

# HSUK NORTH-WEST RAIL STRATEGY

For many years, a high speed railway linking London, Heathrow, Birmingham and Manchester has been seen by planners as the core element of a UK high speed rail network. There has also been general acceptance that such a 'North-West Corridor' route will ultimately continue along the axis of the present West Coast Main Line to Edinburgh and Glasgow, and there seems an unarguable logic in a new direct route linking the UK's capital and primary aviation hub with its second and third most populous cities, and ultimately extending to Scotland.

However, this clearly desirable concept is fatally flawed by a) the impracticality of establishing high speed routes through the centres of Heathrow, Birmingham and Manchester, and b) its failure to recognise the wider requirement for high speed rail to comprise a genuine network, capable of linking all of the UK's major centres. Against this latter requirement, a high speed route aligned primarily with the West Coast Main Line, and lacking any transpennine dimension, clearly fails to measure up. To gain maximum connectivity benefits for the North-West from the UK high speed rail initiative, and to avoid the clear dangers of increasing regional economic disparities through increased focus upon London, a trans-Pennine high speed route must be integral to any proposal put forward by the Government. This has been belatedly recognised in the 2014 launch of the Government's 'HS3' initiative.

The following diagrams chart the development of the North-West's rail network, and illustrate the likely impacts of both HS2 and High Speed UK. 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).

## NWN1 : NORTH-WEST REGIONAL NETWORK - PRE-1923 GROUPING

The North-West rail network was dominated by 3 major companies, the London North-Western (LNW), the Lancashire & Yorkshire (L&Y) and the Cheshire Lines Committee (CLC) (the latter a local amalgamation of Great Northern, Great Central and Midland railways). Each company (LNW, L&Y and CLC) had separate stations in both primary cities of the region ie Manchester and Liverpool (and with the Great Western's Woodside terminal across the water in Birkenhead, Liverpool effectively had 4 termini). Of these stations, all comprised termini, with the only exceptions being Manchester Exchange/Victoria and Manchester Piccadilly (with 2 through and 12 terminating platforms). Although both Great Central and Midland railways offered intercity services to London via trans-Pennine alignments, the LNW route via Crewe always comprised the primary route, now aligning with the present-day West Coast Main Line. The LNW also operated the other 'West Coast' routes to Liverpool, and via Shap and Beattock to Scotland. The 4 main transpennine routes were operated by separate companies, respectively Hope Valley (Midland), Woodhead (Great Central), Diggle (London North-Western) and Calder Valley (Lancashire & Yorkshire).

## NWN2 : WOODHEAD NORTH-WEST REGIONAL NETWORK - CONTEMPORARY

This diagram illustrates the concentration of intercity connectivity at the primary hubs of Manchester and Liverpool. In contrast with the multiplicity of rail terminals which once served these 2 cities, the 1960's and 1970s saw major rationalisation. With the construction of the Merseyrail loop and the Northern line, all local and intercity rail services in Liverpool focussed upon Lime Street Station; whilst in Manchester, construction of the Windsor Link to the west of the city allowed all intercity and most regional services to be integrated upon Manchester Piccadilly; and with the establishment of the Metrolink tram system, good connections now exist to Manchester Victoria on the north side of the city. Further integration should take place with the forthcoming Northern Hub scheme, in which the proposed Ordsall Chord will allow trains from Bradford, Halifax and Rochdale on the Calderdale Line to continue from Victoria to Piccadilly, and onwards to Manchester Airport; but a major drawback is that the entire local system will remain reliant on the congested 2-track route between Deansgate and Piccadilly (P/F 13 & 14).

It must be stressed that although the interventions proposed in the Northern Hub scheme will bring welcome capacity relief in the Manchester area, it will not deliver the step change benefits of a new railway such as HS2. It will also not deliver significant new freight capacity. It should be noted that with the closure of all cross-Manchester freight routes (ie Tiviotdale via Stockport, the Fallowfield loop in south Manchester and the Rochdale-Bury-Bolton line), all east-west railfreight must pass through either Piccadilly or Victoria stations. The greatest pressure is currently experienced at Manchester Piccadilly, where all trains to the Trafford Park container terminal must pass through the congested through platforms (P/F 13 & 14).

Other centres across the region, such as Chester, Bolton, Wigan and Stockport have seen significant rationalisation, with some services lost but all remaining services operating from a single integrated hub. Stockport, the primary centre to the south of the Greater Manchester conurbation, enjoys a level of intercity connectivity almost equivalent to Manchester Piccadilly, with 3 trains per hour to London, and also Crosscountry and (since the opening of the Hazel Grove chord in 1986) TransPennine services also. Possibly the greatest connectivity deficiency exists at Warrington. Here, east-west trans-Pennine services cross over north-south West Coast services, with no interchange between Central and Bank Quay stations.

### **NWN3 : CONNECTIVITY OF LOCAL & INTERCITY RAIL NETWORK TO HS2**

The HS2 trunk route is projected to follow the axis of the West Coast Main Line, passing under Crewe in tunnel, continuing north between the urban masses of Warrington and Greater Manchester, before connecting to the existing route south of Wigan. Extension along the WCML corridor towards Scotland is projected, but no route has yet been defined. Manchester will be served by a dedicated spur, approaching the city from the south-west. The spur will serve a Manchester Airport station, remote from both airport terminals and existing transport interchange. The spur will then continue in a 12km long tunnel to a central Manchester terminus located adjacent to the existing Piccadilly station. This spur is also planned to form the HS3 route from Manchester to Liverpool. It has yet been explained how HS2's Manchester terminus will have the capacity to accommodate the planned frequency of HS3 services, or enable onward HS3 services to Leeds, which will operate from Manchester Victoria.

