

# HSUK WEST MIDLANDS RAIL STRATEGY

There is little if any dispute, that a high speed line from London to the West Midlands must be a core element of any future UK high speed network. But Birmingham cannot be the exclusive aim of high speed rail planners; it is only the primary urban centre of the much larger West Midlands conurbation. This is acknowledged in HS2's core remit, which defines a high speed rail link from London to the West Midlands (rather than Birmingham) as the initial objective of the HS2 project. For the benefits of HS2 to spread beyond the extent of the new build (which in practical terms must finish in central Birmingham) optimum integration with local transport systems must be achieved.

The following diagrams define existing West Midlands rail connectivity, and review the capability of both HS2 and the alternative High Speed UK proposals to integrate with the local rail system and improve existing connectivity. 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).

## WMN1 : WEST MIDLANDS REGIONAL NETWORKS - PRE 1923 GROUPING

It is essential to understand the historical development of the West Midlands rail network. This started in 1838 with the arrival of both the London & Birmingham and the Grand Junction Railway (from Lancashire) at the Curzon Street terminus. By the 1850s the region was crisscrossed by a burgeoning network of new lines. These coalesced into 3 principal systems; Great Western, Midland and London North-Western (LNW), the latter of which subsumed the London & Birmingham and the Grand Junction railways. All were trunk routes that spanned the region, and peripheral original terminus stations such as Curzon Street were superseded by more central through stations (eg New Street), after less than 15 years' operation. The Midland and London North-Western systems merged at New Street Station, but the Great Western remained a separate through route with its city centre station at Snow Hill.

## WMN2 : WEST MIDLANDS REGIONAL NETWORKS - CONTEMPORARY

Even today, there is little connection, and little integration between the Midland/LNW and Great Western systems, which continue to operate from disconnected city centre stations. The LNW and Midland systems now comprise the West Coast and CrossCountry main lines, a local network of 40 suburban stations and a wider regional network, all converging upon New Street. The Great Western system, now truncated north-west of Birmingham, comprises the Chiltern route to London Marylebone and a much smaller local network focussed upon Moor Street and Snow Hill stations. Within Birmingham, interchange between the two systems is only possible by tram.

## WMN3 : CONNECTIVITY OF LOCAL & INTERCITY RAIL NETWORK TO HS2

HS2's proposed Curzon Street terminus in Birmingham will be contiguous with Moor Street Station, and as such will offer reasonable connectivity to the Great Western system. But with the local networks primarily converging upon New Street, HS2 will be effectively disconnected from most of the West Midlands conurbation, with only 2 access points (at Curzon Street and Birmingham Interchange - both of which lack any local rail links). When considered alongside the bypassing of Coventry and other major regional centres, it is fair to question whether HS2 is fulfilling its remit, to serve the West Midlands.

Of almost equal concern is Curzon Street's configuration as a terminus station. As such it lacks capacity, it cannot offer effective through routeings (for instance on CrossCountry axes) and hence it would seem to be in a dysfunctional 2-tier relationship with New Street, from where the majority of services will continue to operate.

## WMN4 : HIGH SPEED UK AND OTHER DEVELOPMENTS TO LOCAL RAIL SYSTEM

This diagram details an M6-aligned dedicated West Midlands spur from the M1-aligned spine of High Speed UK. However, HSUK's primary strategy is to enhance the existing Rugby-Coventry-Birmingham route, with 4-tracking between Rugby and Birmingham. The main impediment to this scheme will be the difficulty of undertaking such works on a railway that is already highly congested; hence electrification of both Coventry-Nuneaton and Nuneaton-Birmingham lines is proposed, to create a viable diversionary route. Concentration upon the existing Coventry corridor will achieve far greater connectivity benefits than a dedicated spur (which would only be constructed later as dictated by capacity requirements and possible Eurogauge operation) and will still enable London-Birmingham journey times below 1 hour.

Operations at New Street will be rationalised to eliminate terminating trains, and thus maximise capacity; as part of this strategy, the route north-westwards towards Wolverhampton will be effectively 4-tracked by means of a new link from Soho Junction to Tame Bridge, to access the faster Grand Junction lines. This will considerably accelerate services to Manchester and Liverpool, extensions of high speed services from London operating on the classic network. This will also improve intercity access to Walsall, and will harmonise with proposals to re-establish the Wichnor-Walsall-Stourbridge freight corridor.

4-tracking is also proposed along the existing CrossCountry route from Birmingham to Derby, with line speeds generally enhanced to 250km/h (possible with the favourable near-straight alignment).

#### WMN5 : CONNECTIVITY OF LOCAL & INTERCITY RAIL NETWORK TO HIGH SPEED UK

Far greater connectivity can be achieved with the High Speed UK proposals, fully integrated with the existing network and accessing 11 existing regional centres (as against the 2 new stations proposed for HS2). New Street would remain the primary regional hub, but its operations would be streamlined through the elimination of terminating services, and 4-tracking of the approaches to south-east and north-west which could then operate far more efficiently as intercity routes, allowing Coventry, Walsall and Wolverhampton to become hub stations integral to the high speed network. Faster journey times and a greater range of destinations give greater connectivity; 4-tracking of New Street's approach routes offers much greater capacity for intercity and local services. Overall, HSUK creates a more diversified and higher capacity model of local to intercity connectivity, less reliant on primary hubs such as New Street.

The enhancements introduced by High Speed UK will also deliver major benefits to the Midlands regional network. The proposed new Soho-Tame Bridge link, the restoration of the Walsall-Lichfield route and the creation of a north-facing connection from Rugby to the 4-track HSUK trunk route all combine to establish a 'ring' of connectivity around the West and East Midlands. This ring would directly connect Birmingham-Birmingham International-Coventry-Rugby-Leicester-Loughborough-Derby-Burton-Lichfield-Walsall-Birmingham; and with short extensions, Wolverhampton, Northampton and Nottingham could also be included in the system.

