CHILTERN COUNTRYSIDE GROUP

www.chilterncountrysidegroup.org

This document is submitted on behalf of the Chiltern Countryside Group

to the House of Commons Transport Committee Inquiry

into the Strategic Case for High Speed Rail

SUBMISSION FROM CHILTERN COUNTRYSIDE GROUP

Written and researched by the Steering Group
May 2011

The Chiltern Countryside Group's supporters live, work and enjoy

leisure pursuits throughout the Chilterns.

The Steering Group comprises transport, noise & aviation consultants, commercial pilots

& professionals in science, technology, media, healthcare & education.

Written evidence from the Chiltern Countryside Group to the House of Commons Transport Select Committee Inquiry May 2011

We thank the Transport Select Committee for the opportunity of submitting this evidence to their Inquiry into the

Strategic Case for High Speed Rail. Their decision to conduct this further Inquiry into HSR is welcomed.

The Chiltern Countryside Group (CCG) was established at the time of the National Air Traffic Service's Terminal Control North Public Consultation 2008 as a natural evolution of local groups with the same aim of preserving the character and peace of the Chilterns and its Area of Outstanding Natural Beauty (AONB). Following this consultation, the whole SE airspace area is now being reviewed.

Our submission is not confined to the locality of the Chilterns. The CCG and its supporters are not against the principle of high speed rail. Whilst the Chilterns and its AONB would be heavily impacted by the current HS2 proposals, we recognise that the concept of a HSR provision for the UK is of great national importance, therefore our evidence is focused on the question: 'Are the present proposals truly in the nation's best interests?'

Our considered view is that the current proposals from the Department of Transport (DfT) are not in the nation's best interests.

We give below our supporting evidence which we hope the Transport Select Committee will accept and fully consider when reaching their decisions.

The CCG would be willing to give oral evidence, if required, on the points raised under Q6.2 Impact.

Summary of Key Points

1. The Chiltern Countryside Group is not against the concept of High Speed Rail but is not persuaded that the HS2 proposals currently out for Public Consultation are in the nation's best interests.
2. The principal arguments for HSR of improved capacity & connectivity, reduction in journey time and reliability are not unique to HSR and can also be true for improvements to existing rail routes and development of local infrastructures.
3. There is scant evidence to prove a causal link between HS2 HSR and regeneration to those areas most in need, evidence is inconclusive.
4. Principal arguments against HS2 HSR are economic – should the UK taxpayer fund a project of uncertain benefits when essential services are being cut? Such a long-term commitment is extremely high risk; the passenger demand forecasts are highly questionable. Costs do not take rising inflation into account.
5. In the present and foreseeable future, the world & domestic situation is politically and economically unstable. Committing the vast sums of taxpayers' money required to finance HS2 HSR will inevitably take away from investment in the 'classic' network.
6. HS2 will not reduce carbon emissions. At best it will be carbon neutral but even this depends on a high load factor.
7. If HS2 went ahead, the preferred route would set a precedent since 2000 (CROW Act) for the approval of infrastructure of this scale through an Area of Outstanding Natural Beauty.
8. Those areas which HSR passes through without any stations will suffer degeneration environmentally and thus, inevitably financially.
9. Investment in transport will not achieve optimal benefits without simultaneous investment in business opportunities. Moving people from place to place does not itself generate economic expansion or regeneration. It may well simply transfer money.
10. Modal shift, upon which the environmental and financial success of HS2 HSR depends, is not reliable & can be easily transformed by other factors eg improved technology, unanticipated national or world issue, unexpected competition. People will still use domestic & Continental aviation where flights are cheaper and offer a total journey time of less than 3-4 hrs. Cost is a key motivator. Where groups of people travel together by car, the cost per head and convenience is unlikely to produce a modal shift to air or train.
11. The Government is investing £530m in the UK's broadband network – more people will need to travel less.
12. Omissions have been found in relevant legislation, policy and objectives in HS2 Ltd's Appraisal of Sustainability (AoS). This has led to concerns that the DfT, HS2 Ltd and its consultants have failed to give sufficient weight to conserving designated land in route design. This may give rise to unplanned cost implications which impact on the business case.
13. When designing a route, it is important to avoid, or minimise the length of route, in AONBs and National Parks. When such a route is demonstrated to be in the national interest, a tunnelled option throughout the length of the designated land should be included for public consultation. Tunnelling produces much less spoil than deep cutting per km, as well as producing a far superior environmental landscape solution. HS2 Ltd's severe underestimation of spoil generated in the Chilterns will add to construction costs.
14. Without full and exhaustive information on noise and its effects no sensible analysis of the environmental costs and benefits can take place. A full Environmental Impact Analysis can be the only basis for such a decision & this is not available. This is a grave error.
15. 1he HS2 HSR programme is seriously flawed in its judgement of demand, its claim on the UK taxpayers' purse during the present planning stage and years of construction and in its environmental impact. This is a long-term project which may never achieve the benefits it seeks to portray but will cost each UK constituency c£51m and every UK taxpaying family c£1,200. During its first stage construction of at least 7 years, it will bring physical, economic, environmental and social degeneration to those communities through which it passes, from which they may never recover.
16. HS2 HSR should be withdrawn and more robust planning using correct modelling undertaken including for those alternatives which could offer greater benefit with more affordable costs and the local connectivity sought by many areas. A regional approach, which is not London centred, could offer better opportunity for a truly national regeneration of greater fairness and access.
17. The CCG find that the DfT in its response has not adequately addressed the recommendations made by the Transport Select Committee following the 2010 Inquiry into Transport and the Economy. (*ref: 1) Third Report of Session 2010-2011 HC473)*
18. The CCG finds the Government and the Treasury have still to establish an overall integrated & sustainable transport policy which is affordable & makes best use of the nation's budget.

