STOP HS2 No business case. No environmental case. No money to pay for it.

This submission to the House of Lords Economic Affairs Committee inquiry into HS2 is on behalf of Stop HS2, the national grassroots campaign group opposing HS2.

September 14th 2014

Overview of HS2

High Speed 2 (HS2) is the Government's proposed new ultra-high speed rail line. The Government says it will cost £42.6 billion to build, plus £7.5bn for the trains, in 2011 prices. Phase 1 would not run until 2026 at the earliest, with stations in just Birmingham and London. Phase 2 would have stations in Manchester, (near) Nottingham, Sheffield and Leeds but is currently due for completion in 2033.

An April 2014 YouGov poll found 48% of voters are opposed to HS2, with only 30% in favour.

The House of Commons Transport Select Committee inquiry into HS2 in 2011 concluded[1]:

> *"123. Many issues about the Government's proposal for HS2 and about high-speed rail in general have been raised in the course of our inquiry. We have pointed to a number of areas that we believe need to be addressed by the Government in the course of progressing HS2. These include the provision of greater clarity on the policy context, the assessment of alternatives, the financial and economic case, the environmental impacts, connections to Heathrow and the justification for the particular route being proposed."*

The case for HS2 has got significantly worse since 2011, alternatives have been repeatedly dismissed with the Department for Transport admitting that a high speed railway is worse for the environment than a conventional speed railway. The policy context now shows that the HS2 announcement just before the last election was rushed through by the previous Labour Cabinet without proper scrutiny, and connections to Heathrow and to HS1 have been dropped.

1.0 Is there an economic case for HS2?

> *"So far the Department has made decisions based on fragile numbers, out-of-date data and assumptions which do not reflect real life."*
>
> *-"High Speed 2: a review of early programme preparation" Public Accounts Committee, September 2013*

Costing £50bn, the economic case for HS2 must stand up to scrutiny - but it does not. Patrick McLoughlin has dismissed independent Parliamentary and non-governmental bodies as "bean counters" when they have raised concerns about the huge costs and risks of HS2. Sadly, this is

1 http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/118510.htm

symptomatic of a ‘fingers in the ears’ attitude which dismisses out of hand anything which can be construed as negative regarding HS2.

The DfT’s economic case for HS2 relies so heavily on the economic value of journey time savings that every decision about the railway has been made to maximise speed, at the expense of connectivity and the environment. In the latest economic case, 79% of the supposed benefits of HS2 are made up of the cash benefit to the economy of journey time savings. This approach has meant the wholescale dismissal of alternatives which provide greater viability and value for money.

The economic case for HS2 has always completely relied on the assumption that all time spent on trains is wasted, and therefore by business travellers going faster, there is an economic benefit to the economy of HS2. With the advent of technology like tablet computers and mobile phones, even the DfT now publicly admit the assumption is outdated, but the October 2013 economic case relied even more heavily on the flawed concept that absolutely no-one uses a laptop on a train when calculating the Benefit Cost Ratio.

Additionally, the concept that there is a benefit to the economy from business passengers going faster relies completely on the idea that the journey taken on HS2 is the only journey being taken, that the station is the end destination of all travellers. Because the HS2 proposal is to only connect to two existing stations: Euston and Manchester Piccadilly, travellers making ongoing journeys at other stations will lose the time saved by travelling on HS2 to transfer stations and complete their journey, a fact which has been completely ignored when calculating the business case.

The benefits attributed to time savings have risen in the latest economic case to 79% of the total benefits. The number of expected business travellers on the train has doubled in the HS2 calculations, to approximately 60-70%, depending on the precise journey being made. This in spite of Transport ministers now agreeing publicly that time on trains can be productive.

1.1 Signing the blank cheque

> *“It is not possible to give a definitive figure for expenditure that will result as a consequence of this Bill.”*
>
> *-House of Commons Explanatory Notes, High Speed Rail (Preparation) Bill, May 2013*

The expected cost of HS2 from London to Manchester and Leeds was originally £33bn, in 2009 prices, but, at the time of the 2013 High Speed Rail (Preparation) Bill debate, the cost leapt to £50bn, in 2011 prices. This still excludes such things as localised infrastructure to connect with HS2, foot bridges and farm bridges to cross it.

