIA TO MANCHESTER PICCADILLY & WATH YARD TO MOTTRAM EXCHANGE SIDINGS*

*FREIGHT ROUTE EXTENDING TO LANCASHIRE POWER STATIONS & PORTS*

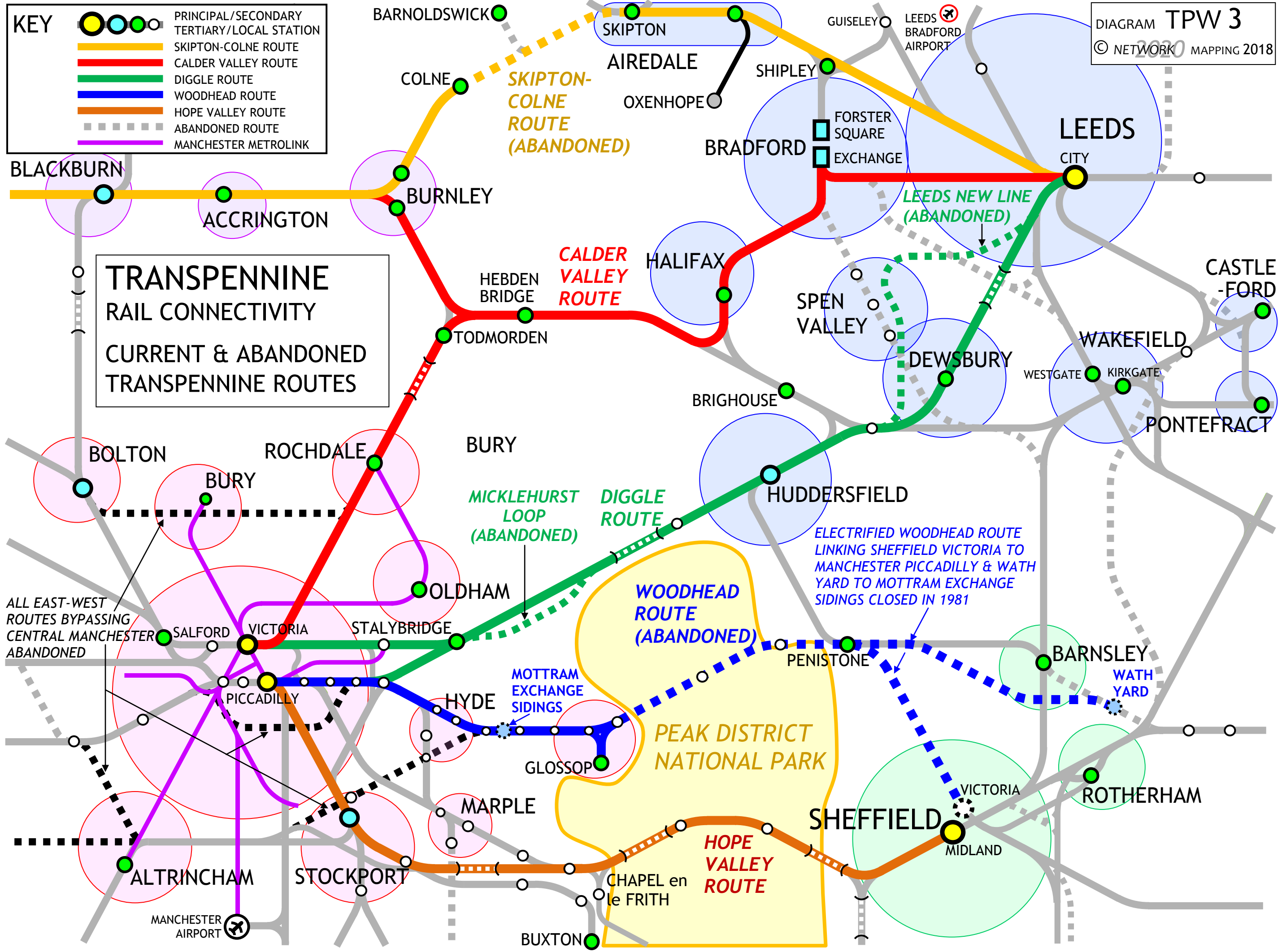


MANCHESTER AIRPORT

**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



ALL EAST-WEST  
 ROUTES BYPASSING  
 CENTRAL MANCHESTER  
 ABANDONED

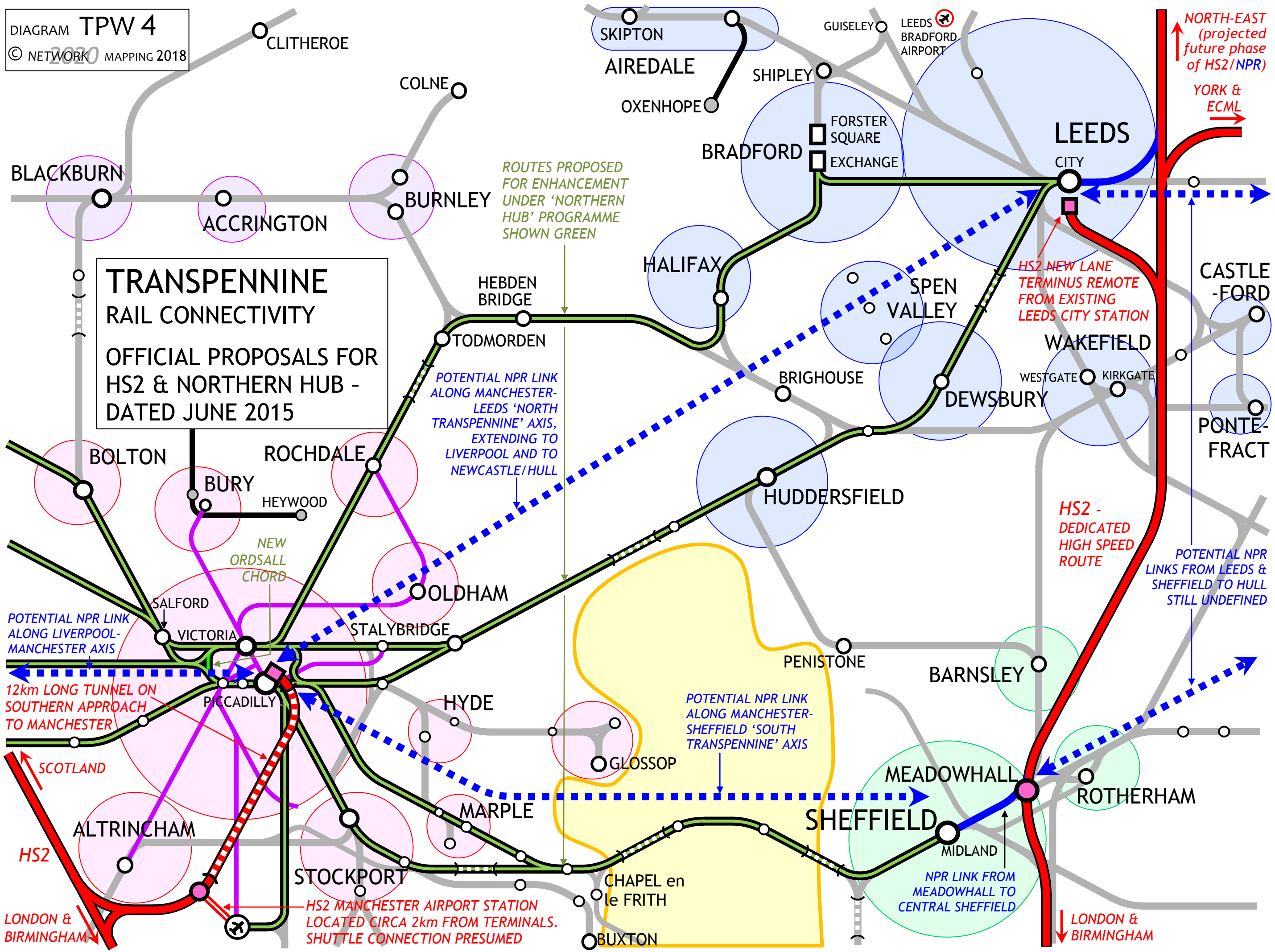
ELECTRIFIED WOODHEAD ROUTE  
 LINKING SHEFFIELD VICTORIA TO  
 MANCHESTER PICCADILLY & WATH  
 YARD TO MOTTRAM EXCHANGE  
 SIDINGS CLOSED IN 1981