HS2 services will only serve 7 stations in the North-West region (as illustrated on the diagrams). Other centres such as Stockport and Chester, currently integral to the intercity network, will be bypassed by HS2, and will be left greatly disadvantaged. To illustrate the quality of the connectivity achieved by HS2, a green/amber/red 'traffic light' system indicates stations within 20/40/60 minutes' direct journey from the nearest station at which high speed services to London are planned.

### **NWN4 : ALTERNATIVE HIGH SPEED UK AND OTHER DEVELOPMENTS TO LOCAL RAIL SYSTEM**

High Speed UK will serve the North-West by means of a transpennine spur, routed via the restored Woodhead corridor. 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. The route will approach central Manchester along existing rail corridors, generally upgraded to 4 tracks along redundant trackbeds to permit local and intercity services to be segregated for optimum capacity. Some expansion of the existing Piccadilly terminus is planned, but most services will need to cross Manchester en route to Liverpool and other destinations further west. A tunnelled route is planned between Ardwick in the west, and Castlefield in the west; this will be aligned via Piccadilly Station, with underground platforms below Fairfield Street ie located between the terminating trainshed platforms to the north, and the through Platforms 13 & 14 to the south.

HSUK will then continue towards Liverpool, first running parallel to the existing Liverpool & Manchester 'Chat Moss' Line. HSUK will pass north of Warrington, where a triangle junction will connect to the WCML (effectively analogous to the Grand Junction meeting the Liverpool & Manchester at Earlestown), and continue to Liverpool, parallel to the M62. At Liverpool Lime St, extra capacity for terminating HSUK services will be created by extending existing Merseyrail tunnels to Edge Hill, allowing most local services to be routed through to Birkenhead.

### **NWN5 : CONNECTIVITY OF LOCAL & INTERCITY RAIL NETWORK TO HIGH SPEED UK**

HSUK high speed services will directly access 13 regional centres, with services to a far more diverse range of destinations than HS2 can offer. These destinations will include Preston and Blackpool, Chester and Manchester Airport. Connectivity along existing West Coast Main Line routes, both via Stoke to Manchester, and via Stoke and Crewe to North Wales, Liverpool and Scotland will also be maintained. As with HS2, a green/amber/red 'traffic light' system indicates stations within 20/40/60 minutes' direct journey of the nearest station hub. This clearly demonstrates High Speed UK's much greater connectivity which - with shared use of the new underground platforms at Manchester Piccadilly - will also bring major benefits to the regional rail system, allowing more through routeing.

### **NWN6 : HIGH SPEED UK AND ASSOCIATED FREIGHT DEVELOPMENTS**

The HSUK transpennine routeing is part of a wider strategy to increase rail capacity between the North-West and the east-sided conurbations of the East Midlands, South and West Yorkshire and the (English) North-East. The restoration of the Woodhead corridor presents a unique opportunity to achieve a step-change increase in capacity for trans-Pennine railfreight, in terms of both the number of trains operated and also an increase in wagon size to 'Continental Gauge'. But with all transpennine rail routes focussed upon central Manchester ie passing through either Piccadilly or Victoria, and with all diversionary routes having been abandoned during the Beeching era, it is necessary also to scheme a cross-Manchester freight route, linking to an onward route to Liverpool.

This will involve:

- restoration of the abandoned 'Tiviotdale' Mersey Valley route via Stockport that was followed by the former Woodhead coal traffic;
- upgrade/restoration of former CLC routes as far as Glazebrook and onwards to join the WCML near Wigan;
- 8km of new railway following the Manchester Ship Canal from Partington to Warrington
- upgrade of the existing Timperley-Garston route via Fiddlers Ferry.
- upgrade of existing routes to the Liverpool 'Superport' at Seaforth, and also Garston Docks.

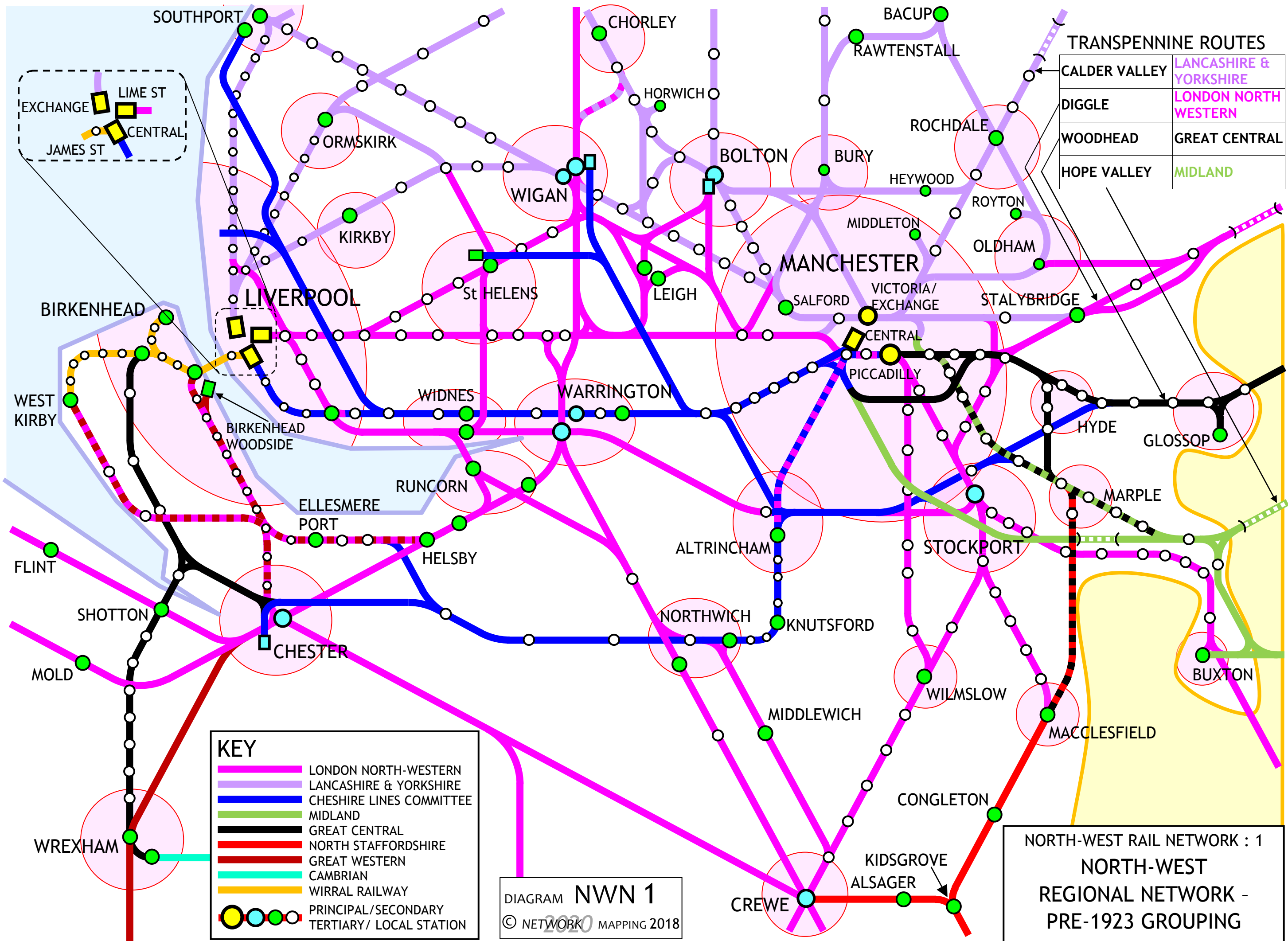
This will create a largely dedicated freight route able to handle the high volume of trains necessary to ferry containers unloaded at Liverpool from the port to their final destination, possibly on the far side of the Pennines.