In addition, this does not include the Heathrow Link which was suspended pending the Davies Review, which has produced the interim conclusion that Heathrow should at least stay in its current form, or any provision for changes to the scheme. Changes such as these are inevitable.

In 2013, incoming HS2 Ltd chair David Higgins was asked to investigate ways of reducing the costs of HS2. When he reported in March 2014, the fact that his original brief was to cut the costs of HS2 was conveniently forgotten. The resulting ‘HS2 Plus’ report failed to find any cost savings, claiming it would be “irresponsible” to reduce the budget. Further, Higgins blamed “the uncertainty over the legislative timetable” for his inability to find any cost savings.

In fact, Higgins' HS2 Plus report also claimed a need to be “more ambitious about Euston” and

rejected the HS2-HS1 link. It seems politically unlikely that any new proposal for either Euston or a link to HS1 will be put forward without a substantial increase in the overall budget. Higgins also saw fit to pre-empt the results of the consultation of Phase 2 of the route, saying he wanted to add a 'hub station' the Crewe, but again had no costings for this. The results of the Phase 2 route consultation, which closed on 31st January, have still not been published.

Despite political rhetoric that there will be 'no blank cheque' for HS2, the High Speed Rail (Preparation) Bill allows unlimited spending on preparatory works. Many of the items specified were included in the 2010 budget, and although the bill asks for annual expenditure reports, the first one will not be put before Parliament until after the next General Election.

This Bill is not a necessary part of the process of building HS2, but was introduced to Parliament because the original budget was seriously underestimated and costs to date are already significantly over budget. Of the 16 'professional services' contracts awarded by HS2 Ltd in 2013, every single one was over-budget by February 2014, with the average over-spend being 86%. The original budget for these six contracts was £101m, but in February before they all had been completed, the total was running at £188m. These overspends included five contracts for environmental services required for the Environmental Statement accompanying the Hybrid Bill which were running at 150% over budget, despite the fact HS2 Ltd admitting that 40% of the route had not been surveyed.

1.2 Speed "almost irrelevant" but dictates everything

Transport Secretary Patrick McLoughlin said that for a new north-south railway, the speed was "almost irrelevant" but that as HS2 will only cost around 9% more than a brand-new conventional speed railway, we might as well spend the extra taxpayer's money to make it ultra-high speed. However the unjustified design speed of 250mph (400kph) reduces both connectivity and capacity, and removes the possibility to run heavy freight on the new line. It also means the line has to be straighter than a conventional railway, increasing the impact on communities, woodlands and habitats.

The economic case for HS2 is reliant on the assumption that time on trains is wasted. Proponents of HS2 say every option that would reduce its speed "won't have the same benefits". In essence the DfT are saying we have to build a high speed railway, which costs £4bn extra, because a conventional speed railway isn't high speed, even though they also say the speed is irrelevant.

However a conventional speed railway would mean lower cost to build and run, greater connectivity, more freight paths, greater versatility, lower energy requirements and therefore a lower carbon footprint, and would be less damaging to communities and the local environment. If the argument that capacity can be increased on the existing network by addressing pinch-points, the costs would drop even more.

2. Should the Strategic Case for HS2 published in October 2013 by the Department for Transport and analysis from HS2 Ltd have taken account of any other factors in making an economic case for the project? Is the expected range of the benefit cost ratio persuasive?

2.1 Shifting Arguments

Since the inception of HS2, there have been a series of justifications used as a reason for building it. Initially, the justification was shorter journey times, but this assumed all time on trains was wasted. Then it was about replacing airplanes, but HS2 Ltd say HS2 will neither achieve modal shift, nor reduce carbon emissions. It was heralded as an environmentally friendly solution, but it is massively damaging to local environments.

The HS2 business case has been downgraded time and again. It's been condemned by the National Audit Office, Taxpayers Alliance, Public Accounts Committee, New Economics Foundation, Treasury Select Committee and Institute of Economic Affairs amongst others. It has now been claimed HS2 will rebalance the economy and heal the north-south divide, but international evidence shows it is almost certain HS2 will suck more economic activity towards London.