WOODHEAD  
 ROUTE  
 (ABANDONED)

PEAK DISTRICT  
 NATIONAL PARK

MANCHESTER  
 AIRPORT

LEEDS  
 BRADFORD  
 AIRPORT



**TRANSPENNINE  
RAIL CONNECTIVITY**  
OFFICIAL PROPOSALS FOR  
HS2 & NORTHERN HUB -  
DATED JUNE 2015

ROUTES PROPOSED FOR ENHANCEMENT UNDER 'NORTHERN HUB' PROGRAMME SHOWN GREEN

POTENTIAL NPR LINK ALONG MANCHESTER-LEEDS 'NORTH TRANSPENNINE' AXIS, EXTENDING TO LIVERPOOL AND TO NEWCASTLE/HULL

POTENTIAL NPR LINK ALONG LIVERPOOL-MANCHESTER AXIS  
12km LONG TUNNEL ON SOUTHERN APPROACH TO MANCHESTER

POTENTIAL NPR LINK ALONG MANCHESTER-SHEFFIELD 'SOUTH TRANSPENNINE' AXIS

NPR LINK FROM MEADOWHALL TO CENTRAL SHEFFIELD

HS2 - DEDICATED HIGH SPEED ROUTE

POTENTIAL NPR LINKS FROM LEEDS & SHEFFIELD TO HULL STILL UNDEFINED

NORTH-EAST (projected future phase of HS2/NPR)