Connection of the cross-Manchester freight route to the CLC main line at Glazebrook establishes an alternative rail access to the Trafford Park container terminal. This would avoid the congestion in the Manchester Piccadilly area that currently limits freight flows, and it would also permit Eurogauge operation.

#### **NWN7 : ENHANCED RAIL CONNECTIVITY TO MANCHESTER AIRPORT (AND STOCKPORT)**

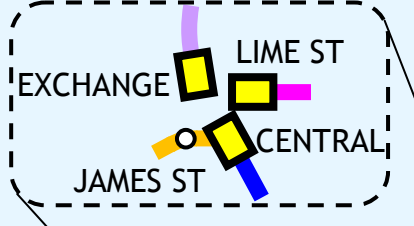
To improve intercity access to Manchester Airport, a new link is proposed from the Stockport-Crewe line. This will extend to the west, and return via Altrincham and Glazebrook to the HSUK main route to Liverpool. This will enable intercity access to Manchester Airport from all primary cities of the North (ie Liverpool, Manchester, Sheffield, Leeds and Newcastle, as per the One North initiative) and also a large range of more local connections, with most second-tier cities also connected. These greatly increased train movements through Manchester Airport are possible with through rather than terminating operation, as presently applies.

The proposed development of transpennine routes to Manchester Airport will also have the effect of greatly enhancing hub function at Stockport, allowing direct high speed services to most UK primary cities. This will also allow viable reopening of the (virtually) closed stations at Denton and Reddish South.



**TRANSPENNINE ROUTES**

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

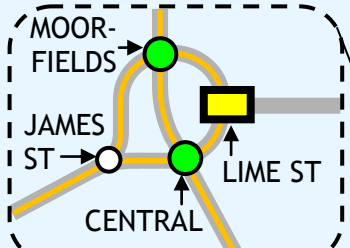
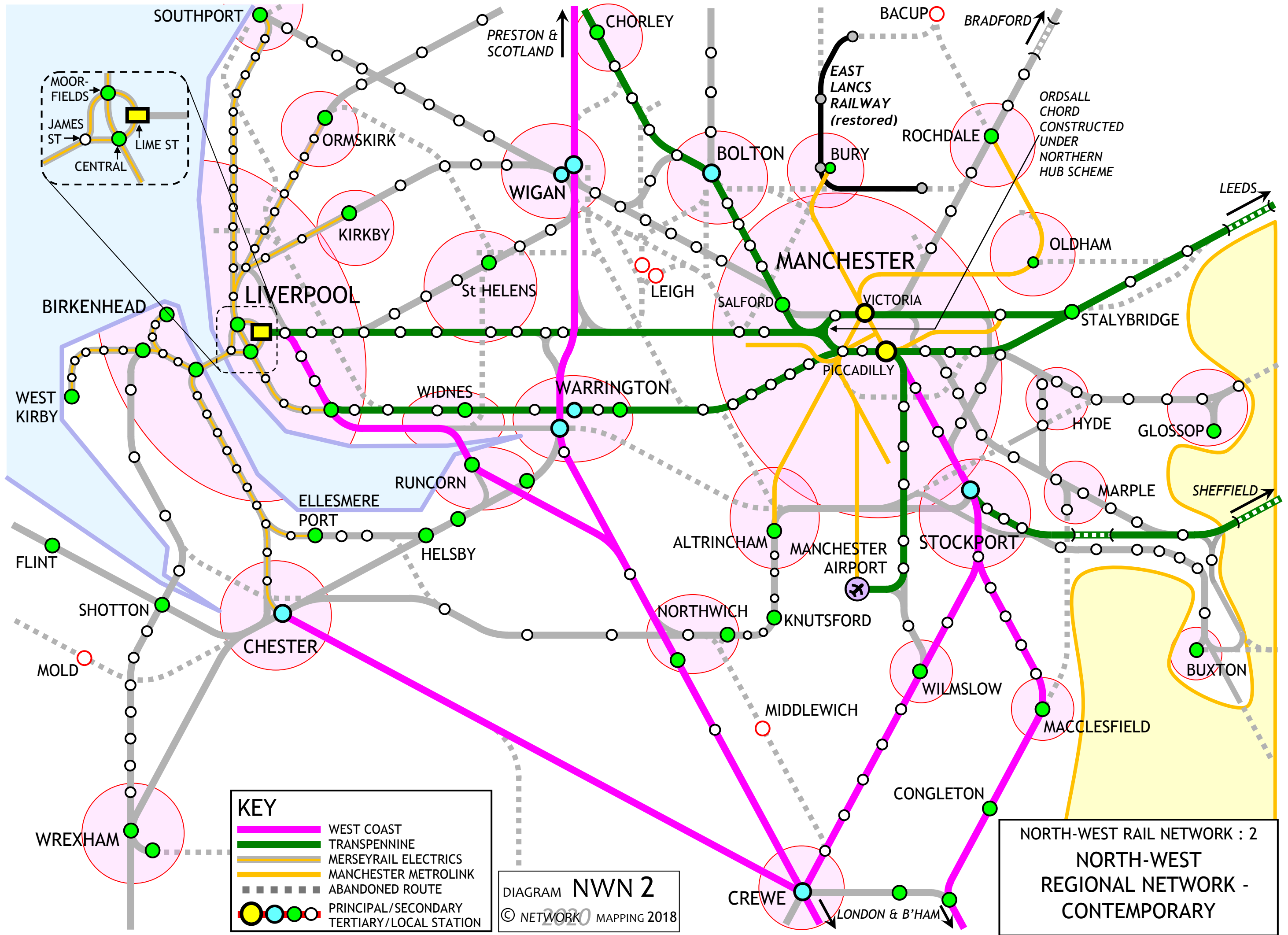


