RAILNEWS

July 2008

SPECIAL REPORT

What future for High Speed in Britain?

BRITAIN'S rail system is running out of capacity. Demand will exceed the network's capability within 20 years—possibly within 10 years—according to all the latest forecasts. And these do not take into account higher demand if motoring costs continue to remain rise.

Contrary to many earlier reports, neither the government's 2007 White Paper on the next 30 years of the rail system nor Sir Rod Eddington's report in December 2006 on Britain's transport infrastructure ruled out the development of a new north-south high-speed rail line.

Although the government dropped consideration of a MAGLEV (magnetic levitation) route—on the grounds that it could cost around £60 billion—the 2007 White Paper made clear there was a need to start planning ahead of the next 'high level output specification' (HLOS) in 2012 for the possibility that demand for rail services accelerates.

And the White Paper acknowledged that one of the first areas where extra capacity may be needed is along the London–Birmingham–Manchester corridor.

When it is completed at the end of 2008, the modernisation of the West Coast Main Line will have created extra capacity on the route—including the four-tracking now under way in Staffordshire—but Parliament's Public Accounts Committee has warned that the modernised route could be at full capacity again from as early as 2015.

The government agrees that in future it would be better to build new lines rather than upgrade existing ones.

"The clear view of railway professionals with experience of the Channel Tunnel Rail Link and West Coast Main Line projects is that the disadvantages of undertaking major new construction work alongside a working railway outweigh the advantages. … For this reason the Government believes that any future planning should focus on new line options," said the railway White Paper.

Meanwhile—encouraged by the industry lobby group The Railway Forum—Jim Steer, the strategy director of the former Strategic Rail Authority, set up an organisation called Greengauge 21 to argue the case for a new high-speed line.

What next?

A new route, High Speed 2, has been put forward by the pressure group Greengauge 21, which is to set up a Public Interest Group comprising "a broad coalition of interests"—among them, regional development agencies, city councils and rail industry organisations. Its work will be coordinated with a New Lines Programme, also announced by Network Rail.

Network Rail boosts British high-speed rail proposals

• MPs' report says 'capacity problem on the West Coast Main Line is already grave'

PLANS to extend high-speed train services from St Pancras International to the Midlands and North — *High Speed 2* — have been boosted by Network Rail, which has set up a study to see if new lines can be justified. The results should be known within a year.

Richard Eccles, Network Rail's Head of Route Planning, said a 'new lines programme' would be looking at the East Coast Main Line, Midland Main Line, West Coast Main Line, Chiltern Line and Western Main Line corridors.

The team had been set up by Network Rail to examine what should be done when network capacity runs out in the next 10 – 20 years, he told a Railway Forum conference in Birmingham.

"*Our expectation is that the best value for money will be a high-speed line," Richard Eccles said.*

An influential committee of MPs has also called on the government to make a decision on a new line—at least as far as Birmingham—by 2010.

And a report for Birmingham City Council has forecast that a new 300km/h (186 mph) line would boost the West Midlands' economy by over £6 billion.

This is the first-ever detailed estimate of economic benefits that high-speed rail services would bring to a British city.

Until now, calls for new high-speed lines have had to be based on the experience of Lille, northern France, after completion of new lines from Paris to Brussels and London.

The Birmingham study forecasts that by building High Speed 2 from the terminus of High Speed 1 at St Pancras—and with a spur line into Heathrow airport—half of all road trips between Birmingham, London and Heathrow would switch to rail.

David Bull, Birmingham's Assistant Director (Development Strategy), said that as well as frequent trains over the new line to London and Heathrow, there would be two international services each hour to destinations such as Paris, Brussels and Amsterdam.

Over five million passenger trips a year are forecast, said Mr Bull — 3.9 million from Birmingham, 0.8 million from Birmingham International Airport and 0.3 million from Heathrow.

Total economic benefits are expected to be over £6 billion, of which £1 billion alone would come from 'highway decongestion' resulting from the big switch of motorists to high-speed trains.

MPs want early decision

In its latest report, Parliament's Transport Select Committee said the government "needs to commit to making a decision by 2010 at the latest."

The committee's report — much of it prepared before the death of its former chairman, Gwyneth Dunwoody — said "the capacity problem on the West Coast Main Line is already grave."

The MPs added: "We were therefore concerned that the Department [for Transport] has no time-frame for a decision on a high speed link, at least as far as Birmingham, the stretch of the line with the most pressing problems."

Greengauge 21, the organisation set up by Jim Steer—who was strategy director at the former Strategic Rail Authority—has proposed building the first stage of a new high-speed line to the north.

