Stakeholder Consultation Report conducted by Bircham Dyson Bell LLP and ComRes on behalf of Greengauge 21.

February 2009

Contents

Consultation Approach

Greengauge 21 commissioned Bircham Dyson Bell[1] to conduct a qualitative stakeholder consultation. Bircham Dyson Bell worked alongside ComRes[2] in delivering the programme. The combination of Bircham Dyson Bell's legal and public affairs expertise and ComRes' experience of qualitative research was built into the design and execution of the stakeholder consultation. The aims of this consultation are to determine the views of stakeholders towards high speed rail, and in particular to understand the priorities, objectives and reasons in support of, or in opposition to, high speed rail. Greengauge 21's requirements were to:

- Identify the guiding policies and objectives that should inform the planning process for high speed rail;
- Carry out consultation exercises to inform the work of the principal consultants and to help build a consensus around conclusions on the form that high speed rail network development in Great Britain should take;
- Produce the consultation findings that help inform the public and political debate; and
- Help to build consensus on a suitable way forward for high speed rail in the UK.

The work aimed to build on the studies undertaken by Atkins for the Strategic Rail Authority (SRA) on high speed rail. Atkins and the SRA worked together on two rounds of consultation and a follow-up seminar to investigate the business case for a north-south high speed rail network. The resulting strategy would, in turn, have been consulted on. However, this work did not proceed and a strategy was not developed. The work of Greengauge 21 and the consultation work commissioned aimed to utilise and further develop this earlier work.

[1] Bircham Dyson Bell LLP is a leading law firm with a particular expertise on major projects and infrastructure development, providing a uniquely comprehensive range of legal, political and public affairs services to clients.

[2] ComRes provides research that is designed and conducted by experts in both polling and communications. They have a strong track record of conducting bespoke, large-scale, quantitative and qualitative research that has been used in conjunction with high profile thought-leadership work, campaigns and academic studies.

Context

Greengauge 21 is a not-for-profit organisation which aims to research and develop the concept of a high speed rail network, and to promote its implementation as a national economic priority.

This consultation takes place as one of a series of workstreams to help Greengauge 21 shape its priorities and engagement with stakeholders. Greengauge 21 set out four specific aims for this round of consultation:

- To establish where there is a consensus on the objectives of high speed rail;
- To identify the objectives that should guide the development of high speed rail in the UK;
- To assess reactions to the proposed corridors; and
- To identify constraints, conditions or other material factors that stakeholders believe should apply to high speed rail development.

The ultimate aim of the consultation process has been to measure and assess the perceptions of opinion formers towards high speed rail and its related issues in order to inform the design and development of high speed rail in the UK.

Additional workstreams commissioned by Greengauge 21 are being conducted by SYSTRA-MVA to carry out the planning and technical work to develop a high speed rail strategy. Another central aim of this consultation exercise has been to feed the findings on to SYSTRA-MVA to inform this work at an early stage by exploring the objectives and key issues identified by stakeholders.

Previous research

This consultation also takes place in light of the conclusions which were made from the Atkins study in 2003. The Atkins studies, and consultation of stakeholders, were designed with the aim of producing a full strategy for the development of high speed rail, but this did not proceed for a variety of reasons.

The Atkins consultation showed broad support for high speed rail, and led to some indelible findings. Stakeholders generally favoured a high speed rail line, or lines, which was able to integrate with the existing rail network. The reasoning behind this was the containment of capital costs, the facilitation of phased development and the opportunities to extend the benefits of high speed rail to those not directly served by it. The possibility for an eventual segregated high speed network was also raised, but that this would be unrealistic in a more immediate timeframe. It was recognised that tunnelled alignments may be a necessary feature in environmentally sensitive areas.

City centre stations were found to be generally more favourable than parkway stations in order to serve main cities along a high speed rail route. Stakeholders mentioned that any additional intermediate stations should only be included where they could be justified on regional planning policy and environmental grounds.