YORK & ECML

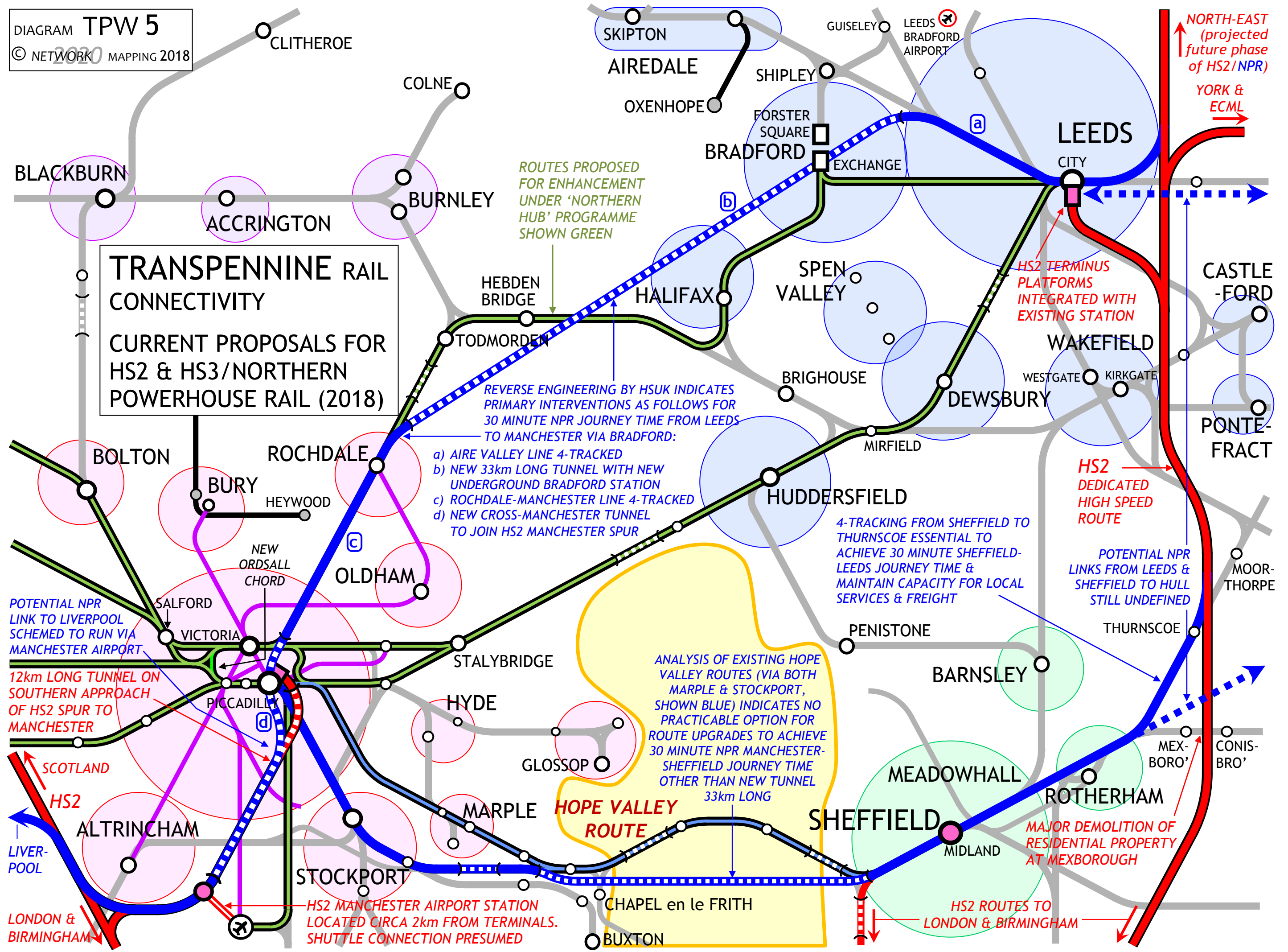
SCOTLAND

LONDON & BIRMINGHAM

LONDON & BIRMINGHAM

# TRANSPENNINE RAIL CONNECTIVITY

## CURRENT PROPOSALS FOR HS2 & HS3/NORTHERN POWERHOUSE RAIL (2018)



ROUTES PROPOSED FOR ENHANCEMENT UNDER 'NORTHERN HUB' PROGRAMME SHOWN GREEN

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 CROSS-MANCHESTER TUNNEL TO JOIN HS2 MANCHESTER SPUR

POTENTIAL NPR LINK TO LIVERPOOL SCHEMED TO RUN VIA MANCHESTER AIRPORT

12km LONG TUNNEL ON SOUTHERN APPROACH OF HS2 SPUR TO MANCHESTER

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

HOPE VALLEY ROUTE

MAJOR DEMOLITION OF RESIDENTIAL PROPERTY AT MEXBOROUGH

HS2 ROUTES TO LONDON & BIRMINGHAM

HS2 DEDICATED HIGH SPEED ROUTE

POTENTIAL NPR LINKS FROM LEEDS & SHEFFIELD TO HULL STILL UNDEFINED

HS2 TERMINUS PLATFORMS INTEGRATED WITH EXISTING STATION

NORTH-EAST (projected future phase of HS2/NPR)

YORK & ECML

SCOTLAND

LIVERPOOL

LONDON & BIRMINGHAM

HS2 MANCHESTER AIRPORT STATION LOCATED CIRCA 2km FROM TERMINALS. SHUTTLE CONNECTION PRESUMED

HS2 ROUTES TO LONDON & BIRMINGHAM



**KEY**

-   EXISTING/NEW STATION
-  LOCAL PASSENGER
-  HIGH SPEED PASSENGER
-  M1-M60 LORRY SHUTTLE
-  TRANSPENNINE RAILFREIGHT

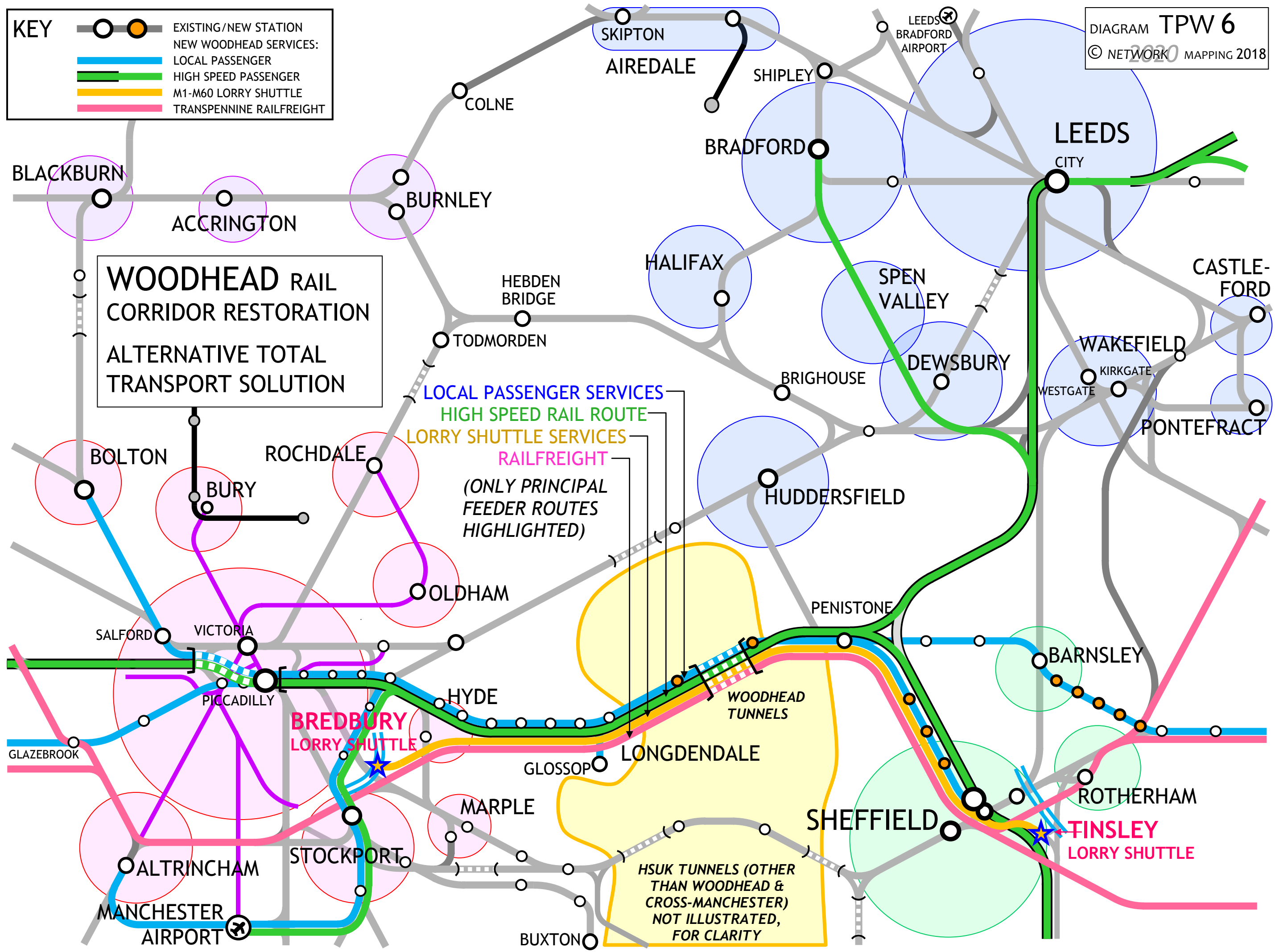
**WOODHEAD RAIL CORRIDOR RESTORATION**  
 ALTERNATIVE TOTAL TRANSPORT SOLUTION

LOCAL PASSENGER SERVICES  
 HIGH SPEED RAIL ROUTE  
 LORRY SHUTTLE SERVICES  
 RAILFREIGHT  
 (ONLY PRINCIPAL FEEDER ROUTES HIGHLIGHTED)

