



The Whitacre Link: Improving central England's connectivity

A report of the potential benefits
of restoring the Stonebridge Railway

June 2013

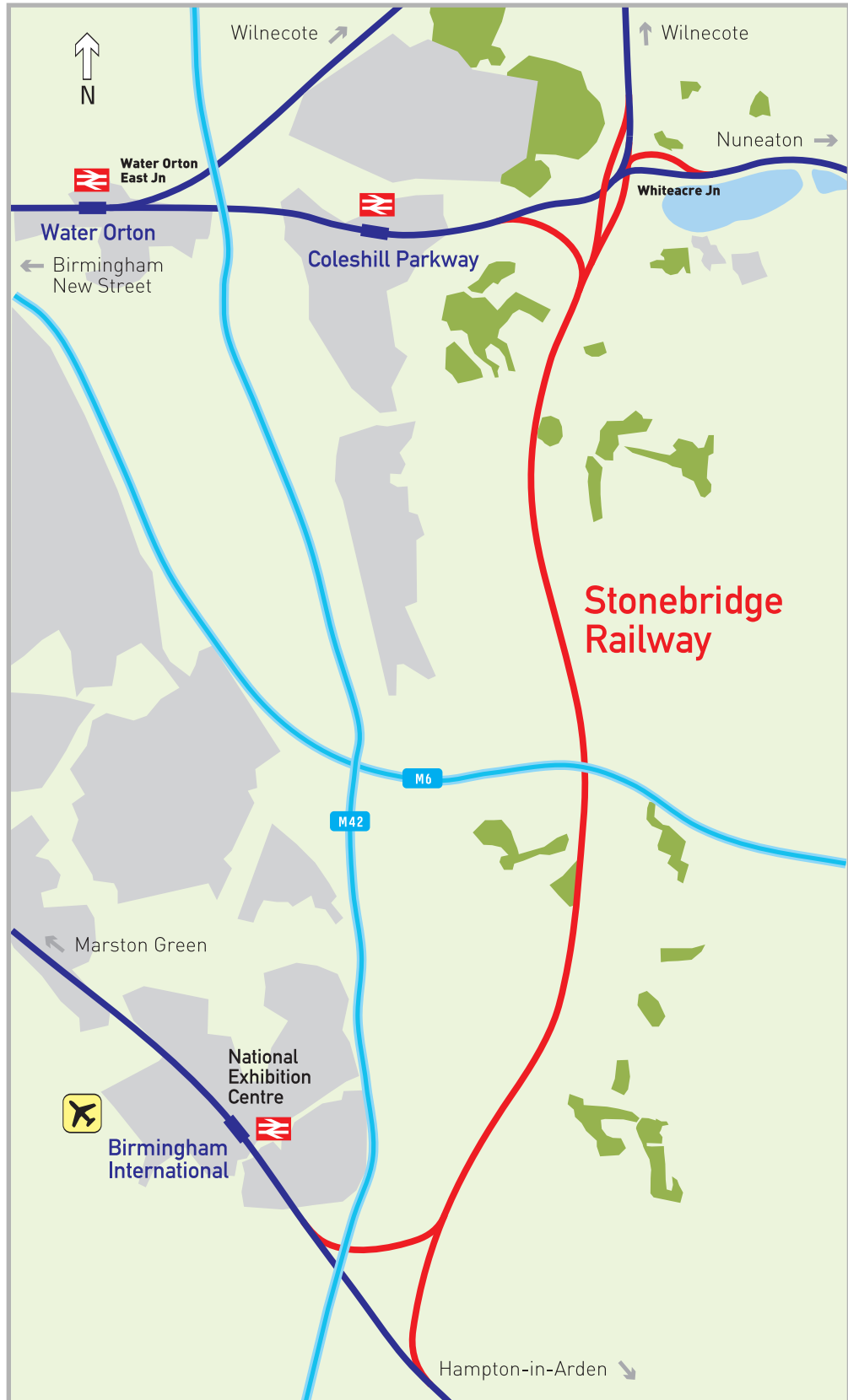
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Railnews Today's news for tomorrow's railway

Given its aim of providing 'Today's news for tomorrow's railway' Railnews has been happy to assist with the preparation and design of this document, but the contents remain entirely the responsibility of the authors, Alan Marshall and Michael Byng.

Front cover picture: The Stonebridge Railway would be built to modern standards, with a maximum speed of 160km/h (100mph).

The Whitacre Link proposal



Graphic: Sim Harris, Railhub

The route proposed for restoration, with schematic indication of new junctions at each end.

Preface

RAILNEWS is the national newspaper of the British railway industry, with over 100,000 readers every month. Its editorial policy is to be strongly supportive of the industry and in 2012 it adopted a new strap line – ‘Today’s news for tomorrow’s railway’ – reflecting the changing nature of Britain’s growing railway system.

In 2013, Railnews celebrates its 50th anniversary. The publication was introduced in the Beeching era to provide a common information medium for all those working in the rail industry. In 1996, as privatisation and diversification of the industry was nearing completion, British Rail ceased publishing the paper but it was quickly reinstated by the present company, which continues to publish it today under the chairmanship of Sir William McAlpine, Bt., and with Cyril Bleasdale OBE as managing director.

One of the founder members of Railnews Limited in 1996 was Alan Marshall, who has continued since then as the Editorial Director and contributes regularly to the newspaper. He has lived in Warwickshire, in Kenilworth, for over 25 years and has always maintained a close interest in transport planning and developments in the surrounding region, having been instrumental in establishing the original West Midlands Regional Rail Forum (WMRRF) in 1990 when he was based in Birmingham as British Rail’s London Midland Regional Public Affairs Manager.

He has come together now to produce this report with Michael Byng, a specialist quantity surveyor and construction economist dealing with heavy and light rail projects world-wide, who lives in Whitacre, North Warwickshire, and has his business based in Coventry, and is undertaking a major exercise for Network Rail with the aim of establishing a standard form of costing railway infrastructure projects. Most recently Michael Byng has applied his techniques to planning for the re-opening of the East West Railway (EWR) between Oxford, Bicester, Bletchley and Bedford – which the government confirmed in 2012. This restored railway will connect four main lines (the Great Western, Chiltern, West Coast and Midland) and is now to become part of a designated north-south ‘Electric Spine.’ The other part of the ‘Electric Spine’ will extend from Oxford to Banbury, Leamington Spa and Coventry – where it will connect with the electrified Rugby-Birmingham section of the West Coast Main Line – and to Nuneaton, where it will link with the recently widened Trent Valley section of the West Coast Main Line.

There is now a growing and urgent need to consider how to improve capacity of the rail network in Central England, even ahead of construction of the first phase of High Speed Two (HS2) that will relieve the southern section of the West Coast Main Line. Concurrently, Birmingham Airport has been seeking to develop its long-term strategy. It is already extending its runway to enable the longest-haul flights to use it from 2014, so expanding the airport’s range of potential destinations to the same as any other Western European airport, including to China, South America and the West Coast of the USA. The airport also has considerable latent spare capacity, even before the possibility of adding a second runway. HS2 will enable many more people to access it quickly via the Interchange station to be developed nearby, at Middle Bickenhill, given as a minimum an adequate and rapid People Mover connection, but ideally with an Airport terminal development integral to the Interchange station’s design.

Nevertheless, uncertainties about the Government’s overall national policy for airports – following the controversy over proposals for a third runway at Heathrow Airport near London, which has led to a commission of inquiry being set up under the chairmanship of Sir Howard Davies – has caused Birmingham Airport to delay publication of a new surface access strategy. Instead, Birmingham Airport continues to work to with stakeholders to improve transport accessibility to the Airport site.

Despite good built infrastructure, and being the UK's best-connected airport, there is room for substantial improvements in service levels as Birmingham Airport continues to generate greater demand and throughput.

Direct access to the airport by train is currently limited. A recent study has shown that 78 per cent of those people who do use rail to reach the airport have to change trains in Birmingham, the inconvenience of which is considered a serious impediment to attracting more air travellers to using rail services for their surface access. This is an understandable legacy of the old Passenger Transport Executives whose priorities were assigned to city centres and not to peripheral facilities, such as airports.

Moreover, the demand for rail network capacity in Central England has been growing at a considerable rate. Commuting in and out of Birmingham by rail has more than doubled in the last five years. Over the same period, the number of people using trains in the West Midlands 'travel to work area', which includes parts of the East Midlands, has grown at such a rate that the number estimated in Network Rail's route utilisation strategy to be travelling in 2020/21 has already been achieved, eight years ahead of forecast. Of the stations around the country with the greatest increase in passengers during the last five years Coventry recorded the highest, with 30 per cent growth. This has been well publicised by regional transport organisations such as Centro and the WMRRF.

All these factors have come together to lead Alan Marshall and Michael Byng to prepare this document, proposing the restoration of one of the very earliest passenger railway lines, which has lain largely out of use for 80 years but could now have a transformative impact on travel patterns in Central England – including greatly improved opportunities for direct rail travel to Birmingham Airport, as well as providing direct access to the HS2 Interchange station from the surrounding areas, including Coventry and Warwickshire, and to Solihull Metropolitan Council's flagship proposal, 'UK Central'.

The document is in two parts. The first sets out 'the vision' of restoring the Stonebridge Railway line, and the second summarises 'how it could be achieved.'

We commend the document to policy-makers, for further evaluation.



Executive Summary

The Government's decision to locate an Interchange station on the new High Speed Two (HS2) railway close to Birmingham Airport, the National Exhibition Centre, the A45 and the M42/Blythe Valley business corridor is a once-in-a-lifetime opportunity to create an intermodal transport hub that will greatly benefit the economic activity and employment opportunities of the surrounding sub-region – principally comprising Solihull Borough, Coventry City, and the Warwickshire Districts of North Warwickshire, Nuneaton & Bedworth, and Warwick (which includes Leamington Spa and Kenilworth), home to 0.85 million people – as well as the rest of the Greater Birmingham region including Birmingham, Staffordshire, Hereford & Worcestershire, Derbyshire, Leicestershire and Shropshire.

Aspirations on the part of Birmingham City Council, Solihull Metropolitan Borough Council and Local Enterprise Partnerships are also likely to align along the M42 corridor – widely regarded as the 'jewel in the crown' of the Midlands' economy. A number of economic studies have highlighted this as a significant potential growth area.

Quite apart from the benefits to be conferred on the sub-region by the development of HS2, a fully integrated transport hub as described here will also hugely improve access by rail to Birmingham Airport from a wide area of Central England and a population of some 8.3 million people (15% of the England and Wales total). Birmingham Airport is set to play an increasing role as the Midlands' premier International Gateway and driver for economic prosperity. In terms of infrastructure, it is the UK's best-connected airport, yet has room for significant improvement. With HS2 completed, a total of 15 million people will be within one hour's rail travel of the Airport.

Key to achieving this significant transport hub will be restoration of the 'Whitacre Link' – the former Stonebridge Railway, between Hampton-in-Arden and Whitacre Junction, and re-connecting it to the existing and expanding national railway network.

This document outlines how all transport modes – air, rail and road – can be linked together around the new HS2 Interchange station to provide transport benefits right across Central England, as well as to the economic growth area around the A45/M42, which already supports an estimated 100,000 jobs and £5.1bn income in the region.

The purpose of this report is to encourage recognition and evaluation of the benefits across a wide range of stakeholders. The most pressing priority is to ensure that provisions being made for HS2 facilitate the future prospects for the Whitacre Link to be restored and should not extinguish them. It would be a tragedy if, after 80 years, the planning of HS2 does not maximize this opportunity but instead destroys it.