The report concluded that any high speed rail line or network should be a premium product in comparison with existing rail services. It was also important that a market-based fares

policy was in operation where high speed rail could provide advantages over the conventional rail network.

The report recommended that a phased development of high speed rail would be the most viable approach, largely due to issues of affordability. Funding was an important issue, with the report recommending the delivery of high speed rail through a partnership between the public and private sectors.

While the notion of high speed rail found broad support in the consultation, this support was dependent upon which regions would ultimately be served by a high speed line or network, due to the economic regeneration benefits that these regions would enjoy. Concerns were raised about the balance of investment between the regions, in particular that the South would gain comparatively more than others.

Stakeholders also highlighted their unease about investment levels in both high speed rail and existing classic rail lines, often fearing that high speed rail might draw funds away from the existing network.

The Greengauge 21 consultation was designed as a continuation from the 2003 Atkins work, and in particular to see if or to what extent views had changed. While it is not surprising that many issues identified in this study have retained their salience, new issues and a shift in priorities have been identified. This may be due in part to the changing nature of the industry, for example the restructuring of railway planning following the 2005 Railways Act, and the increasing pressures of issues surrounding capacity. Two factors are notable in the comparison between the Atkins conclusions and this consultation exercise. One is the increased need to consider the environment and climate change as an important factor in any future transport development, and the second is that questions over the economic impact of high speed rail have yet to be answered.

This report addresses how priorities have changed and identifies the action that needs to be taken in light of both the 2003 Atkins work and this consultation.

Stakeholders

Stakeholders who participated in this consultation represented rail companies, regional bodies and development agencies, and strategic planners, policy makers and transport companies (a full list is available in the appendix).

The selection of candidates was developed based on existing Greengauge 21 contacts and those pre-identified in the Invitation to Tender document. These were then supplemented where gaps were identified, for instance either sectorally or geographically.

Due to the considerable number of stakeholders that might have ideally been consulted, the stakeholders were divided into a Group A (most influential or well informed stakeholders) and a Group B (lower level of influence stakeholders). Group A received one-to-one interviews (face to face or by telephone if more convenient) and Group B were invited to take part in an online version of the consultation. This split would also allow for the additional supplementation of contacts in the event of a low initial response rate. This was however not the case, and response rates from both groups were extremely positive.

Methodology

50 qualitative interviews were conducted among key Group A stakeholders. The interviews were conducted by a mixed methodology of face-to-face interviews and telephone interviews, where face-to-face was not possible, mainly due to availability issues.

The interviews addressed participants' overall views towards high speed rail, as well as discussing opinion on whether or not there is a need for high speed rail in the UK. They also covered the objectives that should be considered when approaching the development of a high speed network, and the different local and national issues that need to be taken into account. Particular attention was paid to the Department for Transport's 'Towards a Sustainable Transport System' report, and in light of this the five main areas addressed are: productivity and competitiveness; equality of opportunity; climate change; quality of life; and health, safety and security. This format was adopted to ensure that the report would best fit with the approach taken by the Department, and in particular its approach to long-term transport planning.

Where relevant, additional attention was paid to the findings of the Atkins report in 2003 and other relevant studies were discussed, as well as reaction to Greengauge 21's suggested High Speed Two corridor (London-Birmingham-Manchester). An important consideration was to create an interactive process which could be altered over time or if the need arose, rather than use a fixed interview structure. This process also enabled a flexible interview framework to make the individual meetings most relevant to the expertise of the audience, to identify their particular concerns and also to address them where practicable.

The online element of the consultation complemented the qualitative work and allowed us to approach a broader group of stakeholders to enquire about the key issues and objectives of high speed rail.

Executive Summary

Stakeholders are in general favourable towards high speed rail as well as being very well informed about the issues facing decision makers. However, high speed rail is not seen as the only solution to capacity problems and to address economic growth. While stakeholders are positive, they are also risk averse. For example stakeholders often attach caveats to their support in particular around the economic benefits, the environmental impact and the cost and financing of a new high speed rail network. Stakeholders believe that there are many important issues at stake in particular the economic, environmental and social impact that a high speed network would have on the UK.