Q1: What are the main arguments for or against HSR?

The principal arguments **to support** High Speed Rail are:

- Increased capacity
- Improved connectivity
- Reduction in journey times
- Reliability

However, these outcomes are not unique to the HSR programme but are also true for improvements to existing rail routes and development of local infrastructures.

These additional **benefits** are promoted by Government, but it is highly questionable they will be achieved; Government has given little concrete evidence to support their claims that HS2 HSR will be 'the engine for':

- Regeneration of deprived and impoverished areas
- Bridging the 'North-South economic divide' in the UK

In the 2010 report by Dr. Terry Gourvish, commissioned by HS2 Ltd to research the global experience of high speed railways, Dr. Gourvish states: 'most studies indicate that it would be unwise to pin much faith in new railways as engines of growth'. The EU Commission estimated that HS rail networks 'would only add 0.25% to EU GDP and 0.11% to employment over 25 years *(ref 2) Gourvish, T. (2010) The High Speed Revolution: History and Prospects*). Other leading experts in economics have expressed their doubts.

Some of the arguments **against** the current HSR programme are:

i. Basic cost of planning and building HS2 HSR – commitment to spending a minimum of £33bn (2009 value) of taxpayers' money over several decades is required to fulfil the programme's stated objectives.
ii. British construction costs are higher than others in Europe. HS2 Ltd's commissioned study (*ref. 3*) *Comparison of High Speed Lines' CAPEX Nov 2009/Dft HS2 Economic Case p38)* shows 'civil engineering costs in the UK are up to twice what they are in other comparable European countries'. This not only increases the funding required but places greater risk of non-profitability and bankruptcy.
iii. Insufficient weight has been placed on environmental cost regionally and nationally.
iv. The UK does not need to 'catch up' with Europe, as it has had a high speed rail system for years, with routes already capable of trains running at 125mph (official definition of high speed rail). Virgin Trains Euston-Birmingham fastest train 1h11m. (ref 4) (*Virgin Trains Euston-Birmingham 1h11m/wikipedia WCML)*
v. The UK does not have long distances between major centres of population compared to other nations to justify the cost and environmental impact of the ultimate speed of 250mph for the proposed HS2 route (64mph faster than top speed of HS1) with only 35 minutes time saving on phase 1.
vi. Reliance on the high risk strategy of one contentious and expensive project (HS2) to primarily resolve the UK's economic future. Reduced ticket revenues might not even service the debt from construction.
vii. The DfT appear to have ignored the economic lessons of HS1, the franchise of which was sold at a loss in 2010. HS2 construction (2009 estimate) is £100 million per km. (*ref 5) HS2 Report to Government March 2010 3.5.14)*
viii. Environmentally, the programme is reliant on modal shift & high load factor to break even. *(ref. 6 p53) HS2 Consultation Document p53)* If this is not achieved, then neither is sustainability.
ix. Modal shift is unlikely to be achieved domestically as cost and convenience will dictate choice. Good local and cross-country connections which do not drag the consumer to a large conurbation he is only visiting as a transit point are more likely to be attractive and lessen carbon footprint by reducing time & miles travelled.
x. Increase in capacity is only necessary at peak times, which may be for a few hours daily and in extremity, weekly (eg Friday evenings). HS2 HSR is a very expensive and highly disruptive solution to this.
xi. Almost complete rebuilding of Euston, a major main line and local station with its associated severe disruptions to all users over a minimum of 7 years.
xii. To support running costs, ticket prices are likely to attract the highest paid employed population sector, unless tickets are subsidised, in which case, the travelling taxpayer pays twice.
xiii. Reliability may not be achieved as the proposed HS2 HSR programme uses untested technology.
xiv. Those areas and communities 'by-passed' by HS2 HSR are likely to see their wealth and potential transferred to those places served by HSR. The UK may see a transfer of wealth rather than an actual increase in wealth.
xv. Employment may increase in those areas served by HS2 HSR but this may well reduce the employment and skills pool for those areas which are not. This would result in a location transfer of skilled and professional workers rather than an actual increase in numbers.
xvi. No value cost has been placed upon the impact of construction on those areas through which the currently proposed HS2 HSR route passes, nor on the social/health cost to those communities.
xvii. No environmental or health value or cost has been placed on the increased aural & light pollution to communities and the individual.

Q2: How does HSR fit in with the Government's transport policy objectives?

- **Q2.1** The DfT sets out 5 goals for transport: climate change; productivity and competitiveness; equality of opportunity; health, safety and security; quality of life and natural environment. HS2 HSR fails to satisfy any of these goals. *(ref. 7) Delivering a Sustainable Transport System http://dft.gov.uk/pgr/regional/policy/evidenceresearchstrategy/2)*

Q2.1.1 Inter-urban connectivity is important, but London already has good high speed rail links to other major UK cities. Moving away from a London-centred approach to give better East-West & regional links would have many benefits in removing pressure from the congested SE & London networks, reducing travel time & cost for those who are only using London as an interchange, not a final destination. For example, currently, travellers by rail to the NE from the Northern Home Counties have to go South into London & then out again or drive tens of miles, clogging roads, to access the London-NE rail network.

2.1.2 Local and regional developments such as the Northern Hub *(ref. 8) 16.2.11* www.networkrail.co.uk/north *)* could generate prosperity within those regions, improve wider social inclusion and opportunity through an integrated transport connectivity which is accessible & affordable (in capital and travel costs). Funding for this is estimated at £530m. Can the UK afford this & the HS2 HSR programme? Which offers the best Cost Benefit Ratio? will come on stream first? offers greater benefit to more people where it's most needed? Regional developments may of course impact on HS2 HSR passenger demand and thus profitability.