**KEY**

<span style="color: magenta;">—</span>	LONDON NORTH-WESTERN
<span style="color: purple;">—</span>	LANCASHIRE & YORKSHIRE
<span style="color: blue;">—</span>	CHESHIRE LINES COMMITTEE
<span style="color: green;">—</span>	MIDLAND
<span style="color: black;">—</span>	GREAT CENTRAL
<span style="color: red;">—</span>	NORTH STAFFORDSHIRE
<span style="color: brown;">—</span>	GREAT WESTERN
<span style="color: cyan;">—</span>	CAMBRIAN
<span style="color: orange;">—</span>	WIRRAL RAILWAY
<span style="color: yellow;">●</span>	PRINCIPAL/SECONDARY
<span style="color: lightblue;">●</span>	TERTIARY/ LOCAL STATION

DIAGRAM **NWN 1**  
 © NETWORK MAPPING 2018

**NORTH-WEST RAIL NETWORK : 1**  
**NORTH-WEST REGIONAL NETWORK - PRE-1923 GROUPING**

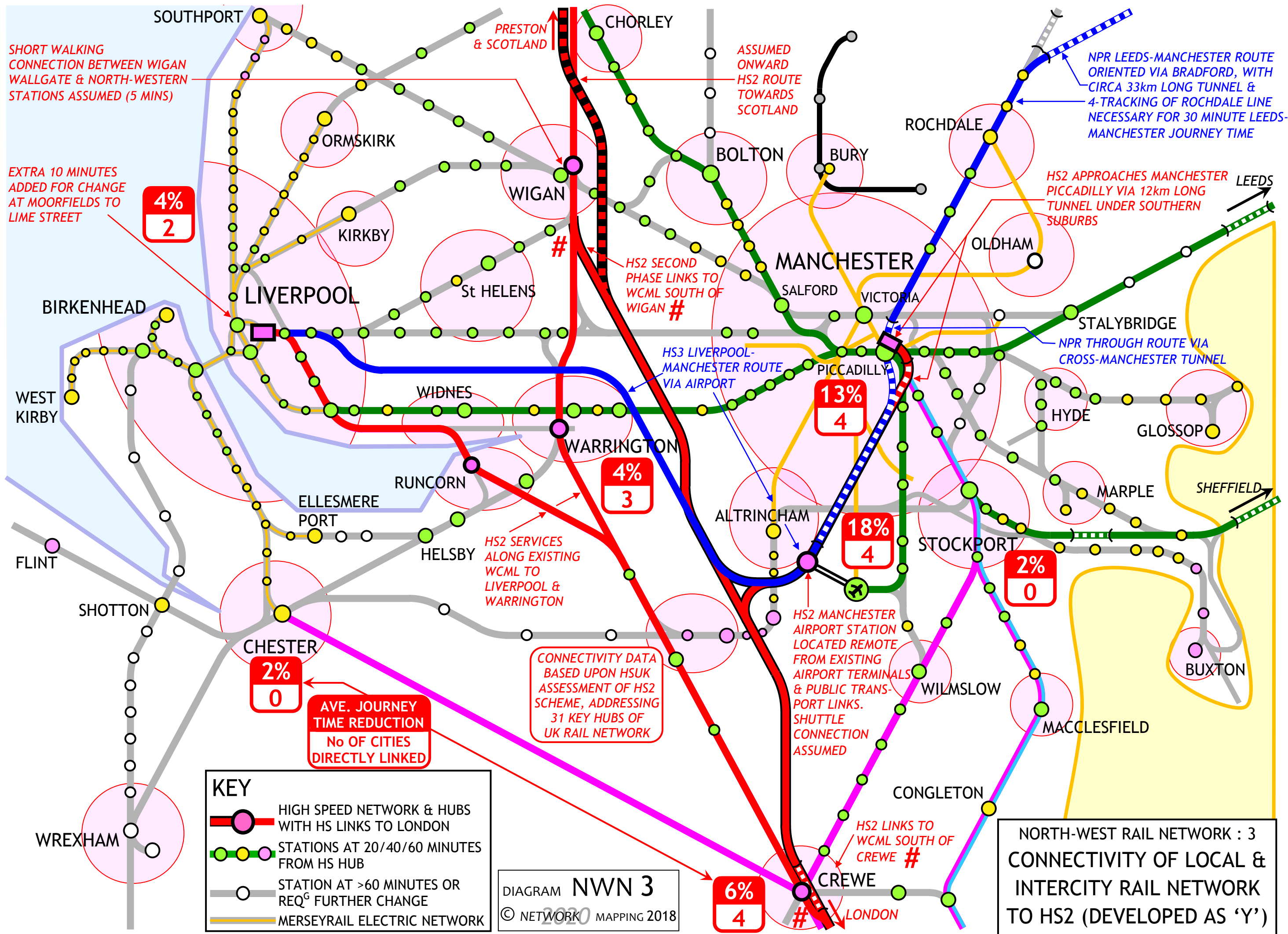


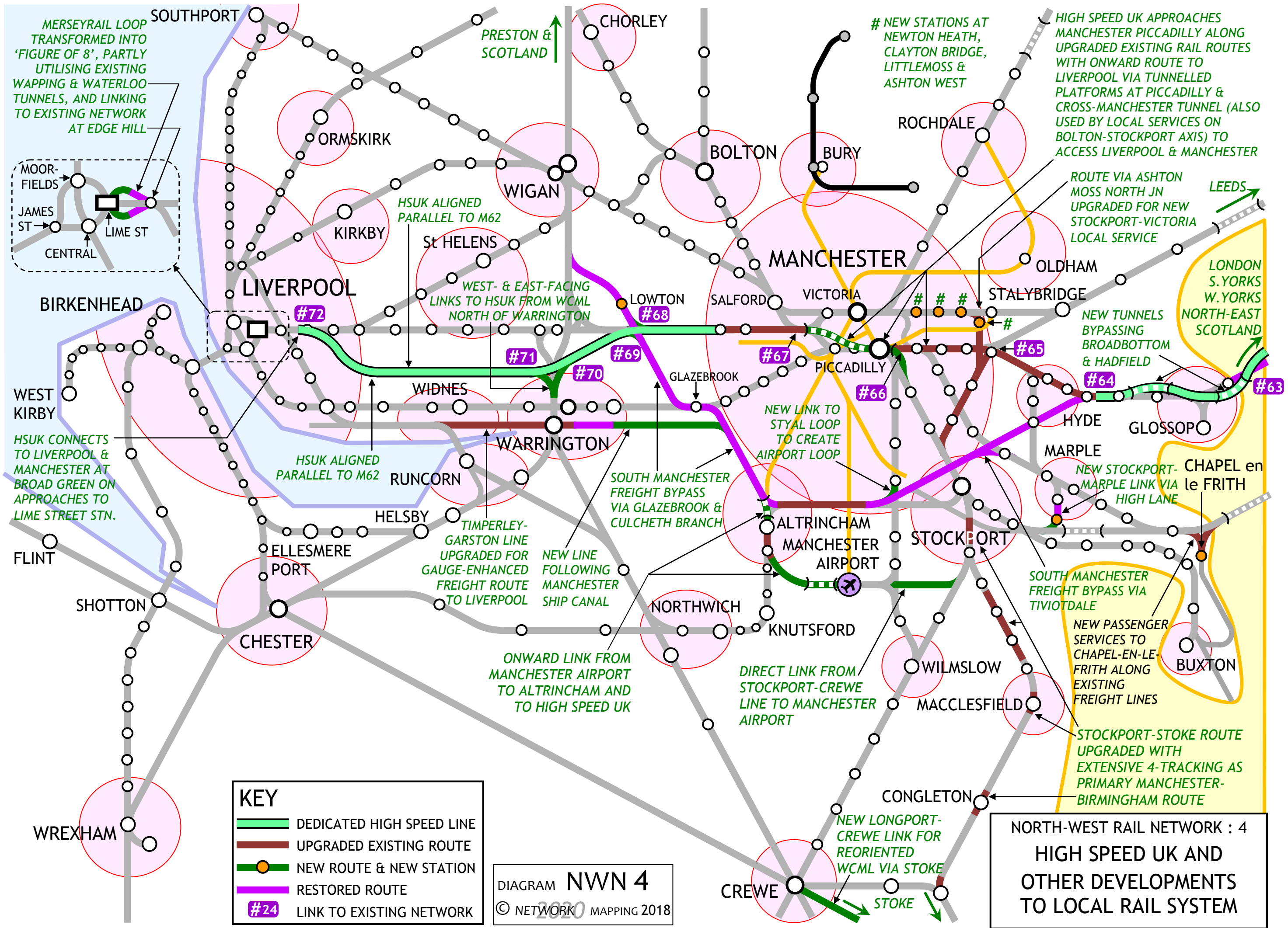
**KEY**

- WEST COAST
- TRANSPENNINE
- MERSEYRAIL ELECTRICS
- MANCHESTER METROLINK
- ABANDONED ROUTE
- PRINCIPAL/SECONDARY TERTIARY/LOCAL STATION

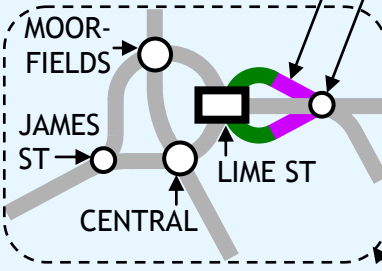
DIAGRAM **NWN 2**  
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**NORTH-WEST RAIL NETWORK : 2**  
**NORTH-WEST REGIONAL NETWORK - CONTEMPORARY**