Milepost 0, marking the point at which the Stonebridge Railway started its route southwards to Hampton-in-Arden, is still evident at Whitacre Junction today

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Part 1 – The Vision

Introduction - History matters

WHEN IT OPENED in 1839 the Stonebridge Railway formed a crucial part of the north-east arm of the original Y-shaped railway system connecting London with North West and North East England – to be replicated now, in modern form, by High Speed Two (HS2). In the early days there was no main line from Kings Cross to the north; everything passed from Euston through the Midlands.

The Stonebridge Railway was the southern-most section of the original Birmingham and Derby Railway, connecting at Hampton-in-Arden with the London and Birmingham Railway. The latter continued into Birmingham where it joined the Grand Junction Railway, going on to serve Crewe, Warrington, Liverpool and Manchester, while the Stonebridge Railway – often referred to today as ‘the Whitacre Link’ – went by Middle Bickenhill, Little Packington and Coleshill to Whitacre to join with the line coming south from Derby, Burton-on-Trent and Tamworth (whose famous MP and former Prime Minister, Sir Robert Peel, was one of the strongest supporters of the project). At Derby, it joined with the North Midland Railway, enabling trains to go on to serve Yorkshire and the North East.

The Stonebridge Railway’s significance as a direct link to and from London was quickly surpassed by the opening of a railway from Leicester to the L&BR at Rugby and by the subsequent opening of a railway between Birmingham, Water Orton, Whitacre (with a junction to the Derby route) and Nuneaton, avoiding the need to travel via Hampton-in-Arden. The Stonebridge route became a minor branch line and fell largely into disuse in the 1930s, although its alignment is still marked on maps and is clearly visible on satellite images of the area (see Fig 1).

The route has lain largely forgotten, sitting as it does in the rural hinterland of North Warwickshire. It has remained away from the gaze of policy-makers and planners until now.

However, with proposals for a major transport hub at the Birmingham HS2 Interchange station near to Birmingham Airport and the NEC – which is also forecast by Greengauge21 to create 3,750 new jobs in the surrounding area – restoration of this link of 11.74km (7.34 miles) could substantially transform surface access opportunities by train ... not just to HS2 but potentially to a new integrated airport terminal above the station.

Some policy-makers in Coventry have questioned the benefits of HS2 to that conurbation; however, restoration of the Whitacre link would provide direct connectivity from Coventry to the HS2 station. Travel time from Coventry to the HS2/Airport terminal could be similar to that from Birmingham. The link could actually bring parts of the region, such as Tamworth and Nuneaton, closer to HS2.

A degree of fresh thinking – using existing connectivity such as the Sutton Park line – could help to connect the Black Country to HS2 and to its International gateway. The Whitacre Link could also form the basis of an ‘eastern freight bypass’ for Greater Birmingham – complementing similar plans on the western side of the conurbation, and adding resilience to the national network.

The Whitacre Link would also provide additional connectivity from across a very wide area – including much of Staffordshire, Derbyshire, Nottinghamshire, South Lincolnshire, Leicestershire, Cambridgeshire, Bedfordshire, Northamptonshire, Oxfordshire, Gloucestershire, Herefordshire, Worcestershire and Shropshire – in addition to the immediate sub-region, including the Black Country; Burton-on-Trent, Alrewas/Wychnor/Fradley (where a new station is proposed), Tamworth; Fort Dunlop, Castle Bromwich (new stations proposed); Nuneaton, Bermuda Business Park (new station), Bedworth, Ricoh Arena (new station), Coventry; Binley & Willenhall (new station proposed), Rugby, Long Buckby; Stratford Upon Avon, Leamington Spa, Kenilworth (new station planned); Canley, Tile Hill, Berkswell and Hampton-in-Arden.

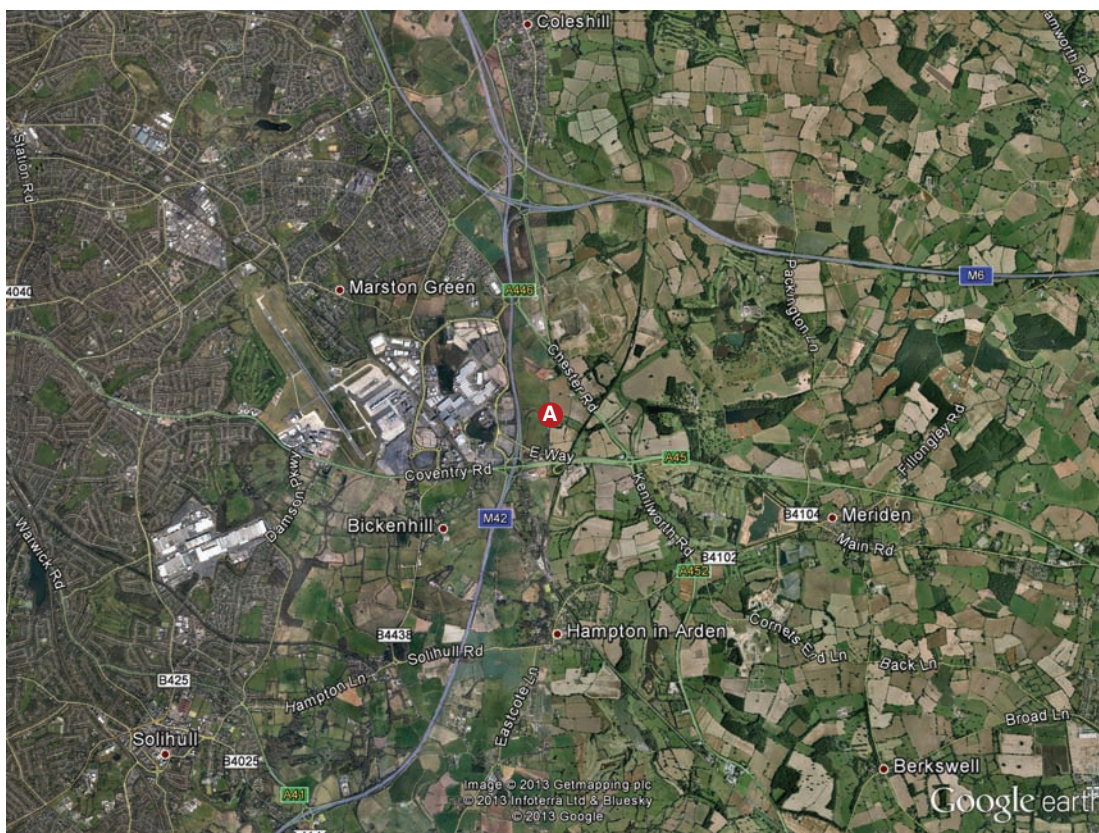


Fig 1 - HS2 Interchange/Hub location at Middle Bickenhill ('A')

It is believed that restoration of the Stonebridge Railway would be relatively straightforward to achieve, the most significant engineering requirements being grade-separated junctions near Hampton-in-Arden and Whitacre; a bridge over the M6 and M6 Toll Link Motorways; and an appropriate station adjacent to the HS2 Interchange station – together with an international passenger terminal for both air and rail passengers, linked to Birmingham Airport by a secure people-mover system. It is also anticipated that 4-tracking of some or all of the West Coast Main Line from Hampton-in-Arden towards Coventry would be desirable (although this is expected to become necessary in any event and should not be seen as a condition to the reinstatement of the Stonebridge Railway).

This first part of this document seeks to outline conceptually the substantial opportunities that could be created by restoring the Stonebridge Railway, and to create a vision of the significant opportunities that could be achieved by optimising this new transport hub serving both Birmingham Airport, and the area along the Blythe Valley/M42 Corridor and the adjoining sub-region. The second part summarises a detailed technical report setting out how this vision could be achieved by restoring the Stonebridge Railway, at an estimated total cost in the region of £240 million at current prices.

Parkway, Interchange or Transport Hub?

In a report in 2011 citing Birmingham Airport and the NEC, Greengauge21 was at pains to point out that: "While Birmingham Interchange is sometimes referred to as a parkway station (including by HS2 Ltd), in fact it has been developed as a **multi-modal hub. The distinction is important** [Authors' emphasis], **since it embraces the concept of all modes of transport being interconnected at one site**, in this case: rail, HSR, air, bus, coach, taxi, hire car, minicab, cycle and private car. Such hub facilities (which are in chronic short-supply across the nation as a whole) provide opportunities for better journeys using a rich variety of mode combinations."

Greengauge21 also emphasized two factors that have a strong influence on the success of edge-of-city interchange stations, such as that planned at Middle Bickenhill for HS2:

- i) They should be provided in addition to, rather than instead of, city centre stations.
- ii) They need to be well-linked to other transport modes so that they are effective in attracting additional demand to the HSR network. Indeed, there tend to be fewer physical constraints for edge-of-city stations, which mean their locations can be more readily optimised to allow for good access to other transport networks. The links from Birmingham Interchange to the local transport networks include:
 - Excellent access to the highway network: the M42, the A45 and the A452;
 - Coach connections at Birmingham Airport to major cities as well as to other airports by a range of operators;
 - Local bus connections to the city centre and surrounding districts; and
 - Connection via Birmingham International station to a wide variety of local and more distant rail destinations.



Fig 2 - HS2 Interchange location (A) in relation to Birmingham Airport

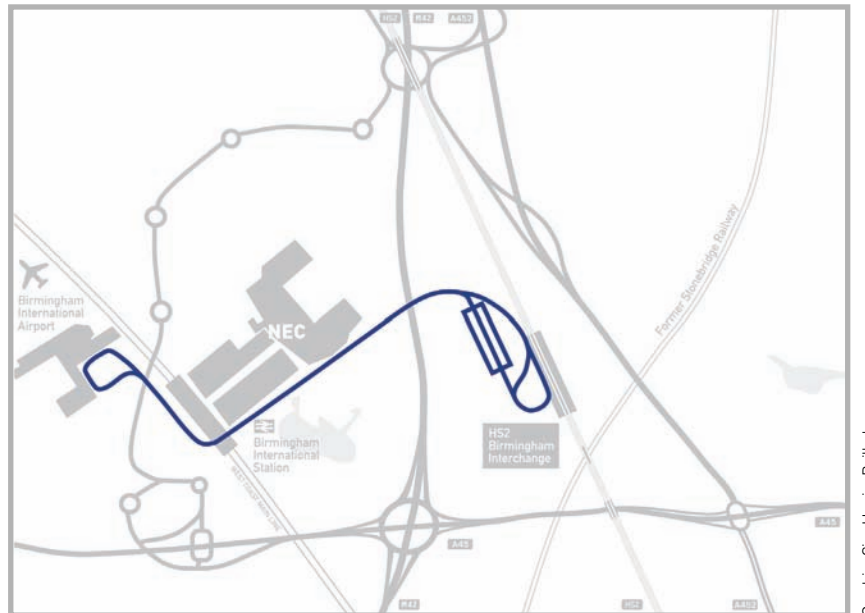


Fig 3 - Plan of HS2 Ltd's initial proposed layout with people-mover connection

The second and fourth points above made by Greengauge21 are important, as they highlight one considerable weakness with the envisaged interchange hub – that it will be approximately 2.4km (1.5 miles) from the existing Airport terminal (see Fig 2) and National Express coach connections, and 1.8km (1.1 miles) distant from the existing 'classic' railway station (currently known as Birmingham International but proposed by the Airport Company to be renamed as Birmingham Airport station) – which is not at all well served by direct train services, including from/to more distant destinations.