2.1.3 Secretary of State for Transport, Philip Hammond speaks of the high cost of the UK railways: 'Britain has one of the most expensive railways in the developed world. According to the independent regulator, up to 40% more expensive than our main competitors...public subsidy running at £5.5 bn a year..this has to change'. *(ref. 9) Conservative Party Conference 4.10.10)* Whilst this is ambiguous, we presume the change sought by Mr. Hammond is cost reduction. We are unclear how committing public funds of £33bn to HS2 HSR will enable such change, especially if further annual public subsidy is necessary to keep its ticket costs at affordable prices.

2.1.4 The Sustainability Commission in its outgoing report finds the richest 10 per cent of the population benefit from receiving four times as much public spending on transport as the poorest 10 per cent. Its recommendation to Government on transport is for 'policy-makers to prioritise reducing the demand for transport; encouraging more sustainable modes of transport and improving the efficiency of existing modes of transport over increasing the capacity of the transport system'. *(ref. 10)*http://www.sd-commission.org.uk/pages/fairness-in-a-car-dependent-society.html*)* The CCG totally endorses these recommendations.

- **Q2.2**

2.2.1 It is challenging to see how committing £17bn over the next 15 years and a similar further amount to the HS2 HSR project will not reduce the amount of Treasury money available for investment in the 'classic' rail structure. The CBI *(20.9.10)* recommends: existing transport assets to be maintained; all public sector transport projects to undergo more rigorous value for money assessments. The CBI warns *(ref. 11) News Release 9.5.11)* of 'squeezed household budgets, weak wage growth, high wage inflation' and 'rising commodity prices putting more upward pressure on inflation'. Not only will this slow growth, challenge demand for HS2 HSR, but also heavily impact on eventual capital costs.

2.2.2 The experience of HS1 for Ashford commuters is that 'journey times are only a little, if at all, quicker than..before. Many high-speed trains run almost empty. Conventional services that people actually do want to use have significantly deteriorated' . *(ref. 12) Gilligan D.Telegraph 4.4.11)*

2.2.3 And for Southeastern commuters - In 2010 Southeastern reduced their new high speed Javelin London-Dover service as demand fell away. Commuters said 'passengers for Victoria lost their peak period services' ...'an even more expensive service ..which terminates in a place no one wants to be'. *(ref. 12a) Evening Standard 4.5.10)*

In France, one-third of existing high-speed lines lose money and older, non-high speed and suburban lines are poorly equipped and maintained as investment is put into TGVs. Guillaume Pepy, president of the French state railways, SNCF, says they are 'decaying..facing a financial impasse...and heading for the wall'. *(ref. 13) Independent 9.4.11)*

- **Q2.3**

2.3.1 There will be no modal shift from air to HSR in the first £17bn London-Birmingham leg, as there are no flights between the 2 cities. Sir David Rowlands (former chairman of HS2 Ltd, now chairman of Gatwick Airport) has rejected claims by the SofS that a HSR route from London-Scotland will solve capacity at Britain's congested airports. *(ref. 14) Guardian 25.1.11, Transport Times Aviation Conference).*

2.3.2 Transporting people around the UK to London airports for them then to fly overseas increases their carbon footprint, time and use of resources. This should be discouraged, not encouraged.

2.3.3 Research indicates that HSR is currently not competitive with air for journeys longer than approximately 800 km. *(ref 15)* http://cfit.independent.gov.uk/pubs/2004/hsr/index.htm*)*

2.3.4 BAA have indicated that should short-haul slots at Heathrow become vacant through passenger fall-off, they will fill these with long-haul flights, with consequent greater air, noise pollution & carbon emissions. Therefore, HSR is unlikely to reduce aviation, merely change flight destination. Expansion at other airports will add to carbon impact.

Q3 Business case

- **Q3.1: Forecasting and modelling:**

3.1.1 The Public Accounts Committee describes the DfT's knowledge of how many people use which parts of the rail network and when as 'inadequate, sketchy and so gives a poor basis for decision-making'. *(ref. 16) Public Accounts Committee Conclusion 3 Increasing Passenger Rail Capacity 9.11.10)*

3.1.2 The transport model used to design and appraise the proposed route for HS2 was not able to realistically model the balance of long distance travel between air, car and HS2 and the effects of different HS2 designs on this. Thus it cannot provide the scientific evidence base to support the business case and in particular the benefit-to-cost ratio (BCR). The model could not be used to assess the various options for serving Heathrow (eg stopping at Heathrow, near Heathrow or ignoring Heathrow). The transport model's origin-destination pattern was based on rail ticketing data which would bias in favour of where people currently buy tickets to. For eg people buy tickets to London, even if they are travelling to rail destinations outside the city on the other side. This model would not be capable for example, of modelling the connection to HS1. The transport model does not have a destination choice model to forecast the effect of changes in the transport infrastructure on the origin-destination pattern of travellers. Therefore it would not be capable of investigating alternative HS2 routes properly and would give HS2 routing solutions which copy the current set of rail routes - as in this case to parallel the West Coast Mainline. A properly specified destination choice model would reflect the effect of changes in people's origin-destination pattern on HS2. As HS2 offers a considerable change in transport service provision, these effects are likely to be potentially huge, so a properly specified transport model could find a completely different HS2 solution to that proposed**.**

3.1.3 Even for a public transport scheme much smaller than HS2 (eg £50million), DfT modelling guidance require the transport model to be composed of a full hierarchy of choices: choice of trip frequency, mode choice, time period choice, destination choice and route choice, interconnected in such a way that one choice correctly influences the others by connecting one choice model with the logsum from the model below it. The model they used had route choice and some other ad-hoc models which did not cover the same area and were totally disconnected from each other. The model should have sufficient spatial detail to be capable of modelling the infrastructure in question. This model has about 250 zones (which could be suitable for a £50m scheme but would be too few zones for say a £200m scheme) whereas for infrastructure of the scale of HS2 the model should have several thousand zones.