This diagram, employing a traffic light system to illustrate proximity of any local station to the intercity/high speed network, clearly demonstrates the superior connectivity achieved by High Speed UK's more integrated and diverse system, when compared with the segregation of HS2.

#### WMN6 : PROPOSED 'MIDLAND RING' SERVICES IN ASSOCIATION WITH HIGH SPEED UK

#### WMN7 : MIDLANDS CONNECTIVITY TABULATION

The establishment of High Speed UK, fully integrated with the existing network, requires a suite of interventions including the following:

1. 4-tracking of existing Rugby-Coventry-Birmingham International-Birmingham New Street route;
2. New link between Soho Junction and Grand Junction lines at Tame Bridge (to create enhanced 4-track corridor north-west from Birmingham New Street);
3. Restored route between Walsall and Lichfield (essential for improved network access to the regional freight hub at Bescot);
4. Upgrade of Birmingham-Derby route to 4 tracks;
5. Restoration of north side of 'Derby Teardrop' to allow through running between Burton-Derby line and onward route to Nottingham and Loughborough;
6. New high speed line creating new link between Midland Main Line at Leicester and West Coast Main Line at Rugby.

These interventions, essential for creating a balanced high speed intercity network around Birmingham, also permit a new 'Midlands Ring' regional service connecting Birmingham New Street - Birmingham International (BHX) - Coventry - Rugby - Leicester - Loughborough - East Midlands Parkway (EMAP) - Derby - Burton - Lichfield - Walsall - Hawthorns - Birmingham, and also extending to Wolverhampton, Northampton and Nottingham. The extent to which this will transform connectivity between West and East Midlands centres is demonstrated in the tabulations in Diagram WMN7.

An empirical calculation of Connectivity Index indicates that the HSUK national interventions will result in a 40% improvement in local/regional connectivity. By contrast, the intervention of HS2 creates no local connectivity benefits, and instead requires major distortion of the local networks to conform with HS2.

#### WMN8 : HIGH SPEED UK AND ASSOCIATED FREIGHT DEVELOPMENTS

This diagram illustrates the High Speed UK strategy for development of railfreight corridors clear of congested intercity and commuter routes. Along these corridors, freight becomes 'prime user', no longer subject to the congestion at bottlenecks of the classic network which often renders it impossible to establish new interregional freight flows. This strategy would see existing freight flows routed via central Birmingham diverted to more peripheral routes - for instance, WCML container flows to Bescot diverted via Nuneaton and the Sutton Park line, and CrossCountry flows diverted onto a restored Stourbridge-Wichnor route. The latter would require restoration of the abandoned Stourbridge-Dudley-Walsall, and Walsall-Brownhills-Lichfield lines. For the section via Dudley, competing aspirations for extensions of the West Midlands Metro must be taken into account.

Restoration of the Stourbridge-Wichnor route harmonises well with wider aspirations for the development of a Continental Gauge freight network oriented parallel with High Speed UK. The north-south spine of this system would be routed via the Midland Main Line and the Ivanhoe Line, joining the 4-tracked CrossCountry Main Line at Burton on Trent; the restored Walsall-Lichfield section would offer direct access to Bescot Yard, and possibly other Black Country industrial areas.