The current plan is to have the interchange connected with the existing railway station and the airport terminal itself by a people-mover system (see Fig 3) that would serve en route parts of the NEC, too.

Greengauge21 stated that the HS2 station concourse would be suspended above platform level, which will be in an excavated box (similar to the HS1 station at Stratford in East London). The concourse would be connected by the People Mover directly serving the NEC halls, Birmingham Airport (International) station and the Airport, as well as a planned car parks for 7,000 vehicles around the HS2 Interchange, accessed from the A452.

Greengauge21 explains that to meet passenger demand the people mover would be 'high-capacity and high-frequency: current assumptions are for a capacity of up to 2,000 passengers per hour in vehicular units of 100 passengers at a frequency of 20 per hour.' Most of the people-mover alignment would be on a high-level structure, crossing the M42.

However, there are serious doubts whether a single, all-purpose people-mover system will be adequate. An estimate of up to 9 minutes had been quoted – little quicker than the proposed journey time between the West London Interchange at Old Oak Common and Heathrow Central. This now has been revised to 6 minutes, but any extra journey time is likely to have a negative impact on perceived connectivity.

Moreover, if there were to be an International terminal at the Birmingham Interchange Hub station to check-in airline as well as rail passengers, as proposed here, a dedicated link would be required to transfer passengers to secured airside areas of the Airport. This would be a significant step towards providing a truly integrated journey experience for passengers.

How might connectivity with the existing and expanding 'classic' rail network be improved?

To highlight the issues and opportunities, key items from the Executive Summary of the 2011 Greengauge21 report are set out below (*in italics*), together with comments.

Strategic case

■ *Birmingham Interchange will be a multi-modal hub, very well-connected to other public transport networks and with the national motorway network.* (Comment: However, as things are now, it will be poorly connected by direct train services from much of the railway network. At present, due to lack of direct services, 78 per cent of passengers travelling by train to Birmingham Airport are forced to change trains in Birmingham, either at New Street station or by transferring from Moor Street or Snow Hill stations to New Street station.)

■ *In particular, Birmingham Interchange will encourage mode shift from car to high-speed rail through offering a road-connected alternative.* (With improved rail connections, mode shift to rail can be improved further.)

■ *Improving accessibility to Birmingham Airport will widen choices for air travellers.* (The limited direct services at present to the rest of the rail network will continue to inhibit access by train to Birmingham Airport, with the enforced change of trains at Birmingham New Street continuing to be a significant deterrent.)

Transport case

■ *The potential market for the station (those who live within 45 minutes drive) is over one million people.* (However, only a relatively small number of these people presently would have direct rail access to the Interchange location and its link with Birmingham Airport.)

■ *Around 40-50 per cent of West Midlands HS2 passengers, or 23,000 passengers a day, are expected to use Birmingham Interchange in preference to the city centre station.* (This number, and the proportion of the total, can be increased if rail links to the Interchange are improved.)

Economic case

■ *Birmingham Interchange improves the economics of the HS2 scheme. In 2010, it was estimated that the benefits of the station would exceed its costs by a ratio of 2.9 to 1.* (If additional rail services can be provided, it is likely the BCR would improve further.)

■ *There will be considerable local benefits to businesses and workers in the area. Significant office, leisure and retail space is expected as a result of the HS2 station, stimulating nearly 60,000m2 of new development.* (However, travel to work and visitor opportunities by train will be limited without improved rail connections.)

■ *These developments are forecast to deliver an additional 3,750 jobs in the local area.* (If rail links to the Interchange could be improved, the proportion of journeys to work by train could be increased significantly.)

Sustainability case

While the station is planned to be built on land currently designated as Green Belt, it is effectively surrounded by roads and is adjacent to motorways, the airport and the NEC. It is considered that additional highway traffic will not have a significant impact above current forecasts. (Improved rail links to the site would likely lessen the increase in highway traffic.)

■ *The case for the station fits well with local and regional development plans and is well-supported by stakeholders. (Improved rail connections to the site would likely improve stakeholder support.)*

COMMENT

Greengauge21 states that to ensure the new station is highly accessible by car, taxi and bus services, substantial highway improvements would be required.

However, there has been no serious debate thus far about the limited accessibility from the 'classic' rail network that will continue if no action is taken, or how accessibility from the 'classic' rail network to the Interchange Hub (and hence also to the Airport) might be improved significantly – yet there are likely to be significant enhancements to the 'classic' rail network in the immediate sub-region (and in the wider regions beyond) by the time the first stage of HS2, which will serve Birmingham Interchange, is due to open.

Current access difficulties are referred to in the second draft of the final report on Regional Connectivity to Birmingham Airport, 2013¹ by W S Atkins, which noted that the Birmingham Airport Company had delayed producing its next surface access strategy until more clarity is provided regarding the Government's national aviation strategy – now the subject of a review by the government-appointed commission chaired by Sir Howard Davies². The deliberations of the commission could have a transformational impact on the connectivity and economy of the Midlands.

W S Atkins reports that 8.6 million passengers passed through the airport in 2011 (about only a third of its potential capacity), with a mode share for rail of 14.6 per cent (i.e., rail conveyed only about 5 per cent of the airport's total potential capacity) and comments: "Whilst there are many through trains, it was noted that there are no through trains towards the South-West (for example, towards Worcester and Gloucester) or towards the North-East (for example, towards Derby and Sheffield). Within the West Midlands there are generally poor links with the Black Country (with the exception of Wolverhampton) and also to Walsall." However, restoration of the Stonebridge Railway, serving the new Interchange hub as proposed here, could address all these shortcomings – and create many more rail journey opportunities as well.

The Atkins' report states that "a potential solution to this poor connectivity is (re-) opening of the Whitacre link" and that ARUP "is currently undertaking a Feasibility Study into the re-opening of the southern part of the Whitacre Link as a means to providing good connectivity between Coventry and the new Birmingham Interchange Railway Station on HS2." But it adds: "This study will not consider the route north of a potential new station, so this is an area for further study in the future."

This document, however, suggests consideration should be given *immediately* to restoring the whole line, as it could have significant implications for improving surface access to Birmingham Airport – and, hence, the role it may play in future aviation strategy now being considered by the

¹ W S Atkins. Regional Connectivity to Birmingham Airport. January 2013

² Aviation Commission. <https://www.gov.uk/government/publications/submitting-evidence-and-proposals-to-the-airports-commission>. 09th May 2013.

'Davies Commission' – as well as to the surrounding area, which includes both Birmingham and Blythe Valley Business Parks. It is understood that plans for sensitive and sustainable development in the area are currently being reviewed by Solihull Metropolitan Borough Council in the form of 'UK Central'.

The proposals for consideration contained in this document would not necessarily require the Stonebridge Railway/Whitacre Link to be joined at Hampton-in-Arden to Birmingham International by a north-west facing connection (although this may well be desirable and there is space at Birmingham International station, adjacent to the NEC, for a further island platform, see Fig. 4, and such a link would probably require 4-tracking from Hampton-in-Arden to Birmingham International).

However, any through services between the East Midlands and North Midlands and central Birmingham could, under the proposals mooted here, reverse at the Interchange Hub and continue via Coleshill and Water Orton (to avoid increasing pressure on the Birmingham International-Birmingham New Street corridor). However, more significantly, 4-tracking from Hampton-in-Arden towards Coventry would almost certainly be required – but would probably also bring significant beneficial results in terms of providing much-needed additional capacity in the busiest rail passenger corridor in the West Midlands, as well as offering an alternative route from Coventry to the freight terminals at Kignsbury/Birch Coppice, Hams Hall and Birmingham Lawley Street.

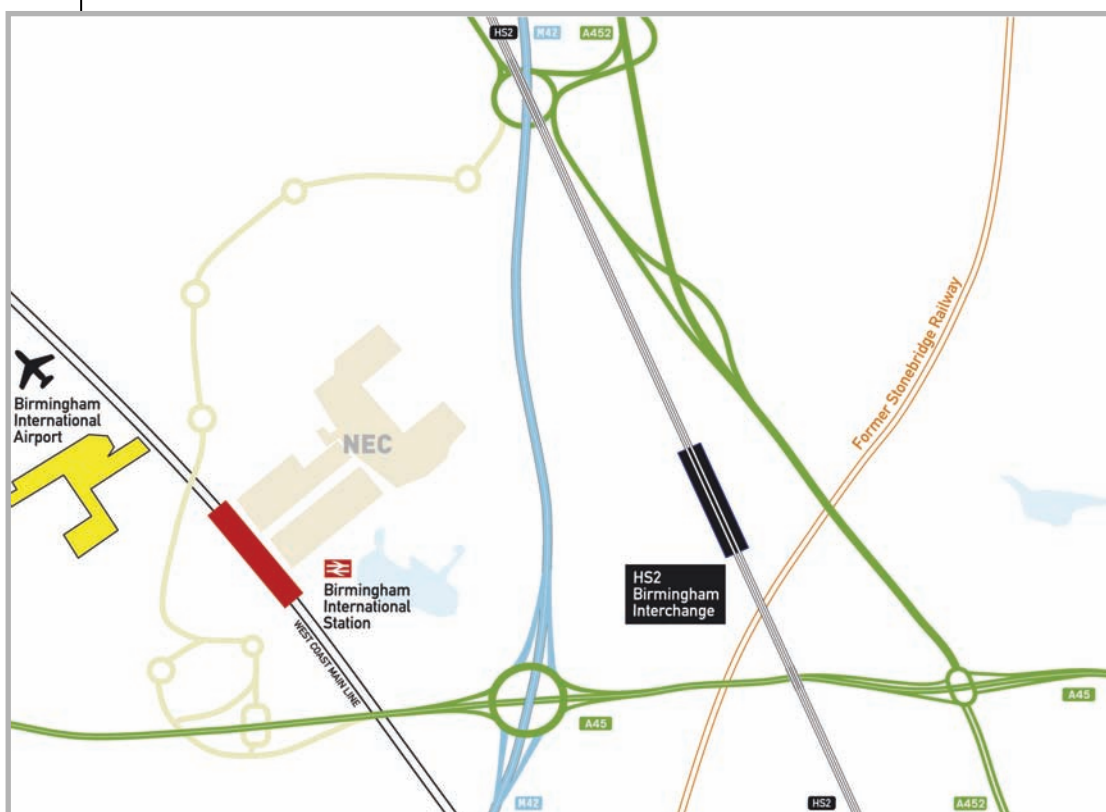
The timescale for preparing major rail projects also suggests that detailed planning should begin now. If the proposals in this document are to be taken forward, powers would need to be obtained either in accordance with an Order under the Transport & Works Act or via a hybrid bill, for example as part of the bill that will be necessary to authorize the second phase of HS2 and, possibly, a spur into Heathrow Airport. Also, the developments proposed here would need to commence (if not be completed) during the next Control Period (CP6, 2019-24), which also implies that detailed planning should begin now.



Fig 4 - There is space on the NEC side of the present Birmingham International Station for an additional platform island.

The proposed solution is potentially a very significant one

THE route of the former Stonebridge Railway, which ran between Hampton-in-Arden and Whitacre, crosses the south-east corner of the triangular site (bounded by the A45, A452 and M42 Motorway) in which it is proposed to locate the HS2 Interchange station at Middle Bickenhill.