The plan has been welcomed and supported by the Railway Forum, as well as by Eurostar, which saw a 21 per cent rise in passenger numbers — and a 25 per cent increase in revenue — in the first quarter of 2008, following the opening of High Speed 1 last November.

The 'candidate route' suggested by Greengauge 21 would run from St Pancras towards west London, with a spur line to Heathrow, then the main route would follow the Chiltern line northwards, passing under High Wycombe and the Chilterns in a tunnel.

It would then carry trains — at almost three times the maximum legal driving speed — alongside the M40 motorway past Banbury and Warwick before following the M42 motorway towards Tamworth. There it would join the West Coast Main Line where it is currently being expanded from two to four tracks.

A 'branch line' would run into Birmingham city centre from Dorridge, using the former

Great Western relief lines into Moor Street station.

A new station would be built near Birmingham International Airport and the National Exhibition Centre where HS2 crosses the Coventry-Birmingham route, linked to the existing Birmingham International station.

Based on High Speed 1 the new route—totalling 150 miles to Birmingham and Tamworth—would cost £11 billion, including a 66 per cent overspending allowance, as required by the Treasury.

Journeys between London and the north would all be reduced by at least 30 minutes and capacity would also be freed up on the 'classic' route via Milton Keynes and Rugby for more commuter, regional passenger and freight services.

Journeys on HS2 between London and Birmingham would be cut to less than one hour, and the time between Heathrow and Birmingham would be only about 45 minutes.

Paris and Brussels would both be within three hours of Birmingham.

* Growth will soon outstrip network capacity

BRITAIN'S rail network is fast filling up, and there are growing concerns about its ability to cope with future demand.

Richard Eccles, Head of Route Planning at Network Rail, told the Railway Forum that the government's aim was to carry double passenger and freight volumes on the present network. "That is a huge increase," he said. "Can you imagine Liverpool Street station handling twice as many people as it does today? It just won't work."

Mr Eccles said current forecasts suggested that demand would exceed capacity by 2026, only 18 years away.

But according to Michael Hayes, of consultants W S Atkins, capacity might be reached as soon as 2016.

Among long-distance routes, the worst problems were expected to arise south of Peterborough on the East Coast line, and south of Rugby on the West Coast line.

"We could be back to where we are today, or probably worse, even after Pendolino lengthening, the Intercity Express Programme (the replacement of diesel HSTs), and extra services on both the East Coast and Midland Main Lines," he said.

Already, long-distance passenger-kilometres had grown 65 per cent since 1994 said Mr Hayes.

And in only the past three years numbers on the West Coast route had increased by 25 per cent following introduction of the initial Virgin Pendolino timetable.

Jim Steer, of Greengauge 21—which has proposed construction of a new high-speed line with a first stage north of London to Birmingham and to the West Coast Main Line near Tamworth—said the advantages of the new high-frequency Pendolino service "are not sustainable because of capacity constraints."

Mr Steer added: "The Pendolino service is very predictably going to be the victim of its own success."

But a new high-speed line would not only create additional capacity but also provide many benefits for passenger and freight customers on existing lines.

Jim Steer said HS2 would reduce growth pressures in South-east England and shift demand to the Midlands and North, including creating economic regeneration in Birmingham and the West Midlands region.

Shorter journey times would also make Birmingham International Airport closer to London than Stansted, he added.

Atkins' Michael Hayes said half of the expected economic benefits from a high-speed line would come from journey time reductions. The other half would come from relieving pressure on existing routes.

Richard Eccles, of Network Rail, said the business case—both for building a new line and providing capacity on the existing infrastructure—should be "compelling".

For example, Milton Keynes commuters should benefit from a new high-speed line because it would free up capacity for additional trains, he pointed out.

Passengers at other stations should also benefit because it would be possible to transfer passenger trains from the slow to the fast lines, and this would create extra capacity on the slow lines for more freight trains.

Minister criticised for questioning need for high-speed rail

A CLAIM by railway minister Tom Harris that there was little need for high-speed rail operations in Britain was consistently criticised by speakers at the Birmingham conference.

Earlier a letter had been leaked to The Times newspaper, which reported the Minister saying: "The argument that high-speed rail travel is a 'green option' does not necessarily stand up to close inspection.

"Increasing the maximum speed of a train from 200km/h [125mph – the current maximum speed of domestic trains] to 350km/h leads to a 90 per cent increase in energy consumption."

Mr Harris's letter was responding to Chris Davies, the Liberal Democrat MEP for the North West of England, who had asked the government to make its position clear. Mr Davies pointed out that France had already built 1,000 miles of 186mph line, was planning another 500 miles and was considering raising the top speed of trains to 225mph.