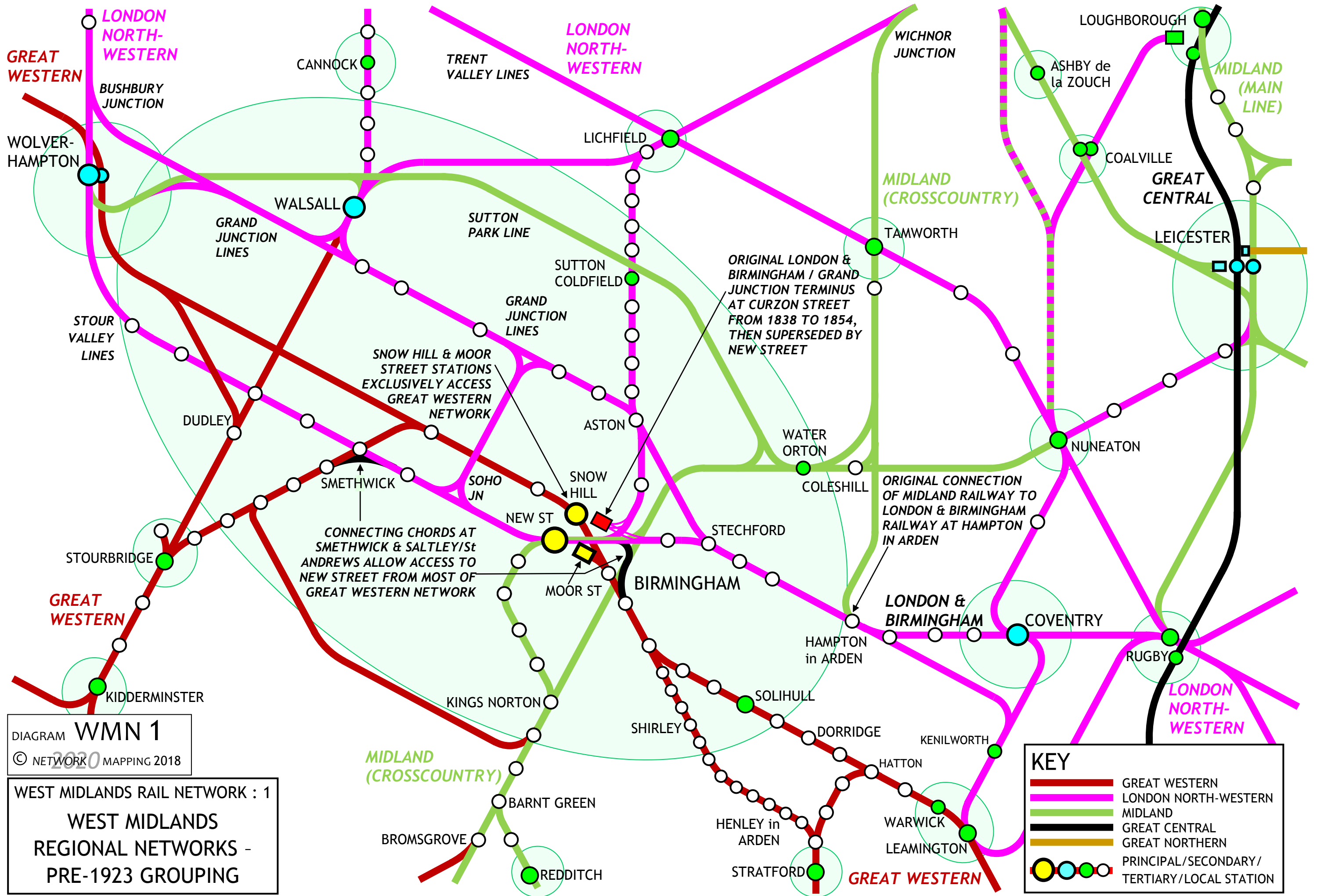


DIAGRAM **WMN 1**  
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**WEST MIDLANDS RAIL NETWORK : 1**  
**WEST MIDLANDS REGIONAL NETWORKS - PRE-1923 GROUPING**

**KEY**

- GREAT WESTERN
