

# Network Rail Western Route Study Final Report

HBUG Secretary

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A 289 page document with the above title has been published by Network Rail and is available for download at

<https://www.networkrail.co.uk/Publications/long-term-planning/western-route-study/Western-Route-Study-final.pdf>

if you haven't used all of this month's data allowance.

Various members of the HBUG Committee have been searching it for any comments that seem directly relevant to the service on the Branch Line or between Twyford and Paddington and I have summarised them below. There may well be other items not yet spotted but overall it does not sound as though we are looking at much in the way of service improvement.

There is a great deal of detail below but the key points that emerge are

Network Rail (NR) are still assuming that the Branch line will be electrified before 2019

NR are also assuming that all through trains between Henley and Paddington will cease before 2019

There are conflicting statements about whether or not a 30 minute service can be introduced on the Branch Line.

Crossrail is seen as the primary supplier of service between Twyford and Paddington

A semi fast service between Twyford and Paddington is seen as desirable and an uncosted plan to permit this is outlined. Unless this plan is implemented all services from Twyford are assumed to be stop at all stations Crossrail units.

At some point between 2019 and 2024 it will not be possible for fast services between Twyford and Paddington to travel on the main line due to the volume of main line traffic. An uncosted potential plan that would allow these services to continue is outlined

## Introduction

An option to increase the frequency of the service to two trains per hour on the Henley-on-Thames branch has been identified – either with electrification to reduce journey times or by means of an amended calling pattern. Linespeed opportunities will also be assessed on this and the other Thames Valley branch lines, particularly in line with electrification and renewal activities.

As the number of services increases, it becomes increasingly difficult to perpetuate some of the existing service patterns such as a number of Relief Line services to London Paddington that cross to the Main Lines for part of their journey. Options to maintain connectivity are assessed, with a high-level view of the additional infrastructure that would be required in order to continue with the 2019 ITSS and the growth in services envisaged for 2043.

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#### Thames Valley services

The primary service change for the suburban services in the Thames Valley area is through the introduction of Crossrail services. Crossrail will be a high frequency service serving all stations between Reading and London Paddington and across central London to East London. Crossrail will replace current suburban services and provide improved capacity and connectivity to the West End and the City of London with 24 trains per hour (tph) operating in each direction through the central tunnel. At peak times it is anticipated that ten trains per hour will continue west of London Paddington consisting of: 4tph to Heathrow Airport, 2tph to West Drayton, 2tph to Maidenhead and 2tph to Reading; 14 services will start / terminate at London Paddington. The service on the Greenford branch will be amended to operate as a shuttle into a new bay platform at West Ealing at today's frequency.

The Henley-on-Thames, Windsor & Eton Central and Marlow/Bourne End branches remain unchanged at the same service frequency as today and are anticipated to benefit from electrification on the Western Route and be served by electric rolling stock. The 2019 ITSS used in the baseline currently assumes that the morning and evening peak through services between London Paddington and Henley-on-Thames and Bourne End/Marlow will be replaced by connections at Twyford and Maidenhead respectively.

The introduction of EMUs will bring additional on-train capacity and journey time opportunities due to the improved capability of the rolling stock. However there are currently no proposals to change the service pattern further beyond that presently proposed.

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#### Thames Valley Branches

The 2019 ITSS assumes that the Windsor, Marlow and Henley-on-Thames branches will be electrified and the introduction of electrically powered rolling stock will provide improved acceleration capabilities and higher capacity.

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#### Description of the Anticipated 2019 Baseline Infrastructure

The investment projects expected to be implemented between

2014 and 2019 mean that the infrastructure assumptions for the baseline differ from today's infrastructure. They are anticipated to include:

- renewal of signalling equipment
- Overhead Line Electrification (OLE) of all lines between London Paddington and Reading and three of the Thames Valley branches (excluding Greenford), allowing electric trains to operate on these routes:
  - London to Oxford, Newbury, Bristol Temple Meads (via both Bristol Parkway and Bath Spa) and South Wales
  - Slough – Windsor & Eton Central
  - Maidenhead – Marlow
  - Twyford – Henley-on-Thames.

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Relief Line trains:

- 4tph London Paddington Crossrail – Heathrow Terminal 4 (extending beyond Paddington through the Crossrail tunnels to central London and beyond)
- 2tph London Paddington Crossrail – Maidenhead • 2tph London Paddington Crossrail – Reading • 2tph London Paddington – Reading or beyond (residual semi fast outer suburban service operating on the Relief Lines using the existing London Paddington Station) • 4tph Heathrow Terminal 5 - Reading (anticipated implementation during CP6) • 4tph Freight.

During peak hours, a number of additional passenger services operate over this Route Section to carry high passenger volumes into and out of London Paddington, which include additional peak services from West Drayton, Oxford and Reading.

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Changes to the Indicative Train Service Specification to 2043 Between 2019 and 2043

it is anticipated that there will be a number of further service changes. Consequently, the following changes are anticipated beyond the 2019 ITSS subject to future planning cycles:

Relief Lines:

- extension of 2tph Crossrail beyond Maidenhead to Reading.

The above is in addition to the 4tph Heathrow Terminal 5 – Reading introduced upon the opening of WRLtH, anticipated to

occur during CP6, and assumed in the 2019 baseline.

