# HSUK assessment of Integrated Rail Plan performance in Midlands

With no definitive design criteria for the Integrated Rail Plan established by the Government, HSUK has set 7 criteria by which schemes should be assessed:

- 1. Full compliance with any core specification (note that no specification for journey time, service frequency etc between Midlands cities has been established by any official body).
- 2. Direct links between all principal (Midlands) population centres.
- 3. Delivery of maximised journey time reductions.
- 4. Full integration with local networks at city centre stations.
- 5. Delivery of step-change capacity gains for local services.
- 6. Provision of radically enhanced capacity for railfreight.
- 7. Optimisation of direct links & reductions in journey time to principal population centres across national network.

The following assessment contrasts the performance of Integrated Rail Plans based on a) the official HS2 'Y-network' and Midlands Rail Hub proposals, and b) the High Speed UK exemplar alternative. The assumption is made that the Integrated Rail Plan will stipulate that HS2 and Midlands Rail Hub are implemented in full; any scope reductions in either scheme (for instance the widely predicted curtailment of the HS2 Phase 2b 'Eastern Arm') will further exacerbate the inadequate performance of the official proposals.

The assessment shows HSUK's comprehensive superiority over any local network based upon the official HS2 'Y-network' and Midlands Rail Hub proposals.

It should particularly be noted that HS2 as currently schemed provides no direct links whatsoever between Midlands cities. Note that 'out of town' parkway stations such as the proposed HS2 East Midlands Interchange at Toton are not accepted as providing direct intercity services to either Nottingham, Derby or Leicester.

Further information on the performances of HS2 and HSUK as national propositions is given in Document A15, see Figures 4.1, 4.2, 4.3, 7.1 & 7.2.



#### Midlands Rail Hub & HS2:

Are they the network that Midlanders need? Do they deliver the Integrated Rail Plan? and... Can they meet the HSUK Challenge?

A study by Colin Elliff BSc CEng MICE

# Hold this thought... \*\*ISUK



- → The HS2 project can only be justified if it results in an improved national railway network, offering stepchange enhancements in capacity and connectivity.
- → This improved national network is vital to deliver the HS2 promises of economic benefit, regional rebalancing and reductions in CO<sub>2</sub> emissions, and to build back better after the COVID-19 pandemic.
- → HS2 cannot be an end in itself.

### Executive Summary - 1 //SU



- 1. The Midlands Rail Hub (NPR) initiative is vital to creating the enhanced transport network in the Midlands that is necessary:
  - to spur the economic development of the Midlands Engine;
  - to meet the Government's 'levelling up' agenda;
  - to deliver step-change CO<sub>2</sub> reductions in line with 'net zero' commitments:
  - to 'build back better' after the COVID-19 pandemic.
- 2. This demands not any rail network, but the best possible railway network, delivering the greatest possible connectivity and capacity between the principal cities of the Midlands.

# Executive Summary - 2 ///S



- 3. This study defines 6 core performance requirements of an enhanced rail network for the Midlands Engine:
  - direct intercity links between all principal population centres;
  - step-change journey time reductions across Midlands network;
  - city centre stations for full local/intercity integration;
  - step-change capacity increase for local services;
  - harmonisation with a parallel strategy for regional railfreight;
  - optimised intercity links to other major UK population centres.
- 4. This study reveals for the first time how a future UK rail network including HS2 & Midlands Rail Hub would perform against the 6 performance requirements listed above.

# Executive Summary - 3 //SUK



- 5. This study then contrasts MRH's & HS2's combined performance against that of the Midlands Ring/HSUK Exemplar Alternative.
- 6. On all comparators, Midlands Ring vastly outperforms MRH/HS2.
- 7. MRH's failure can be attributed to HS2's lack of integration with the existing network, offering no links between Midlands cities.
- 8. This leaves MRH as the only intervention to improve Midlands links.
- 9. By contrast Midlands Ring's design as an integrated national intercity network, independent of HS2, gives far superior performance.
- 10. HS2's total lack of integration effectively sabotages both Midlands Rail Hub and the Government's Integrated Rail Plan.
- 11. Only the fully integrated Midlands Ring can deliver.

#### Contents



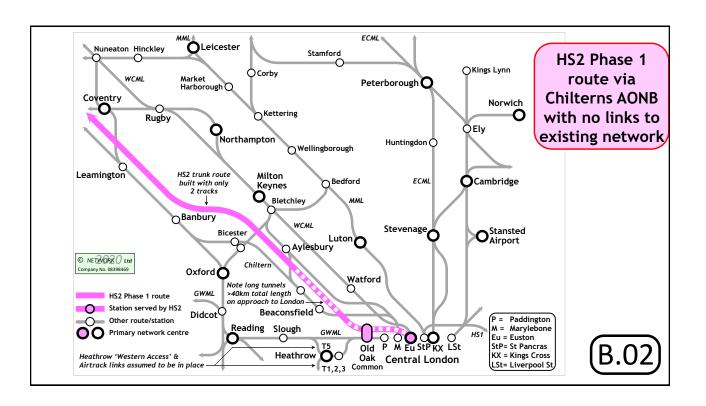
- A.01 Exec Summary/Contents
- B.01 Development of MRH
- C.01 MRH Does it Work?
- D.01 HSUK Exemplar Alternative
- E.01 Compliance with core spec?
- F.01 Comprehensive direct links?
- G.01 Step-change journey time reductions?
- H.01 MRH/HSUK city proposals...

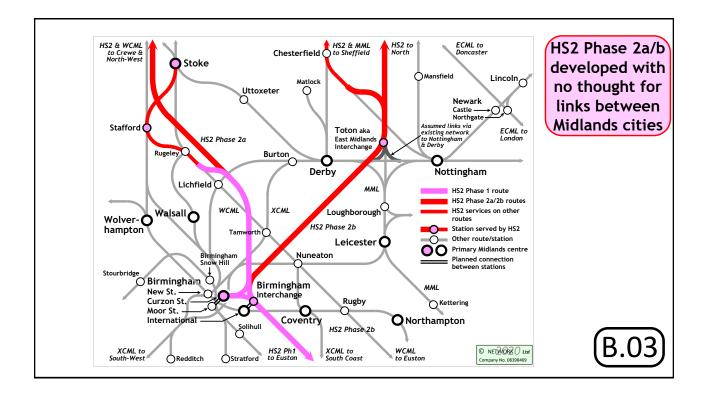
- I.01M1 Corridor cities
- Birmingham J.01
- K.01 **Black Country**
- L.01 Stoke/Potteries
- East Midlands cities M.01
- N.01 Midlands Railfreight?
- P.01 Links to other UK regions?
- 0.01 Conclusions
- R.01 Integrated Rail Plan

### MRH Development



- 1. 2009 HS2 project launched, with basic remit for new London West Midlands high speed line.
- 2. 2010 HS2 concept of national Y-network defined, with Ph1 London-West Mids stem splitting into Ph2a route to North-West and Ph2b route to Yorks.
- 2012 Ph2a and Ph2b routes confirmed. Note no links created by HS2 between Midlands cities.
   See Slide B.03



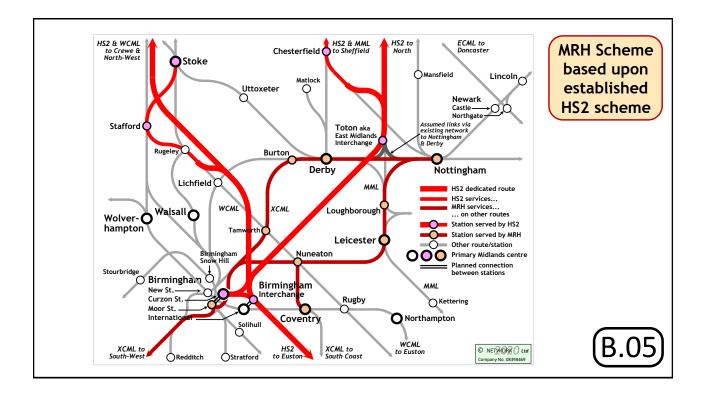


## MRH Development



- 4. 2015 Midlands Connect (MC) established to develop the transport infrastructure necessary to boost the economy of the Midlands.
- 2019 MC's Midlands Rail Hub initiative published, proposing upgrades of key intercity routes between West Midlands and East Midlands.
   See Slide B.05

(B.04)



# MRH - Further Steps SUK

- 6. End of 2020 Government due to publish 'Integrated Rail Plan for whole GB network' - a key recommendation of Oakervee Review of HS2 project. MRH & HS2 key elements of Integrated Rail Plan.
- 7. August 2021 So far, no Integrated Rail Plan.