Graphic: Sim Harris, Railhub

HS2 Interchange site and the route of the former Stonebridge Railway (in orange)

The route of the Stonebridge Railway actually passes very close to the location proposed for parking for 7,000 cars alongside the HS2 station, accessed from the A452.

This offers the prospect, for example, of placing a 'classic' rail station beneath or adjacent to one of the car parks or close to HS2 Interchange, together with an International Passenger Terminal (for both rail and airline passengers) above or alongside the station 'box', and a separate people-mover link directly from there to the secure air-side areas of Birmingham Airport.

Reinstating this 'classic' rail link with multi-directional grade-separated junctions at each end would dramatically and strategically improve rail access opportunities to Birmingham Airport – and to HS2 – from a very wide area of the East Midlands, South-East Midlands and South-West Midlands, as well as from the surrounding areas, including Coventry (including Binley & Willenhall, where a new station is proposed when capacity is released by the opening of HS2), Ricoh Arena (new station proposed), Bedworth, Bermuda Business Park (new station proposed), Leamington Spa, Kenilworth (where a new station is planned), Stratford Upon Avon, Nuneaton, Hinckley, Burton-on-Trent, Alrewas/Wychnor/Fradley (where a new station is proposed), Tamworth, Walsall and Aldridge.

SPECIAL NOTE: This document does not assume future service patterns or franchise arrangements would be the same as today's. In another decade there are likely to be significant changes, including services over new routes and/or new stations – examples being the East West Railway between Bedford, Bletchley and Oxford, or the current proposal to reinstate the passenger line between Honeybourne, Long Marston and Stratford upon Avon.



Fig 6 – Visualization of the HS2 Birmingham Interchange [HS2 Ltd and Arup]

■ This image, looking northwest, shows HS2 passing beneath the A45 trunk road in the bottom right corner. The line of trees, bottom left to centre left, is the course of the former Stonebridge Railway – but this image, which appears in the draft Environmental Statement published on 16th May 2013, no longer shows the former railway north of the A45.

New train service opportunities to/from Birmingham Airport (and the HS2 Interchange) with Stonebridge Railway restored

Regional/Long Distance Passenger Services

- Nottingham – Derby – Willington - Burton-on-Trent – Alrewas/Fradley (new station) – Tamworth – Wilnecote – Kingsbury (new station) – BHX/HS2 Interchange
- Nottingham – Long Eaton – Loughborough – Leicester – Hinckley – Nuneaton – BHX/HS2 Interchange
- (Norwich/Stansted/Cambridge/Ely) – Peterborough – Stamford – Oakham – Melton Mowbray – Leicester – Hinckley – Nuneaton – BHX/HS2 Interchange
- Corby – Oakham – Melton Mowbray – Leicester – Hinckley – Nuneaton – BHX/HS2 Interchange
- Bedford – Wellingborough – Kettering – Market Harborough – Leicester – Hinckley – Nuneaton – BHX/HS2 Interchange
- Bedford/Aylesbury – Bletchley/Milton Keynes – Northampton – Long Buckby – Rugby – Binley & Willenhall (new station proposed) – Coventry – BHX/HS2 Interchange
- Princes Risborough/Bicester – Banbury – Leamington Spa – Coventry – BHX/HS2 Interchange
- Oxford – Banbury – Leamington Spa – Coventry - BHX/HS2 Interchange
- Bicester (EWR)/Oxford – Charlbury – Moreton-in-Marsh – Honeybourne – (then via Long Marston over the rail link currently proposed for reopening) – Stratford Upon Avon – Leamington Spa – Coventry – BHX/HS2 Interchange
- Hereford/Gloucester – Worcester – Honeybourne – (then via Long Marston over the rail link currently proposed for reopening) – Stratford Upon Avon – Leamington Spa – Coventry – BHX/HS2 Interchange
- Hereford/Gloucester – Worcester – Bromsgrove – Birmingham (either via University to New St, or via the Camp Hill Line with new stations at Hazelwell, Moseley and Kings Heath, to Moor St and the proposed Bordesley chords) – Fort Parkway (new station) – Castle Vale (new station) – Water Orton – Coleshill – BHX/HS2 Interchange
- Hereford/Gloucester – Worcester – Kidderminster – Stourbridge – Smethwick Galton Bridge (connection with low-level Wolverhampton line) – Birmingham Snow Hill – Birmingham Moor St (then via proposed Bordesley chords) – Fort Parkway (new station) – Castle Vale (new station) – Water Orton – Coleshill – BHX/HS2 Interchange
- Shrewsbury – Telford – Wolverhampton – Sandwell & Dudley – Birmingham New St – Coleshill – BHX/HS2 Interchange – Coventry – Rugby – Northampton/Milton Keynes.

NOTE: various of these potential services could be linked together – e.g., Hereford/Worcester – Stratford Upon Avon – Leamington Spa – Leicester – Peterborough; Princes Risborough - Bicester – Banbury – Burton-on-Trent - Derby/Nottingham (perhaps extended to Newark and Lincoln) – without any need to pass through the network in central Birmingham, which is becoming increasingly congested.

Some services could also operate as portions – e.g. trains from Peterborough and Corby could join together at Oakham or Melton Mowbray; trains from Nottingham (via Loughborough) could join with trains from Bedford (via Market Harborough) at Leicester; trains from Princes Risborough/Bicester could join trains from Worcester at Leamington Spa.



A CrossCountry train from Birmingham to Stansted Airport passes through Whitacre Junction on its way between Coleshill Parkway and Nuneaton.

Sub-regional Passenger Services

- **Cross-City 3:** Redditch – Alvechurch – Kings Norton – Birmingham (either via University to New St, or via the Camp Hill Line with new stations at Hazelwell, Moseley and Kings Heath, to Moor St and the proposed Bordesley chords) – Fort Parkway (new station) – Castle Vale (new station) – Water Orton – Coleshill – BHX/HS2 Interchange.
- **Cross-City 4:** Rugeley – Cannock/Aldridge – Walsall – Tame Bridge Parkway – Perry Bar – Birmingham New St – Fort Parkway (new station) – Castle Vale (new station) – Water Orton – Coleshill – BHX/HS2 Interchange – Coventry – Kenilworth (new station) – Leamington Spa.
- **Cross-City 5:** (Assuming Sutton Park line is resumed as a passenger route) Walsall – Aldridge – Streetly – Sutton Coldfield – Water Orton – Coleshill – BHX/HS2 Interchange.
- **Coventry Circular:** (clockwise) Coventry – Canley – Tile Hill – Berkswell – Hampton-in-Arden – BHX/HS2 Interchange – Gailey Common (new station proposed) – Nuneaton – Bermuda Business Park (station planned) – Bedworth – Ricoh Arena (station planned) – Coventry; and counter-clockwise.
- **An alphabetical list of stations that could benefit from reinstatement of the Stonebridge Railway is show in Appendix A.**

New train service proposals in the context of Network Rail's draft 'Long Distance Market Study'

The range of rail services shown above would give passengers the ability to use the 'classic' (conventional) rail network in Central England to access Birmingham Airport via the Interchange Hub. Approximately 8.3 million people (15 per cent of the total population of England and Wales) live within the catchment area.

However, it should also be noted that, in terms of offering access to Birmingham Airport, the range of locations within similar journey times via the completed HS2 'Y' network, will include a much larger area of the country – embracing much of the North West and North East of England and Yorkshire, as well as London itself (via Euston or the Old Oak Common Interchange in West London), and also Docklands/East London (via Stratford International) and Kent (via Ebbsfleet and Ashford International) if High Speed domestic services are established over a HS1-HS2 link, for which Greengauge21 is undertaking a detailed study. After HS2 is completed, it is estimated that a total of 15 million people will be within one hour's rail travel of Birmingham Airport.

Already rail travel has reached unprecedented levels, with the total for the National Rail network in 2012 standing at 1.51 billion journeys, a number that has not been exceeded since records began at the time of the 1923 'railway grouping' – when the network was substantially larger than it is today.

On 27th March 2013 Network Rail published a draft 'Long Distance Market Study' for consultation*. This document is the first in a new style of research designed to look 10 to 30 years into the future. According to Richard Eccles, Network Rail's head of strategic planning: "Rail has a unique ability to offer fast and efficient connectivity for businesses and communities, while also being a greener, less carbon hungry form of travel. Only by planning many years ahead will we be able to keep trains moving and meet demand."

The proposals in this document are therefore considered aligned with this new way forward for long term planning of the rail system as now being adopted by Network Rail.

Network Rail states in its document: "In developing this market study, the rail industry sets out a new approach to developing plans for the future. This reflects the need to understand more about how plans for the railway impact on the economy and make sure that strategic change, such as the development of High Speed 2, can be effectively considered in rail industry planning."

Moreover, the draft study forecasts: "It is unlikely that all of the factors which are currently in rail's favour will change materially in the short term, and annual passenger demand growth to 2023 is expected to be similar to the level experienced recently."

In this context, the Network Rail draft study also records: "Since 1994 passenger demand in the long distance sector has grown robustly at an average rate of over three per cent per year. This growth was strongest in the years immediately preceding the recession when passenger kilometres travelled by rail grew by 25 per cent between 2004/05 and 2007/08. Since then, demand has continued to grow, albeit at a lower rate, before returning to a higher rate of growth in 2010/11 with a 6 per cent increase in demand."

In considering aspirations for the next 30 years (a not excessive period for planning long-term infrastructure such as rail), Network Rail's view is that "[looking to] the long term has changed the emphasis of [rail] industry planning, from consideration of 'what can be achieved given existing constraints', to 'what should be achieved to deliver the desired outcome'." Possible future



Passenger and freight trains have to share the two-track Coventry Corridor

developments should therefore be treated “as aspirations for the future rather than recommended investment decisions.”

The opportunities that could arise from the proposed reinstatement in modern form of the Stonebridge Railway/Whitacre Link, as presented here, should be viewed similarly.

Network Rail’s draft study suggests that “the largest improvements . . . are likely to be generated by providing very fast services between London and the other principal regional centres, and between some of the other principal regional centres of around 100 miles in separation, such as Birmingham and Leeds.” This, of course, is exactly what the HS2 ‘Y’ network will achieve by offering potential direct links within an hour or less from, for example, Manchester, Leeds and Sheffield – as well as London and the South East – to the Interchange Hub and to Birmingham Airport.

So far as the conventional rail network is concerned (and relevant to the proposal in this document to restore the Stonebridge Railway/Whitacre Link) Network Rail’s draft long distance study observes:

- “• Provision of improved opportunities to travel between a number of locations that are not currently directly served would be beneficial against the strategic goals.
- “• Significant additional capacity is likely to be required over the next 30 years to accommodate the growth in economically productive travel. This capacity requirement is likely to be greatest between the principal regional centres.”

As for surface access to airports, the Network Rail draft study states: “To support national economic growth, better access and connectivity to the international and regional airports is required. Rail service provisions should be able to meet growing demand of accessing the international and national airports by rail. Earlier morning and later evening rail services to the airports from core economic centres should also be considered subject to value for money and affordability.”

In relation to earlier morning and later evening services for passengers using Birmingham Airport, it should be noted that the proposals in this document to restore the line between Hampton-in-Arden and Whitacre, and to link it at either end with both easterly and westerly routes, would mean that there should always be an alternative route available when any engineering works are undertaken on another. For example if the route from Birmingham via Stechford is closed, the route via Coleshill should be open; if the route between Coventry and Hampton-in-Arden were to be closed, the alternative would be via Nuneaton and Whitacre Junction.