- LONDON NORTH-WESTERN
- MIDLAND
- GREAT CENTRAL
- GREAT NORTHERN
- PRINCIPAL/SECONDARY/TERTIARY/LOCAL STATION

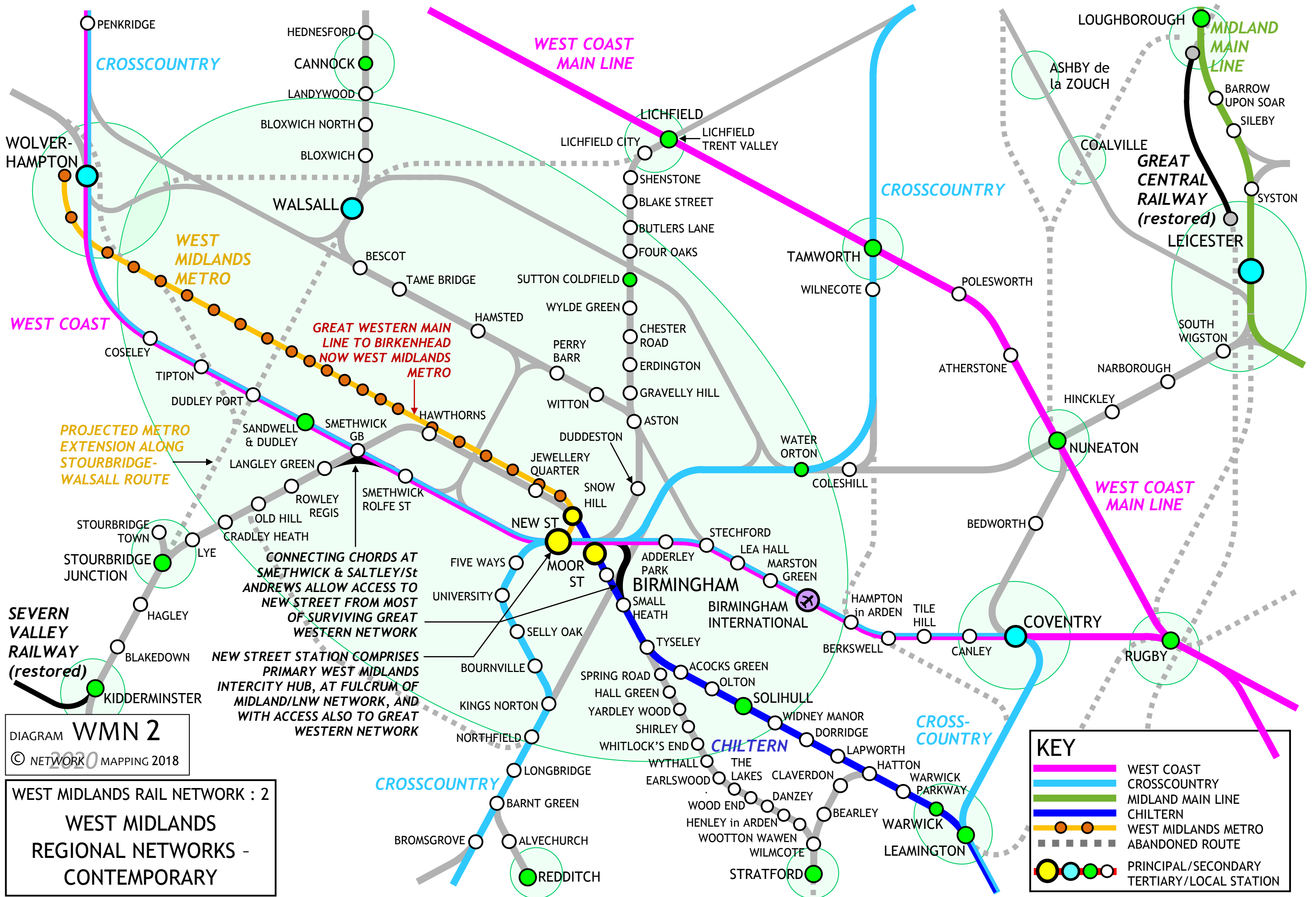
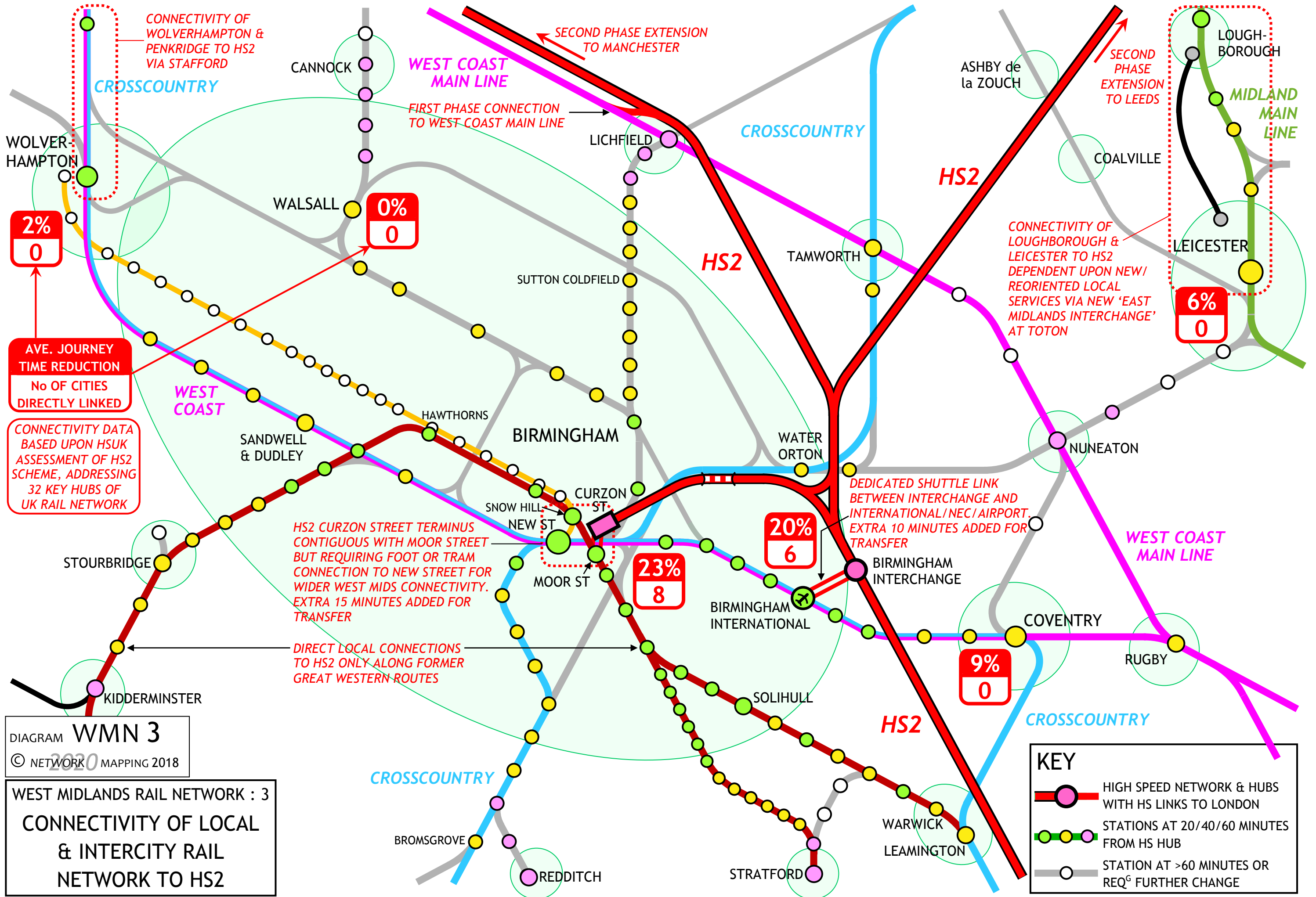