(B.06)

# MRH: Does it Work? MSUK

Comprehensive review of Midlands Connect outputs indicates:

- No evidence of definitive technical proposals for MRH routes or stations (compare with HS2 progress!)
- No evidence that MC has adopted any structured approach to developing MRH as an optimised railway network. Note that exactly the same is true of HS2 no consideration of national network. C.01

#### Nevertheless...



Sufficient information exists in MC's and HS2 Ltd's technical outputs to:

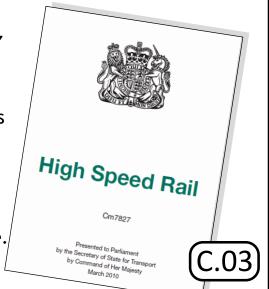
- Assess MRH's likely improvements in intercity journey times & direct intercity links;
- Determine MRH's overall performance as a railway network interlinking the principal cities of the Midlands Engine.

(C.02)

Primary Info Source 1 //SUK

High Speed Rail: Cm7827 HMG/DfT (March 2010)

- ➤ This document set out the Government's plan for a Y-shaped 'network' of high speed lines, with a the Phase 1 London-West Midlands stem splitting into:
  - Phase 2a to the North-West; and
  - Phase 2b to East Midlands & Yorkshire.
     See Slides B.02 & B.03.



Primary Info Source 2a //SUK

#### Midlands Rail Hub:

The Case for Transformational Investment in the Region's Rail Network Midlands Connect (June 2019)

➤ This document set out the Midlands Rail Hub programme of improved rail links, primarily between East and West Midlands.

See Slide B.05



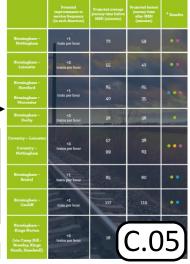
# Primary Info Source 2b SUK

Midlands Rail Hub: The Case for Transformational Investment in the Region's Rail Network Midlands Connect (June 2019)

→ Proposed journey times and service frequencies shown on Page 11

→ Proposed routes shown on Page 13 →





#### Remember...



It cannot be disputed that...

→ To deliver the greatest possible economic and environmental benefits, the Midlands Engine needs the best possible railway network, providing the greatest possible enhancements in connectivity and capacity.

(C.06)

#### Remember...



It also cannot be disputed that...

- → Any proposed 'MRH network' must be designed to deliver optimum performance as a network.
- → This cannot be left to chance it is no good designing HS2's high speed lines in isolation from the existing railway system, and then hoping that MRH will deliver the required connectivity.

# Key Network Objectives SUK

An ideal Midlands Engine rail network should...

- 1. Comply fully with any core specification.
- 2. Directly interlink all principal Midlands population centres.
- 3. Deliver maximised journey time reductions.
- 4. Integrate fully with local networks at city centre stations.
- 5. Deliver step-change capacity gains for local services.
- 6. Provide radically enhanced capacity for railfreight.
- 7. Optimise direct links & reductions in journey time to principal population centres across national network.

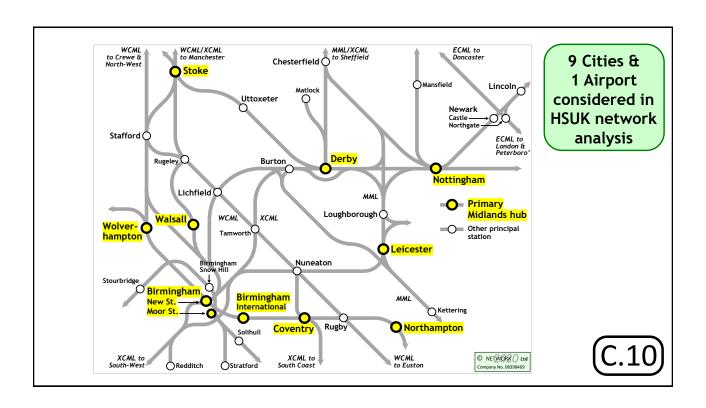
(C.08)

# 10 Hubs Considered in SUK **HSUK Network Analysis**



Northampton Coventry B'ham Airport Birmingham Walsall

Wolverhampton Stoke Derby **Nottingham** Leicester

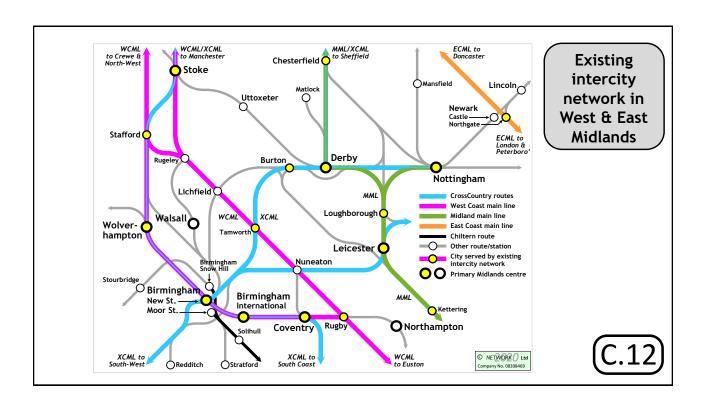


### Basis of Analysis



- → Any judgment on network performance can only be made in the context of the performance of the existing network.
- → Primary problem:
  - West Midlands served by WCML
  - East Midlands served by MML
  - All West Mids-East Mids links focussed upon Birmingham New Street

(C.11)



# 



Northampton	NN						High (	quality	,	Direct
Coventry		CV					Mediu	ım qua	lity i	hourly ntercity
B'ham Airport			BHX				Low c	μality		link
Birmingham				ВІ			No dii	rect lir	nk	
Walsall					WS		•	No	. of	21
Wolverhampton						WV		direc	t link	
Stoke							ST			
Derby								DE		
Nottingham									NG	
Leicester										LE
	NN	CV	ВНХ	ВІ	WS	WV	ST	DE	NG	LE
No of Direct Links	5	5	5	9	2	6	6	4	3	3

Existing network offers 24 direct intercity links out of 45 possible.

Network **53**% efficiency

# The High Speed UK MSUK **Exemplar Alternative**

- → A properly informed judgement on MRH's performance as an intercity network, and on its worth as a public infrastructure project, can only be made through rigorous comparison with an 'Exemplar Alternative'.
- → High Speed UK provides this Exemplar Alternative.

#### The HSUK Alternative



- → Unlike MRH or HS2, Midlands Ring/HSUK has been designed from the outset as a national intercity network, with the basic aim of establishing frequent and direct intercity links between all major UK cities.
- ➤ The HSUK design is supported by detailed design (at 1:25,000 scale) of over 1,000km of new, upgraded and restored railway. This has in turn allowed detailed estimation of construction cost, and calculation of journey times on all intercity routes.

#### Midlands Ring & HSUK



- → The elements of High Speed UK in the Midlands Engine region are presented as the 'Midlands Ring'.
- → The Midlands Ring has the same fundamental aim as Midlands Rail Hub (MRH) - to interconnect the major cities of the Midlands, and hence promote economic growth.
- → The detailed design supporting Midlands Ring allows rigorous comparisons to be made with MRH on a wide range of technical criteria.

#### 



- → High Speed UK/Midlands Ring intercity services will extend to all major population centres in the Midlands Engine/M1 Corridor.
- > These services will be fully integrated with a wider network of local services.
- → Routeing via M1 Corridor vital for HSUK's comprehensive coverage & full integration.