[* Long distance market study 2013 is available at <http://www.networkrail.co.uk/improvements/planning-policies-and-plans/long-term-planning-process/market-studies/long-distance/> Similar studies for the Regional Urban and Freight markets were due to be published as this document was being finalized.]

New train service proposals in the context of the WMRRF draft document 'A World Class Rail Network for the West Midlands'

On 26th March 2013, the West Midlands Regional Rail Forum released for consultation with wider stakeholders a Summary Document of its Draft Rail Vision "A World Class Rail Network for the West Midlands"##.

This focuses on a geographical area – “the wider Travel to Work area (including neighbouring parts of the East Midlands)” – that is smaller than the catchment area referred to earlier in this document. Nevertheless, it is considered that there is close correlation between this report proposing reinstatement of the Stonebridge Railway/Whitacre Link and the WMRRF draft document, which *inter alia* draws attention to:-

- Strong growth, over and above that predicted in industry and government forecasts, that is continuing in both the regional and intercity passenger markets and also the rail freight sector. This, it says, will require urgent investment in longer/more frequent trains and additional infrastructure capability in order to meet the increasing transport demand.
- With HS2 reshaping the economic geography of the UK and acting as a catalyst for local economic growth, improved connectivity to the new HS2 stations will be essential if the benefits of the new line are to be maximized across the wider West Midlands region.
- The rail network represents a vital asset for the economy of the region and has the potential to play an even greater role in supporting regional prosperity and higher rates of employment.
- Supporting Local Enterprise Partnership (LEP) objectives to stimulate economic growth, job creation and retention through:
 - Improved connectivity between the West Midlands and other national economic centres (both through HS2 and on the classic network)
 - New stations and services
 - Journey time reductions
 - More frequent services
 - Interchange improvements
 - More cross-regional services
 - Interventions which support the long term structural change towards the knowledge/service economy, such as improved rail connectivity to new centres of employment, will therefore be vital to the economic growth and enhanced productivity of the West Midlands.
 - Rail schemes that improve connectivity through reductions in Generalised Journey Time can therefore have a major positive impact on the regional economy and support the six West Midlands' Local Enterprise Partnerships in delivering their specific objectives for economic growth and employment.
 - In order to maximize the benefits of HS2 to Solihull, Coventry and Warwickshire and provide improved access from the north to Birmingham Airport and the NEC, the West Midlands Regional Rail Forum is also calling for the majority of HS2 services between London, the North and Scotland to call at Birmingham Interchange (thus likely to attract additional passengers and increase numbers traveling to the Interchange Hub).

■ The full benefits of improved connectivity to Europe are dependent on the provision of regular direct international services from both West Midlands HS2 stations via the proposed link between HS2 and the existing HS1 route to the Channel Tunnel, says the WMRRF.

This requires that customs and passport control facilities are provided at these stations from the outset and that a flexible layout is created at the interchange station to enable platforms to be used by both international and domestic high speed services (potentially through use of movable screens on platforms to segregate international passengers when required).

■ HS2 will create a new station in Birmingham City Centre (currently referred to as Curzon St but with its entrance actually adjacent to Moor Street station) and another in Solihull at Birmingham Interchange connected to the NEC, Birmingham Airport and the existing Birmingham International (Airport) station. These stations should provide the catalyst for new office, retail and housing developments, stimulating the economy and creating jobs.

■ With HS2 also acting as a catalyst for regional economic growth, improved connectivity to the new HS2 stations will be essential if the transport and wider economic benefits of this significant investment in transport infrastructure are to be maximized across the wider West Midlands region.

At the Interchange Hub, the WMRRF document states the following to be necessary:-

- People Mover Connection must provide direct access to existing platforms at Birmingham International (Airport) station
- Metro / rapid transit to Coventry, Solihull, Warwickshire
- Bus / rapid transit interchange(s)
- Direct heavy rail connection to Birmingham Interchange. (WMRRF adds that Birmingham Airport "is promoting a reopened rail link from Birmingham International station to Whitacre via Birmingham Interchange which could facilitate connecting services from Tamworth, Nuneaton & Leicester – the alignment of this route should therefore be safeguarded where it is crossed by HS2.")

New train service proposals in the context of Centro's long term vision and strategy framework

In 2010 the West Midlands' Integrated Transport Authority (Centro) published its "Integrated Public Transport Prospectus". However, a number of significant national and strategic changes affecting the West Midlands since 2010 has recently led Centro to release a draft update of the Prospectus.

In particular, the changes focus on: -

- The interaction of the West Midlands' transport network with HS2: the need for effective use of released rail capacity and for new local connections to High Speed Two stations in the West Midlands, such as a link between Interchange station and Coventry, to maximize the economic benefits of HS2.
- The increased emphasis on transport infrastructure boosting economic activity.

The proposed restoration of the Stonebridge Railway/Whitacre Link clearly addresses both of these issues – for example, it includes possible services that could be added in the Nuneaton-Coventry-Kenilworth-Leamington (NUCKLE) corridor – and also contributes to the desire of Local Enterprise Partnerships to be informed of a long-term vision for transport.

New train service proposals in the context of Greater Birmingham & Solihull LEP's 'Strategy for Growth'

On 30th April 2013 the Greater Birmingham and Solihull Local Enterprise Partnership (GBS LEP) published its "Strategy for Growth"[¥]. This states the LEP's vision is "to re-establish Greater Birmingham's role as the major driver of the UK economy outside London" and to make the area "the natural home for Europe's innovators, entrepreneurs and wealth creators."

This, it said, means closing the per capita output gap with the national average, and simultaneously establishing the preconditions for economic leadership on a worldwide scale. To achieve this, the LEP has identified six 'strategic enablers' – of which one is 'improving physical (and digital) connectivity.'

The LEP's aspiration is "to significantly improve the quality and reliability of connectivity both within the LEP, and from the LEP to the region/nation/world. We see road, rail, air and digital connectivity being key components of this mix and believe they need to work effectively together to better connect people to jobs, and businesses to markets. We need to cut congestion and uncertainty over travel times, and reduce the average time taken for people to get to their place of work, or to visit for business or leisure tourism."

GBS LEP proposes that a new Strategic Alliance of local LEPs should be created to ensure the wider travel to work area is supported by strong transport governance, and it adds: "Working with Birmingham Airport we will increase route development East and West." The report goes on: "We will focus on reducing journey times for employees, and for businesses. Championing HS2, we will ensure a complimentary package of investments ensures the wider LEP geography will be connected to this key development."

The LEP commits to identifying a comprehensive list of transport infrastructure requirements needed to deliver the GBS Strategy for Growth.

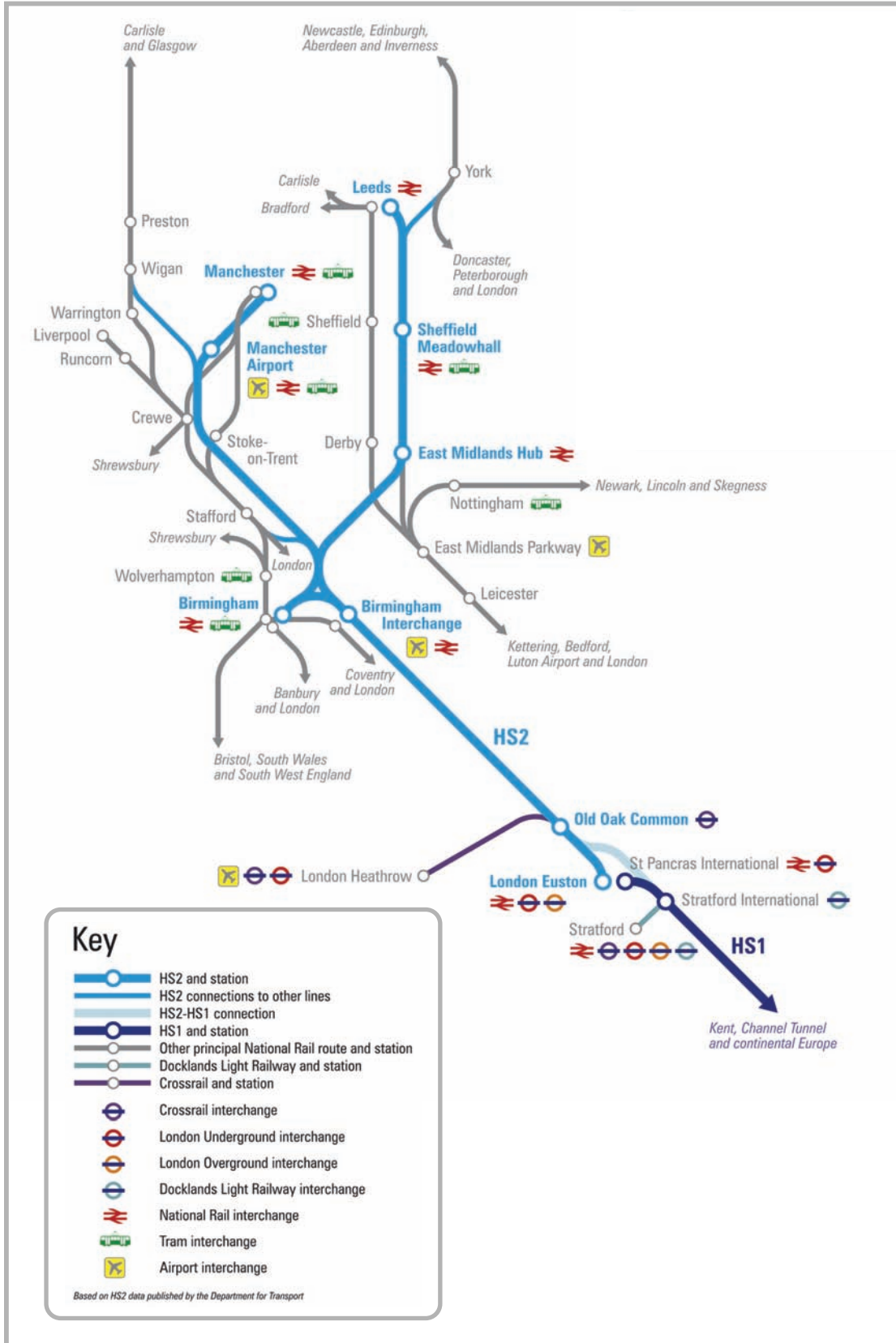
Restoring the Stonebridge Railway as proposed in this document clearly supports the LEP's objectives.



In the last five years Coventry recorded a higher growth in passengers – 30 per cent - than any other city or town in Britain.

[¥ The Greater Birmingham & Solihull Local Enterprise Partnership 'Strategy for Growth'
– <http://centreofenterprise.com/2013/04/30/greater-birmingham-seeks-economic-breakthrough-with-strategy-for-growth/> -
30 April 2013 2013]

The HS2 Y Network 2033



Graphic: Sim Harris, Railhub

Strategic Freight Network Services

As freight services continue to grow in number, and the lengths of trains increase (Network Rail is planning to cope with operator requirements for trains up to 775 metres in length, compared with those today that mostly have a maximum length of 500 metres) there will be growing operating difficulties – in particular at Coventry where freight trains moving between Leamington Spa and Nuneaton (a route to become part of the recently-defined north-south 'Electric Spine') have to cross the Rugby-Birmingham corridor, which is already intensively used.