**BREDBURY**  
 LORRY SHUTTLE

**TINSLEY**  
 LORRY SHUTTLE

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

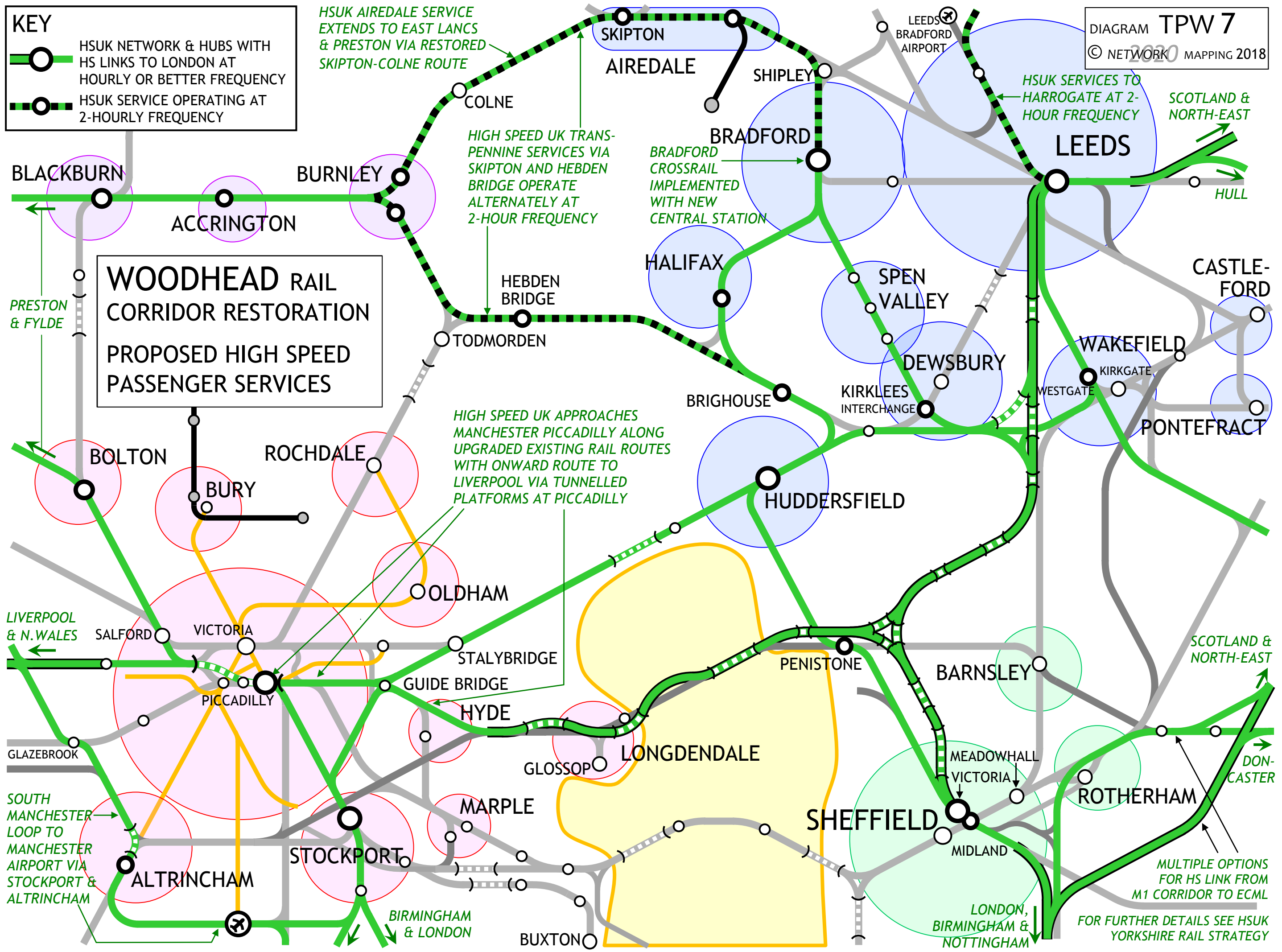


**KEY**

- 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

DIAGRAM TPW 7  
© NETWORK MAPPING 2018



**WOODHEAD RAIL CORRIDOR RESTORATION**  
PROPOSED HIGH SPEED PASSENGER SERVICES

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

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

HSUK SERVICES TO HARROGATE AT 2-HOUR FREQUENCY

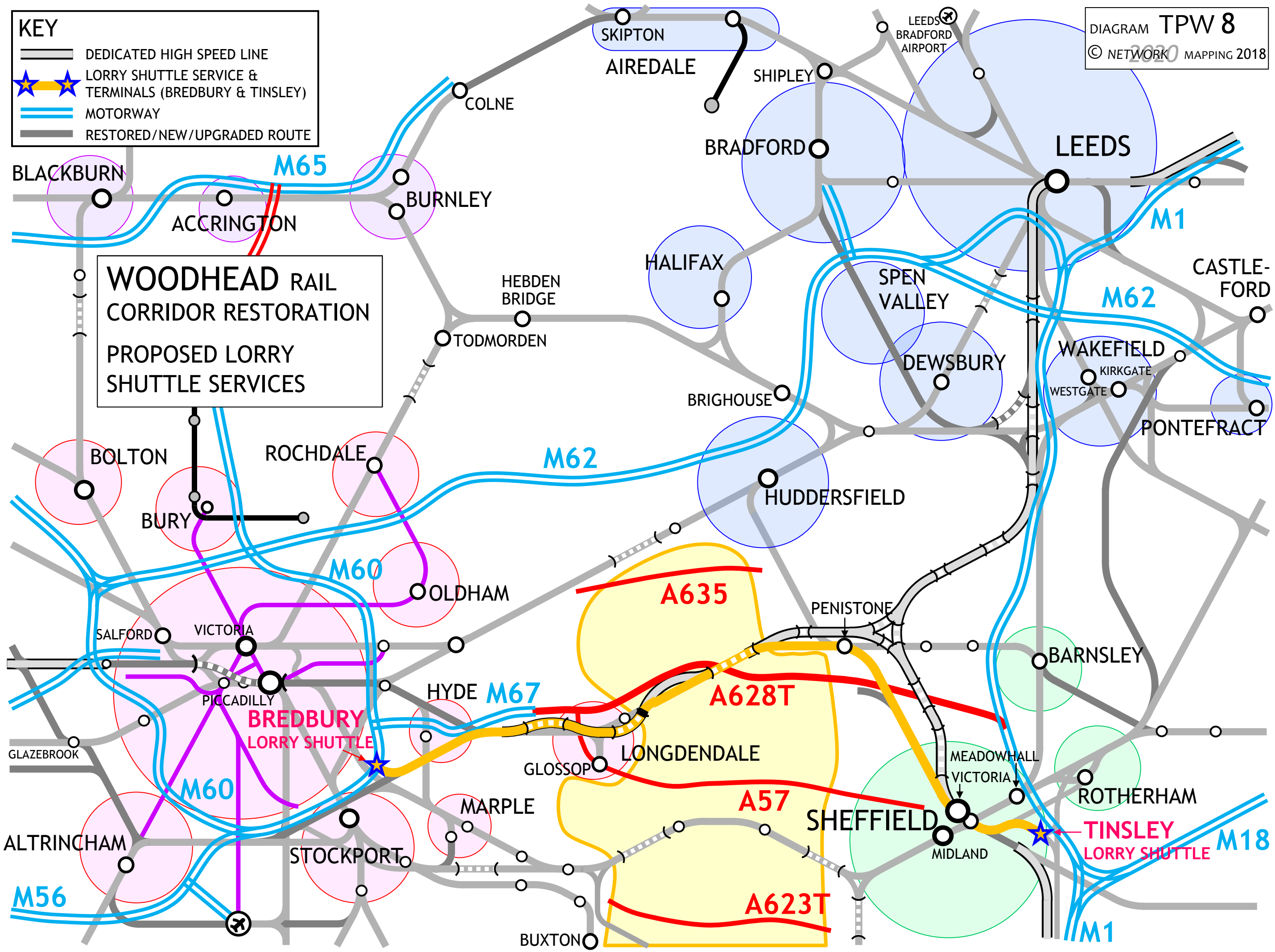
SCOTLAND & NORTH-EAST