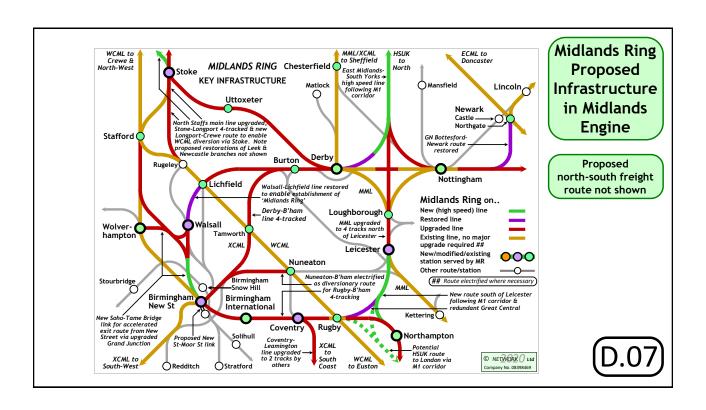
Chesterfield O Sheffield Midlands Ring WCML WCML to Manchester ECML to Doncaster to Crewe & North-West to North Intercity Stoke Mansfield Lincoln, Network in Uttoxeter **Midlands** Newark Walsall-Lichfield line Castle **Engine** Northgate establishment of 'Midlands Ring' Stafford 🔘 GN Bottesford-Derby-Birmingham line restored Derby Burton Nottingham Lichfield HSUK intercity services set out in Demonstrator Loughborough C **W**alsall Timetable Wolver-Tamworth **MIDLAND** HSLIK Local Services hampton Chiltern/GW Local Services **RING** Leicester C Connecting Lines New Soho-Tame Bridge link — New Station/Major Upgrade Nuneaton Proposed inter-station link Birmingham -Snow Hill New Rugby HSUK link Stourbridge Birmingham Birmingham New St. Kettering Moor St. MML to London Coventry Northampton Rirminaham line XCML to South Coast WCML to © NETWORK () Ltd

#### Midlands Ring Routes



- → High Speed UK/Midlands Ring services will operate on a blend of:
  - New-build routes;
  - Upgraded existing routes;
  - Restored abandoned routes.
- > This is harmonious with wider initiatives to:
  - Create a dedicated north-south freight route; and
  - Electrify most Midlands rail routes.
- → Vastly reduced env. impact along M1 Corridor.

(D.06)



#### Network Aim 1



 Full compliance with core specification for journey time & service frequency??

(E.01)

# Compliance with Spec **Service** Frequency??

No core specification has ever been issued for fundamental intercity connectivity between the principal population centres of the West and East Midlands.

(E.02)

#### Network Aim 2

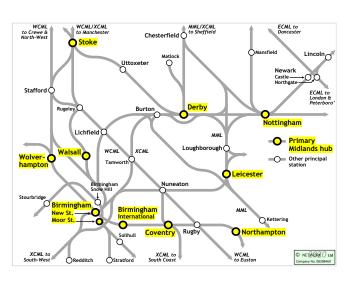


2. Comprehensive direct links between principal centres of Midlands Engine

F.01

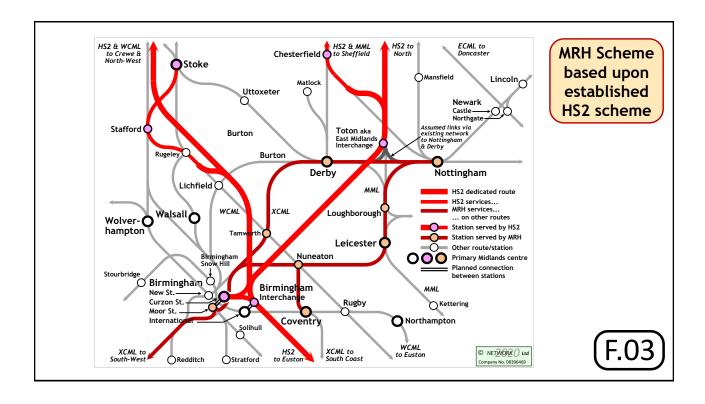
#### Direct Links??





- 9 cities + 1 airport considered in connectivity analysis of rail network of the Midlands Engine
- 9 possible links from 10 centres
- 45 links in total

(F.02



# Direct Links via MRH **MS**



Northampton	NN					0	HS2 d	irect ir	ntercity	/ link
Coventry		CV				7	MRH c	lirect i	ntercit	y link
B'ham Airport			BHX			38	Existir	ng inte	rcity li	nk
Birmingham				ВІ		36	No direct intercity link			link
Walsall					WS			No	. of	7
Wolverhampton						WV		direct	t links	/
Stoke							ST			
Derby								DE		
Nottingham									NG	
Leicester										LE
	NN	CV	ВНХ	ВІ	WS	WV	ST	DE	NG	LE
No of Direct Links	0	2	0	3	0	0	0	2	4	3

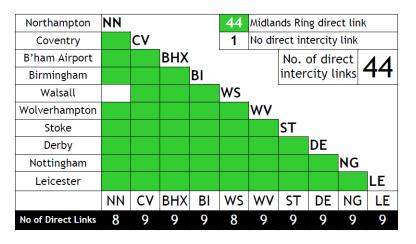
MRH offers **7** improved direct intercity links out of **45** possible. HS2 offers **nothing**.

16% Network efficiency

(F.04

#### Midlands Ring Direct Links | SU





Midlands Ring offers 44 improved direct intercity links out of 45 possible.

Network 98% efficiency

#### Midlands Ring & HSUK MISS

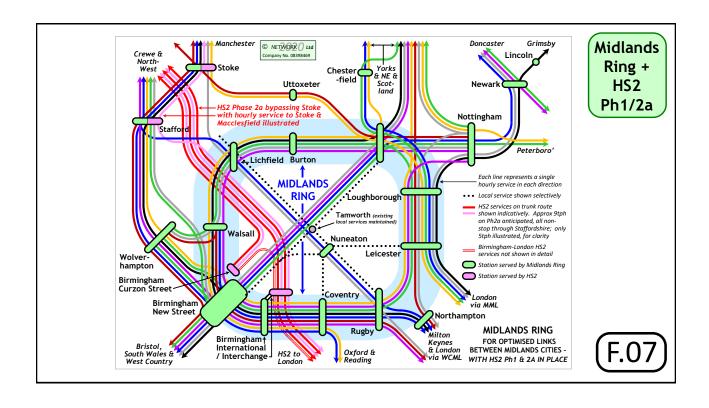


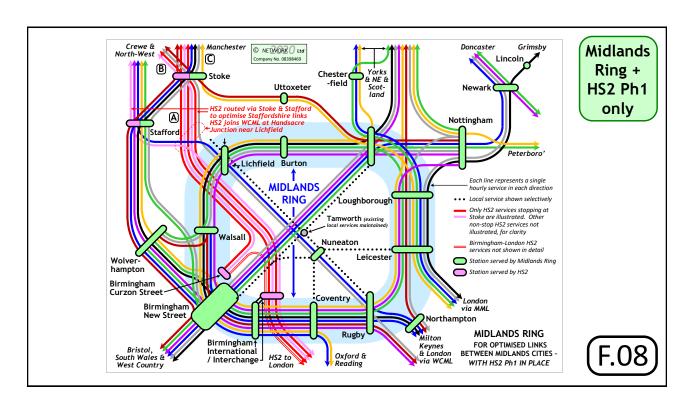
Midlands Ring links will be achieved independent of HS2 rollout.