In his reply the Minister claimed that Britain has less need for high-speed rail than other European countries. He said: "The economic geography of the UK is very different from other countries with high-speed lines. The main challenge for the UK's transport network is congestion and reliability, not journey times and connectivity."

Criticism 'simplistic'

Richard Brown, Eurostar's chief executive, immediately fired off an angry letter, which was published next day in The Times, calling the Minister's comparison with existing trains "simplistic."

Mr Brown said the European consensus on future maximum speed was 320km/h (199mph) not 350km/h, that Eurostars carried twice as many passengers as the government had assumed, and European high-speed rail services had enabled very significant modal shift from plane to train, delivering a vast saving in carbon dioxide emissions."

He concluded: "With domestic main lines running out of capacity, and with the current rapid expansion of the continental high-speed rail network, the case for further high-speed lines in Britain should be properly and fully investigated."

Greengauge 21's Jim Steer said Tom Harris had disregarded the evidence—including the Department for Transport's own work.

"The Edddington report showed that high-speed rail in Britain would save, not increase, CO_2 with a benefit of between £2 - £5 billion because of the switch to rail from domestic aviation," said Mr Steer.

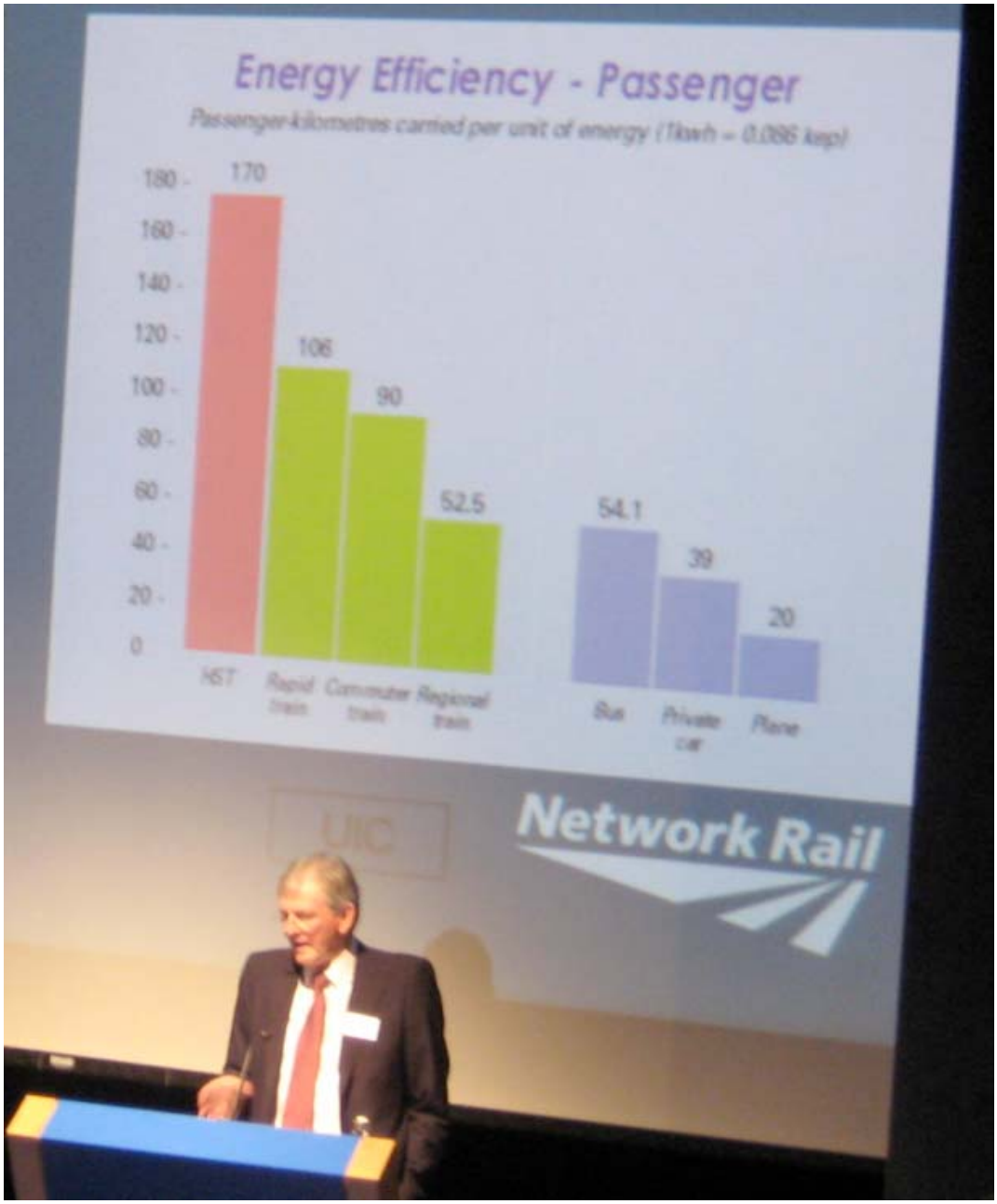
He added that Eurostar services created only 10 per cent of carbon emissions per passenger compared to flying between London and Paris. And over the past 30 years Japan had increased its train speeds from 210km/h up to 350km/h but there had been no increase in carbon emissions per passenger.