DIAGRAM **WMN 2**  
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**WEST MIDLANDS RAIL NETWORK : 2**  
**WEST MIDLANDS REGIONAL NETWORKS - CONTEMPORARY**

**KEY**

- WEST COAST
- CROSSCOUNTRY
- MIDLAND MAIN LINE
- CHILTERN
- WEST MIDLANDS METRO
- - - ABANDONED ROUTE
- PRINCIPAL/SECONDARY
- TERTIARY/LOCAL STATION



**2%**  
**0**

**AVE. JOURNEY TIME REDUCTION**  
**No OF CITIES DIRECTLY LINKED**

**CONNECTIVITY DATA BASED UPON HSUK ASSESSMENT OF HS2 SCHEME, ADDRESSING 32 KEY HUBS OF UK RAIL NETWORK**

**0%**  
**0**

**23%**  
**8**

**20%**  
**6**

**9%**  
**0**

**6%**  
**0**

DIAGRAM **WMN 3**  
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**WEST MIDLANDS RAIL NETWORK : 3**  
**CONNECTIVITY OF LOCAL & INTERCITY RAIL NETWORK TO HS2**

**KEY**

- HIGH SPEED NETWORK & HUBS WITH HS LINKS TO LONDON
- STATIONS AT 20/40/60 MINUTES FROM HS HUB
- STATION AT >60 MINUTES OR REQ<sup>d</sup> FURTHER CHANGE

**HS2 CURZON STREET TERMINUS CONTIGUOUS WITH MOOR STREET BUT REQUIRING FOOT OR TRAM CONNECTION TO NEW STREET FOR WIDER WEST MIDS CONNECTIVITY. EXTRA 15 MINUTES ADDED FOR TRANSFER**