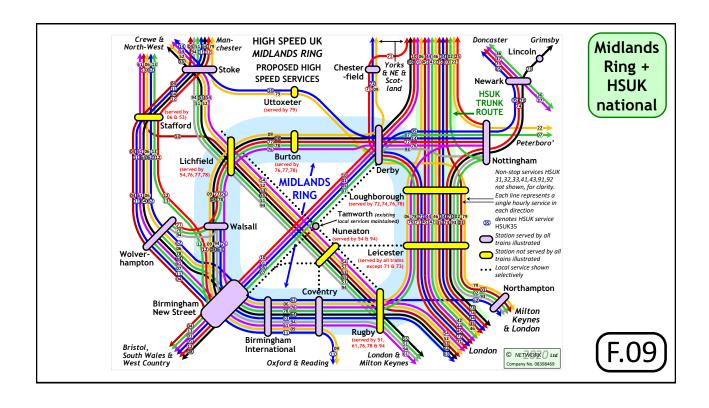
- Midlands Ring + HS2 Ph1 & 2a Slide F.07
- Midlands Ring + HS2 Ph1 only Slide F.08
- Midlands Ring + wider HSUK project -Slides F.09/F.10

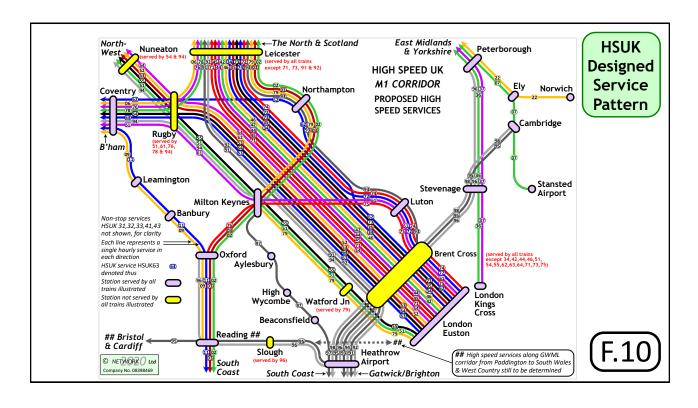
20

F.06









#### Network Aim 3



3. Step-change journey time reductions on intercity routes within Midlands Engine

(G.01)

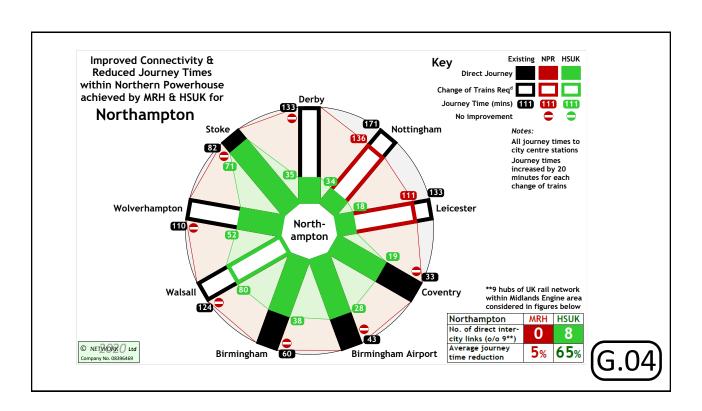
# Journey Time Calcs **MSUK**

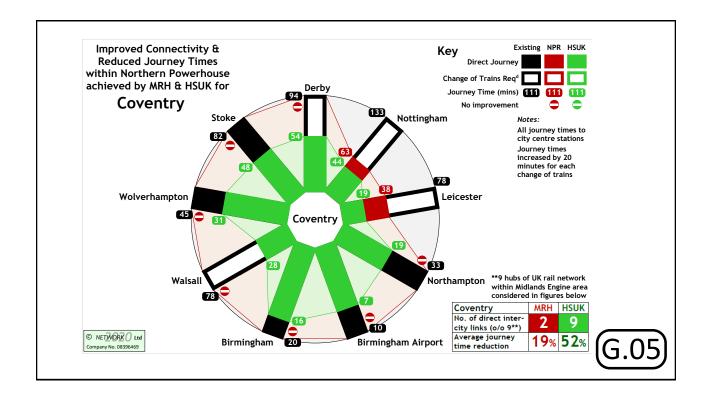
- ➤ Comprehensive route design of Midlands Ring's new-build, upgraded and restored lines allows direct journey times to be calculated for all the proposed services illustrated in Slide F.05.
- → MRH direct journey times are based on the services illustrated in Slide F.03 and journey times published by Midlands Connect.
- → Times for journeys requiring a change of trains include an allowance of 20 minutes to reflect the 'deterrent effect' of changing trains.
- → Midlands Ring, MRH and existing journey times to 10 principal West and East Midlands centres are presented on the following slides

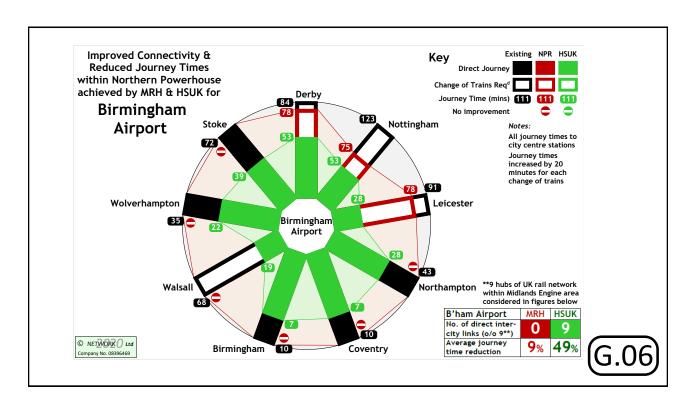
#### Index to City Data

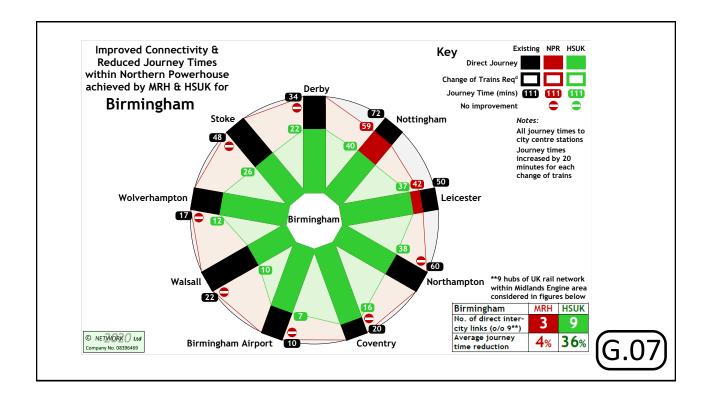


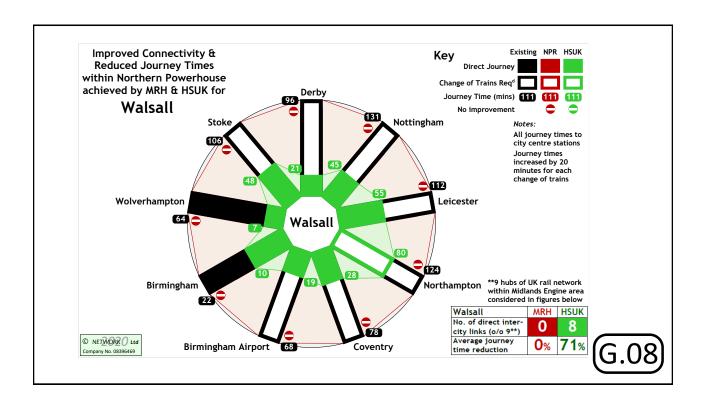
Northampton	G.04	Wolverhampton	G.09
Coventry	G.05	Stoke	G.10
B'ham Airport	G.06	Derby	G.11
Birmingham	G.07	Nottingham	G.12
Walsall	G.08	Leicester	G.13