Richard Eccles, Network Rail's Head of Route Planning, showed the conference a chart of passenger kilometres travelled per unit of energy.

"European high speed trains appear to be the most efficient — short of a camel," he declared.

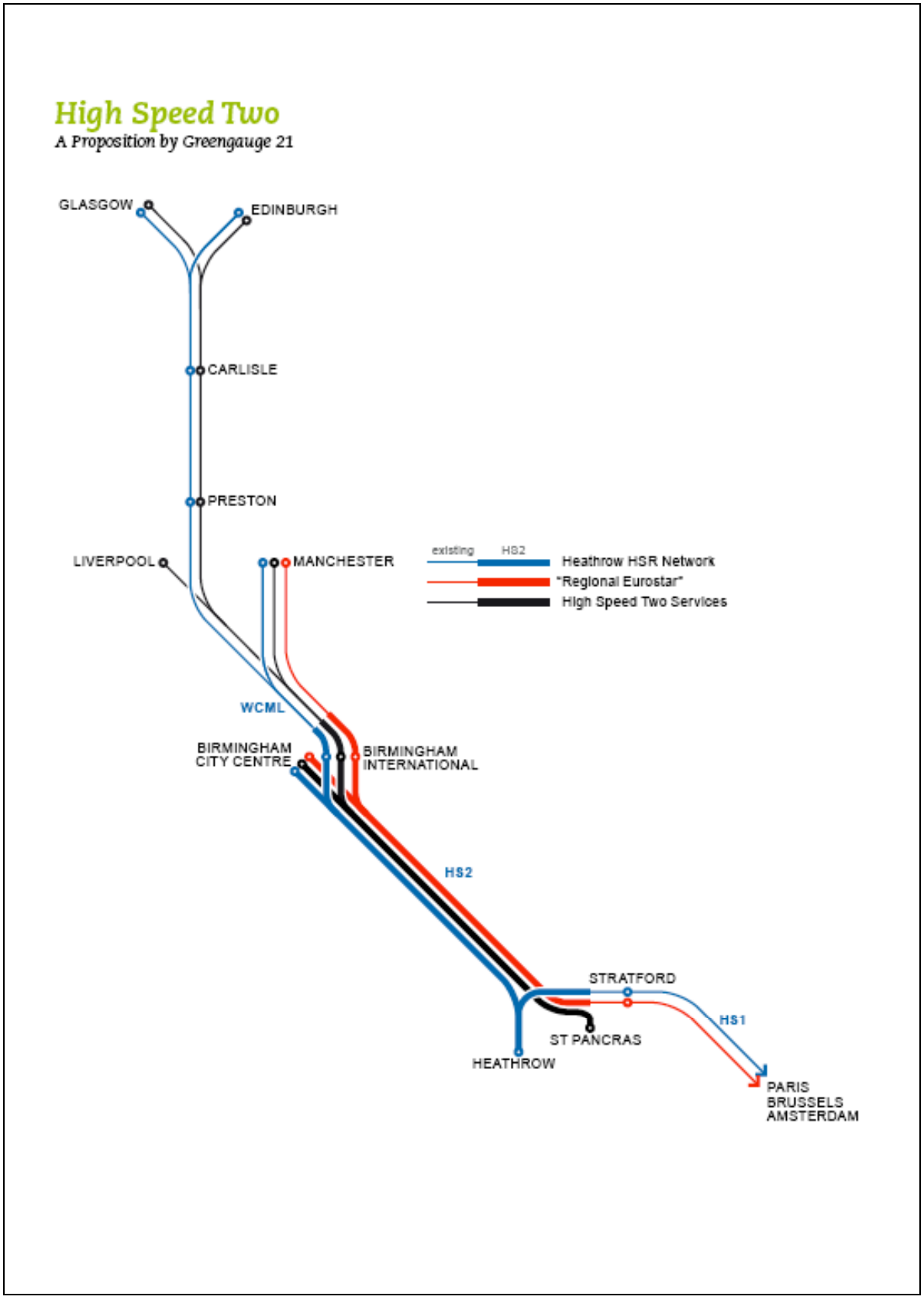
- Two weeks later, Tom Harris appeared to have changed his mind when *The Daily Telegraph* reported he had said his personal belief was that there will be new lines capable of being used by trains traveling at 186 mph.