MERSEYRAIL LOOP TRANSFORMED INTO 'FIGURE OF 8', PARTLY UTILISING EXISTING WAPPING & WATERLOO TUNNELS, AND LINKING TO EXISTING NETWORK AT EDGE HILL



PRESTON & SCOTLAND

# NEW STATIONS AT NEWTON HEATH, CLAYTON BRIDGE, LITTLEMOSS & ASHTON WEST

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 ON BOLTON-STOCKPORT AXIS) TO ACCESS LIVERPOOL & MANCHESTER

ROUTE VIA ASHTON MOSS NORTH JN UPGRADED FOR NEW STOCKPORT-VICTORIA LOCAL SERVICE

LONDON S. YORKS W. YORKS NORTH-EAST SCOTLAND

NEW TUNNELS BYPASSING BROADBOTTOM & HADFIELD

NEW LINK TO STYAL LOOP TO CREATE AIRPORT LOOP

NEW STOCKPORT-MARPLE LINK VIA HIGH LANE

SOUTH MANCHESTER FREIGHT BYPASS VIA TIVIOTDALE

NEW PASSENGER SERVICES TO CHAPEL-EN-LE-FRITH ALONG EXISTING FREIGHT LINES

STOCKPORT-STOKE ROUTE UPGRADED WITH EXTENSIVE 4-TRACKING AS PRIMARY MANCHESTER-BIRMINGHAM ROUTE

NEW LONGPORT-CREWE LINK FOR REORIENTED WCML VIA STOKE

WEST- & EAST-FACING LINKS TO HSUK FROM WCML NORTH OF WARRINGTON

HSUK ALIGNED PARALLEL TO M62

HSUK ALIGNED PARALLEL TO M62

HSUK CONNECTS TO LIVERPOOL & MANCHESTER AT BROAD GREEN ON APPROACHES TO LIME STREET STN.

TIMPERLEY-GARSTON LINE UPGRADED FOR GAUGE-ENHANCED FREIGHT ROUTE TO LIVERPOOL

NEW LINE FOLLOWING MANCHESTER SHIP CANAL

ONWARD LINK FROM MANCHESTER AIRPORT TO ALTRINCHAM AND TO HIGH SPEED UK

SOUTH MANCHESTER FREIGHT BYPASS VIA GLAZEBROOK & CULCHETH BRANCH

DIRECT LINK FROM STOCKPORT-CREWE LINE TO MANCHESTER AIRPORT

HSUK CONNECTS TO LIVERPOOL & MANCHESTER AT BROAD GREEN ON APPROACHES TO LIME STREET STN.