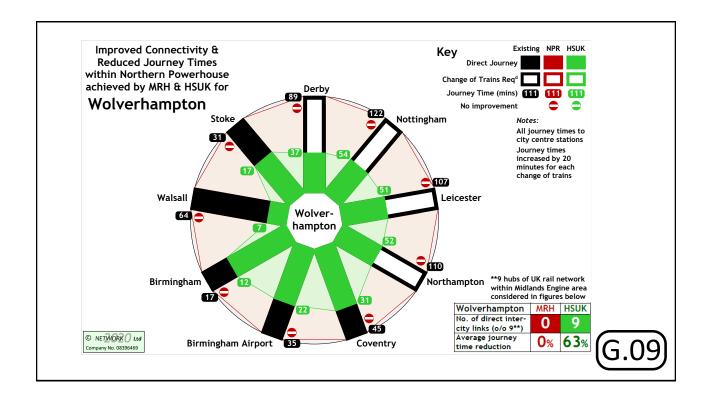


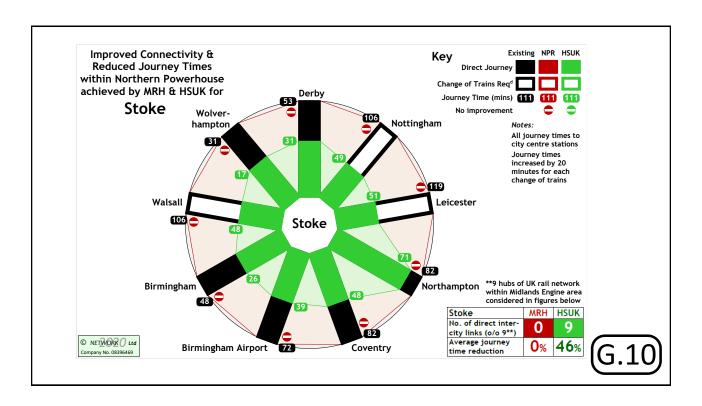


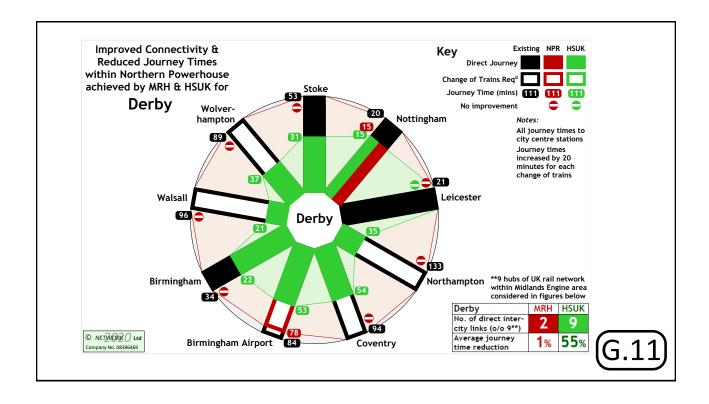


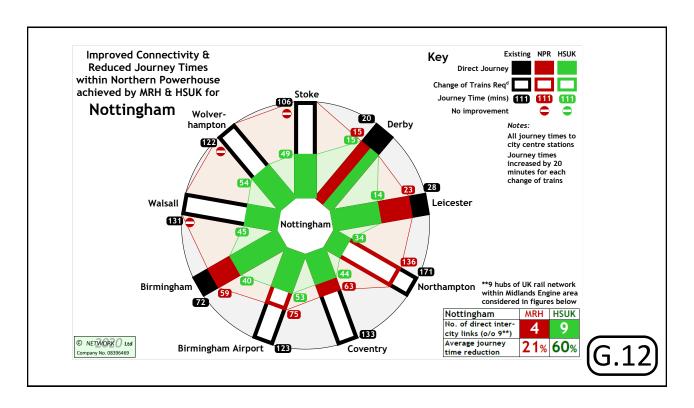


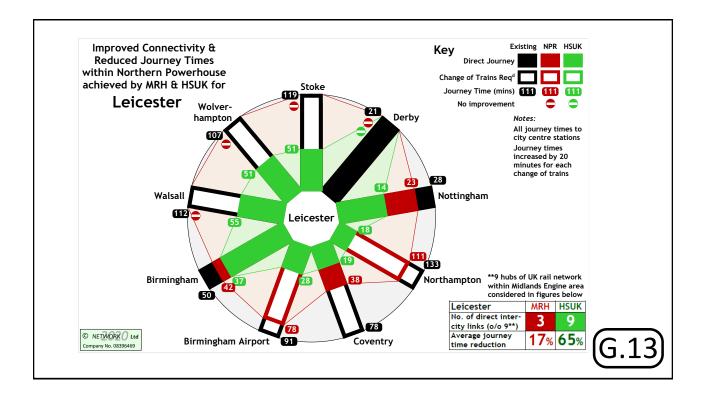












# Overall Journey Time **SUK**Reduction Performance

Averaged across 45 journeys interlinking 10 key Midlands Engine centres:

- MRH achieves 8% average JT reduction
- Midlands Ring achieves 59% average JT reduction

G.14

# Network Aims 4 & 5 MSUK

- 4. Full integration between high speed and existing networks
- 5. 'High speed' benefits to all major population centres

(H.01)

# 

No detailed schemes have yet emerged to demonstrate how HS2 and Midlands Rail Hub can be successfully integrated either with each other, or with the wider rail network of the West and East Midlands, to deliver real transport benefits for the people of the Midlands.

(H.02)

# HSUK Schemes for Midlands Engine Cities

Under HSUK/Midlands Ring's fully integrated design approach - including detailed route design and development of the Demonstrator Timetable - schemes have been developed for all major population centres in the Midlands.

# Integration & Capacity Index to City Schemes



Northampton	I.02	Wolverhampton	K.03
Coventry	I.03	Stoke	L.02
B'ham Airport	I.04	Derby	M.02
Birmingham	J.02	Nottingham	M.03
Walsall	K.02	Leicester	M.04

(H.04)

#### **WCML** Corridor



Northampton I.02

• Coventry I.03

Birmingham Airport I.04

(I.01

# Northampton



- HSUK/Midlands Ring will serve Northampton at existing station.
- Northward link to Leicester via HSUK & southward via restored East-West route to Reading and South Coast places Northampton on a new north-south intercity corridor. I/C connectivity transformed.
- No MRH or HS2 services are proposed for Northampton.

(1.02)

## Coventry



- HSUK/Midlands Ring will serve Coventry at its existing station on the WCML route to Birmingham.
- Northward link to HSUK near Rugby will transform Coventry's links to East Midlands, Yorkshire, the North-East and Scotland.
- No HS2 services are proposed for Coventry, and instead major reductions in Coventry's intercity services are likely. MRH will only link Coventry to Leicester & Nottingham.

# Birmingham Airport



- HSUK/Midlands Ring will serve Birmingham Airport at the existing Birmingham International station & deliver direct airport links to all major Midlands centres, also to Yorkshire and the North-West.
- Birmingham-Airport-Rugby route fully 4-tracked.
- No MRH services proposed for Birmingham Airport.

# Birmingham



- HS2 in Birmingham J.02
- HSUK in Birmingham J.03
- HSUK proposed works J.04
- HSUK local services J.05

J.01)

# Birmingham - HS2/MRH//SUK

- HS2 will serve Birmingham at the proposed new Birmingham Curzon Street terminus.
- MRH will serve Birmingham at the existing Birmingham Moor Street terminus.
- Both stations remote from New Street, which will remain primary hub for local West Mids services.
- Both stations are termini therefore both capacity and capability for through routeing (e.g. Cross-Country to South-West) hugely limited.

# Birmingham - HSUK MSU

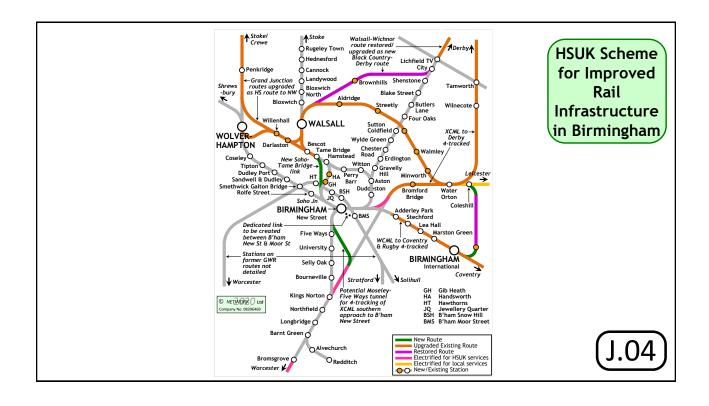


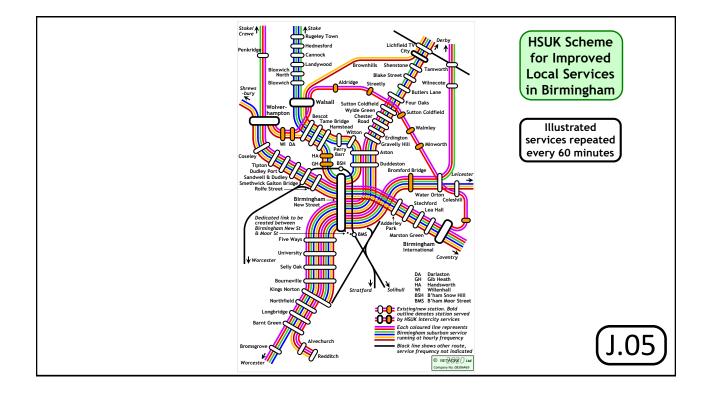
- HSUK/Midlands Ring will serve Birmingham at the existing Birmingham New Street Station.
- Existing 12 platforms have sufficient capacity if termination and reversal of services at New Street can be eliminated.
- Primary constraint on capacity is limited capacity on existing 2-track approach routes to New Street.