"I think there is the potential for a real shift in how people travel," Mr Harris said. "Do I think there will be high speed travel in the long term? The answer is yes."



Richard Eccles, Network Rail's Head of Route Planning, provided information from the International Union of Railways (UIC), showing passenger kilometres carried per unit of energy.

High Speed (300km/h) train	170 pass/km	Bus	54.1 pass/km
Rapid (200km/h) train	106	Private car	39
Commuter train	90	Plane	20
Regional train	52.5		


High Speed Two
A Proposition by Greengauge 21
GLASGOW
EDINBURGH
CARLISLE
PRESTON
LIVERPOOL
MANCHESTER
existing
HS2
Heathrow HSR Network
"Regional Eurostar"
High Speed Two Services
WCML
BIRMINGHAM CITY CENTRE
BIRMINGHAM INTERNATIONAL
HS2
STRATFORD
HS1
ST PANCRAS
HEATHROW
PARIS
BRUSSELS
AMSTERDAM

* Eurostar welcomes plan for High Speed 2

EUROSTAR Chief Executive Richard Brown has welcomed Greengauge 21's proposals for the first stage of a new route.

He said: "Greengauge 21's report is an innovative proposal which recognises how to optimise and build on the benefits that High Speed 1 brings to the nation. It aims to ease the growing congestion on the UK's roads and existing rail networks and reduce demand for environmentally damaging short-haul domestic and international flights."

Richard Brown added: "Crucially, it would enable people living across the UK to make a simple choice between the environmentally unfriendly option of flying from a regional airport, or taking a much greener high-speed rail service between some key British towns and cities to and from the Continent."

Greengauge proposes a new line from High Speed 1 (the Channel Tunnel Rail Link) in north London—and a new spur into Heathrow airport—that would then follow the M40 and Chiltern line corridor to the M42 in Warwickshire. There the new line would turn to follow the M42 past Birmingham Airport and the National Exhibition Centre (where a new Birmingham International station would be provided) and join the West Coast Main Line's Trent Valley section, where four-tracking will be completed this year, near Tamworth.

A 'branch' off the high-speed line is also proposed to continue through Solihull into the centre of Birmingham.

Although Sir Rod Eddington's Transport Study was seen as dismissive of a new high-speed line, Sir Rod has clarified in front of the House of Commons Transport Select Committee that he believed that there was a role for high-speed rail in this country, provided it uses proven technology rather than systems such as MAGLEV.

Moreover, he told the committee, planning activity should start now.

Outlining its plans for the first stage of a new line, Greengauge 21 says: "Whichever way the project is phased, demand projections carried out to support the Eddington review show that substantial new rail capacity is needed within the next 10-15 years.

Could take 15 years

"Given the long lead times for planning, consultation, design, construction and testing, it could be expected to take 15 years before the first phase is operational.

"Work must clearly start now, as highlighted by Sir Rod Eddington in his evidence to the Transport Select Committee."

Greengauge says: "For a number of reasons, it is the North West Corridor that makes best sense for the next extension of high-speed rail in Britain. A high-speed railway between London and Birmingham, with links to the West Coast Main Line further north to link the North West, North Wales and Scotland, provided with direct connections using a spur into Heathrow airport, is what is needed to maximise value for money."

Greengauge argues that environmental impacts can be minimised by following existing railways and motorways. "Costs per route mile are much

lower than on High Speed 1 [the Channel Tunnel Rail Link], and costs total £6.6bn, or £11.0bn with a 66 per cent optimism bias adjustment for High Speed 2," it reckons.

"High Speed 2 would comprise a new fully segregated 300km/h (186 mph) alignment linking the existing international High Speed 1 stations of St Pancras and Stratford International (in East London) with Birmingham and the four-tracked Trent Valley section of the West Coast Main Line for services to the North West and Scotland—plus a connection into Heathrow Airport for direct high-speed services both from within Britain and from the near-continent."