3.1.4 The HS2 model was based on simple elasticities to determine the additional travel which could be generated by HS2 providing a faster and better service. These elasticities were calibrated on relatively small changes to the train speed and service pattern and are designed to be applied on small rail schemes, new stations etc. Simple elasticities are inapplicable for something of the scale of HS2. The HS2 model is using these elasticities well outside their calibrated range and it is no wonder that the numbers they come up with are so out of kilter with reality. Elasticity models say nothing about where this additional HS2 travel is to come from. This additional HS2 travel is unlikely to come from other modes of transport because travel (especially car travel) is declining and has been for the past 5 or so years (which pre-dates the recession so is real).

3.1.5 The model forecasting of future levels of travel used very high growth assumptions - much higher than would normally be used for rail schemes - which are unlikely to be achieved. Even the 'normal' rail growth assumptions are unlikely to be achieved. 'Normal' rail growth forecasts are based on the trend of rail growth since privatisation - before this, rail travel growth was much lower. Privatisation of the rail system led to a better rail travel 'product' and better marketing so that rail travel grew at a higher growth rate than before privatisation. This new rail travel has now been captured plus travel in general is declining, so rail travel is unlikely to grow at the rate assumed by HS2. The HS2 BCR is on the cusp of acceptability so adopting more realistic growth assumptions could well make it not worth building.

3.1.6 HS2 should build a proper transport model of the country with a full interconnected choice hierarchy to sufficient spatial detail so as to do the job properly. They would then have the right tool to be able to design the right scheme on a sound scientific evidence base with a properly supported BCR. Only then can they select a route and only then can they be in a position to be able to persuade people that it is necessary to build it (if indeed it is).

- **Q3.1 Demand:**

3.1.7 The assumptions for demand are not robust – these are based upon economic growth not the precarious financial climate of the foreseeable future.

3.1.8 Demand will be heavily dependent upon ticket affordability. This affordability will be challenged by the change of formula governing increases in regulated fares from RPI+1% to RPI+3% from January 2012. *(ref.17) Passenger Focus 11.5.11)* A recent Passenger Focus survey quotes fares in Britain already being 1.59% higher than than any other European country *(ref. 18) DTelegraph 31.12.10)* with some SE commutes costing over £5,000 pa. The Campaign for Better Transport comments 'Politicians need to...understand that people simply cannot afford to pay a fifth of their income just to do a day's work'. (ibid) 'Government has allowed Southeastern to increase fares by 7%, 3% above July 2010 RPI. But this masked higher increases approaching 13% on some routes'. *(ref. 19) David Milward, D. Telegraph 31.12.10)*

3.1.9 People facing these challenges will seek alternatives to rail commute – home based work, more local employment or road-based options such as coach or car, or simply become unemployed. The 2010 Labour Force Survey 1 (*ref 20)* http://dft.gov.uk/consultations/open/DfT-2011-10/Home*)* identified several benefits for home-based working, including a better home-work life balance, reduction in business costs & time & money spent travelling. Encouraging more home-based or closer to home working will reduce peak commuter demand & congestion & support local services. The 2010 Spending Review (*ref. 20) 1.39)* provides £530m over the next 5 years to develop the UK's broadband network. Current HS2 HSR proposals fail to consider these changes and their potentially considerable affect upon demand and viability.

3.1.10 Unless HSR is integrated into a complete door-to-door service it will not attract passengers *(ref. 21) Passenger Focus 2010c;* http://www.dft.gov.uk/about/vision*).* DfT figures (2009) *(ref. Ibid 2.33)* show 50% of all trips are leisure, 18% business or commuting with 95% of all trips less than 25 miles and 67% under 5 miles. This indicates the narrow market share of all transport forms which a long distance HSR rail service is seeking to capture.

3.1.11 The UK would be well advised to heed the experiences of other European nations. In Holland, the Dutch high speed operator could face bankruptcy; the service has not attracted sufficient users with some trains having just 15% occupancy; fares have been forced to drop by more than 50%. *(ref. 22) Reuters 1.2.11)*

- **Q3.2.**

3.2.1 The Sustainability Commission (ref. Ibid) states HS2 HSR will encourage long distance commuting which is 'inherently unsustainable...[what is needed is] more distributed development and local jobs rather than encouraging people to travel longer and longer distances'. Further, the Commission says that a small proportion of the £17-33bn HS2 budget could transform local transport & offer more equal accessibility & connectivity in towns and cities across Britain.

3.2.2 The CCG outlined some alternative capacity solutions to the 2010 TSC Inquiry. *(ref. 23) CCG submission TSC Inquiry 2010 into Transport & the Economy)*

3.2.3 Sir Richard Branson, chairman of the Virgin Group, claimed that 'if the Government gave the private sector more freedom to innovate, a further upgrade of the London-Glasgow WCML could reduce journey times sharply (London to Birmingham could be reduced by 22 minutes) and be self-funding'. *(ref 24)* http://www.ft.com/ *20.9.09*) Only 1 'relief' train to cope with the Friday peak (18.43 Euston-Crewe) has been allowed to operate – why cannot these restrictions be addressed to give immediate relief? Virgin lose the franchise in April 2012.

3.2.4 There are already 5-6 trains per hour throughout the day between London Euston & Milton Keynes. However in peak times Northampton has only a half hourly service. It is these peak hour trains where capacity is a problem. These could be doubled by a grade separated junction South of MK (estimated cost £243m) and new, higher performance rolling stock. These could be delivered within 5 years at a cost slightly less than one-third of the £17bn HSR spend. *(ref. 25) Chris Stokes, rail consultant, Bucks CC HS2 summit 15.4.11).*

3.2.5 Long distance WCML Inter City trains have only limited overcrowding presently and by increasing the number of carriages, conversion of one first-class carriage per train to standard, overall standard class capacity could be increased by 112% without any significant infrastructure spend. *(ref 25)* HS2 HSR is a sledgehammer to crack a nut.