**DIRECT LOCAL CONNECTIONS TO HS2 ONLY ALONG FORMER GREAT WESTERN ROUTES**

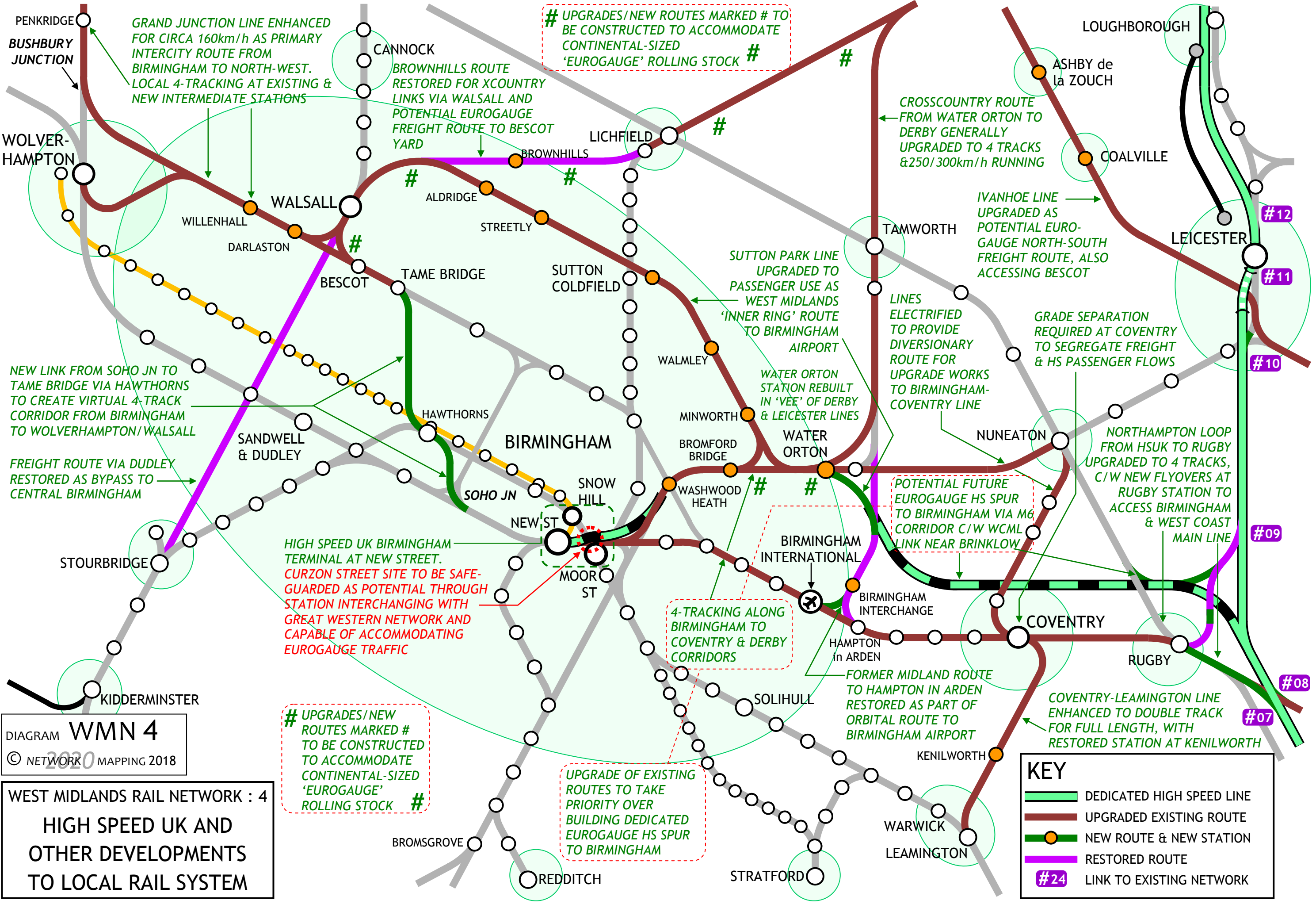
**DEDICATED SHUTTLE LINK BETWEEN INTERCHANGE AND INTERNATIONAL/NEC/AIRPORT. EXTRA 10 MINUTES ADDED FOR TRANSFER**

**CONNECTIVITY OF WOLVERHAMPTON & PENKRIDGE TO HS2 VIA STAFFORD**

**SECOND PHASE EXTENSION TO MANCHESTER**

**SECOND PHASE EXTENSION TO LEEDS**

**CONNECTIVITY OF LOUGHBOROUGH & LEICESTER TO HS2 DEPENDENT UPON NEW/REORIENTED LOCAL SERVICES VIA NEW 'EAST MIDLANDS INTERCHANGE' AT TOTON**



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

GRAND JUNCTION LINE ENHANCED FOR CIRCA 160km/h AS PRIMARY INTERCITY ROUTE FROM BIRMINGHAM TO NORTH-WEST. LOCAL 4-TRACKING AT EXISTING & NEW INTERMEDIATE STATIONS

BROWNHILLS ROUTE RESTORED FOR XCOUNTRY LINKS VIA WALSALL AND POTENTIAL EUROGAUGE FREIGHT ROUTE TO BESCOT YARD

CROSSCOUNTRY ROUTE FROM WATER ORTON TO DERBY GENERALLY UPGRADED TO 4 TRACKS & 250/300km/h RUNNING

IVANHOE LINE UPGRADED AS POTENTIAL EUROGAUGE NORTH-SOUTH FREIGHT ROUTE, ALSO ACCESSING BESCOT

SUTTON PARK LINE UPGRADED TO PASSENGER USE AS WEST MIDLANDS 'INNER RING' ROUTE TO BIRMINGHAM AIRPORT

LINES ELECTRIFIED TO PROVIDE DIVERSIONARY ROUTE FOR UPGRADE WORKS TO BIRMINGHAM-COVENTRY LINE

GRADE SEPARATION REQUIRED AT COVENTRY TO SEGREGATE FREIGHT & HS PASSENGER FLOWS

NEW LINK FROM SOHO JN TO TAME BRIDGE VIA HAWTHORNS TO CREATE VIRTUAL 4-TRACK CORRIDOR FROM BIRMINGHAM TO WOLVERHAMPTON/WALSALL