The 'candidate' route (using the M40 and Chiltern rail corridor) that has been put forward would avoid both disruption and costly tunneling, Greengauge argues, although it says new stations would be required at Birmingham city centre, Birmingham International and at Heathrow.

A key feature of High Speed 2, as proposed, is that it not only supports the operation of longer distance high-speed services, but could also be used by regional express services, broadening the spread of its benefits.

"HS2 can form part of an environmentally sustainable transport sector by displacing wasteful and carbon-damaging short-haul air trips, and by providing an alternative to the road network should national road pricing become a reality," says Greengauge.

---

* Why MAGLEV is ruled out

THE 2008 railway White Paper was clear on why MAGLEV was a non-runner — cost.

"Travelling at 500–550 km/h (310-340 mph), a maglev would be sufficiently fast to provide a London–Glasgow service that could compete with air on journey time, whilst providing intermediate stops at Birmingham, Manchester, Leeds, Newcastle and Edinburgh.

Its promoters, UK Ultraspeed, have estimated a cost of £29 billion (excluding land-take) for such a network.

"However, the only operational maglev system in the world (the Shanghai airport link)

Shanghai Maglev train

had costs three times higher than their equivalent high-speed rail lines. This suggests that the figure could be very significantly greater in the UK (of the order of £60 billion)," according to the White Paper.

• MAGLEV has been developed principally by a consortium of German companies led by Siemens—but even in their own country plans for MAGLEV operations have been dropped.

A proposed high-speed link between Munich's city centre and airport was scrapped earlier this year because of its high cost.

West Midlands commerce and industry casts doubts

THE absence of a wider business audience at the Railway Forum conference in Birmingham—*"High Speed 1 — on time, on budget — Where next?"*—was criticised by Chris Clifford, the Confederation of British Industry's West Midlands Regional Director.

Mr Clifford said trying to get support in the West Midlands for major projects was "like pulling teeth" compared to his earlier experience with the CBI in the North-west of England.

As if to underline his concerns, the Birmingham Chamber of Commerce and

Industry took the unusual step of issuing a press release questioning the HS2 project.

The Chamber's chief executive Jerry Blackett said: "As exciting as any novel propositions are, the city must be rigorous in assessing whether a high speed rail option really represents the best option for Birmingham and the West Midlands."

However, Stephen Hughes, chief executive of Birmingham City Council, said: "HS2 is now definitely in the city's long-term plans. It will have a transformational impact on Birmingham and the West Midlands."

End of the line for Birmingham's 'Grand' idea

Curzon Street station (left) and Millennium Point (centre and right), with the site proposed for Grand Central station in the foreground, viewed from a train leaving New Street station

IRONICALLY, the Railway Forum's conference was held at Birmingham's Millennium Point, where delegates could overlook the Grade II-listed Curzon Street station.

Reputed to be the oldest railway terminal in the world, this was the original terminus of the London & Birmingham Railway when it opened in 1838 — the first inter-city railway line to be built into London.

Recently, a major campaign was mounted for a new 'Grand Central' station to be built at Curzon Street on 11 acres of a former British Rail parcels depot, more recently used by Royal Mail Parcel Force.

Proponents of the station project — conceived by Murray Rayner, the developer behind Birmingham's highly-successful Bullring Shopping Centre — suggested 17 platforms, each long enough to accommodate a Eurostar train, in a station that would replace Birmingham New Street's 12 platforms.

Grand Central station — estimated to cost around £650 million — would be adjacent, and linked, to Moor Street station on the Chiltern line to provide Birmingham with an equivalent of the new central station built in Berlin, Germany's capital.

However, Birmingham City Council and the city's business community fought a campaign for a £650 million refurbishment of New Street Station — which the government approved earlier this year and is expected to be completed in 2013 — saying it will address Birmingham's rail needs for the foreseeable future.

Despite arguments that the cramped nature of the New Street site makes a new station elsewhere around Birmingham city centre inevitable within the next 20 years, the city planners have approved a £350 million scheme for flats, offices, shops and a VTP (vertical theme park) on the former Parcel Force site on the Curzon Street site.

Figure 4 Illustrative Wider Service Network Opportunities for High Speed Two

* So what are the benefits of another high-speed route?

PLANNING and design of High Speed 2 in the North West Corridor needs to start now, say the project's sponsors, to achieve a range of benefits. These include:

• It offers the means to achieve a step-change in commuting capacity into London from the prime growth areas of the Home Counties by providing the capacity to operate new longer distance commuter services into central London ([as planned for Kent with the 225km/h (140mph) Javelin fleet] and by the "huge release" of line capacity on the existing main lines it would parallel, as the current inter-city services are superseded

• It offers an accessibility boost to the major city regions it serves, "providing a dynamic and sustainable stimulus to commercial development outside the wider South East. This benefits the major city regions of the Midlands, the North and Scotland, adding to the attractiveness of development in what are now seen as peripheral locations. This in turn would have the effect of easing demand pressures in the South East."