WEST KIRBY

FLINT

SHOTTON

CHESTER

ELLESMERE PORT

HELSBY

RUNCORN

WARRINGTON

WIDNES

GLAZEBROOK

LOWTON

St HELENS

KIRKBY

ORMSKIRK

SOUTHPORT

CHORLEY

WIGAN

BOLTON

BURY

ROCHDALE

MANCHESTER

VICTORIA

STALYBRIDGE

OLDHAM

HYDE

GLOSSOPO

MARPLE

CHAPEL EN LE FRITH

BUXTON

WILMSLOW

MACCLESFIELD

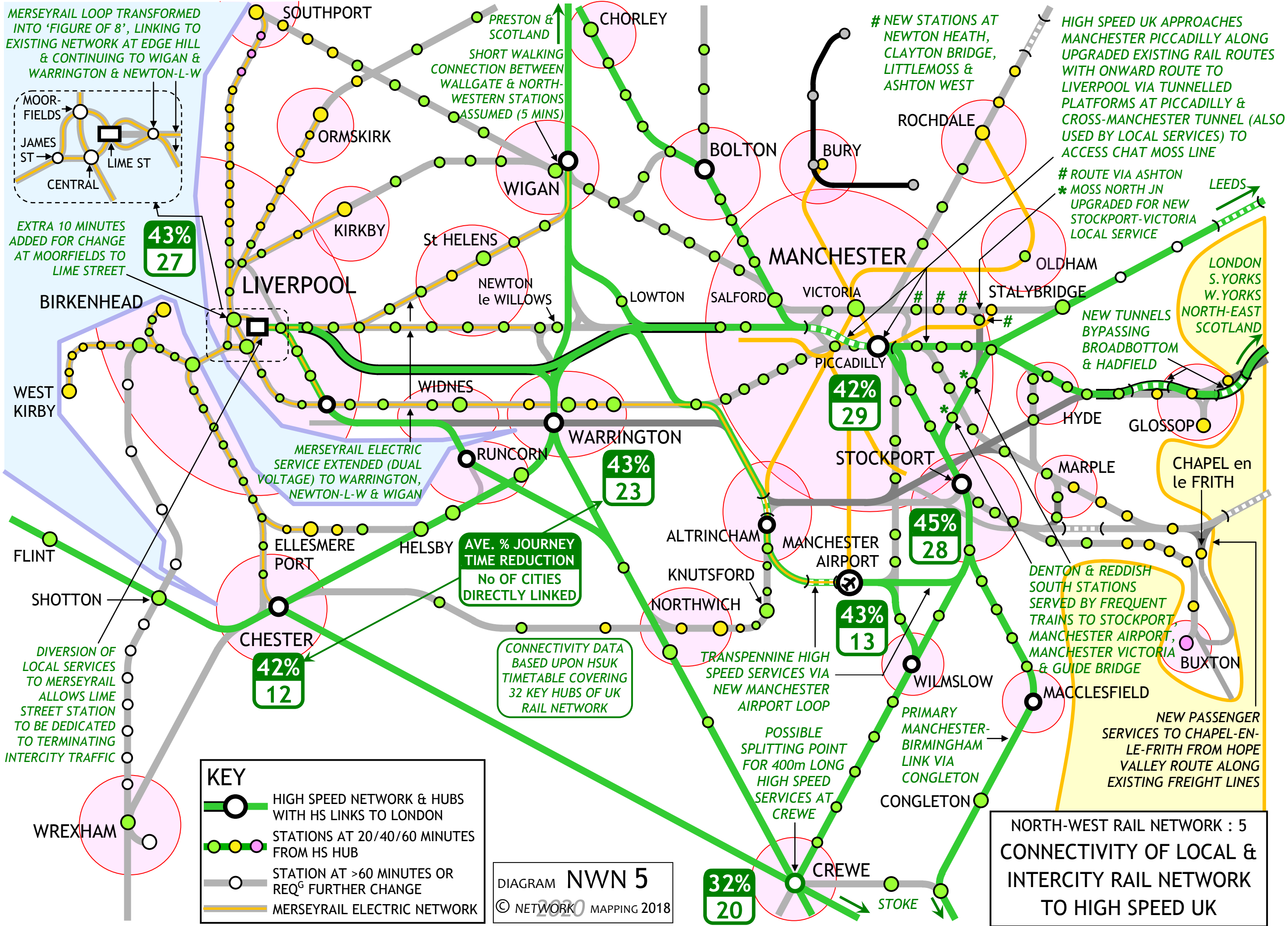
CONGLETON

CREWE

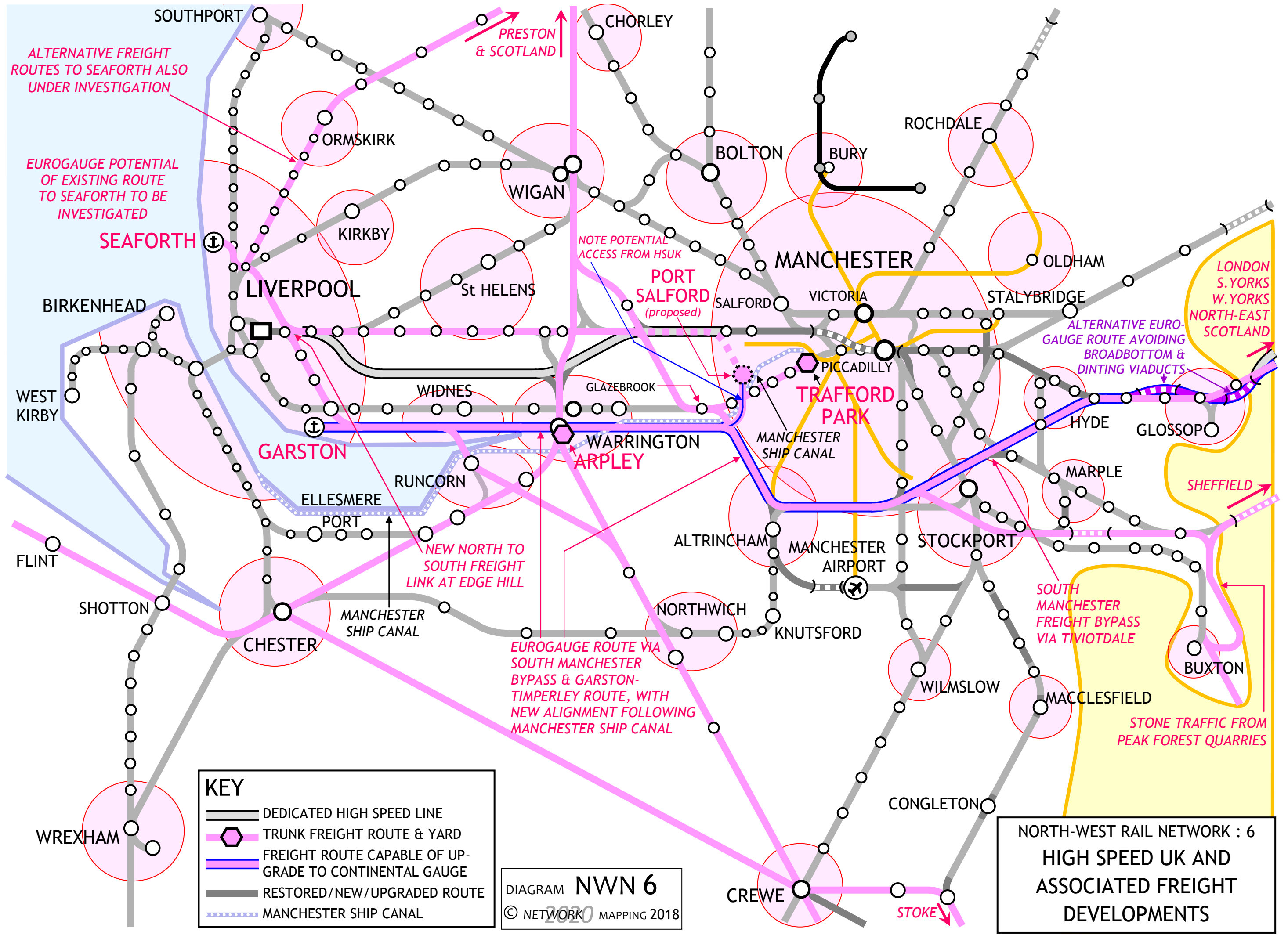
STOKE

LEEDS

WREXHAM







SOUTHPORT

CHORLEY

ROCHDALE

BOLTON

BURY

OLDHAM

MANCHESTER

STALYBRIDGE

LIVERPOOL

St HELENS

WIGAN

KIRKBY

SALFORD

VICTORIA

BIRKENHEAD

GARSTON

WARRINGTON

TRAFFORD PARK

HYDE

GLOSSOPO

WEST KIRBY

WIDNES

GLAZEBROOK

RUNCORN

ELLESMERE

PORT

SHEFFIELD

FLINT

SHOTTON

CHESTER

MANCHESTER SHIP CANAL

ALTRINCHAM

MANCHESTER AIRPORT

STOCKPORT

MARPLE

BUXTON

NORTHWICH

KNUTSFORD

WILMSLOW

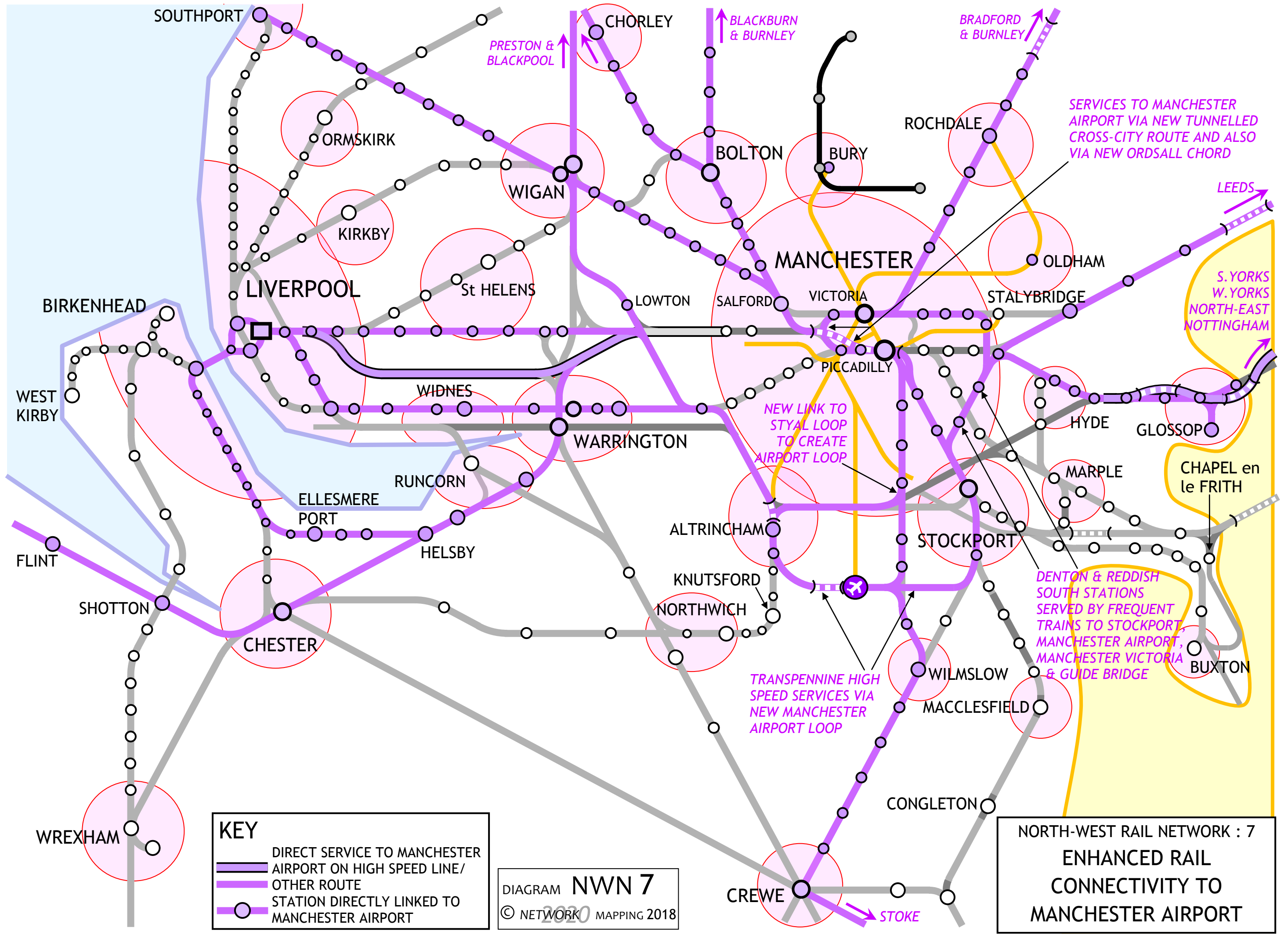
MACCLESFIELD