MULTIPLE OPTIONS FOR HS LINK FROM M1 CORRIDOR TO ECML  
FOR FURTHER DETAILS SEE HSUK YORKSHIRE RAIL STRATEGY

**KEY**

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

**WOODHEAD RAIL CORRIDOR RESTORATION**  
**PROPOSED LORRY SHUTTLE SERVICES**



**KEY**

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

**WOODHEAD RAIL CORRIDOR RESTORATION**  
TRUNK HGV BANS ON TRANSPEAK ROADS

TRUNK HGV BANS ON ALL TRANSPEAK ROADS

A635

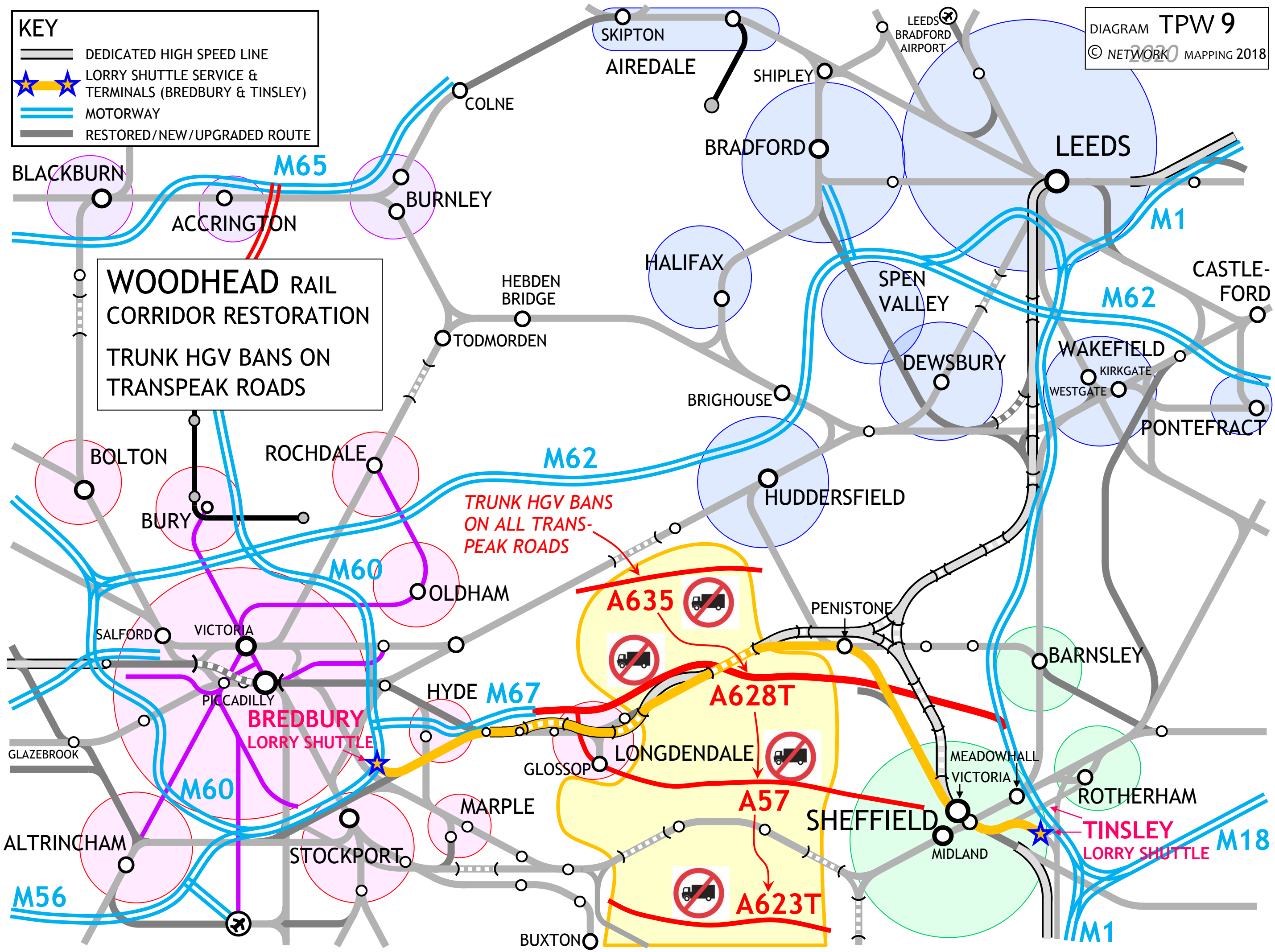
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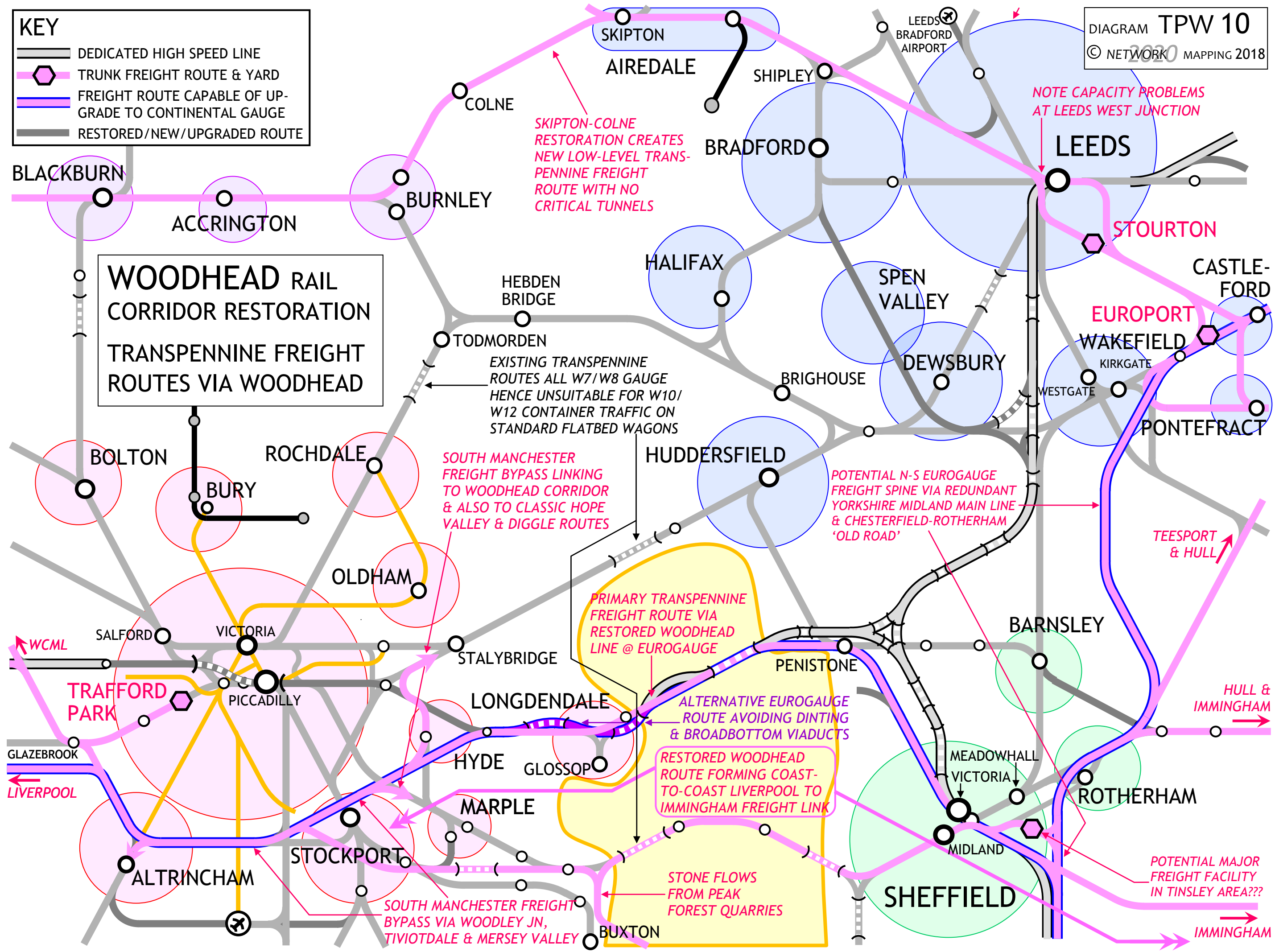
**BREDBURY**  
LORRY SHUTTLE