• There is a further capacity advantage. High-speed lines would all be built to a larger (European) loading gauge, allowing the operation of full-size bi-level trains (and the Alstom [TGV] Duplex train in daily high-speed operation in France exploits this facility). This offers much needed flexibility to accommodate growth, achieving a 40 per cent uplift when train fleets are replaced, with no associated infrastructure costs.

Lessons learned since the opening of High Speed 1

AVERAGE delay to Eurostar services caused by infrastructure problems and adverse weather since High Speed 1 opened last November has been just four seconds per train. "That is Japanese standard performance," Richard Brown, Eurostar's chief executive, said.

* * *

AIRLINES operating the London-Paris/Brussels routes achieved only 61 per cent punctuality (measured within 15 minutes of scheduled time) in the first quarter of 2008.

* * *

THE number of Eurostar passengers carried in the first quarter of 2008 was 21 per cent higher than the same period last year, and revenue increased by 25 per cent. There was also a 68 per cent increase in journeys originating in the West Midlands, with passengers transferring between Euston and St Pancras, even though Eurostar had not then launched any marketing activity in the midlands. Through fares from Birmingham to Paris or Brussels start from £77 return.

* * *

THE French now regard London as their seventh city—with over 300,000 French people living or working in London, made possible by easy access using high-speed Eurostar services.

* * *

CONSTRUCTION of the £5.8 billion High Speed 1 has resulted in £10 billion of investment in regeneration projects—£4 billion at King's Cross Central (the area north of St Pancras and King's Cross stations, between the Midland and East Coast main lines), £4 billion at Stratford (including the 2012 Olympics), and £2 billion at Ebbsfleet, in north Kent.

* * *

THE publicity campaign to tell people that Eurostar services was relocating from

Waterloo to St Pancras last November was so successful that only five Eurostar passengers turned up at Waterloo in the first week after the move.

* * *

THE European high-speed rail network will grow by over 500km of track to 15,000km by 2020. Without any further developments, Britain will account for only 220km, or less than 1.5 per cent of the European total.

* * *

ALSTOM's second-generation high-speed train—the AGV (Automotrice à Grande Vitesse)—unveiled earlier this year, which is capable of carrying up to 900 people in double-deck configuration, is 25 per cent more energy efficient than the first-generation TGVs and Eurostars.

* * *

BUILDING High Speed 1 "was a model of good community and neighbour relations," said Eurostar chief executive Richard Brown. There were no "Swampy" protestors during the construction period, well over one million trees were planted along the route, and since the line opened last November no complaints have been received about noise of trains, he said.

---

* What is the 'candidate' route for HS2?

GREENGAUGE 21 claims the route proposed for High Speed 2 would minimise adverse environmental impacts by maximising the use of existing transport corridors.

It follows a combination of the Chiltern and M40 alignments "to seek an overall optimum for a route that also serves Heathrow efficiently." Environmental standards would match those developed for High Speed 1.

The only new high-speed stations to be provided would be in the centre of Birmingham (where Moor Street station could be adapted and extended), at Birmingham International/National Exhibition Centre and at Heathrow.

The route would connect into High Speed 1 immediately north of St Pancras, so that services could operate over High Speed 2 from either St Pancras International or High Speed 1 (Stratford, Ebbsfleet Parkway, Ashford and continental Europe).

Connections could also be provided into Euston as an alternative central London destination for domestic high-speed trains.

HS2 would proceed westwards and into a new tunnel near the former North Pole Eurostar depot (vacated since HS1 was opened in November last year) into which a new connection would be provided.

The line would then follow the largely unused track-bed of the former Great Western route alongside the Central Line of London Underground. A delta junction in the Northolt area would be provided for a tunneled access route to Heathrow.

The main route northwards would follow the Chiltern Line and M40, with a tunneled section under the railway alignment through High Wycombe. It would incorporate the existing Chiltern Line north of Princes Risborough to south of Banbury where it would follow the M40 motorway north westwards. Then, beyond Warwick where the motorway and existing rail lines come alongside one another, the new line would switch to follow a north-easterly alignment adjacent to the M42 motorway.

Passing east of Birmingham through a new high-speed station at Birmingham International Airport and the National Exhibition Centre, the route continues north-eastwards to culminate in a connection with the newly-created four track section of the West Coast Main Line, near Tamworth.