HSUK will 4-track all principal approach routes.

Proposed travellator link to Moor Street.

J.03





## **Black Country**



Walsall K.02

Wolverhampton K.03

(K.01

#### Walsall



- HSUK/Midlands Ring will serve Walsall at its existing station - currently with only local services.
- With new/upgraded/restored links to Birmingham, Wolverhampton and Derby, Walsall will see its intercity connectivity transformed, both to Midlands cities and nationally.
- No MRH or HS2 services are proposed for Walsall.
- Links to MRH & HS2 will require walking transfer from B'ham New Street to Moor Street. (K.O)

## Wolverhampton



- HSUK/Midlands Ring will serve Wolverhampton at the existing 'High Level' station.
- Restoration of Walsall-Lichfield route will transform Wolverhampton's links to East Midlands.
- No MRH or HS2 services are proposed for Wolverhampton.
- Links to MRH & HS2 will require walking transfer from Birmingham New Street to Moor Street.

(K.03)

#### **Potteries**



- HS2/HSUK in Stoke L.02
- HSUK station location L.03
- HSUK proposed works L.04
- HSUK local services L.05

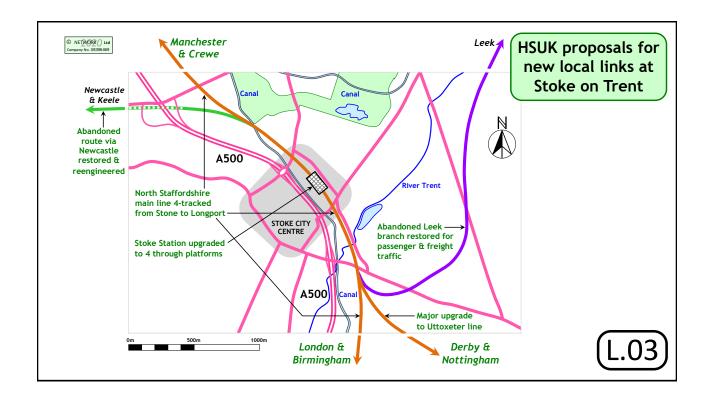
(L.01

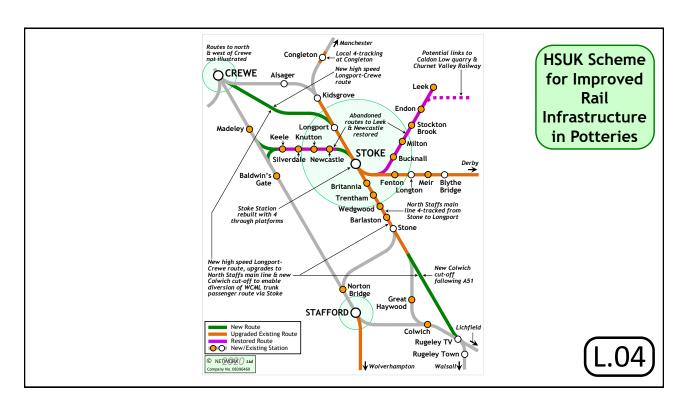
#### Stoke/Potteries

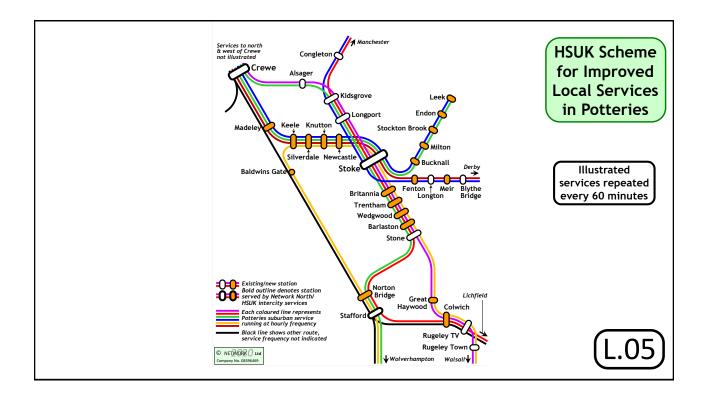


- HSUK/Midlands Ring will serve Stoke at its existing station, upgraded to 4 through platforms.
- This is part of wider strategy to divert WCML passenger route to serve Potteries conurbation and vastly improve Stoke's intercity links.
- North Staffs main line 4-tracked between Stone and Longport for enhanced capacity.
- No MRH services are proposed for Stoke.
- HS2 link only to London none to Midlands.

(L.02







## East Midlands Cities 15



Derby M.02

Nottingham M.03

Leicester M.04

M.01

## Derby



- HSUK/Midlands Ring will serve Derby at the existing 'Derby Midland' station.
- The need to reverse Birmingham-Nottingham services at Derby will be eliminated through restoration of the abandoned northern leg of the 'Derby Teardrop'.
- No HS2 services are proposed for Derby, only to remote Toton Parkway; MRH will only link Derby to Nottingham & Birmingham.

## Nottingham



- HSUK/Midlands Ring will serve Nottingham at the existing 'Nottingham Midland' station.
- Routes east of Nottingham will be upgraded and restored (note Bottesford-Newark reopening) to promote operation of through intercity services without the need to reverse at Nottingham.
- No HS2 services are proposed for Nottingham, only to remote Toton Parkway; MRH will only link Nottingham to Leicester, Coventry, & B'ham. M.03

#### Leicester



- HSUK/Midlands Ring will serve Leicester at the existing 'Leicester London Road' station.
- This station will be substantially redeveloped, and

   due to its location on HSUK's north-south spine will see vastly improved intercity links compared with Leicester's current poor connectivity.
- No HS2 services are proposed for Leicester; MRH will only link Leicester to Coventry, Birmingham & Nottingham.

## Summary



Full integration		Midlands	<b>HS</b> benefits	
HS2	HSUK	City/Airport	HS2	HSUK
×	<b>/</b>	Northampton	×	<b>/</b>
×		Coventry	×	<b>/</b>
×	<b>\</b>	B'ham Airport		<b>\</b>
×		Birmingham		
×		Walsall	×	
×	\	Wolverhampton	×	<b>\</b>
×		Stoke	×	
×		Derby	×	<b>/</b>
×	<b>\</b>	Nottingham	×	<b>\</b>
×	<b>\</b>	Leicester	×	<b>\</b>

M.05

#### Network Aim 6



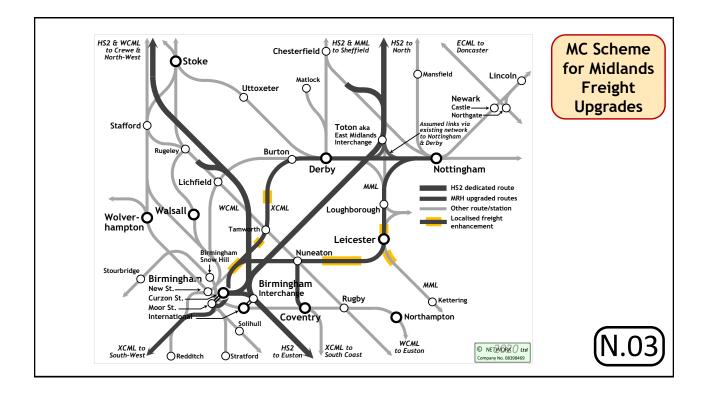
6. Achievement of radically enhanced capacity for railfreight

(N.01

## 



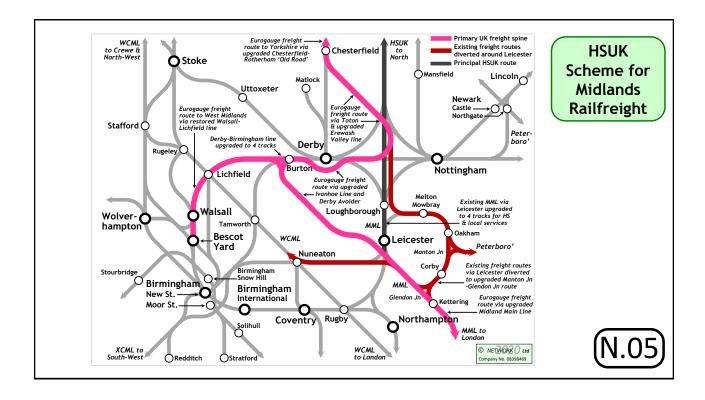
- → Under the MRH initiative, localised enhancements are proposed to increase capacity for freight.
- → However, these interventions are limited, and there is no strategy to create dedicated railfreight routes.
- ➤ Without these routes, the improvements in freight capacity and connectivity necessary to deliver stepchange road to rail modal shift and consequent major CO<sub>2</sub> emissions reductions cannot happen.