What's more it now appears that HS2 was never properly assessed by the last Labour Cabinet: Peter Mandelson wrote in the Financial Times in July last year about the situation at the time[2]:

> *"In 2010, when the then Labour government decided to back HS2, we did so based on the best estimates of what it would involve. But these were almost entirely speculative. The decision was also partly politically driven. In addition to the projected cost, we gave insufficient attention to the massive disruption to many people's lives construction would bring. ….. We were focusing on the coming electoral battle, not on the detailed facts and figures of an investment that did not present us with any immediate spending choices."*

2.2 Capacity

The current rationale for HS2 is that a new railway is needed for capacity reasons. This is being used because everyone who uses trains has been on a busy train, but HS2 would deliver capacity where it is needed least, whilst the majority of passengers will still face crush-hour conditions. The growth in rail travel is mainly commuter and regional travel but the economic justification for HS2 is for long distance business travel to meetings, whereas in reality this is falling.

This is backed up by the latest figures from the Department of Transport (published September 2014, table RAI0214). These DfT figures for passengers standing show that there are significant numbers of passengers in excess of capacity on commuter services into all major cities in the morning peak hours including on London Midland and the Trans-Pennine Express into London and Manchester respectively: on the long distance services run by Virgin and East Coast there are zero passengers in excess of capacity. The figures are similar for evening trains departing from major cities.

In responses to specific questions, the DfT have said that WCML long distance peak hour trains are just 56% full. What is worse are the suggestions that HS2 may displace commuter trains. The

2 *http://www.ft.com/cms/s/0/5db4c212-e301-11e2-bd87-00144feabdc0.html#ixzz2l5QY4uZV*

One North report suggested:

> *"In some locations, existing capacity constraints might be overcome by developing new arrangements to reduce the number of local trains terminating in central stations – a potentially expensive use of crucial platform capacity that could be freed up for HS2 trains."*

Rather than making the journey to work better for commuters, HS2 could make overcrowding worse for ordinary people.

While it has been claimed that HS2 will 'free up capacity', it is clear that to many destinations this means 'losing the trains you already have', as it can mean nothing else. Over 30 destinations will receive fewer, slower or no services to London after HS2 under current plans, due to the cost savings from the existing network which the HS2 business case requires. It also has to be remembered that these London services which would be reduced are also used as the fast regional services, for example the Virgin service from Birmingham to Coventry.

HS2 documentation claims that passenger growth will carry on rising, for decades. However, the increased growth in passenger numbers has happened over 15 years, after a much longer period of static growth. Across the world, high-speed rail programmes have failed to achieve the grossly inflated passenger numbers used to justify their construction.

HS2 is presented as the only possible solution to an urgent problem, even though improvements to the existing railway can supply the new capacity that the railway industry say we need. These could be operational long before HS2 opens, and all represent better value for money.

2.3 Modal shift

With every economic case, the modal shift has dropped. With the 2013 revision, only 5% of passengers are expected to have shifted from air or car.

	Classic Rail	New Trips	Air	Car
2010 economic case	57%	27%	8%	8%
2011 economic case	65%	22%	6%	7%
2012 economic case	65%	24%	3%	8%
2013 economic case	69%	26%	1%	4%

It is now projected that over a quarter of projected HS2 passengers will only chose to travel because HS2 has been built, whilst over two-thirds are expected to transfer from existing services, which will almost certainly be cheaper than HS2, but may well be cut to force passengers on to HS2.

2.4 Dismissing digital technologies

Stop HS2 have repeatedly criticised HS2, because it ignores the growth in digital alternatives. This is already happening. For example, a report produced for the Department for Culture, Media and

Sport, published in November 2013 says:

> *"Large corporates have made significant inroads over the last few years into reducing their travel costs (and emissions) by reducing the need for face-to-face meetings through the use of collaboration software and video-conferencing. With affordable faster broadband with low latency now widely available, we anticipate that the next few years will see this trend increasingly applying to smaller businesses."*

- p41 UK Broadband Impact Study [3]

To begin with the Department for Transport and HS2 Ltd simply ignored that these technological changes were happening. More recently they have deliberately twisted the argument, linking the growth of technologies to growth in rail passenger numbers, but ignoring detailed studies by Government departments. Overall long-distance travel has been falling, and car usage has been static for the last 15 years, following a period of growth from the 1950s. In contrast, rail usage was static for much of that period, before it began to grow again, after privatisation.