The passage of a 500-metre-length train at present at Coventry can block the Rugby-Birmingham lines for five or six minutes, and lengthier trains will involve longer conflicting movements with potentially serious impact on main line capacity. Some of the freight trains that cross the main line at Coventry are travelling from and to freight terminals in the North-West and Scotland, using the West Coast Main Line via the widened Trent Valley section beyond Nuneaton, but others are bound from and to the West Midlands' freight terminals at Hams Hall (Coleshill), Lawley Street (Birmingham) and Kingsbury/Birch Coppice (North Warwickshire) and are currently routed via Nuneaton and then through Arley Tunnel to Whitacre Junction.

A particular concern that must be addressed urgently is the rail capacity between Birmingham, Whitacre and Kingsbury/Birch Coppice/Tamworth. The West Midlands Regional Rail Forum has highlighted this issue because a scheme to provide additional capacity in the Birmingham - Tamworth corridor has at present been excluded from the Rail Industry's 2013 Strategic Business Plan, which is the basis for proposed rail investment, subject to final approval of the Office of Rail Regulation, during Control Period 5 (2014-19).

According to the WMRRF: "This location [Birmingham - Tamworth] acts as a major constraint on the network and could act as a serious impediment to passenger and freight growth on this corridor. ... Provision of a Whitacre east chord line could further assist in freeing up capacity on the Water Orton corridor into Birmingham through enabling direct access to/from the three Kingsbury terminals from Nuneaton and the West Coast Main Line." An additional chord at Whitacre could be facilitated as



A heavily-laden freight train from Hams Hall terminal departs through Whitacre Junction towards Nuneaton.

part of the reconnection proposed here of the Stonebridge Railway/Whitacre Link with the existing infrastructure.

The WMRRF also stresses the significance of re-opening the Stourbridge – Walsall – Lichfield line (which could also serve an additional strategic freight terminal at Bescot (*see map, page 34*). Re-opening the route via Walsall [enabling freight trains from the South West to rejoin the route to the North East at Wychnor] would release capacity to allow additional passenger services to maximize the benefits of the proposed Camp Hill Chords, with new stations at Hazelwell, Kings Heath and Moseley, while avoiding the need for trains on the South West/North East axis to pass through the congested Birmingham area. It would mirror in the west of the region the additional capacity, also avoiding central Birmingham, that would be created along the Warwickshire border by the presence of modern infrastructure being restored between Hampton-in-Arden and Whitacre.

The WMRRF points out that the Camp Hill Chords' connection of new origin/destination points to the existing network would increase the potential economic benefits of other schemes. This would be true of the proposal in this document, which offers the prospect of direct services that do not exist at present operating over the routes from the South West of the region (such as Gloucester, Worcester and Hereford) to Birmingham Airport and the HS2 Interchange.

4-tracking Coventry/Hampton-in-Arden/Birmingham international

Atkins, in the second draft of the final report on Regional Connectivity to Birmingham Airport, dated 9th January 2013, suggested that congestion and conflicting movements at Coventry could be mitigated by directing some trains away from Coventry altogether by re-opening the former direct link between Kenilworth and Berkswell, via Burton Green. However, Atkins had overlooked that, at the Kenilworth end, this former alignment has already been given over to Sustrans and now forms part of the National Cycle Network, while the section from Burton Green to Berkswell is proposed by HS2 Ltd to be incorporated into the alignment of the new high-speed line.

With the Stonebridge Railway restored to modern standards and the existing infrastructure widened to four tracks where practicable west of Coventry, it would be possible to route some freight trains via Hampton-in-Arden and Whitacre, rather than via Nuneaton, to pass from and to the freight terminals at Hams Hall, Lawley Street and Kingsbury/Birch Coppice.

An added advantage of improved access to the depots at Hams Hall and Birch Coppice, with their proximity to Birmingham Airport, is that this could contribute to the Airport's desire to increase considerably the amount of airfreight it handles, which currently is taken by road for transit through London Heathrow.

Four-tracking the Coventry corridor is not a new proposition. The London Midland & Scottish Railway secured powers (which subsequently lapsed) prior to World War II for 4-tracking (which explains, for example, the presence today of an island platform on the down side of Stechford station).

Four-tracking from Beechwood Tunnel to Stechford was also included in Atkins' Rail Package 2 (RP2) proposal – one of the alternatives developed for the Department for Transport to test against the HS2 business case. The 'Optimised Alternative' to HS2, based on RP2 and put forward by the HS2 Action Alliance, excluded 4-tracking west of Beechwood Tunnel (perhaps because it was costed at close on £1 billion) and with the service level proposed by HS2AA it is unlikely that even the present level of passenger trains could be maintained at intermediate stations. This, then, emphasizes the criticality of the already limited capacity between Coventry and Birmingham.



Fig 8 – The Coventry Corridor's capacity is constrained by having only two tracks, seen here passing through Beechwood Tunnel

It is the view of professional rail operators that this corridor will require to be increased to 4 tracks, and the Chief Executive of the West Midlands Integrated Transport Authority (Centro), Geoff Inskip, has stated publicly on several occasions that 4-tracking is likely to be necessary to provide additional capacity, even without HS2. This is the busiest rail passenger corridor in the West Midlands, and figures disclosed by the Association of Train Operating Companies in March 2013 showed that of the 14 British cities with the highest growth in rail travel in the past five years, Coventry's was greatest with 30 per cent growth, much of it in the Birmingham direction.

The extent of growth in passenger travel is also emphasized by the West Midlands Regional Railway Forum, which states that with passenger numbers increasing at 5.5 per cent per annum the passenger growth to 2020-21 anticipated in Network Rail's West Midlands and Chilterns' Route Utilization Strategy has already been achieved – eight years early. "In effect since 2008-09, the West Midlands travel to work area rail network has seen 11 years' forecast growth in passenger numbers (30 per cent) achieved in just four years," according to the WMRRF – whereas the government's High Level Output Specification (HLOS) and the current industry Strategic Business Plan assumes the region will only need to cope with growth of 2.5 per cent per annum during the next Control Period (2014-19).

Physical and operational requirements for a reinstated Stonebridge Railway/Whitacre Link

Restoration of the Stonebridge Railway should be relatively straightforward to achieve.

The most significant engineering requirements (which are the subject of Michael Byng's report, summarized in Part 2 of this document) are likely to be:

- grade-separated junctions at Hampton-in-Arden towards Middle Bickenhill and from Middle Bickenhill towards Birmingham International (where two additional platforms could be provided); also at Whitacre (from both Coleshill and Kingsbury towards Middle Bickenhill, and from Middle Bickenhill towards Nuneaton);
- a bridge over the M6 and M6 Toll Link Motorways;
- an appropriate station, comprising at least four platforms (six, if additional platforms at the present International station are not provided), including turn-back capability, adjacent to the HS2 Interchange station;
- a passenger-handling facility for passengers using international train services via HS2/HS1/Eurotunnel, and airline passengers transferring to Birmingham Airport
- a secure people-mover system (with associated luggage transfer system) to carry airline passengers from the Interchange station to secured areas of Birmingham Airport.
- it is also assumed that 4-tracking would be undertaken towards Coventry.

The restored line and its junctions need to be designed to the highest standards, including modular signaling and provision for full 25kVac electrification. A maximum line speed of 160km/h (100mph) for passenger trains and 120km/h (75mph) for freight trains is envisaged and design standards would be similar to those now being adopted for development of the East West Railway between Oxford and Bedford.

How the hub could operate

The principal elements of the new Hub Interchange would comprise: -

- The existing Birmingham International (Airport) station, which would form Hub platforms 1 – 5 (with space for two additional platforms alongside the NEC – Hub platforms 6-7. See Fig. 9).
- The HS2 Interchange station, comprising four platforms (Hub platforms 8 – 11) and two 'through' lines.
- The Whitacre Link station, comprising four platforms (Hub platforms 12 – 15) and two 'through' or 'avoiding' lines.
- An International Passenger Terminal above or adjacent to the HS2 Interchange and Whitacre Link platforms, for passengers to be checked-in for international rail and air journeys. (Passengers for trains would be able to wait in a secure area before being conducted to secure platform areas in the HS2 station below; passengers for air services would be transferred to secure Birmingham Airport terminal areas by a dedicated people mover link, while their checked-in luggage would go by a secure conveyor system alongside the people mover line.)
- There would also be an 'open' people mover system, as already proposed (see Fig. 3 above), linking the car park adjacent to the A452 with the Whitacre Link and HS2 stations, the NEC, platforms 1-7 at Birmingham International, the adjacent bus interchange and the public areas of Birmingham Airport.



Space at Birmingham International station for an additional island platform



• Fig. 10 - M42/Blythe Valley corridor and HS2 Interchange Hub ('A')

■ In addition, it would be highly desirable to have a form of metro/light rail system to link the new Interchange Hub with new employment area(s) that are expected to develop in proximity to the Interchange, also with other areas of current and expanding business activity – such as Birmingham Business Park and the Blythe Valley Park. Indeed, a Blythe Valley Light Rail (BVLR) system might form part of an extension of the Midland Metro if a line is projected, as has been mooted, from Birmingham city centre towards the Airport and the Hub Interchange via the Stechford/Marston Green/A45 corridor.

Example of People Movers

There are many types of people mover system in use at airports and rail stations around the world. Here are just four examples.



Above left: This elevated people mover links the main terminal at Kuala Lumpur Airport, Malaysia, with the departure terminal



Above right: The first phase of the PHX Sky Train system opened at Phoenix Sky Harbor International Airport, Arizona, on 8th April 2013. In its first stage, the free driverless train connects Terminal 4, the East Economy Parking Lot and the Metro light-rail station



Above left: A suspended monorail People Mover in Dusseldorf, Germany



Above right: The monorail People Mover system at Liberty Airport, Newark, New Jersey, links the Amtrak station served by Acela high speed trains between Boston, New York and Washington DC, with the airport terminals, car parks and car rental terminals.

PART 2 – How the vision can be achieved



This section is based on the work undertaken by Michael Byng, of mbpc Infrastructure Limited of Coventry, and summarizes the scope of works and estimate of cost for the reinstatement of the derelict railway between Whitacre Junction and Hampton-in-Arden to provide additional and enhanced rail access for passengers to Birmingham Airport and the HS2 Interchange.

Rail routes in the West Midlands proposed for reopening and/or restoration of passenger services



Graphic: Sim Harris, Railhub

In addition to the reinstatement of the derelict railway, two additional chords are proposed to be built. These will provide: -

- A connection from the reinstated railway to Birmingham International Station
and
- A west to south connection from Coleshill to Blythe Wood to allow traffic from the north and east of Birmingham to make access to the reinstated railway and destinations in the 'Coventry Corridor' of the West Coast Main Line and in areas south of the West Midlands.

In addition to creating a new rail link to the airport and the HS2 Interchange station, the reinstated railway, at the centre of a horizontal 'figure of eight' within the West Midlands regional railway network, will allow circular services to be made from Birmingham and from Coventry.

Description of the derelict route

Origin and construction

'The Stonebridge Railway' was conceived and constructed to provide a main line railway link between the London and Birmingham Railway (now part of the electrified section of the West Coast main line from London Euston to Birmingham New Street) and the East Midlands (Derby and Chesterfield) to the North East of England (Sheffield, Leeds, York and Newcastle).

It was promoted as 'the Birmingham & Derby Junction Railway' in 1836 and the line was designed by George Stephenson and constructed under his supervision; it was formally opened on Monday 5th August 1839, 11 months after the London & Birmingham railway had opened.

The double track railway ran between Whitacre and Hampton-in-Arden for a distance of approximately 7 miles and 27 chains, 11.74km.

