

HS2

Quentin Macdonald proposes an alternative high speed network

HighSpeedUK (HSUK) is proposed as an alternative to HS2. It is a fully developed design mapped in detail at 1:25,000. It consists of 883km of new build high speed railway having a maximum speed of 360km/h and interlinking all primary cities. The lower speed than HS2 gives a minimum radius of curvature of 5,700m as opposed to 7,100m for HS2. This means that HSUK can follow the M1 corridor and completely avoid the Chilterns AONB. On the existing network

240km will be upgraded and 55 interconnections made to HSUK.

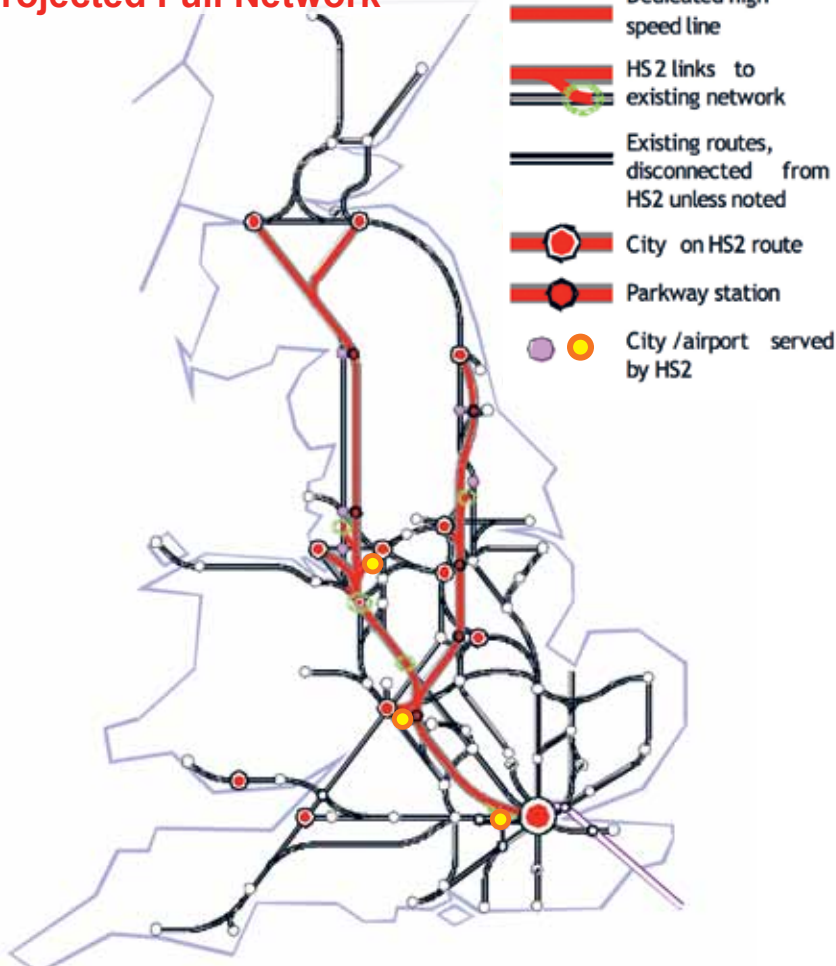
HSUK is estimated to be £14bn cheaper to build than HS2 because the route is 200km shorter and there are 104km less tunnel. The topography of the east side of the country also makes the line easier and hence cheaper to build. Furthermore the design allows for a very simple and cheap connection to be made to HS1.

A crucial difference between HSUK and HS2 is that HSUK has a high speed trans-Pennine link which

delivers three major benefits for the North:

- it will connect Liverpool, Manchester, Leeds and Sheffield directly together, giving Yorkshire and Lancashire a new rail spine considerably increasing rail capacity;
- the same tracks carry the Yorkshire and Lancashire services to London thereby reducing the amount of new construction needed;
- the old Great Central corridor through Longdendale will become the trans-Pennine spine with the old Woodhead tunnels enlarged to Channel Tunnel dimensions. This will allow the creation of an M1 to M60 lorry shuttle with an accompanying lorry ban on the A628 Woodhead Pass, the A57 Snake Pass and the A623 Peak Forest road.

HighSpeed2 Projected Full Network



HSUK is a fully developed plan for a national high speed rail network. We believe that it will revolutionise UK rail travel by a factor of 10 compared to HS2. To test this claim HSUK engineers created a timetable for the network and then considered the effect on journey times between the following 33 locations:

London, London Heathrow, Aberdeen, Birmingham, Bradford, Chester, Coventry, Darlington, Derby, Doncaster, Edinburgh, Glasgow, Huddersfield, Hull, Leeds, Leicester, Liverpool, Luton, Manchester, Milton Keynes, Newcastle, Northampton, Nottingham, Oxford, Perth, Peterborough, Preston, Sheffield, Stoke, Walsall, Warrington, Wolverhampton & York

There are 528 different journeys that can be made between these 33 locations. A journey is defined as

take2



	Journey Times			Total journeys
	Reduced	Unchanged	Increased	
HS2	44	349	135	528
HSUK	498	30	0	528
HSUK betterment factor	11.3	11.6	∞	

going from one place on the list above to another place on the list above. It does not matter what route it takes and return journeys don't count. York to Derby and/or Derby to York is just 1 journey irrespective of whether the train actually goes via Leeds or via Doncaster or via both or via neither. All 4 variations are possible though the last two are only used as diversionary routes at the present time.

We first looked at the HSUK timetable and for each of the of 528 journeys, noted the duration of the journey and the number of changes on today's existing network, compared with the duration of the journey and the number of changes in HSUK world.

For HS2, there is no equivalent timetable to our HSUK timetable. So we had to assess each of the 528 journeys to determine the effect of HS2 on them. To inform this part of the study we have also taken data from the KPMG report pages 91 & 92. We have made every effort to genuinely compare like with like.

The HS2 results are given in good faith having been generated using the same methodology as HSUK. The results even surprised us and we feel fully justified in saying; HSUK has 10 times better connectivity than HS2! Remember that the Government has now said that it is not top speed that matters but connectivity.

HSUK is also forecasting a

significant modal shift from cars to trains with an estimated saving of CO2 emissions of 600 million tonnes over 40 years. That would reduce total UK CO2 emissions by 3% p.a. Contrary to the requirements of the 2008 Climate Change Act, HS2 can

only claim that it is carbon neutral.

As Colin Elliff, HSUK's Civil Engineering Principal has said: "Building HS2 would be like building the M1 without any interchanges. You just wouldn't do it and spend an extra £14bn of taxpayers' money into the bargain."

Quentin Macdonald is the systems engineering principal for HighSpeedUK, and Vice-President of the Lib Dems in York
www.highspeeduk.co.uk

HighSpeedUK Designed Full Network