## HSUK Freight Scheme //SU



- → HSUK's overall strategy includes the creation of a dedicated Eurogauge (UIC-C) national freight spine.
- → This will be capable of carrying most standard articulated trailers and will enable major road-to-rail modal shift and hence major CO<sub>2</sub> reductions.
- → The freight spine, following the M1/Midland Main Line corridor, is designed to avoid conflict with express passenger routes, in particular through Leicester.
- → Likewise, new chords are proposed to enable existing Felixstowe-WCML flows to be diverted from Leicester.



#### Network Aim 7

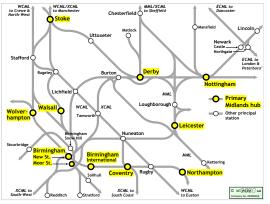


7. Optimised direct links & journey time reductions to principal population centres in other UK regions.

P.01

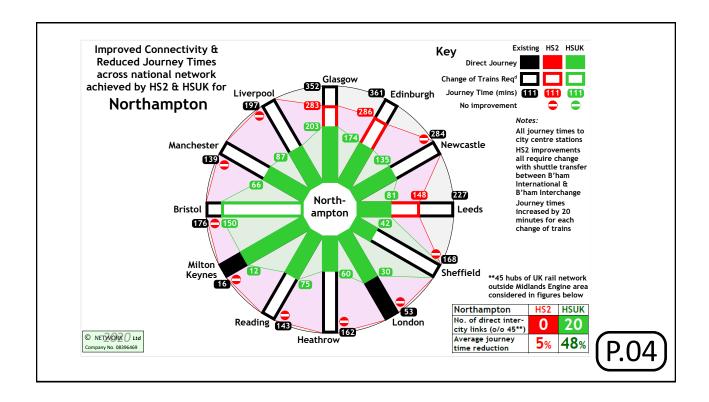
#### National Links??

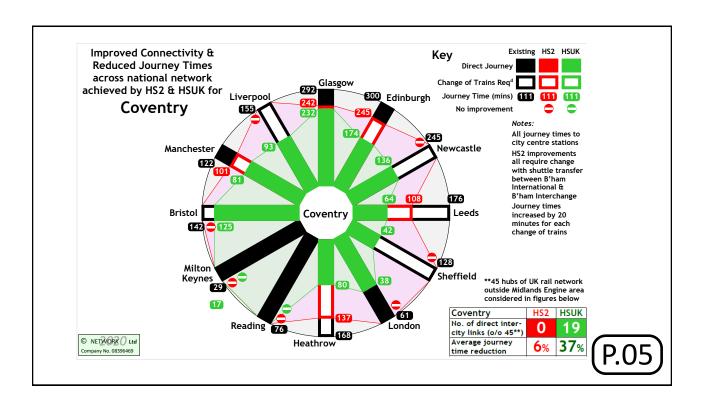


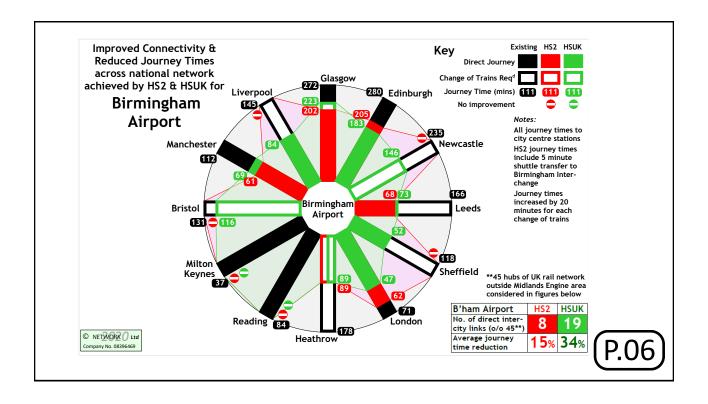


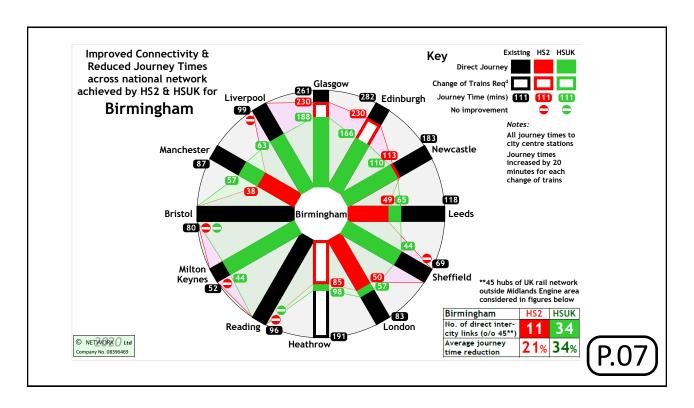
- 9 cities + 1 airport considered in connectivity analysis of rail network of the Midlands Engine
- Links to 41 cities + 4 airports considered in connectivity analysis of wider national rail network
- 45 possible links from 10 centres
- 450 links in total
- Timings for HSUK & HS2 set out on following slides calculated on similar basis to methodology set out in slide G.02

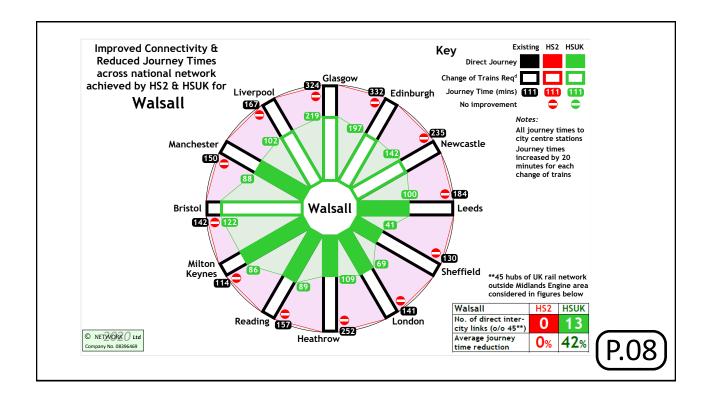
Journey Time Relation Time Relation Time Relation De Coventry  B'ham Airport north P.06 north P.06 north P.06 north P.07 north P.08 following P.08	eductions ata	nes SI	JK
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Walsadlasgowing P.08	Leicester	P.13	
folio		(	P.03