Along the course of the original route there were approximately 29 main bridges (under bridges or over bridges) all of which now require complete replacement or, in the case of bridges 19, 20 and 22 at Little Packington, major refurbishment and restoration is needed.

History and use

The railway, promoted as a main line arterial route, did not serve its purpose for any length of time, being superseded by routes built in the 1840 and the 1860's from Leicester to Rugby and from Bedford to Hitchin, providing access to London King's Cross Station, and in 1868 from Bedford to London St Pancras Station.

The line, built originally as a double track railway with its formation and all structures designed for two lines of railway, was reduced to a single track railway between August 1842 and March 1843; however, the double track formation and structures remained and were maintained until 1947.

The railway was used at first for main line passenger and goods traffic. However, following the singling of the railway, it carried only minor passenger traffic until it was closed to passengers on 1st January 1917 (as a war-time economy measure) and for goods traffic on 23rd April 1930. The line was left in situ although the failure of a timber bridge over the River Blythe in 1935 meant that it could no longer be worked as a through route, and it continued as a siding from both ends, Whitacre and Hampton.

The remaining track materials were removed in 1951 when several of the over bridges were also demolished and filled in.

Among the over bridges that were demolished and filled were those at Whitacre and those at the southern end of the original railway where the A452 Chester Road and the A45 Birmingham – Coventry Road (see Fig. 17) passed over it.

Current condition

The track bed of the dismantled railway can be seen in several places along its route.

South of Whitacre Junction, the M6 Motorway and the M6 Toll Link Motorway both cross the former route south of Hawkesmill Farm

South of the Motorway, the track bed can be seen as it continues through Little Packington to Middle Bickenhill, where it has been taken over by access roads into the National Exhibition Centre.

From Middle Bickenhill, the track bed may be seen south of the A45 Trunk Road towards its original destination at Hampton-in-Arden.



Fig 17 – This original link road to the NEC was provided beneath the A45 (before the M42 was built) along the trackbed of the original Stonebridge Railway

Performance specification for the major elements of the reinstatement work

The restored line will be a modern mixed traffic, main line railway capable of accommodating a high number of passenger and freight services and will incorporate:

- Passive provision for future electrification - Maximum permissible speeds of 100mph (160km/h) for passenger trains and 75mph (120km/h) for freight trains.
- Structure gauge of W12, allowing the passage of international multi-modal containers.
- Proposals for deviations from the existing corridor due to impassable obstructions - Connections with the existing Network Rail network
- Interface with the proposed HS2 hub interchange at Middle Bickenhill - Statutory Requirements for reinstatement; Transport & Works Act Orders

Project interfaces with Network Rail and the proposed HS2 Hub, and connection to the existing network

The proposal has been developed on the basis that the restored railway would be fully compatible with Network Rail infrastructure standards, and would interface with all Network Rail systems, including signaling and telecommunications and the future West Midlands Railway Operating Centre (ROC), including: -

- Whitacre Junction (Network Rail)
- Coleshill (Network Rail)
- Hampton-in-Arden (Network Rail)
- Birmingham International (Network Rail)
- Middle Bickenhill (HS2 Phase 1) Hub

Scope of the project

The scope of the project is to reinstate the railway from its former junction with the Rugby to Birmingham line (RBS3) at its former junction at Hampton-in-Arden.

The original dismantled railway will be expanded by the addition of two new chord lines, connecting it: -

- Via a west to south chord between Coleshill and Blythe Wood
- Via a north to west chord to allow train services from the north and east to access the HS2 Hub and Birmingham Airport interchange
- The provision of a new station adjacent to the HS2 Station at Middle Bickenhill carrying on to a connection with the Rugby to Birmingham railway line (RBS3)
- The completion of a grade-segregated junction at Whitacre Junction to allow direct running from the Kingsbury Junction (KJW) line and from the Whitacre and Nuneaton line (NWO)
- There will also be a link, paralleling the A45 corridor, between the railway and the Coventry-Birmingham line towards the present Birmingham International station.

Phasing of the Project

The full report considers optimum phasing to provide an operating railway as soon as is possible, at an optimum cost, causing the minimum disruption to Network Rail and adjoining operators.

The length of the reinstated and new railways will be as follows.

Section	Description	Length in miles	Length in km
01	Whiteacre Junction to Siding Wood	4 miles 70 chains	7.85 km
02	Siding Wood to HS2 Hub and Birmingham International	1 mile 60 chains	2.81 km
03	Coleshill to Blythe End Chord	2 miles 20 chains	3.96 km
04	Siding Wood to Hampton-on-Arden	4 miles 40 chains	4.02 km
Total length of works		11 miles 30 chains	18.64 km

The length of the works used to calculate and analyze the cost of the construction works in Equated Track Kilometres is 40.02 ETKM.

Scope of the Works - Reinstatement and New-Build

All sections of the reinstated railway and the proposed new chords at its northern and southern ends will be constructed as a double track railway with signalling and telecommunication systems compatible with the adjoining Network Rail infrastructure; both reinstated and new lines of railway will make passive provision for future electrification.

Permanent Way

Double track railway throughout; formation to support track category 2; axle loading 26.5 tonnes; continuously welded CEN60 rail on concrete bearers; switches and crossing CEN60 rail on concrete bearers - 40 mph turnouts; emergency crossovers at 2 m 40 chains (4.02 km). Drainage to track - catch pits at 50 m centres; drainage discharge to adjacent watercourses

Railway Control Systems

Bi-directional colour light signaling, controlled from West Midlands Signalling Centre; computer based interlocking (CBI); train detection with axle counters; train protection - TPWS; signalling immunized from future electrification; raised equipment platforms to support location cases and the like above the level of the flood plane.

Operational Telecommunications Systems:

Fibre-optic cables in concrete troughing to one side of track; connections to existing control centres to create fixed telephone network (FTN); working to existing control centres to incorporate new route.

Level crossings

There are no level crossings on the route; the former level crossing at Maxstoke Lane is now replaced with a vehicular over bridge

Civil engineering requirements

Removal of all vegetation, trees shrubs and the like within the railway corridor; excavation and filling to form sound foundation to railway formation.



Earthwork repairs to sides of cuttings and embankments; where cuttings have slipped, sides will be repaired with sheet steel piling to maintain width of formation and cess walkways and cable routes both sides; embankments will be dealt with similarly with the addition of land drainage and water disposal to both sides

Replacement of 29 over bridges (as listed in Appendix B); each over bridge formed in precast prestressed concrete decking with bridge parapets and concrete copings; surfacing and paving in tarmacadam with precast concrete kerbs; over bridges for public rights of way electrically lit with lighting standards to adoptable standards.

Level footpath crossings closed and made safe; crossings replaced with steel framed footbridge and ramps (Disability Discrimination Act (DDA) compliant where appropriate); where bridges replace level crossings, e.g. at Maxstone Lane, the cost of the bridge includes the roads required to make the new access.

Buildings

The proposal provides for a major interchange station at the HS2 Hub Interchange site at Middle Bickenhill:

- The station will have four platforms, each bi-directionally signalled. - Access to each platform will DDA compliant and will allow direct exit to the travelator [People Mover] proposed to link the HS2 Hub Station with Birmingham Airport.

- The maximum number of trains using the reinstated railway that can serve the HS2 Hub Interchange and Airport connection is six per hour in each direction; on a typical working day

between, say, 05.00 and 23.00 a total of 216 trains may be run. However this usage is subject to any limitations in capacity on the adjacent Coventry – Birmingham line (RBS 1), the Derby to Birmingham line (DBP3) and the Nuneaton – Water Orton (NWO) route.

Enabling Works

The diversion of all existing services along the line of the derelict railway, with the exception of the gas plant at Whitacre, is included in the proposal

Where cuttings or former bridges have been filled in (e.g. Bridges No. 01 and 02 at Whitacre and Bridges No. 22 and 24, A452 Chester Road and A45 Coventry Road, and the cutting to the west of the A452 Chester Road) excavation will be required to remove filling materials, including disposal of all contaminated waste.

Recent information has come to hand suggesting that the cutting formerly to the west of Bridge No. 24 (A452 Chester Road) was infilled with household waste in the early 1950's before the advent of licensed tipping; the project programme and estimated project cost takes account of the current legal requirement for the removal of this waste by a licensed contractor and its disposal at a licensed tipping site.

Where bridges beneath existing public roads and carriageways are required to be replaced, temporary bridges will be established and maintained with suitable traffic management and diversions for the duration of the works

Estimated Total Cost

The estimated total cost of the works including project management, design and supervision fees, construction costs, land acquisition and the application and receipt of the Transport & Works Act Order is £241,156,562.00 at the prices prevailing in the second quarter of 2013.

Risk Element

Allowances have been made for:-

- Design development
- Construction - Employer's change
- Employer's Other Risks

Land requirements

The land through which the derelict railway passes is no longer in the ownership of the British Railways Board Residuary body, having been sold to private landowners between 1963 and 1980.



Section	Purchaser	Date
11	Network Rail compound	1st August 1974
10	Gas plant	30th July 1974
9	Sir William Stratford Dugdale	3rd November 1967
8	BA Featherstone Dilke	14th April 1967
7	WB Wingfield	13th December 1963
6	Earl of Aylesford	8th January 1964 14th July 1966
5	Birmingham City Council	1st November 1974
4	C Bryant & Sons Limited (now Taylor Wimpey Limited)	1st April 1969
3	RB Crowther	10th July 1980
2	WF Skerritt	8th December 1970
1	Wyckham Blackwell Limited	6th September 1973

The locations of these sections of the line sold are shown on the map, left. [BRBR Ltd]

Conclusion

The Whitacre link appears affordable and deliverable, given the right will and co-operation of a wide range of planners, policy-makers and stakeholders.

The most pressing priority is to ensure that provisions being made for HS2 facilitate the future prospects for the Whitacre Link and that they do not extinguish them. It would be a tragedy if, after more than 80 years, those planning HS2 do not maximize the opportunity but instead destroy it. Provision for the Stonebridge Railway/Whitacre Link should therefore be included in the Hybrid Bill that will enable phase one of HS2.

The train services outlined in this document could have considerable social and economic benefits. They are complex to conceptualize alongside the current rail franchising regime. However, 'nothing is forever' and current constraints must not be allowed to bias judgment over a scheme that may take many years to come to fruition and operate for many decades into the future.

Unfortunately, however, the West Midlands has failed to secure significant rail investment in the next control period, proposed to receive just 0.58% of Network Rail investment, primarily on schemes already committed, and it will be necessary to reverse this sparsity of infrastructure investment.

The Sir Howard Davies Aviation Commission will soon deliberate on future airport strategy – which could lead to Birmingham Airport playing an increased role for not just the region, but for the United Kingdom.

Fiddling at the edges is not appropriate for the UK's largest City Region outside the South East. Old regional rivalries must be set aside. With HS2 just a few years away, plans to maximize that opportunity for the whole region need to be progressed urgently.

It is time to become bold and visionary. It could be an exciting journey, and the Whitacre Link could and should be part of it.

Appendix A

Central England stations that could be connected directly by 'through' train services with Birmingham Airport and the HS2 Interchange.