**TINSLEY**  
LORRY SHUTTLE



**KEY**

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



**WOODHEAD RAIL CORRIDOR RESTORATION**  
 TRANSPENNINE FREIGHT ROUTES VIA WOODHEAD

SKIPTON-COLNE RESTORATION CREATES NEW LOW-LEVEL TRANSPENNINE 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'

PRIMARY TRANSPENNINE FREIGHT ROUTE VIA RESTORED WOODHEAD LINE @ EUROGAUGE

ALTERNATIVE EUROGAUGE ROUTE AVOIDING DINTING & BROADBOTTOM VIADUCTS

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

STONE FLOWS FROM PEAK FOREST QUARRIES

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

POTENTIAL MAJOR FREIGHT FACILITY IN TINSLEY AREA???

BLACKBURN

ACCRINGTON

BURNLEY

SKIPTON

AIREDALE

SHIPLEY

BRADFORD

LEEDS BRADFORD AIRPORT

LEEDS

STOURTON

CASTLE-FORD

EUROPORT

WAKEFIELD

KIRKGATE

WESTGATE

PONTEFRACT

HALIFAX

HEBDEN BRIDGE

TODMORDEN

BRIGHOUSE

DEWSBURY

HUDDERSFIELD

BOLTON

ROCHDALE

BURY

OLDHAM

SALFORD

VICTORIA

PICCADILLY

LONGDENDALE

HYDE

GLOSSOP

MARPLE

STOCKPORT

ALTRINCHAM

BUXTON

PENISTONE

BARNSLEY

MEADOWHALL

VICTORIA

ROTHERHAM

SHEFFIELD

MIDLAND

HULL & IMMINGHAM

TEESPORT & HULL

IMMINGHAM

WCML

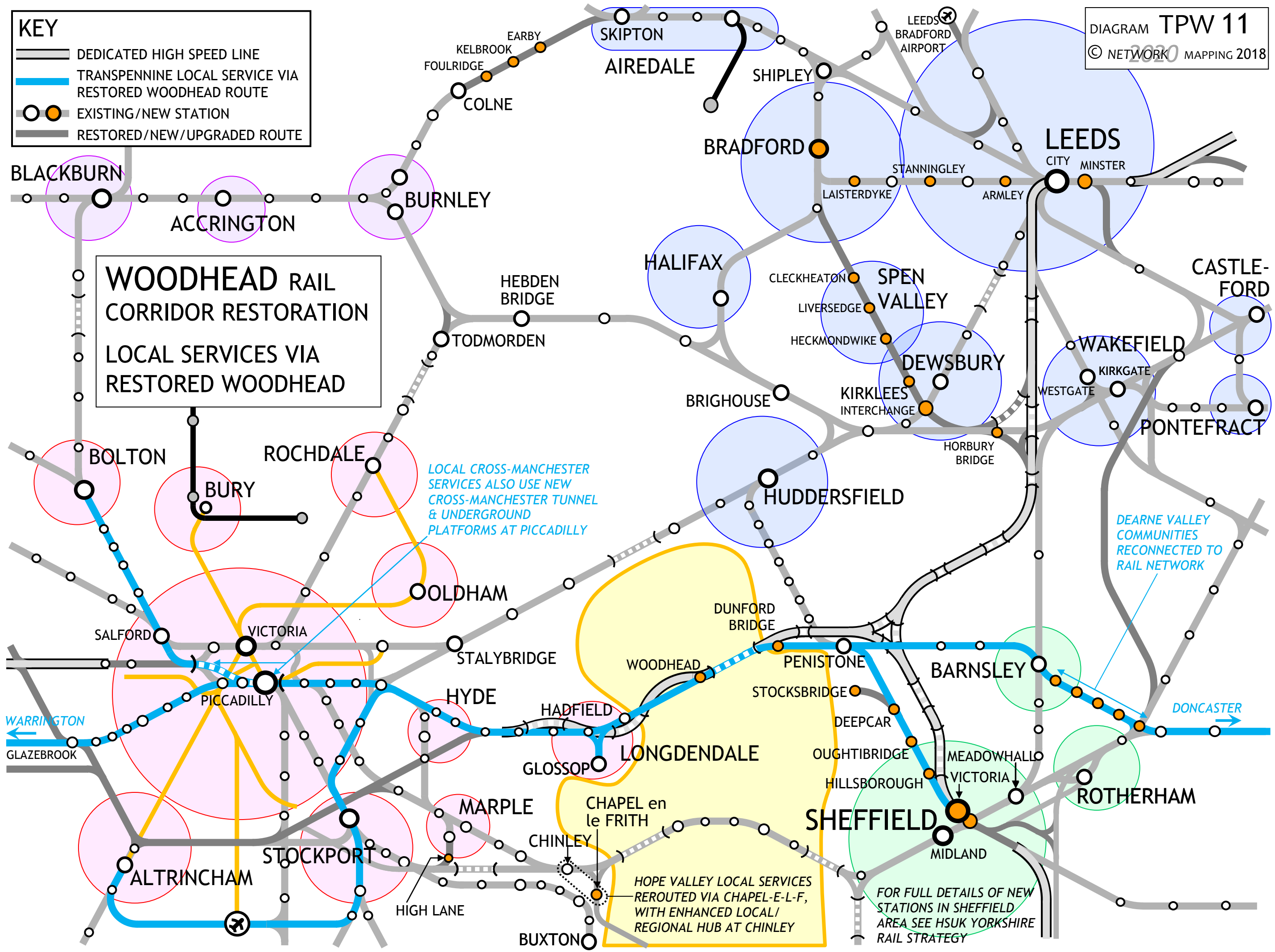
TRAFFORD PARK

GLAZEBROOK

LIVERPOOL

**KEY**

- DEDICATED HIGH SPEED LINE