FREIGHT ROUTE VIA DUDLEY RESTORED AS BYPASS TO CENTRAL BIRMINGHAM

WATER ORTON STATION REBUILT IN 'VEE' OF DERBY & LEICESTER LINES

NORTHAMPTON LOOP FROM HSUK TO RUGBY UPGRADED TO 4 TRACKS, C/W NEW FLYOVERS AT RUGBY STATION TO ACCESS BIRMINGHAM & WEST COAST MAIN LINE

HIGH SPEED UK BIRMINGHAM TERMINAL AT NEW STREET. CURZON STREET SITE TO BE SAFEGUARDED AS POTENTIAL THROUGH STATION INTERCHANGING WITH GREAT WESTERN NETWORK AND CAPABLE OF ACCOMMODATING EUROGAUGE TRAFFIC

4-TRACKING ALONG BIRMINGHAM TO COVENTRY & DERBY CORRIDORS

POTENTIAL FUTURE EUROGAUGE HS SPUR TO BIRMINGHAM VIA M6 CORRIDOR C/W WCML LINK NEAR BRINKLOW

FORMER MIDLAND ROUTE TO HAMPTON IN ARDEN RESTORED AS PART OF ORBITAL ROUTE TO BIRMINGHAM AIRPORT

COVENTRY-LEAMINGTON LINE ENHANCED TO DOUBLE TRACK FOR FULL LENGTH, WITH RESTORED STATION AT KENILWORTH

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

UPGRADE OF EXISTING ROUTES TO TAKE PRIORITY OVER BUILDING DEDICATED EUROGAUGE HS SPUR TO BIRMINGHAM

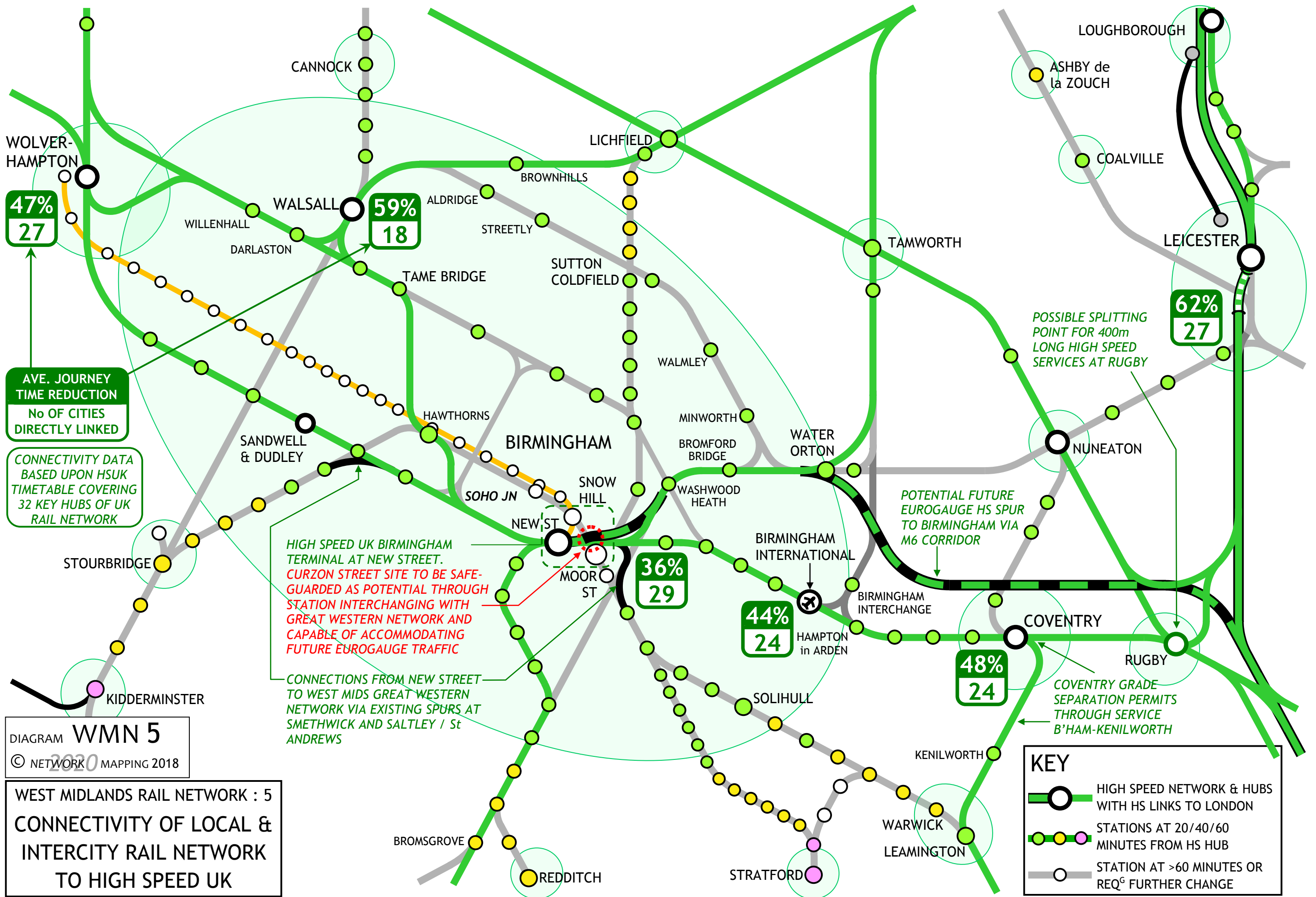
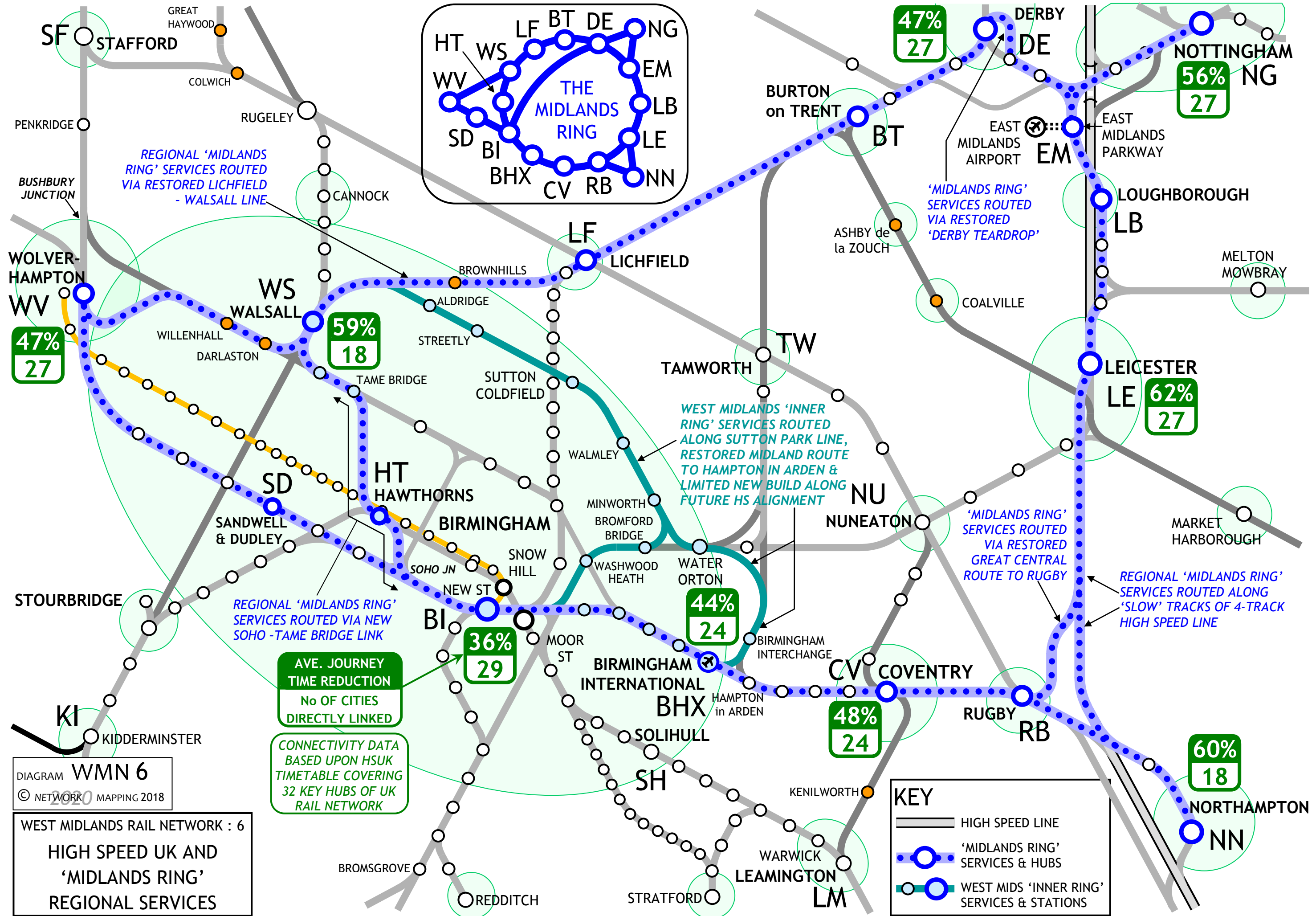
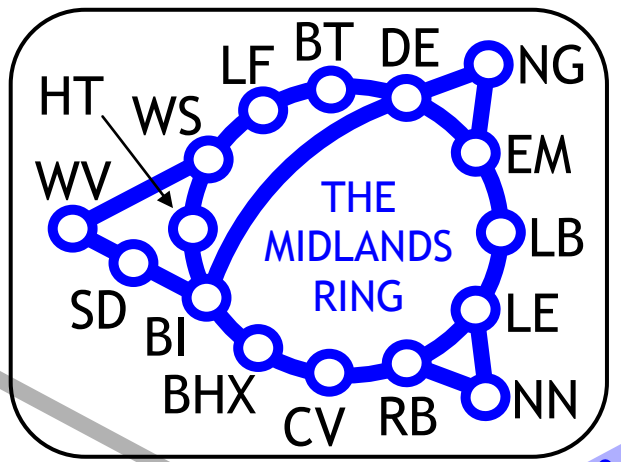


DIAGRAM **WMN 5**  
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**WEST MIDLANDS RAIL NETWORK : 5  
CONNECTIVITY OF LOCAL &  
INTERCITY RAIL NETWORK  
TO HIGH SPEED UK**



STAFFORD (SF)

GREAT HAYWOOD

COLWICH

PENKRIDGE

RUGELEY

CANNOCK

BUSHBURY JUNCTION

WOLVERHAMPTON (WV)

WALSALL (WS)

WILLENHALL

DARLASTON

WALSALL

WILLENHALL

DARLASTON

STOURBRIDGE

KIDDERMINSTER (KI)

REGIONAL 'MIDLANDS RING' SERVICES ROUTED VIA RESTORED LICHFIELD - WALSALL LINE

REGIONAL 'MIDLANDS RING' SERVICES ROUTED VIA NEW SOHO - TAME BRIDGE LINK

REGIONAL 'MIDLANDS RING' SERVICES ROUTED ALONG 'SLOW' TRACKS OF 4-TRACK HIGH SPEED LINE

REGIONAL 'MIDLANDS RING' SERVICES ROUTED VIA RESTORED GREAT CENTRAL ROUTE TO RUGBY

REGIONAL 'MIDLANDS RING' SERVICES ROUTED ALONG SUTTON PARK LINE, RESTORED MIDLAND ROUTE TO HAMPTON IN ARDEN & LIMITED NEW BUILD ALONG FUTURE HS ALIGNMENT