A branch from the new line could follow the existing Chiltern route into central Birmingham—making use of a redundant section of a four-track right-of-way originally built to the Brunel's Great Western Railway broad gauge.

Connections would be provided to the existing railway near Princes Risborough (and possibly Bicester) and Banbury — to facilitate further new services.

The proposal would also provide for a set of regional express services, extending

Southeastern's 'Javelin' train service (due to start in 2009 from St Pancras on High Speed 1):

- North/East Kent – Stratford – Heathrow
- North/East Kent – Stratford – Oxford and Milton Keynes

Furthermore, there would be scope, with appropriate electrification of existing lines, to extend several other services over the new high-speed line, such as:

- Bournemouth/Southampton/Gatwick/ Oxford – Birmingham International – North West
- Coventry/Leamington Spa/Banbury/ – St Pancras (or Euston)
- Cardiff/Bristol – Oxford – Heathrow
- Milton Keynes/Bedford - Heathrow.

High Speed 2 would also create the means to free up capacity on existing lines. Greengauge argues it would be possible to intensify local and regional services on the southern section of the West Coast Main Line (Rugby – London); the Chiltern Line into Marylebone; the Coventry – Birmingham corridor; and Banbury–Leamington Spa–Coventry.

It would also free up capacity for additional freight services on the busiest route in the country (the West Coast Main Line) as well as on the Southampton–West Midlands corridor.

CrossCountry Voyager train alongside the M40 Motorway north of Warwick

This special report has been produced by

RAILNEWS

The British railway industry's national newspaper

www.railnews.co.uk

Email: newsdesk@railnews.co.uk

Newsdesk Tel: 020 7278 6100 **Fax:** 020 7278 6145

Railnews Ltd, King's Cross Station, London, N1 9AP

* Boosting regeneration

HIGH SPEED 2 offers a very wide set of benefits across the country, according to Grengauge 21.

For the West Midlands, the North West and Scotland, it would provide new capacity for very fast and reliable journeys to London, which would bring direct improvements in productivity and a boost to regeneration and development in the city regions.

For London, High Speed 2 would provide an important cross-London link, with fast, non-stop travel between Heathrow and central London.

For travelers from Birmingham and Manchester, direct international services to Paris, Brussels and Amsterdam would be available.

For Stratford, in east London, regular international services and direct connections to Heathrow would boost current regeneration efforts.

For the rail industry, there would be benefits from higher safety standards and a step-change in the quality of service that can be offered.

For the wider South East, High Speed 2 would provide a range of new journey opportunities: a high-quality cross-London express network, with the Javelin fleet operating express commuter services over High Speed 1 from Kent and cross-country connections from Southampton, Gatwick, Reading and Oxford to the Midlands and the North.

For users of the existing railway network, particularly the West Coast Main Line and the Chiltern line, High Speed 2 would release capacity for more intense local and regional services.

For air travelers, it would provide an alternative to environmentally-damaging short-haul domestic and European flights, and provides direct surface access to Heathrow from the Midlands, the wider South East and from the west for long-haul flights.

For the UK, there would be system-wide benefits from a modal switch towards the railway, relieving pressures for development on motorways and airports and resulting in lower overall carbon emissions from the transport sector.

Journeys in the North West Corridor from London to the major centres in the West Midlands, the North West and Scotland, would be 30 minutes quicker than on the upgraded West Coast route from 2009, and very much more reliable, says Greengauge.

Journey times to and from Heathrow would offer substantial journey time savings of an hour or more, from places such as Birmingham and Manchester.

* How much?

GREENGAUGE 21 says the capital costs of the conceptual design for High Speed 2, at 2007 values, are:

- London – Birmingham £4.262bn.
- Connection to the West Coast Main Line (Trent Valley section) via Birmingham International (Airport/NEC) £1.204bn.
- Heathrow branch (both directions) and new station at Terminal 5 £1.176bn.

The total cost of High Speed 2 is therefore estimated at £6.642bn in 2007 prices. This includes all engineering costs, including new stations at Heathrow and Birmingham International, and an upgrade to Moor Street terminus in Birmingham; consequential costs on the existing railway, and new connections to it; depot connection (North Pole); land acquisition and compensation; and all overheads, including design and project management.

It does not include rolling stock, nor 'optimism bias adjustment.' With a 66 per cent optimism bias allowance (which is normally required by The Treasury) project costs would be £11.0bn for the full High Speed 2 scheme or £7.1bn for the 110 mile London – Birmingham route.