In recent years, owning and running a car has becoming increasingly expensive: The costs of fuel and car insurance have rocketed, pricing younger drivers out of cars. Anti-congestion measures have further discouraged car use in towns and city centres. By ignoring changes on other modes of transports, HS2 Ltd is appearing to encourage a simplistic and one-dimensional view of the interactions between transport and communications technology.

3. What are the likely economic benefits of HS2 to the Midlands, to the North of England and to Scotland? Do they also depend on complementary action by governments, local authorities and Local Enterprise Partnerships, for example measures to attract investment and skilled workers?

3.1 HS2 – No link to Europe

Many people in the Midlands and the North of England expect to be able to use HS2 to get to Europe, but this is incorrect. The original 2010 proposal did not have a link to HS1.

The subsequent proposal to use the North London Line – criticised by TFL and other groups as well as Stop HS2 - has been dropped, but there is no current alternative suggested.

What's more telling is that when HS1 was being planned, the expectation was Eurostar trains would be able to use the North London Line to access the West Coast Main Line: but that proved impossible due to engineering constraints.

3.2 Spending £50 bn on HS2 has a huge opportunity cost.

In September 2014 the Conservative Home website polled the public on a suggested policy of "Scrap HS2 and give the savings to northern cities". Voters in the North were overwhelming in favour of this policy with 55% agreeing with it and a mere 19% preferring HS2. Overall, 42% of

3 *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/257006/UK_Broadband_Impact_Study_-_Impact_Report_-_Nov_2013_-_Final.pdf*

voters were in favour of giving the HS2 money to the Northern cities, with 29% opposed and 29% undecided. It is not possible to know how many of these voters wanted HS2 scrapped but a different use for the savings

It's clear even the supposed beneficiaries of HS2 realise there is a huge opportunity cost to it.

Alternatives to HS2 would not cost as much as HS2 and are much better value for money, would benefit far more people, better balanced in meeting needs across the whole country. These alternatives could be implemented much sooner than HS2.

For example, the independent think tank the New Economics Foundation has proposed a £33 bn package of investment including major upgrades to the East Coast and West Coast main lines; regional rail enhancements; investment in urban mass transit and bus networks; and improvements to cycling and walking infrastructure. These investments would still leave funds to extend the roll-out of super-fast broadband.

A package of this kind would not only meet rail capacity needs but would be much more effective than HS2 in catalysing growth and job creation and contributing to a low carbon future.

4. Might some parts of the UK suffer economic disadvantage from HS2?

Stop HS2 has long argued that many places will be at a disadvantage from HS2, as this is both what the international evidence shows and what reports conducted in this country have predicted.

4.1 Disruption from HS2

Building HS2 will cause disruption to the rail network, estimated at 7.5 years of weekend closure according to a Network Rail report published by the Government in October 2013. Constructing HS2 would cause disruption to the rail network at at least; Euston, Camden, Old Oak Common, Calvert, Kenilworth, Berkswell, Birmingham, Streethay, Handsacre, Crewe, Manchester Piccadilly, Long Eaton, Church Fenton, Meadowhall, Golborne, Carstairs, and Preston.

There would also be severe impacts on the road network from building HS2. HS2 will cause years of constant road works along the proposed 351 mile route, including moving the M1 in two places, and causing years of traffic chaos near Birmingham Airport where HS2 Ltd would have to build a station and cross two motorways and two dual carriageways in less than two miles. Such disruption would be replicated throughout the proposed route, but there has been no attempt whatsoever to assess what effect these road works would have on the economy.

4.2 September 2013 KPMG Report shows economic losses in many areas

The Government has been using the September 2013 KPMG report, commissioned by HS2 Ltd to bolster support for HS2.

The report cost HS2 Ltd £242,000 and invented a brand-new untested methodology to claim HS2 would create £15bn of economic benefits per year. The main assumption of the report from KPMG was to assume that the only factor influencing business location was access to labour markets. This methodology has been widely criticised, including by two different former advisors to HS2 Ltd.