WEST MIDS 'INNER RING' SERVICES & STATIONS

WEST MIDS 'INNER RING' SERVICES ROUTED ALONG SUTTON PARK LINE, RESTORED MIDLAND ROUTE TO HAMPTON IN ARDEN & LIMITED NEW BUILD ALONG FUTURE HS ALIGNMENT

'MIDLANDS RING' SERVICES & HUBS

'MIDLANDS RING' SERVICES ROUTED VIA RESTORED 'DERBY TEARDROP'

'MIDLANDS RING' SERVICES ROUTED VIA RESTORED 'DERBY TEARDROP'

**AVE. JOURNEY TIME REDUCTION**  
No OF CITIES DIRECTLY LINKED

**CONNECTIVITY DATA**  
BASED UPON HSUK TIMETABLE COVERING 32 KEY HUBS OF UK RAIL NETWORK

**KEY**

- HIGH SPEED LINE
- 'MIDLANDS RING' SERVICES & HUBS
- WEST MIDS 'INNER RING' SERVICES & STATIONS

DIAGRAM **WMN 6**

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**WEST MIDLANDS RAIL NETWORK : 6**

**HIGH SPEED UK AND 'MIDLANDS RING' REGIONAL SERVICES**

47%  
27

59%  
18

36%  
29

44%  
24

48%  
24

47%  
27

56%  
27

62%  
27

60%  
18





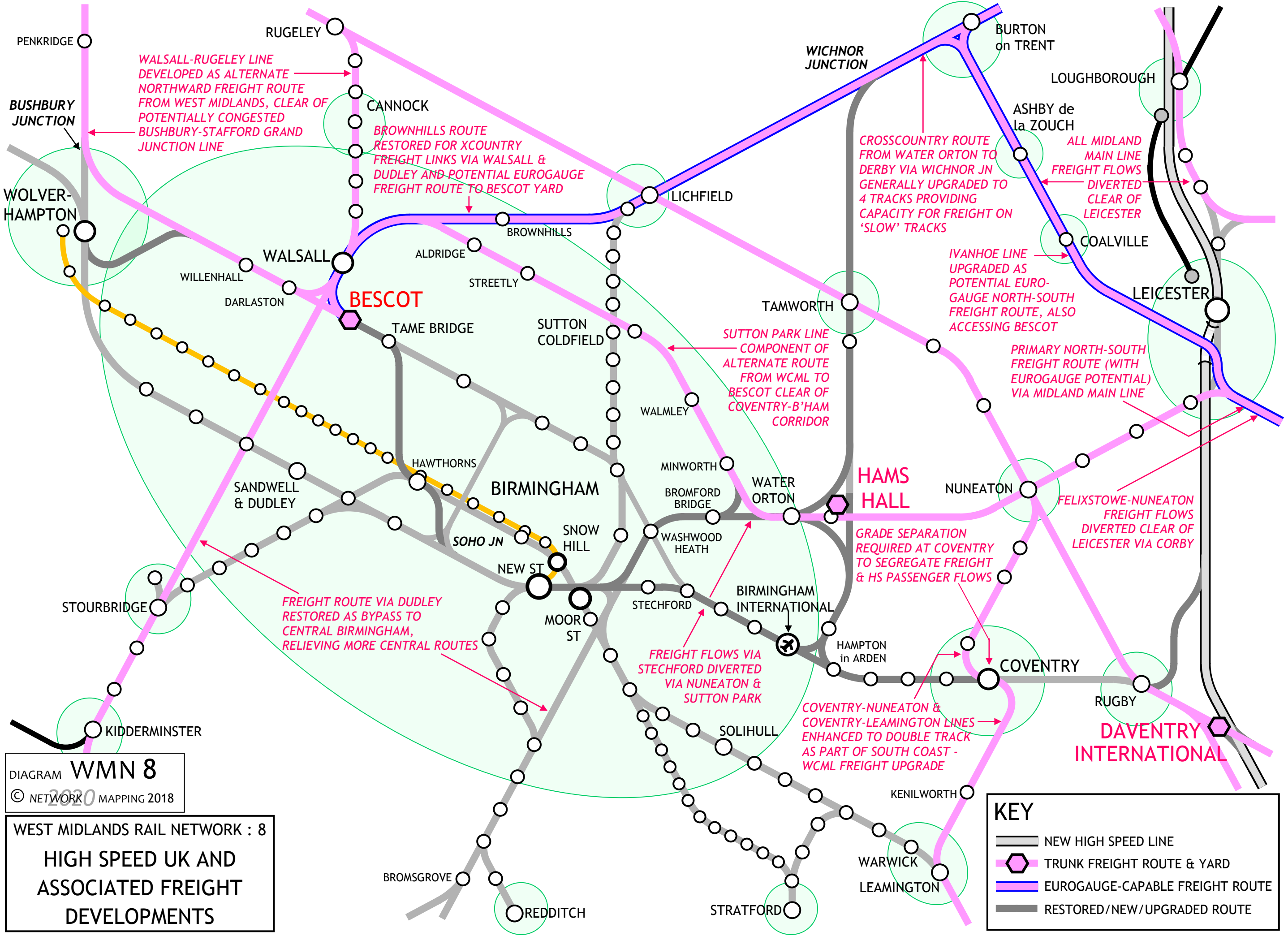


DIAGRAM **WMN 8**  
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**WEST MIDLANDS RAIL NETWORK : 8**  
**HIGH SPEED UK AND ASSOCIATED FREIGHT DEVELOPMENTS**

KEY	
	NEW HIGH SPEED LINE
	TRUNK FREIGHT ROUTE & YARD
	EUROGAUGE-CAPABLE FREIGHT ROUTE
	RESTORED/NEW/UPGRADED ROUTE