CONGLETON

CREWE

STOKE

WREXHAM



SOUTHPORT

CHORLEY

BLACKBURN & BURNLEY

BRADFORD & BURNLEY

PRESTON & BLACKPOOL

SERVICES TO MANCHESTER AIRPORT VIA NEW TUNNELLED CROSS-CITY ROUTE AND ALSO VIA NEW ORDSALL CHORD

LEEDS

S. YORKS  
W. YORKS  
NORTH-EAST  
NOTTINGHAM

MANCHESTER

LIVERPOOL

BIRKENHEAD

WEST KIRBY

FLINT

SHOTTON

CHESTER

ELLESMERE PORT

RUNCORN

WIDNES

WARRINGTON

St HELENS

KIRKBY

ORMSKIRK

WIGAN

LOWTON

SALFORD

VICTORIA

PICCADILLY

NEW LINK TO STYAL LOOP TO CREATE AIRPORT LOOP

TRANSPENNINE HIGH SPEED SERVICES VIA NEW MANCHESTER AIRPORT LOOP

DENTON & REDDISH SOUTH STATIONS SERVED BY FREQUENT TRAINS TO STOCKPORT, MANCHESTER AIRPORT, MANCHESTER VICTORIA & GUIDE BRIDGE

ALTRINCHAM

KNUTSFORD

NORTHWICH

STOCKPORT

WILMSLOW

MACCLESFIELD

CONGLETON

CREWE

STOKE

MARPLE

GLOSSOP

HYDE

OLDHAM

ROCHDALE

BURY

BOLTON

CHAPEL en le FRITH

BUXTON

WREXHAM