- TRANSPENNINE LOCAL SERVICE VIA RESTORED WOODHEAD ROUTE
- EXISTING/NEW STATION
- RESTORED/NEW/UPGRADED ROUTE



**WOODHEAD RAIL CORRIDOR RESTORATION**  
 LOCAL SERVICES VIA RESTORED WOODHEAD

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

DEARNE VALLEY COMMUNITIES RECONNECTED TO RAIL NETWORK

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

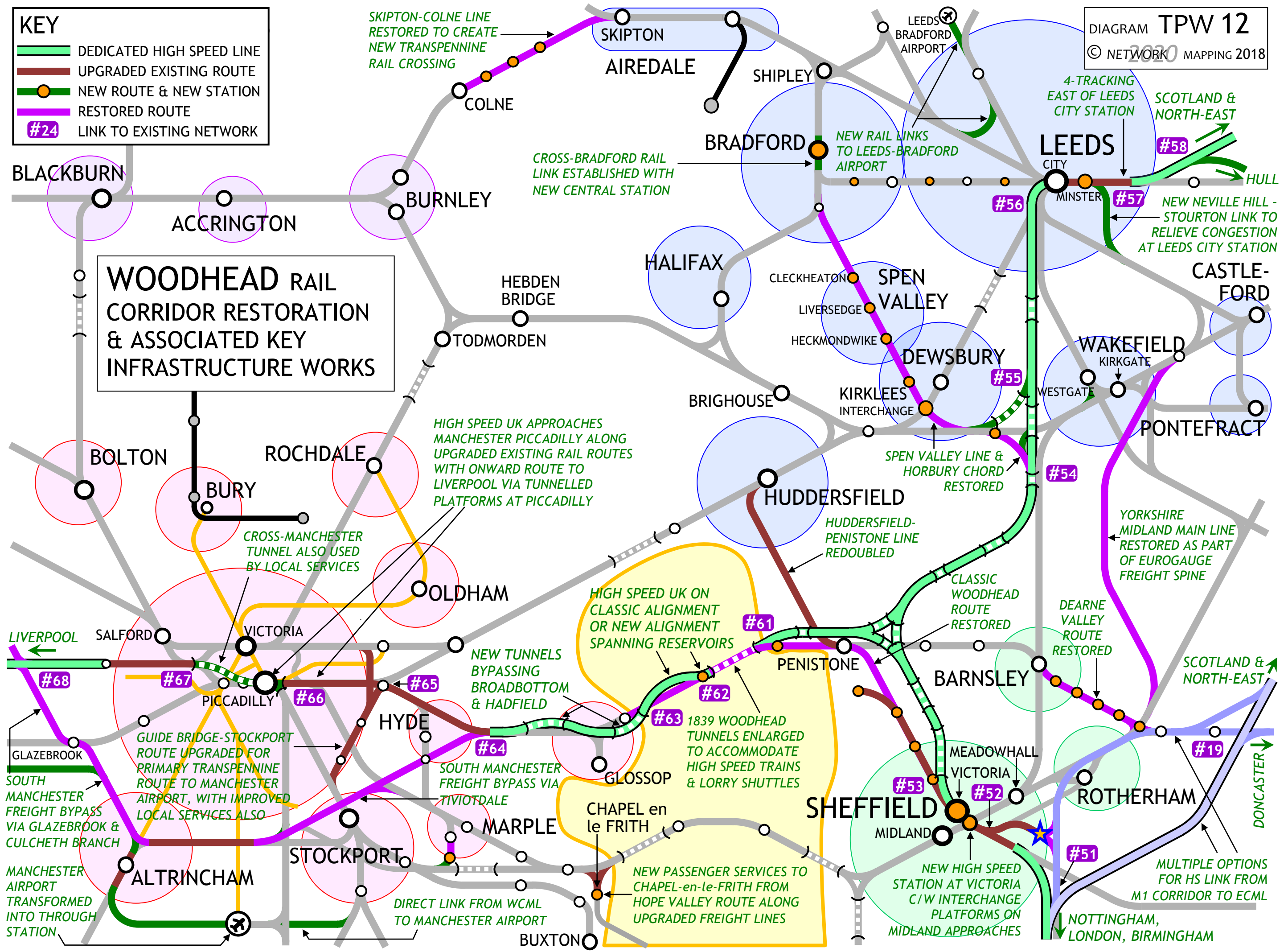
FOR FULL DETAILS OF NEW STATIONS IN SHEFFIELD AREA SEE HSUK YORKSHIRE RAIL STRATEGY

WARRINGTON  
 GLAZEBROOK

DONCASTER

**KEY**

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



**WOODHEAD RAIL CORRIDOR RESTORATION & ASSOCIATED KEY INFRASTRUCTURE WORKS**

SKIPTON-COLNE LINE RESTORED TO CREATE NEW TRANSPENNINE RAIL CROSSING

CROSS-BRADFORD RAIL LINK ESTABLISHED WITH NEW CENTRAL STATION

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

CROSS-MANCHESTER TUNNEL ALSO USED BY LOCAL SERVICES

HIGH SPEED UK ON CLASSIC ALIGNMENT OR NEW ALIGNMENT SPANNING RESERVOIRS

NEW TUNNELS BYPASSING BROADBOTTOM & HADFIELD

1839 WOODHEAD TUNNELS ENLARGED TO ACCOMMODATE HIGH SPEED TRAINS & LORRY SHUTTLES

GUIDE BRIDGE-STOCKPORT ROUTE UPGRADED FOR PRIMARY TRANSPENNINE ROUTE TO MANCHESTER AIRPORT, WITH IMPROVED LOCAL SERVICES ALSO