Even the KPMG report itself states on p83: *"We recognise that this approach does not have a firm statistical foundation".*

The published KPMG report only tells part of the story in their data. It took a FOI request to get the details of places which KPMG had calculated would suffer economic loss if HS2 goes ahead. This included counties and cities far from the line, such as Cardiff, Cornwall, East Anglia and Aberdeen. However even cities like Liverpool, Lancaster and Glasgow could lose out even though it is proposed that they would get HS2 'classic compatible' trains to their stations.

Henry Overman, former advisor to HS2 Ltd, wrote in the Telegraph[4]:

> *"For one thing, part of the calculation that has "no firm statistical foundation" (it's made up, to put it bluntly) nearly doubles the estimated good effect from £8 billion to £15 billion. Consider also that a lot of this projected effect comes from shifting workers around Britain: that might help specific places (Birmingham, London and Manchester) but it won't mean a positive benefit for the British economy as a whole."*

There are a number of other problems with the report. For example, it used the August 2012 economic case, which included a link to Heathrow: this link had been 'paused' months before KPMG began work, but it was still included it in their analysis. Since then the proposed link to HS1, along the North London Line has been dropped.

Whilst using a flawed methodology to calculate benefits of HS2, one finding was consistent with international evidence, in that high-speed rail networks do not necessarily create economic activity, but they can have a significant role in the relocation of businesses, meaning businesses are encouraged to move out of deprived areas where jobs are needed most to unsustainable new developments around stations, which increase the need to commute greater distances to work.

4.3 Businesses and areas directly affected by HS2

HS2 Ltd have worked on the assumption that in businesses which are displaced by HS2, 20% of jobs will be lost. This will have a knock on supply chain effect, meaning further jobs will also be lost in.

No value has been put on the lost output from farming or tourism during the construction and operation of HS2. In an attempt to offset the effect of increasing costs to the business case for the project, HS2 Ltd previously dropped the value of the countryside that would be destroyed by HS2 from £4bn to £1bn.

As previously mentioned, 30 destinations would get reduced rail services as a result of 'freeing up capacity' from HS2, without any economic value put on what this will mean for these locations.

Additionally, it is clear that losses to property values have been incurred by home, land and business owners along the route. This is another factor which should be included in the business case for HS2.

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4 *http://www.telegraph.co.uk/news/uknews/road-and-rail-transport/10454186/HS2-is-bad-value-and-thats-a-fact.html*

5. Is London likely to be a main economic beneficiary of HS2?

Yes.

5.1 Euston

Euston is the main London terminus for HS2, but more than four years after the origional HS2 public announcement, it is still unclear the extent of the rebuild at Euston, the costs of the rebuild or the timescale needed.

Original plans to rebuild Euston were dropped when it emerged that the budget had been underestimated by £500 million and that the plans would take a decade to build – longer than the rest of Phase 1.

The alternative of an extension to the existing 1960s building would still take around 8 years and was described as "a shed being bolted on to an existing lean-to". This was clearly untenable and were dropped by the Higgins HS2 Plus report. However no alternative design has yet been proposed and it is likely that the budget for HS2 would need to be increased. Frank Dobson, the local MP, told the House of Commons in September 2014 that in discussions with HS2 Ltd, "HS2 let slip at meetings that it is now thinking in terms of £7 billion." This is a massive extra cost from HS2.

What's more, HS2 will funnel existing passengers on the East Coast Main Line into Euston instead of Kings Cross and St Pancras. This will add to the pressure on the station, and HS2 Ltd say that Euston will not be able to cope with these passengers, which will increase the urgency for building Crossrail 2. With many pro-HS2 commentators arguing that the current spend on Crossrail 1 (of which 60% comes from Londoners), can simply be transferred to spending on HS2, there is clearly a black hole in the budget.

5.2 HS2 and the South-East airport

Originally a High Speed Rail Line was suggested by the Conservative Party as an alternative to expansion at Heathrow, but the original design of HS2 did not include a link to Heathrow. This was subsequently added as a spur line, but has now been 'paused'. The on/off Heathrow link is a result of the unclear and incomplete objectives for HS2, leading to uncertainty for potentially affected businesses and homes.