Planned, proposed or reopened stations

Aldridge	Darlaston	Kingsbury	Streetly
Alrewas	Fort Parkway	Kings Heath (Camp Hill Line)	Walmley
Bermuda Business Park	Fradley	Long Marston	Water Eaton (Oxford, EWR)
Binley & Willenhall	Gailey Common	Moseley (Camp Hill Line)	Willenhall (Walsall)
Brinsford Parkway	Hazelwell (Camp Hill Line)	Ricoh Arena	Winslow (Bucks, EWR)
Castle Vale	Kenilworth	Shrewsbury Parkway	Worcester Parkway

Existing stations without direct services, which could become linked to Birmingham Airport and HS2 via the Stonebridge Railway

Alvechurch	Eastwood (West Midlands)	Long Eaton	Stourbridge Junction
Aspley Guise	Evesham	Loughborough	Stratford-upon-Avon
Barnt Green	East Midlands Parkway	Malvern Link	Stratford-upon-Avon P'way
Barrow-on-Soar	Fenney Stratford	Melton Mowbray	Sutton Coldfield
Bearley	Great Malvern	Millbrook (Beds)	Syston
Bedford	Hall Green	Milton Keynes	Tackley
Bedford St Johns	Hagley	Moreton-in-Marsh	Tame Bridge Parkway
Beeston	Hanborough	Northampton	Tamworth
Bicester North	Hatton	Narborough	Tyseley
Bicester Town	The Hawthorns	Nottingham	Walsall
Birmingham Moor Street	Hednesford	Nuneaton	Warwick
Birmingham Snow Hill	Henley-in-Arden	Oakham	Warwick Parkway
Blakedown	Hereford	Oxford	Water Orton
Bletchley	Heyford	Pershore	Wellingborough
Bloxwich	Hinckley (Leics)	Peterborough	Whitlocks End
Bloxwich North	Honeyborune	Redditch	Willington
Bow Brickhill	Islip	Ridgmont	Wilmcote
Bromsgrove	Jewellery Quarter	Rowley Regis	Wilnecote
Burton-on-Trent	Kettering	Rugby	Woburn Sands
Cannock	Kempston Hardwick	Rugeley Town	Wood End
Charlbury	Kidderminster	Rugeley Trent Valley	Wooton Waven
Claverdon	Kingham	Shirley	Worcester Foregate Street
Coleshill Parkway	Kings Sutton	Sibley	Worcester Shrub Hill
Corby	The Lakes (Warks)	Small Heath	Wythall
Colwall	Landywood	Smethwick Galton Bridge	Yardley Wood
Cradley Heath	Ledbury	South Wigston	
Derby	Leicester	Spring Road	
Danzey	Lidlington	Stamford (Lincs)	
Droitwich Spa	Long Buckby	Stewartby	

Existing stations that have direct services now (via Birmingham International station), but could gain enhanced services to Birmingham Airport and HS2 via the Stonebridge Railway

Banbury	Coventry	Milton Keynes	Tile Hill
Berkswell	Hampton-in-Arden	Northampton	Wolverton
Birmingham New Street	Leamington Spa	Rugby	
Canley	Long Buckby	Oxford	

Appendix B Schedule of replacement structures required to restore the Stonebridge Railway

Bridge No.	Section	Sub bill No	Location	Type	Span	Deck area	Comments
01	01	0101	Whitacre - Shustoke road	Vehicular overbridge	10.00	90.00	Former bridge filled in: excavate to remove filling : temporary bridge : new structure
02	01	0102	Coleshill - Shustoke Road	Vehicular overbridge	10.00	90.00	Former bridge filled in: excavate to remove filling : temporary bridge : new structure
03	01	0103	The Gorse	Occupation overbridge	10.00	40.00	Remove existing superannuated structure: Make good abutments: new structure; serves the purposes of the former (adjacent) Bridge 3A.
3A	01	0104	Bridge Plantations Crossing	Occupation overbridge	10.00	50.00	Overbridge to replace public footpath surface crossing and to provide access to Dwelling House (former crossing keeper's lodge)
04	01	0105	Bridge Plantations	Watercourse underbridge	5.00	40.00	Probably a large culvert type structure ; replacement needed
05	01	0106	Roundwood	Occupation underbridge	5.00	40.00	Probably a large culvert type structure ; replacement needed
05A	01	0107	Roundwood	Occupation underbridge	5.00	40.00	Probably a large culvert type structure ; replacement needed
05B	01	0108	Castle Farm	Occupation overbridge	10.00	50.00	Overbridge to replace public footpath surface crossing and to provide access to Castle Farm
06	01	0109	River Blythe	Watercourse underbridge	20.00	180.00	Repairs to existing structure over River Blyth
07	01	0110	Castle Farm	Watercourse underbridge	10.00	90.00	Probably a large culvert type structure ; replacement needed
07A	01	0111	Castle Farm	Watercourse underbridge	10.00	90.00	Probably a large culvert type structure ; replacement needed
07B	01	0112	Maxstoke Lane	Public thoroughfare overbridge	10.00	40.00	New vehicular overbridge required to replace existing level crossing
08	01	0113	Maxstoke Lane	Occupation Overbridge	10.00	40.00	New vehicular overbridge required to replace existing structure
09	01	0114	River Blythe	Watercourse underbridge	20.00	160.00	Make good abutments: new structure
10	01	0115	River Blythe	Watercourse underbridge	20.00	160.00	Probably a large culvert type structure; replacement needed
11	01	0116	River Blythe	Watercourse underbridge	20.00	160.00	Make good abutments: new structure
12	01	0117	River Blythe	Watercourse underbridge	20.00	160.00	Make good abutments: new structure
13	01	0118	Hawkeswell Farm	Occupation overbridge	10.00	40.00	Remove existing superannuated structure: Make good abutments: new structure

Bridge No.	Section	Sub bill No	Location	Type	Span	Deck area	Comments
14	01	0119	M6/M6 Toll Viaduct	Vehicular underbridge	70.00	420.00	New concrete viaduct: reinforced insitu concrete foundations, abutments and piers: precast concrete bridge-beam deck: metal parapet and railings
15	01	0120	Moat House Footpath	Pedestrian underbridge	5.00	30.00	Make good abutments: new structure
16	01	0121	River Blythe	Watercourse underbridge	20.00	160.00	Make good abutments: new structure
17	01	0122	Brook Farm	Occupation overbridge	10.00	40.00	Make good abutments: new structure
18	01	0123	Church Farm	Pedestrian Overbridge	10.00	40.00	Make good abutments: new structure
19	01	0124	St Bartholomew's Church	Watercourse underbridge	10.00	90.00	Probably a large culvert type structure; replacement needed
20	01	0125	St Bartholomew's Church	St Bartholomew's Viaduct	5.00	30.00	Make good abutments : new structure
21	01	0126	Packington Siding	Occupation underbridge	5.00	40.00	Make good abutments: new structure
22	02	0201	Chester Road/A452	Vehicular overbridge	40.00	400.00	Former bridge filled in: excavate to remove filling: temporary bridge: new structure
23	02	0202	Middle Bickenhill	Watercourse underbridge	20.00	160.00	Make good abutments: new structure
24	03	0301	Coventry Road/A45	Vehicular overbridge	40.00	400.00	Former bridge filled in: excavate to remove filling: temporary bridge: new structure
25	03	0302	Hampton-in-Arden	Pedestrian underbridge	5.00	30.00	Make good abutments: new structure
26	03	0303	Old Station Road	Vehicular underbridge	10.00	60.00	Make good abutments: new structure

Appendix C **How the Whitacre Link proposal correlates with other reports/policies**

Network Rail's draft 'Long Distance Market Study'

Provision of improved opportunities to travel between a number of locations that are not currently directly served would be beneficial.

Significant additional capacity is likely to be required over the next 30 years to accommodate the growth in economically productive travel.

To support national economic growth, better access and connectivity to the international and regional airports is required. Rail service provisions should be able to meet growing demand of accessing the international and national airports by rail. Earlier morning and later evening rail services to the airports from core economic centres should also be considered subject to value for money and affordability.

WMRRF draft 'A World Class Rail Network for the West Midlands'

Strong growth, over and above that predicted in industry and government forecasts . . . will require urgent investment in longer/more frequent trains and additional infrastructure capability in order to meet the increasing transport demand.

LEP objectives to stimulate economic growth and job creation to be supported by

- Improved connectivity . . . both through HS2 and on the classic network.
- New stations and services
- Journey time reductions
- More frequent services
- Interchange improvements
- More cross-regional services

With HS2 also acting as a catalyst for regional economic growth, improved connectivity to the new HS2 stations will be essential if the transport and wider economic benefits of this significant investment in transport infrastructure are to be maximized across the wider West Midlands region.

Whitacre Link – “the alignment of this route should therefore be safeguarded where it is crossed by HS2.”

Centro's long term vision and strategy framework

This refers to “the need for effective use of released rail capacity [as a result of HS2] and for new local connections to High Speed Two stations in the West Midlands, such as a link between Interchange station and Coventry, to maximize the economic benefits of HS2.”

Greater Birmingham & Solihull LEP's 'Strategy for Growth'

The LEP has identified six 'strategic enablers' — of which one is 'improving physical (and digital) connectivity.'

“Working with Birmingham Airport we will increase route development East and West.” The Strategy goes on: “We will focus on reducing journey times for employees, and for businesses. Championing HS2, we will ensure a complimentary package of investments ensures the wider LEP geography will be connected to this key development.”

Strategic Freight Network Services

A particular concern that must be addressed urgently is the rail capacity between Birmingham, Whitacre and Kingsbury/Birch Coppice/Tamworth. The West Midlands Regional Rail Forum has highlighted this issue

because a scheme to provide additional capacity in the Birmingham - Tamworth corridor has at present been dropped from the Rail Industry's 2013 Strategic Business Plan,

"This location [Birmingham - Tamworth] acts as a major constraint on the network and could act as a serious impediment to passenger and freight growth on this corridor. ... Provision of a Whitacre east chord line could further assist in freeing up capacity on the Water Orton corridor into Birmingham through enabling direct access to/from the three Kingsbury terminals from Nuneaton and the West Coast Main Line." [An additional chord at Whitacre could be facilitated as part of the proposed reconnection of the Stonebridge Railway/Whitacre Link with the existing infrastructure.]

Transport Select Committee - Aviation strategy: First report of Session 2013-14, 9 May 2013

The Committee calls on the Government to:

- Develop a coherent national strategy to improve road and rail access sufficient to address significant problems that exist with surface transport connections to major UK airports.
- Take a more active role in promoting airports in regions outside the south east.

Appendix D Whitacre Link – examples of comparative journey times

The journey times below are based on present-day stopping patterns and the Working Timetable point-to-point times currently in operation.

	With Whitacre Link	Today via Bham New St	Time Saving
To BHX / HS2 From:	Mins	Mins	Mins
Peterborough	93	128	35
Stamford (Lincs)	82	115	33
Oakham	66	99	33
Melton Mowbray	54	87	33
Leicester	38	71	33
Nuneaton	18	51	33
Derby	40	85	45
Burton on Trent	27	71	44
Tamworth	18	48	40
Water Orton	9	27	21
Coleshill Parkway	6	30	24
Coventry	14	}	
Canley	12	}	
Tile Hill	9	}*	12 - 15
Berkswell	6	}	
Hampton-in-Arden	5	}	

* Journey times would be approximately the same as today's to Birmingham International – but by going direct via the Whitacre Link passengers would avoid the inconvenience of having to transfer between Birmingham International and the HS2 Interchange using the People Mover via the NEC – saving an estimated 12-15 minutes (alighting at the present station, transferring to people mover, and travelling on the people mover) to reach HS2 services.

Further reading

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The Whitacre Link: Improving central England's connectivity

A report of the potential benefits
of restoring the Stonebridge Railway