SOUTH MANCHESTER FREIGHT BYPASS VIA GLAZEBROOK & CULCHETH BRANCH

MANCHESTER AIRPORT TRANSFORMED INTO THROUGH STATION

SOUTH MANCHESTER FREIGHT BYPASS VIA TIVIOTDALE

DIRECT LINK FROM WCML TO MANCHESTER AIRPORT

NEW PASSENGER SERVICES TO CHAPEL-en-le-FRITH FROM HOPE VALLEY ROUTE ALONG UPGRADED FREIGHT LINES

NEW HIGH SPEED STATION AT VICTORIA C/W INTERCHANGE PLATFORMS ON MIDLAND APPROACHES

MULTIPLE OPTIONS FOR HS LINK FROM M1 CORRIDOR TO ECML  
 NOTTINGHAM, LONDON, BIRMINGHAM

4-TRACKING EAST OF LEEDS CITY STATION  
 SCOTLAND & NORTH-EAST  
 NEW NEVILLE HILL - STOURTON LINK TO RELIEVE CONGESTION AT LEEDS CITY STATION

YORKSHIRE MIDLAND MAIN LINE RESTORED AS PART OF EUROGAUGE FREIGHT SPINE

DEARNE VALLEY ROUTE RESTORED

SCOTLAND & NORTH-EAST

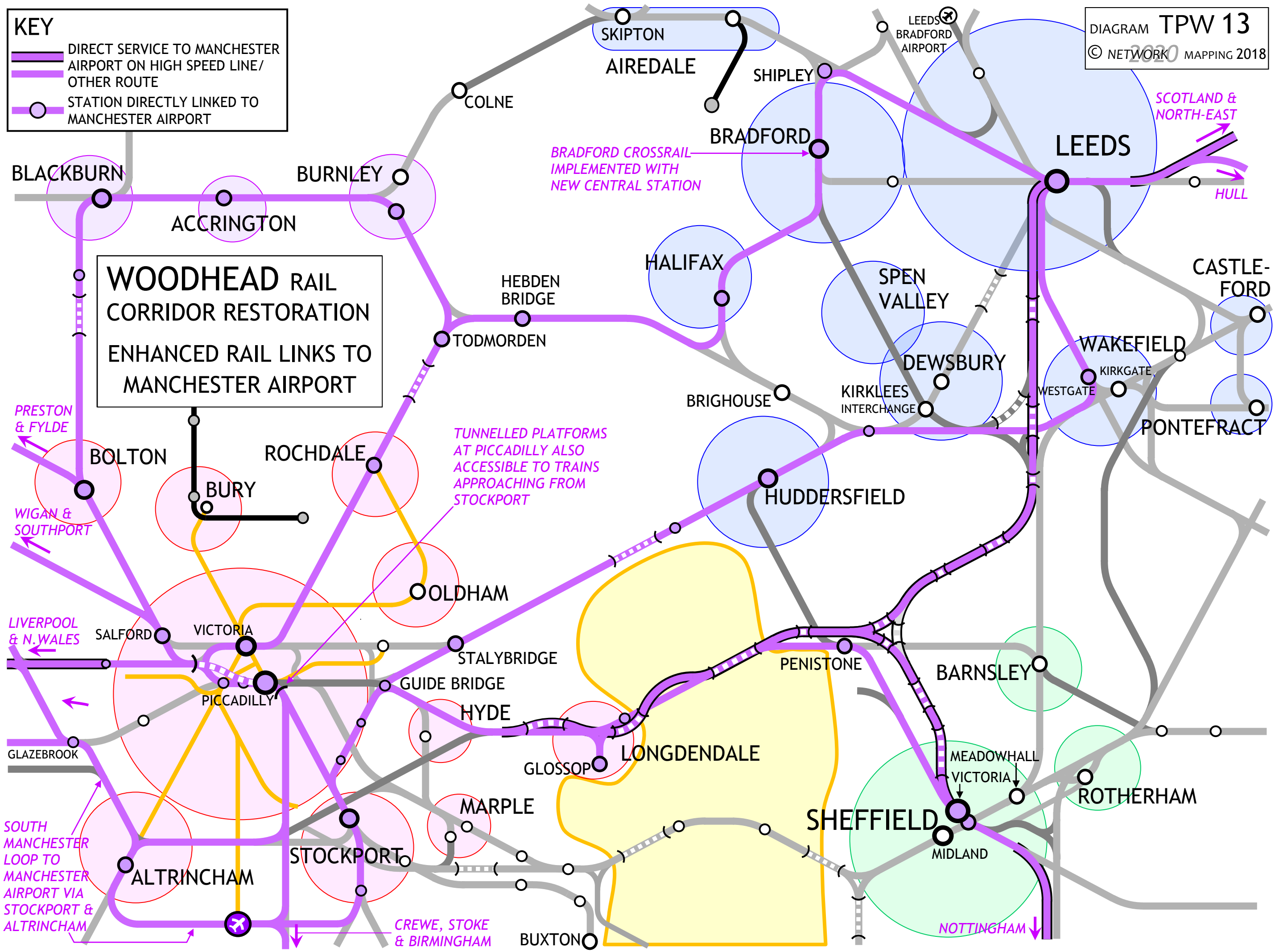
NEW PASSENGER SERVICES TO CHAPEL-en-le-FRITH FROM HOPE VALLEY ROUTE ALONG UPGRADED FREIGHT LINES

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 NOTTINGHAM, LONDON, BIRMINGHAM

**KEY**

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



**WOODHEAD RAIL CORRIDOR RESTORATION**  
 ENHANCED RAIL LINKS TO MANCHESTER AIRPORT

BRADFORD CROSSRAIL IMPLEMENTED WITH NEW CENTRAL STATION

TUNNELLED PLATFORMS AT PICCADILLY ALSO ACCESSIBLE TO TRAINS APPROACHING FROM STOCKPORT

PRESTON & FYLDE

WIGAN & SOUTHPORT

LIVERPOOL & N. WALES

GLAZEBROOK

SOUTH MANCHESTER LOOP TO MANCHESTER AIRPORT VIA STOCKPORT & ALTRINCHAM

CREWE, STOKE & BIRMINGHAM

NOTTINGHAM

SCOTLAND & NORTH-EAST

HULL

SALFORD

VICTORIA

PICCADILLY

ALTRINCHAM

STOCKPORT

MARPLE

GLOSSOP

LONGDENDALE

HYDE

GUIDE BRIDGE

STALYBRIDGE

OLDHAM

BOLTON

BURY

ROCHDALE

TODMORDEN

HEBDEN BRIDGE

HALIFAX

DEWSBURY

KIRKLEES INTERCHANGE

BRIGHOUSE

HUDDERSFIELD

PENISTONE

BARNSLLEY

SHEFFIELD

MIDLAND

MEADOWHALL VICTORIA

ROTHERHAM

PONTEFRACT

WAKEFIELD

KIRKGATE

WESTGATE

CASTLE-FORD

LEEDS

BRADFORD

SHIPLEY

AIREDALE

SKIPTON

COLNE

BURNLEY

ACCRINGTON

BLACKBURN

LEEDS BRADFORD AIRPORT