3.2.6 The Spending Review October 2010 has provided £14bn for Network Rail for major work on the WCML & ECML. *(ref 20) Executive Summary p7)* We would expect this considerable sum to bring some positive resolution to key issues such as capacity.

- **Q3.3**

3.3.1 Rail travel demand can be managed more effectively by encouraging tele-commuting, smart ticketing, more flexible working hours. Research shows that virtual meetings, video chat & conferencing are overtaking traditional communication methods as increasingly businesses use virtual ways for face-to-face meetings. *(ref.26) Forrester Research, Computer Weekly Nov. 2010)*

3.3.2 The Government is calling for evidence following the Local Transport White Paper 2011 *Creating Growth, Cutting Carbon* on alternatives to travel for business and commuting. Increasingly, people are seeking ways to reduce their time & travel costs. With increasing uptake of electronic communication, this is unlikely to fall.

3.2.3 The Public Accounts Committee *(ref. 27) Conclusion 6 Increasing Passenger Rail Capacity 9.10.10)* recommends the DfT conducts a fundamental review of the railway industry structure as it 'provides little external challenge to its vested interest in its own growth' and to 'ensure..value for money..restraining the tendency to seek solutions through growth'. This is essential to the prosperity and economic stability of the UK rail network.

- **Q3.4**

3.4.1 Inflation is rising which will impact on construction costs and CBR. How will this be accommodated?

Q4 The Strategic Route

- **Q4.1.**

4.1.1 'The really time-consuming part of travelling from the West Midlands to London is getting to Birmingham city centre. Live in the wrong suburb with no open railway station and it can take nearly as long to get to New St as HS2 is proposing to get to London': Telford commuter 5.5.11. This is true for all HSR stations outside the main urban centre.

Eurostar has encouraged travellers from air as it delivers them straight to central Paris, a smaller urban centre so shorter time to reach ultimate destination.

4.1.2 A Leeds resident writing to the Leeds local Guardian (21.3.11) calls not for future London-Leeds high speed links but good links now between Leeds–Sheffield, Leeds-Manchester and around all three with a fraction of HSR costs being invested in electrification & more rolling stock.

- **Q4.2**

4.2.1 It may well be worthwhile connecting Liverpool, Manchester to Bradford, Leeds, York with a cross-Pennine higher speed rail. These are close major cities which are currently poorly connected by rail and have relatively few rail trips between them - indicators of high potential benefits. With a proper transport model, which could model changes to people's origin-destination pattern, such a scheme would offer a step-change in transport provision and could provide considerable economic regeneration benefits. HS2 could connect-in to this at some point so that services can be offered from these cities to places north, south, London and Europe. Alternatives like these need to be tested in a properly-specified transport model.

- **Q4.3**

4.3.1 Appropriate modelling should be used to inform choices, including a non-London centred approach. The biggest potential financial benefits are likely to be for the phases from Birmingham-North, where urban interconnectivity is poor and need for regeneration is greatest.

4.3.2 Building in stages may spread cost over time & gives some flexibility to accommodate eg demand changes. However it runs the risk of phase 1 running over time & budget, & thus impacting negatively on future phases, with the possibility that should not be discounted, that they become unaffordable or uneconomic. This is particularly true for the currently proposed phase 1 (London-Birmingham) which ignores the present good intercity rail services, offers the lowest CBR as the total journey is less than 200km, yet has the highest environmental impact cost on an AONB. The worst case, which is not unrealistic, is that the Chilterns AONB will suffer severe degradation through phase 1 without any benefit to the UK as later stages are never built.

- **Q4.4.**

4.4.1 Direct links between HS1 and HS2 are important but need not necessarily be via London. A link with Heathrow assumes that increasing the volume of travellers using Heathrow is desirable. CCG questions this.

Q5 Economic rebalancing and equity.

- **Q5.1**

5.1.1 There is scant evidence to prove a causal link between HS2 HSR and regeneration to those areas most in need, evidence is inconclusive. The DfT's response to the TSC's recommendations from their Inquiry into Transport & the Economy 2010/11 *(ref 1) Recommendation 9 Transport & the Economy: Government response to the Committee's Third Report of Session 2010-12)* sheds no further light.

5.1.2 Expecting one expensive project (HS2) to resolve the complex and diverse problems of regional poverty, decline & comparative regional discrepancies of wealth, opportunity & resources is an extremely high risk strategy. Business leaders hold disparate views. Government relies heavily on quoting large sums of money/benefits which it predicts will be generated by HS2 without substantial or adequately researched information to support these claims.

5.1.3 Whilst 'captains of industry' speak in favour of HS2 HSR, it is notable that there is a lack of private capitalists seeking to invest in the project.

5.1.4 HS1 has failed to generate employment in Ashford. The town's 'unemployment rate has fallen more slowly than the Kent average, the SE average and the GB average'. Other towns off the line have done better. *(ref 28) Gilligan D. Telegraph 4.4.11/Office of National Statistics).*

5.1.5 The DfT predicts that HS2 construction will generate 9,000 jobs, 1,500 operational on-the-line and 20,000 new jobs at Old Oak Common, 2,000 at Euston, 3,800 at the Birmingham interchange and 4,500 at Birmingham New Street. Of the 30,000 'new' jobs, 73% will be in London. *(ref. 6 p18, 45) HS2 Consultation Summary p18,45)*.

5.1.6 We remain unconvinced that being able to catch a fast train to the North will encourage people in the South to travel there, particularly if jobs are harder to find, salaries are lower & train fares higher. HS2 is more likely to attract travellers from North to South, which is where they will spend their disposable income.