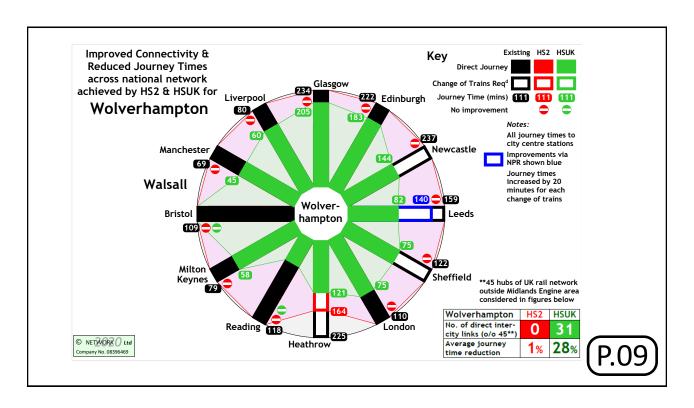


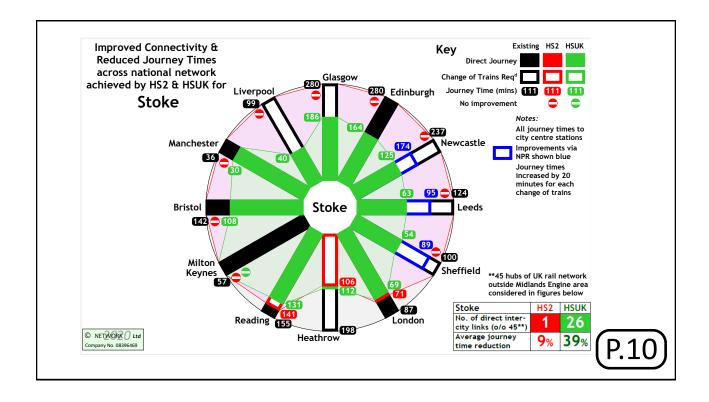


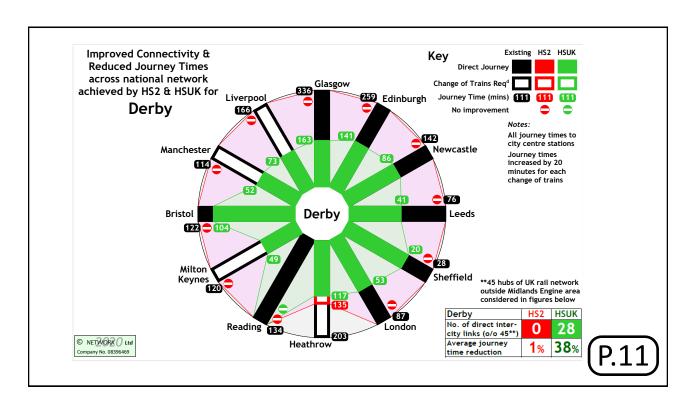


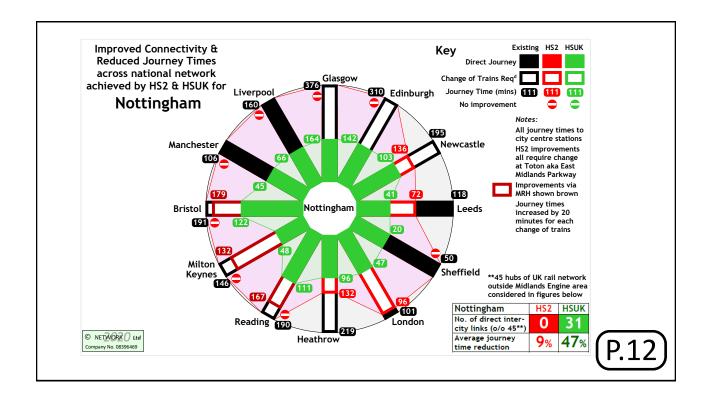


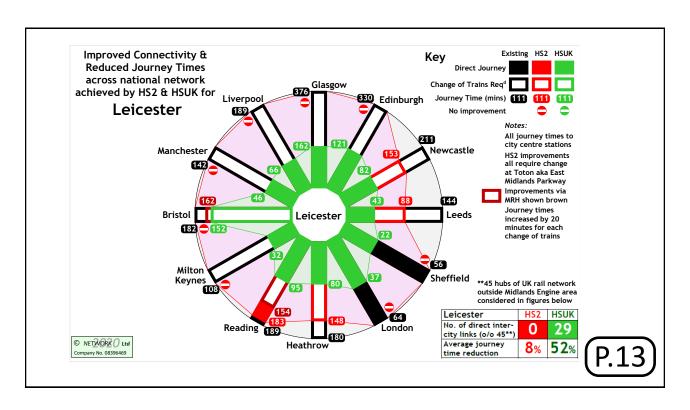












# Direct Intercity Links SUK without Change of Trains

Considering 450 journeys linking 10 key Midlands Engine centres to 45 other centres of UK railway network:

- HS2 offers 20 direct links 4% efficiency
- HSUK offers 250 direct links 56% eff<sup>cy</sup>
   (P.14)

## Overall Journey Time **SUK**Reduction Performance

Averaged across 450 journeys linking 10 key Midlands Engine centres to 45 other centres of UK railway network:

- HS2 achieves 8% average JT reduction
- HSUK achieves 41% average JT red<sup>n</sup>

(P.15)

#### Final Scorecard



	Criterion	Metric	<b>HSUK</b>	MRH
1a	Compliance with MC specification?	No specification		
1b	Non-compliance with MC specification?	No specification		
2	Direct links between key centres?	out of <b>45</b>	44	7
3	Step-change journey time reductions?	%	<b>59</b> %	8%
4	Full integration with local services?	Y/N	Υ	N
5	Step-change local capacity increase?	Y/N	Υ	Ν
6	Compatibility with freight vision?	Y/N	Υ	Ν
7a	Direct links to other UK cities?	out of <b>450</b>	250	20
7b	National journey time reductions?	%	41%	8%

HS2

HSUK wins on every criterion —

Q.01

### Simple Conclusion



- → The HSUK Midlands Ring outperforms the official Midlands Rail Hub proposals by a factor of at least 5 on all criteria.
- → This should not happen on a properly-remitted and well-regulated public infrastructure project.
- → It is legitimate to inquire how this has happened.

Q.02

#### Rationale for MRH Fail



- The failure of Midlands Rail Hub in interconnecting the principal cities of the Midlands is directly attributable to HS2's almost complete lack of integration with the existing network, and its failure to provide any direct links between Midlands cities.
- → This leaves the MRH programme of limited upgrades to key Midlands routes as the only intervention capable of enhancing connectivity between Midlands cities.
- → By contrast HSUK's fully integrated approach, combining new, upgraded and restored routes, allows the creation of the Midlands Ring which vastly outperforms Midlands Rail Hub.

## A Challenge to HS2 Ltd | S



- > This study has demonstrated that on the available evidence, the failure of HS2 to integrate with the existing railway network renders the official Midlands Rail Hub scheme unable to meet the needs of the people of the Midlands for an efficient and optimised railway network.
- These assertions are justified by the vastly superior performance of Midlands Ring and the fully integrated High Speed UK Exemplar Alternative.
- → HS2 Ltd must either:
  - refute these allegations; or...
  - provide further info to justify their own proposals; or...
  - abandon HS2 and support the HSUK alternative.

## Integrated Rail Plan - 1 //SUK

- → In February 2020 the Oakervee Review of the HS2 project recommended the development of an 'Integrated Rail Plan for the whole GB network'.
- ➤ This was intended to address HS2's self-evident lack of integration, and ensure that HS2, Northern Powerhouse Rail, Midlands Rail Hub and other major Network Rail upgrades would together deliver an efficient national rail network.
- ➤ The Government adopted Oakervee's recommendation, and is now developing the Integrated Rail Plan.
  (R.01)

## Integrated Rail Plan - 2 //SUK

- ➤ So far, no criteria have been developed either to:
  - define the Integrated Rail Plan's technical objectives.
  - stipulate how the national railway system resulting from the 'Integrated Rail Plan for the whole GB network' should perform.
- Yet the Integrated Rail Plan can only have one basic aim to develop for the people of the UK the best possible railway network, offering the greatest possible enhancement in connectivity and capacity, and thereby maximising both economic benefits and CO₂ reductions.
  (R.02)

## Integrated Rail Plan - 3 ///SUK

- → It is vital for the interests, both of the UK regions and of the entire UK, that the Integrated Rail Plan delivers the best possible regional and national railway network.
- ➤ The 'Key Network Objectives' set out in Slide C.08 are precisely aligned with this fundamental aim, and effectively establish the requirements of the Integrated Rail Plan.
- → HS2 & MRH comprehensively fail to meet these objectives.
- → By contrast HSUK's success means that HSUK alone meets the fundamental aim of the Integrated Rail Plan.
  (R.03)

### Final thoughts...



#### **HS2** and Midlands Rail Hub:

- Hardly a network; therefore...
- Barely any economic benefit;
- No regional rebalancing;
- Minimal CO<sub>2</sub> reductions;
- Little post-pandemic recovery;
- No justification whatsoever for HS2.

(R.04)