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Operationally separating the railway into dedicated Main and Relief Lines for long distance non-stop and intermediate calling services respectively could release valuable Main Line capacity. The Main Lines could be the primary routeing for fast non-stop services between London Paddington and Reading, and the Relief Lines could accommodate all other passenger services and freight.

- At present, principally in the peak hours, a number of passenger services cross between the Relief and Main Lines resulting in more intense use of the Main lines closer to London Paddington, restricting the number of fast trains that could run from Reading and beyond.
- Optimising the use of the Main Lines could support additional capability that could address the growth forecast as part of the Market Studies, and support delivery of the long term connectivity Conditional Outputs.
- However, there would be a journey time impact for those peak passenger services that cross from the Relief Lines to the Main Lines. It is unlikely that these services could be maintained in the longer term without further infrastructure as demand for additional long distance capacity increases. See Option A18.

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A10: Assessment of capacity and capability requirements for Relief Line services to meet emerging demand Demand forecasts for the use of Relief Line services between London Paddington and Reading indicate that additional capacity will be required from 2023. To ensure that interventions in CP6 are part of a long-term, affordable and deliverable strategy, it is essential to consider system requirements beyond 2024 as part of the CP6 strategy.

These are being developed by the industry, now the requirements for the

2019 ITSS have been confirmed and in light of the need to serve the HS2 station at Old Oak Common from 2026. Choices may include both longer trains and additional or modified services which may or may not require infrastructure interventions.

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A17: Relief Line Enhancements

Conditional Output Connectivity – reduced journey times

Timeframe Longer Term - review the case for passive provision in 2019 –2024 (Control Period 6)

Purpose To allow additional semi-fast services to run on the Relief Lines along with the peak stopping service pattern, and provide an

overtaking capability for times when a two-track railway is in operation

Description Two additional tracks providing Up and Down dynamic loops for semi-fast services to overtake slower services calling at all stations in this section

Indicative Cost £75m – £175m

Cost of operating and providing additional rolling stock is not included

Indicative Value for Money Medium – based on the provision of two additional semi-fast services each hour. However additional costs and benefits such as greater timetable flexibility, additional capacity for passenger and freight services and network resilience will be possible which have not been quantified.

Relates to other options N/A

#### Analysis

To avoid reducing the proposed service level at intermediate stations to a level deemed unacceptable, the additional semi-fast services would be

incremental to the 2019 ITSS. The additional costs of rolling stock and associated requirements have not been assessed or quantified as part of

this high level analysis.

To facilitate the 'flighting' of Relief Line services, thus optimising the use of available capacity, the interval between services at some stations such as Twyford and Maidenhead are unlikely to be even, thus reducing the connectivity benefits of the approach. In order to access the Crossrail tunnel such services join and diverge from the Relief Lines at Portobello Junction near London Paddington. Any trains using the Relief Lines to access the existing platforms at London Paddington would cross the route of the Crossrail trains. Once HS2 Phase 1 is operational such movements will become increasingly difficult to path due to the increased frequency of stopping services operating between the Crossrail tunnel and Old Oak Common. Thus in the long term, any additional services on the Relief Lines would need to go to/from Crossrail in order to avoid conflicts at Portobello Junction and to maximise the use of system capacity and maintain a high performing railway. The creation of additional capacity on the Relief Lines for a suitable length of this Route Section may deliver the potential for timetable flexibility, service resilience and enhanced maintenance access to support future system requirements for both infrastructure and rolling stock, stabling and maintenance. This choice therefore merits further analysis as other work streams develop, including the maintenance and engineering access requirements and final form of the service specification.

## A18: Main Line Enhancements

Conditional Output Connectivity – reduced journey times

Timeframe Longer Term - review case for passive provision in 2019 – 2024 (Control Period 6)

Purpose Allows semi-fast services to run on the Relief Lines from Reading to Slough before crossing over to the Main Lines as part of a 24tph Main Line service

Description • grade separation at Langley (note an enhancement to the proposed grade separation at Langley as part of Western Rail Link to Heathrow could be made subject to requirements, remit and funding)

- reduce planning headways between Reading and Airport Junction

Indicative Cost Not costed

Indicative Value for Money Likely to be Poor – if based solely on the benefits of retaining semi-fast services, however additional benefits such as greater timetable flexibility, additional capacity and network resilience will be possible which have not yet been quantified

Relates to other options A1

### Analysis

Grade separation would be required to allow semi-fast services to form part of a 24tph Main Line service pattern – an opportunity could exist to enhance the proposed grade separation incrementally at Langley that would be required as part of the proposed Western Rail Link to Heathrow scheme (scheduled for completion during CP6 subject to confirmation of funding, a value for money assessment, and the agreement of acceptable terms with the aviation industry). 125mph rolling stock would also be required for these services to operate on the Main Line or a speed reduction in the long distance services would be required.

More detailed analysis would be necessary should this choice be developed further to assess the feasibility of merging trains from the Relief Lines into a service pattern running of 24tph at 125mph on improved headways on the Main Lines.

The ability to cross between Main and Relief Lines provided under this option may offer benefits in respect of service resilience and timetable capability particularly when future maintenance access requirements are taken into consideration.

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Additionally, respondents also raised their concern in respect of the Henley-on-Thames branch line in Route Section B, noting their objection to any reduction in the level of service at Wargrave

Station to permit a higher frequency service at other stations on the branch line.

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Michael Porter

Hon. Secretary

Henley Branch User Group