- **Q5.2**

5.2.1 Expectation would be that such a public spend would support local and regional economies. Government predicts that every working family in the West Midlands will benefit by £2,600 *(ref. 29) Hammond Cons.Central Office 14.4.11)* - but this excludes the costs, resulting in net benefit of £1,400 per working family. However benefits will not be equally distributed; spending on railways benefits the better off much more than the lowest income families, and will do little to help the 9.8% unemployed in that region. So investment in the network, and changes to its shape, give a poor rate of return to support local economies. We suggest investing in directly supporting business and enterprise now is more beneficial.

- **Q5.3**

5.3.1 Limited & lack of integrated accessibility and ticket costs will exclude lower income groups. Prime users will be

urban dwellers with high disposable incomes.

5.3.2 The £123m Masterplan for Birmingham's Eastside & City University regeneration will be abandoned as HS2 needs the site, despite the £30m already invested – and the University wants this back. Is such a fundamental change wise in the current economy? Can Birmingham's residents and taxpayers and the Government afford to waste such amounts when all Councils are cutting services? *(ref. 30) Birmingham Post 16.3.11)*

Q6. Impact

- **Q6.1 Carbon emissions**

6.1.1 The DfT's vision is to 'target[ing] investment in new projects that promote green growth' – HS2 HSR does not fulfil this criteria. The 2008 Climate Change Act sets out legally binding targets for an 80% reduction in greenhouse gases by 2050. Already (May 2011) businesses say this is unrealistic. HS2 will not help.

6.1.2 The *Creating Growth, Cutting Carbon* White Paper 2011 recognises the need to reduce carbon impact on longer journeys, but places dependence on modal shift from car to achieve this. Convenience and cost will act against this. HS2 Ltd estimate as little as 1% of motorway traffic will shift to HS2. HS2 HSR requires a high load factor to be even broadly carbon neutral *(ref. 6 p53)* & during the construction stage will add to environmental pollution. Higher speeds consume more energy & emit more carbon.

6.1.3 The first phase of HS2 will have fewer carbon savings as lower shift from car to air & carbon emissions from its construction are estimated at 0.3-2.1 m tonnes. *(ref 31)* http://www.greengauge21*).*

6.1.4 The *Call for Evidence* following the White Paper states it is medium distance (10-25 mile) trips which are responsible for the highest volume of carbon emissions and some one-third of emissions come from journeys less than 10 miles. *(ref. 32) 2.15, fig 2.3)* HS2 HSR will do nothing to change this and indeed these figures indicate that investment in regional & local options offer better carbon reduction potential.

6.1.5 By freeing up capacity at Heathrow, the government's HS2 high-speed rail project is likely to increase total UK carbon emissions. Further questions surround the scheme's broader sustainability credentials. *(ref33)* http://www.endsreport.com/28048/ *28.3.11)*

- **Q6.2 Environmental costs and benefits**

6.2.1 In designing the UK's high-speed railway sufficient weight must be placed on conserving natural beauty of designated land. The business case takes into account construction costs. Those costs reflect design decisions which are driven by key legislation, policy and objectives protecting AONBs and National Parks.

6.2.2 HS2 Ltd says its Appraisal of Sustainability (AoS) (*ref 34) The Appraisal Process Appendix 1 Appraisal of Sustainability page 7* http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/hs2-aos-appendix01.pdf*)* is in line with SEA requirements *(ref 35) A Practical Guide to the SEA Directive* http://www.communities.gov.uk/documents/planningandbuilding/pdf/practicalguidesea.pdf *).* The developer's SEA Summary indicates its AoS includes the relationship of its own plan (HS2) with other relevant plans and programmes. However in its AoS documents *(ref 34, ref 36) (HS2 Appraisal of Sustainability Main Report Volume 1* http://highspeedrail.dft.gov.uk/sites/highspeedrail.dft.gov.uk/files/hs2-aos-report01_0.pdf*3)* relevant legislation, policy and objectives are either:

i. Not included
ii. Are insufficiently informative
iii. Or the government's obligation is not alluded to.

If the AoS is incomplete then costs to the natural environment, and hence the potential monetary costs, cannot be correctly estimated.

6.2.3 Countryside and Rights of Way (CROW) Act 2000 s85

In the context of AONBs, the Definition of Sustainability Term presented by HS2 in its Appraisal Process *(ref 34, Annex 2)* is the CROW Act 2000. Although the developer states "the single purpose of the AONB designation is to conserve and enhance the natural beauty of the area" it fails to emphasise that any Minister of the Crown has a duty of "regard to the purpose of conserving and enhancing the natural beauty of the AONB" (s85).

Since the enactment in 2000, so far as we can see, there have been no major infrastructure developments receiving legal approbation in any AONB on the proposed scale of HS2. Nor have there been any in National Parks on the scale of HS2 since 1995 when the same Ministerial duty was included in the Environment Act s62. Clearly HS2 Ltd needs to be aware of this duty in making design decisions.

6.2.4 Planning Policy Statement 7

PPS7 states that AONBs and National Parks are confirmed as having the highest status of protection in relation to landscape and scenic beauty. The policy recognises major development may have serious impacts on the natural beauty of such areas and recreational opportunities they provide. It says major development should not take place except in exceptional circumstances and the proposed infrastructure should be demonstrated to be in the national interest. *(ref 37)*Planning Policy Statement 7 Sustainable Development in Rural Areas http://www.communities.gov.uk/documents/planningandbuilding/pdf/147402.pdf 4).