HS2 will not reduce demand for air travel. Not only has the clamour for expanded airport capacity got louder since the election - including from proponents of high speed rail like like Andrew Adonis and David Begg - but HS2 Ltd's own modal shift figures have collapsed away. In the 2010 case, HS2 Ltd said 8% of HS2 passengers would have shifted from air, but by the 2013 economic case, HS2 Ltd's own figures say that 1% of passengers would otherwise have gone by air. Any claims that HS2 might replace air travel are unfounded.

6.0 How might the expected benefits of HS2 to the national economy be realised?

The predicted benefits of HS2 are at best 'voodoo economics', hoping that replicating existing transport links, but without the same levels on connectivity, will somehow lead to an overall increase in economic output. This conclusion is suspect at the very best. Whilst the firms involved in the construction of HS2 and associated developments will see benefits, it has not adequately

been evidenced that there will be any net benefits to the national economy at all. Those drawing up the various business cases for HS2 have strived from day one to maximise the anticipated benefits, whilst in most cases ignoring negative effects to the economy, such as increasing unemployment in areas which businesses might move away from in favour of locating near the HS2 line, and indeed the impacts of businesses closed due to the construction of HS2 and the negative effect on the economy of road works.

The other extremely significant factor in this equation which we believe has been significantly underplayed is the cost of HS2. The official cost of construction has already risen by £10bn, but this is still fraudulently based on 2011 prices. We also believe the current engineering solutions offered by HS2 Ltd are inadequate on issues such as visual mitigation, flood prevention and the transmission of noise and vibration, meaning there will be additional costs for the project beyond simple cost inflation. The fact the HS2 plans are not robust in engineering terms is no better evidenced by the fact that in September 2014, additional provisions were announced because HS2 Ltd had made no effort to understand standard construction practices concerned with traversing the routes of electricity pylons and gas and oil pipelines.

As such we are convinced the construction costs will significantly increase. Additionally, estimates for operation of the railway underplay the costs and overplay the income. HS2 have followed a long-established pattern with high-speed rail projects internationally, to grossly inflate the passenger forecasts, and therefore the income the scheme will reap. They have also underplayed the costs, for example HS2 Ltd forecast that electricity prices would increase 81% in 18 years, but instead of building this in to cost forecasts, they have instead decided that electricity costs will only ever rise in line with inflation until the end of the century.

Most telling with the costs of HS2 is that there has been no attempt made to estimate the financing costs. It is certain that HS2 would be funded by borrowing, but there is no cost associated with this.

Given all this, and the opportunity cost associated with spending on HS2, we believe HS2 will deliver a negative effect to the UK economy.

7.0 How should HS2 be operated? As a franchise in competition with West and East Coast Main Lines?

HS2 will have to be operated with a massive ongoing subsidy. Whilst this will on it's own stifle the idea of genuine competition, it is feared that the Government will legislate to force people on to HS2. It is of significant concern that future franchises on the East Coast Mainline, West Coast Mainline, Midland Mainline and Chiltern Line will have restrictive franchises which cut the number of existing services to destinations which would be served by HS2 to force people to use HS2. This is has been common practice when high-speed rails have been introduced around the world, including in Kent.

8. Should travellers expect to pay higher fares on HS2 than on other lines?

The HS2 Ltd passenger figures assume that fares on HS2 will be the same as conventional fares, but Patrick McLoughlin refused to say this would be the case when repeatedly asked to confirm this in a BBC interview last year. It is not a valid assumption to assume the ticket prices would be equivalent to current fares, as in reality faster services cost more than slower services and Mr

McLoughlin did warn that some passengers will have to pay “a lot of money” to use HS2. With higher energy and maintenance costs than a normal railway, the only way to keep HS2 fares in line with current services would be a massive increase in taxpayer subsidy for HS2.

Speed-based pricing is already evident on London-Birmingham routes, with the hierarchy of speed correlating with the hierarchy of ticket price, in descending order being: Virgin, Chiltern, London Midland. It is clear that excluding premium pricing in the HS2 model has only been adopted to make the passenger numbers work.

Most high speed rail projects forecast far more passengers than use the service when the project is completed, including HS1.

