West Coast South Strategic Advice

Summary Overview

EEH Strategic Transport Leadership Board

29th-September 2023

Background and Purpose

- Fulfil our **licence condition** to demonstrate the future capability of our network, through Strategic Advice,

- Evaluate the opportunities related specifically to **HS2** implementation and conventional network **released capacity**,

- Show where **constraints** and risks are likely to emerge in future, and consider what further conventional **enhancement options** exist should appropriate funding for development be available,

- Give clarity to specifiers, funders and the industry on the long-term direction for West Coast South which can be used as a basis to **assure strategic fit** for any intervening changes or improvements.

West Coast South
Strategic Advice

August 2023

NetworkRail   North West & Central

Approach and Method

- Scope covers **West Coast South route**, but is aligned to advice for the West Midlands, and has considered the wider network,

- Assumed a **post-HS2 Configuration State G** (i.e. Phase 2A) timeframe, focused on providing a longer-term assessment,

- Results generated by testing a set of **train service scenarios**:
  - Informed by a series of basic objectives, 'Planning Principles' and a flow analysis, all in coordination with the industry,
  - Capture the different ways conventional capacity could be used post-HS2,

- Each scenario put through **capacity analysis** to provide:
  - A compliant 'no infrastructure', released capacity train plan,
  - A compliant 'with infrastructure' train plan assuming infrastructure changes, unlocking constraints on further uplift or improvement,

- The results allow a **cross-scenario comparison** of the opportunities to use released capacity as well as a basis for prioritising further enhancement development.

Objectives and Scenarios

NetworkRail

WCSSA Objectives

Maximise revenue generation through improved journey times, connectivity, and capacity to grow major established passenger flows.

Support development by improving passenger service between locations which are relatively deprived or 'levelling up' target areas.

Encourage modal shift by improving connectivity between locations where there is a clear opportunity to abstract trips from private car to rail.

Stimulate new markets which are currently underserved by rail; connecting communities, generating future revenue and unlocking suppressed demand.

Support freight growth by meeting future demand through provision of expanded capacity and routing options for rail freight.

WCSSA Scenarios

Freight Focus	High growth level of freight with further paths provided via East West Rail and Cannock, and freight given priority.
Intermediate Markets	Uplifted intercity and interregional-type services, connecting major non-HS2 served locations.
East West Connectivity	Provision for new direct connections, with priority given to passenger service extensions from East West Rail.
New Connections	Provision for new direct connections, with priority given to inclusion of eight new stations proposals.
Peak Commuter	A peak-hour scenario which gives priority to suburban-type services into London, de-prioritising southbound freight.

Planning Principles

NetworkRail

- The 'Planning Principles' provide a set of **minimum requirements** that were incorporated into every scenario train service,

- They were derived through an initial **economic opportunity analysis**, and were reviewed by the industry,

- Conforming to these would ensure alignment to the overall outputs of the study, and thus **strategic fit**,

- A key element is ensuring effective use of capacity in **integrating the East West Rail** and West Coast South networks.

	Planning Principle	Minimum Requirements
A	Supporting Freight Growth	Uplift from today's provision for freight in every scenario. Test requirements to meet 'High Growth' level.
B	Milton Keynes 'Hub'	Call all or the vast majority of passenger services at Milton Keynes Central. Efficient use of capacity, minimising forced changes at Bletchley.
C	Watford, Milton Keynes, Rugby and Coventry	2tph limited stop between all, and between all and Euston. 4tph Euston-Milton Keynes, Euston-Watford, Watford-Milton Keynes and Coventry-Rugby.
D	Macclesfield, Stoke-on-Trent and Milton Keynes	2tph limited stop Euston-Stoke, Euston-Macclesfield, and Milton Keynes-Stoke. 4tph Euston-Milton Keynes.
E	Stafford, Lichfield, Tamworth and Nuneaton	2tph limited stop between all and Euston. Minimum 1tph all calls service on the Trent Valley.
F	Shrewsbury, Telford and Wolverhampton	1tph limited stop Euston-Telford and Euston-Shrewsbury. 2tph limited stop Euston-Wolverhampton.
G	Northampton Service Structure	2tph limited stop Euston-Northampton and Birmingham NS-Northampton. 4tph Northampton-Milton Keynes.
H	New Stations	2tph calls at Rugby Parkway, Coventry East, Polesworth and Stoke South. Sensitivity test new stations at South Northampton, Daventry, Brinsford and Meecebrook.

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Findings: Using Released Capacity

- The 'no infrastructure' testing results demonstrated the **improvements** in passenger connectivity and freight capacity that are possible using released capacity **across all scenarios**,

- However, maximising the benefits for different ends may drive different requirements and constraints, meaning a **policy decision** on what outcome is sought will be required,

- Capacity into Manchester through Stockport was a persistent issue, showing how the **HS2 infrastructure Crewe-Manchester** phase will be needed to fully capitalise on conventional released capacity,

- Bletchley, Milton Keynes and the Northampton slow lines were key areas of constraint, meaning **new stations** proposals in this area mus be subject to a wider local stations needs assessment.

West Coast South network capacity released by HS2

Using released capacity to focus on freight growth and routing

Using released capacity to focus on intermediate passenger flows

Using released capacity to focus on distributing passenger connectivity

Requires investment in Felixstowe to Midlands and the North to maximise use of released capacity

Requires long-term capacity enhancement into Manchester via Stoke and Stockport to maximise use of released capacity

Requires delivery of full East West Rail programme between Oxford, Aylesbury and Cambridge to maximise use of released capacity

Findings: Priorities for Further Development

- The 'with infrastructure' testing was used to create a **cross-scenario prioritisation** of possible future enhancements,

- The assessment identified that interventions between **Bletchley and Milton Keynes** would unlock further benefit across all scenarios, and were ascribed high priority for further development subject to funding,

- Other interventions across the route could be explored further, though the full benefits are dependent on pursuing a **particular service structure** or scenario,

- Further work could also be undertaken using these findings as a basis to define:

  - Changes to the operator map,
  - Likely future impacts on stations,
  - Incremental enhancements for freight gauging and power supply,
  - How to improve the network's resilience to climate change.

Colwich and Rugeley North Junctions remodelling
Low priority for further development

Coventry and Nuneaton remodelling
Medium priority for further development

Fast Line (Weedon) freight loops
Low priority for further development

Bletchley-Milton Keynes
High priority for further development

- West Coast Main Line South
- Route sections identified for further development enhancement within WCSSA