6.2.5 In only a brief reference to PPS7 (*ref 36, p41*) in its AoS documents, HS2 Ltd does not describe the status of protection of designated land, nor the Government's recognition of the impact major development would have on such

land. In addition, HS2 Ltd has not referred to PPS7 in its Appraisal Process document *(ref 34)* despite Government's "Practical Guide to the SEA Directive" stating Planning Policy Statements are relevant *(ref 35, App. 2)*. Hence the AoS is insufficiently informative which could give rise to unplanned increases in construction costs related to impacts on designated land.

6.2.6 Statutory Designation Criteria

HS2 Ltd's Appraisal Process *(ref 34)* does not refer to the Statutory Designation Criteria *(ref 38) Planning Policy Statement 7 Sustainable Development in Rural Areas* http://www.communities.gov.uk/documents/planningandbuilding/pdf/147402.pdf for AONBs (Countryside and Rights of Way Act 2000) and National Parks (National Parks and Access to the Countryside Act 1949). Criteria include intactness of landscape, presence of incongruous elements, sense of remoteness, landform from vantage points, natural looking woodland, presence of traffic noise, strong aesthetic qualities, a relative lack of human influence, association with written descriptions, a sense of return to nature, peace and quiet. These are all qualities that may influence design decisions. These serious omissions have led to concerns that the DfT, HS2 Ltd and its consultants have failed to give sufficient weight to conserving designated land in route design which may give rise to unplanned cost implications.

6.2.7 When designing a route, it is important to avoid, or minimise length of route, in AONBs and National Parks. When a route through designated land is demonstrated to be in the national interest, a tunnelled option throughout the length of the designated land should be included for public consultation. HS2 Ltd has failed to design such a route for phase 1 of the proposed high-speed line (HS2). If the decision is made to proceed with HS2, as this would create a precedent in an AONB (2.1 above), it is imperative that any encroachment into the AONB be tunnelled. The Secretary of State for Transport has said: 'We will do everything we can to mitigate the impacts on areas like the Chilterns'. *(ref 39)* http://www.moneyex.co.uk/news-590.htm*)*

6.2.8 HS2 Ltd designed a route with engineering works on a massive scale in the Chilterns AONB with consequent impacts on landscape. It will involve two viaducts each 500 metres long and considerable land-take from deep cuttings. HS2 cuttings are typically 15 metres deep and 70-90 metres wide even when partially retained *(ref 40) HS2 maps 7 and 8.* http://highspeedrail.dft.gov.uk/library/maps/map-7 http://highspeedrail.dft.gov.uk/library/maps/map-8. These deep cuttings total 9kms in length. *(ref 36, p84*)

6.2.9 Tunnelling produces much less spoil than deep cutting per km, as well as producing a far superior environmental landscape solution (although there would be tunnel vents every 2kms). Because of the total length (9kms) of deep cutting in the Chilterns AONB, the volume of spoil generated here is massive: 12 million cubic metres *(ref 41)* http://www.chilternsaonb.org/news_detail.asp?ID=174 HS2 – over 1 million lorry movements predicted 74% of which is generated from deep cuttings.

6.2.10 HS2 Ltd estimated its scheme would generate just 0.68 million cubic metres of spoil in the Chilterns. *(ref 42) HS2 Appraisal of Sustainability Main Report volume 2 Plans and Appraisal Framework page 34* http://highspeedrail.dft.gov.uk/library/documents/appraisal-sustainability This is not supported by recent more thorough research by the Chilterns Conservation Board and Dr. M. Fletcher of the Chiltern Countryside Group *(ref. 41)* which showed that in the Chilterns alone the scheme will generate 12 million cubic metres of spoil. The reasons for the discrepancy are HS2 Ltd did not allow for the Amersham tunnel being twin-bore, it omitted the spoil from deep cuttings and it did not include a bulking factor (x1.75) for loose spoil. Less than 10% of the spoil generated can be used in the Chilterns.

6.2.11 Spoil removal from the Chilterns via the route seems likely to be problematic without doing excessive damage to the AONB, due to the terrain, non-patency of adjacent tunnels and the large amount of lorry traffic. To move 12 million cubic metres of spoil by road would create over 1.7 million lorry movements – i.e. a journey on local roads every 26 seconds every working day for 5 years. Thus spoil removal will involve financial and environmental costs which have not been correctly assessed.

6.2.12 In the light of this discrepancy on spoil in HS2's AoS, and omission of relevant objectives, policy details and legal obligation of Government to the AONB, is its AoS reliable in assessing other impacts of its scheme?

6.2.13 The DfT needs to re-appraise its preferred route to allow for its impact on the Chilterns AONB and make commensurate adjustments to its business case. Similar cases may arise when the business case for the "Y" is considered. *(ref 43)High level assessment of the wider network options – Reverse 'S' and 'Y' network, 4.22* http://webarchive.nationalarchives.gov.uk/20110131042819/http://www.dft.gov.uk/pgr/rail/pi/highspeedrail/hs2ltd/networkoptions/pdf/report.pdf

- **Q6.2 Noise**

i. Appendix 5.4 *(ref 35)* contains the noise aspect of the Appraisal of Sustainability. The Noise examination needs to fulfill two essential requirements:

   To inform all stakeholders and interested parties of its extent and degree.

   To define the sustainability noise impact in terms of costs and benefits.

6.2.14 The AoS is a strategic document that is not final. In terms of noise it concentrates on operational airborne noise at residential areas. Other aspects have been appraised at either quantitative or commentary level. No detail work on any subjective aspect of noise is included and the information provided can only be indicative and not definitive.

6.2.15 The method of assessment of railway noise is based upon a widely used, but not exclusive, method that equates

the actual varying noise levels over a period to a construct of an equal energy constant noise level over the same period (LAeq,T). This is both confusing to the layman and can be argued as removing any significance of the varying character of the noise to aggravate a response.