On HS1, not only are the high speed tickets more expensive, but the fares for the conventional speed alternatives have been increasing more than most other fares to try and make HS1 more attractive. HS1 currently carries 9 million passengers per year instead of the 25 million forecast for now: unexpected competition from low cost airlines and ferry operators is blamed for this. The National Audit Office reported that HS1 will cost the taxpayer £10bn more than expected because of this shortfall.

9.0 Does the prospect of HS3 affect the economic case for HS2?

George Osbourne’s “Powerhouse” speech in June 2014 set out a nebulous idea for the next high speed railway after HS2 is built. This was a blank slate chance for cities in the north to develop ideas about a new version of HS2 to go across the Pennines.

However the One North report published in response makes no mention of “High Speed 3″. Although there are numerous mentions of a new east-west railway, it only once refers to “east-west high speed rail link” and the tentative design is a very long way from the design of HS2.

The speed is very different. It suggests 125 mph, the current operating speed of the West Coast Main Line, compared to 250mph for HS2. It is also proposed to carry freight – but from the start, campaigners were told that HS2 would never carry freight. What's more a request in the One North report for “Recasting HS2 in Yorkshire” clearly implies that the Northern cities are unhappy with the current HS2 proposal.

The HS3 proposals have been mooted against a backdrop of the current Trans-Pennine electrification being under threat. In July, Paul Plummer, Network Rail’s strategy director told the Transport Select Committee: *“I can’t give you that absolute, categorical confirmation.”* that the proposed electrification of the Trans-Pennine route from Manchester to York would go ahead, again due to rising costs.

It is notable that support for HS2 amongst Northern Councils had been born out of the fact they had been offered ‘HS2 or nothing’. Now that the option of HS3, or a similar proposal which would do more to regenerate the north for a lower cost is being proposed, support for HS2 is in decline.

10.0 An alternative vision for a modern Britain

The HS2 proposal completely ignores the reality of transport needs in the UK, with the warning coming from the Eddington transport study of 2006, which warned:

"It is critical that the government enforces a strong, strategic approach to option generation, so that it can avoid momentum building up behind particular solutions and the UK can avoid costly mistakes which will not be the most effective way of delivering on its strategic priorities."

"The risk is that transport policy can become the pursuit of icons. Almost invariably such projects – 'grands projets' – develop real momentum, driven by strong lobbying. The momentum can make such projects difficult – and unpopular – to stop, even when the benefit/cost equation does not stack up, or the environmental and landscape impacts are unacceptable."

"The approach taken to the development of some very high-speed rail line options has been the opposite of the approach advocated in this study. That is, the challenge to be tackled has not been fully understood before a solution has been generated. Alternative options do not, therefore, appear to have been fully explored so it is not clear what the highest return solution to a problem would be; nor indeed is the challenge clear."

As such, HS2 has remained a solution looking for a problem, which ignores that the vast majority of rail users travel on short-distance commuters, whilst long-distance inter-city journeys are mainly the preserve of the business elite. More investment in local transport which enables more people to work close to where they live is required to deliver sustainable solutions fit for a digital age.

New options for travel are coming into widespread use. People are choosing to buy electric cars, which will need a whole new infrastructure to support their use. Driverless cars - which will be trialled in Milton Keynes in 2017 - could be coupled together in carriages they could transforming public travel. Britain could be at the forefront of the electric car revolution.

But it's not just 21st century transport which is changing.

The advent of digital technologies and the interconnected world have radically changed the way we work and communicate. Digital technologies mean that physical face-to-face meetings are no longer so necessary, 3-D printers allow us to remotely reproduce objects, and remote sensing means we can find out what is going on somewhere else without going there. A British citizen invented the World Wide Web, so we should ensure that Britain continues to be a world leader in this new digital world.

If we spend £50bn on HS2, future generations will ask why we spent so much money on a 19th century solution in 21st century Britain. They will ask why we built a long-distance railway destroying sensitive wildlife sites at a time when long-distance travel is falling, and they will ask why we integrated it so badly with the existing transport network. They will ask why we spent money on a railway rather than on the infrastructure needed for electric cars at a time when driverless cars were being trialled. They will ask why we ignored the exponential growth in digital technologies, just when it allowed instant communication anywhere across the world.

Rather than emulate the Victorian railway barons with the HS2 proposal, we should be looking ahead and building the digital and other infrastructure needed for 21st century technologies.