6.2.16 The World Health Organisation expressly state that for situations where distinct noise events are present, such as aircraft or railway noise, measures of individual events should be obtained. In short LAeq,T should be augmented with Lamax. If it is accepted that LAeq,T is the best metric to use, HS2 Ltd have taken the period 0600:2400 whereas in other contexts 0700:2300 is used to define daytime. The selection of a shorter nighttime period reduces the amount the HS2 traffic will seem to intrude into this sensitive period. This reduces the consideration of the noise impact and the effects in the early morning or late night.

6.2.17 HS2 Ltd have indicated the areas of potential impact by reference to the dwellings that would be exposed to their chosen criteria :

a) High Noise Level > 73 dB LAeq, 18hr
b) Qualification for noise insulation > 68 dB LAeq,18hr
c) In an area of noticeable increase in railway noise

- These criteria are misleading in their relevance to this AoS:

a) is taken out of its defined context and is expressly excluded from use outside this context.
b) for a dwelling to be subject to noise insulation should not be taken that the noise is mitigated. Noise within gardens and outside areas is ignored.

6.2.18 This criterion is very confusing. For areas already exposed to railway noise the judgment line is taken as the level of the existing railway noise + 3 dB. For areas with a low railway noise the value taken is 53 dB. For area with no railway noise the value is taken as 50 dB. There is no consideration for areas with a background level of say 45 dB which would be required to have a 5 dB penalty imposed rather than the suggested 3 dB if railway noise already present. There is also the factor that it is now accepted that a change of level of greater than 1dB increases the likelihood that there will be an adverse reaction to the noise.

6.2.19 The AoS does not set out the nature of airborne noise at residential dwellings. There is no description of the possible effects of the noise during the day and scant reference to night time noise.

6.2.20 There is concern as to the data used to calculate the HS2 Ltd Noise maps. Source levels for the trains assume future improvements of train set noise. Assumptions are made about the effectiveness of noise barriers that are at best first approximations. Given the level of assumptions made and the inherent degree of accuracy of any computational modelling exercise it is considered that the noise levels calculated could be 5-10 dB different from reality.

6.2.21 The information is on daytime exposure and exposure only to dwellings. Night time noise will occur and the WHO Night Noise Guidance Levels seek to impose much reduced levels at this time and would additionally weight night time railway movements. Both of these factors have been ignored in the AoS. No consideration has been given to areas of quiet that presently exist along the route or of the special areas that are held in trust for the nation. The AONBs must be considered sacrosanct and warrant a much greater degree of consideration than has been applied in the AoS.

- The first requirement of a noise examination is therefore seen not to have been met.
  Without full and exhaustive information on noise and its effects no sensible analysis of the environmental costs and benefits can take place.
- It therefore follows that the second requirement is not met.
  The information that has been made available does not allow a proper consideration to be made as to whether the project should go forward to the next stage. A full Environmental Impact Analysis can be the only basis for such a decision.

6.2.22 It will be appreciated that this submission can only raise the questions of the inadequacies of the AoS and thus the validity of the costs and benefits that have been assumed. These points can be expanded in a verbal presentation to the Committee.

- **Q6.3**

6.3.1 Released capacity for the 'classic' rail network is one of the given benefits for HS2 HSR. But, if as suggested, this capacity will be filled by more passenger trains, the opportunity to increase freight will be limited. However, as the need for additional capacity has been identified at solely peak times, if this is resolved, then freight trains can still be increased outside peak hours. We question whether current freight trains on the WCML are operating at their maximum load – many flatbed wagons are often empty.

6.3.2 The CCG believes there are opportunities, not yet fully considered, to provide more scope for rail freight; releasing freight from main transport corridors (road & rail) onto designated freight lines with properly planned HS1, Channel & Northern sea ports connectivity has many advantages.

- **Q6.4**

6.4.1 HS2 will cause considerable disruption to existing services at Euston as it will need to be completely rebuilt over 7-8 years *(ref 6 HS2 Consultation p54, ref 44 InterCity West Coast Consultation January 2011 p39)*; to GWML services due to reconstruction of Old Oak Common station and to Chiltern Railways services with work between Northolt and

West Ruislip. These are significant.

CONCLUSION: In its vision statement, the DfT specifically refers to seeking 'the best possible advice...on impacts..investment ..and [the] objective to seek good value for money'. The CCG find that the DfT in its response has not adequately addressed the recommendations made by the Transport Select Committee following the 2010 Inquiry into Transport and the Economy, particularly with regard to recommendation 9 concerning regeneration benefits. *(ref 1Third Report of Session 2010-11 HC473).*
Information in HS2's Appraisal of Sustainability is insufficient, or in some instances incorrect, to allow a sufficiently reliable assessment of the environmental impact of HS2 HSR to be made. This is likely to impact on its business case.

The Government has a National Infrastructure Plan (2010). The CCG suggests that the DfT and the Coalition Government do not appear to have a cohesive, considered and integrated approach to transport planning or forward vision linked to agreed objectives.

The HS2 HSR project plans to spend billions on a new route which is questionable in terms of sustainability and economic benefits and to be financially viable, encourages travel. It will be accessible physically & financially to a UK minority.

The White Paper '*Creating Growth, Cutting Carbons'* asks businesses and commuters to reduce travel, seek green alternatives and advocates investment in local transport infrastructures.

These two visions are contradictory. In the present global financial situation, it would be wise to identify priorities which are complementary and realistically achievable.

It may well be in our technologically fast-moving world that the UK has missed the optimum 'window' for investment in HSR. As people find new ways of communicating and doing business there is a risk that HSR could be out of date by the time it comes on stream. A lesson may be learnt from the planning of the new city of Milton Keynes est. 1967. This 'state of the art' city now has one of the slowest broadband connections in the UK for, at the time, its planners did not place sufficient weight on technological and demand changes. *(ref 45)* http://www.adamchapman.com/mkbag/issue/