Stakeholders agree that the most significant problems facing the current network are the constraints caused by congestion, over crowding and the overall lack of capacity. The current and predicted capacity constraints on the rail network are perceived to be the biggest challenge by stakeholders and the top priority to be addressed on the rail network. A strong potential advantage attached to high speed rail would be to free up capacity on the existing network, which could be used for both local passenger journeys and for freight.

From an economic point of view inter-city connectivity is seen as vital. City-to-city links for business travellers are viewed as very important, enabling better access to UK economic centres. Reducing journey times and improving connections between growing cities is seen as an important benefit by stakeholders. In addition, high speed rail is seen to be a possible alternative to domestic air travel as it can compete both on journey time and also on environmental impact. Rail travel is considered to be 'smarter travel', allowing businesses to make best use of travel time and thus increase productivity.

Many stakeholders highlighted the difficulty that the UK faces having an 'overheating' capital generating a significant proportion of economic output. Particularly in light of the current economic situation it is considered that high speed rail could bring advantages to the UK economy by encouraging growth in the North of England, outside London and the South East. In particular, businesses could relocate to within an easy travel time to London or move office functions further afield.

The potential economic benefits are seen to be the main driver behind the development of high speed rail in the UK. Thus it will be key to substantiate existing views that see high speed rail encouraging economic growth both locally and nationally. There is a strong feeling that finding further evidence for these claims is the biggest question to be addressed before further steps are taken. Can the economic benefits for UK plc be realistically estimated?

Beyond the economic impact of high speed rail, the environmental consequences need to be addressed in this planning process. It is important to stakeholders that the sustainability and environmental case for high speed rail is proven and it is an area that stakeholders are particularly well informed on. Encouragingly, there is a perception that high speed rail is greener than air or road travel. Some important environmental concerns regarding high speed rail however remain. In particular these centre around fuel consumption and the source of this energy. This is understood to be a difficult area to address as it depends on a number of factors but stakeholders highlight the importance of determining the scale of the

necessary energy supply and whether this could be supplied from a renewable source or not. In addition, the impact on overall fuel consumption or electricity use that speed and distance would have are important to model and determine.

Other environmental concerns among stakeholders relate particularly to the impact on the local environment and also the possibility of modal shift both from air or road onto rail. Modal shift to high speed rail is favoured for a number of reasons including the perceived environmental benefits, but again this is an area yet to be further explored and tested. Stakeholders are keen to see this addressed. While it was not considered as high a priority as addressing energy supply the impact that a new high speed line would have on local areas – both the environment but also the local population – must be addressed. Similarly to the conclusions in the Atkins report, some stakeholders suggested that tunnelling may be able to address the issues of noise and vibration impacting on local areas. The impact on local areas by a high speed line needs to be addressed carefully during the planning stage but it is thought that this is an area that can be realistically addressed and that solutions to the concerns that are raised can be provided in time.

Most stakeholders see high speed rail to be primarily beneficial to business travellers. However, they do also think that it could be popular with leisure travellers if there was a suitable fare structure and competitive prices. Different corridors are favoured by stakeholders in different regions but most understand the prioritisation of the London-Birmingham-Manchester route. Links to Scotland and the Trans-Pennine route are also popular.

It is clear that there is general favourability across the board when it comes to high speed rail. However the difficulties arise in the detail. In particular all UK regions would like to be served by a high speed rail link or have particular stations. This is an area which Greengauge 21 needs to carefully address in the regional strategic planning workshops. In general, although occasionally with some reluctance, stakeholders agree with Greengauge 21's prioritisation of the London-Birmingham-Manchester route as the first line. However, carefully consideration needs to be given to the needs, issues and priorities in each area of the UK.

In the Midlands, support is strong in both the East and West Midlands. It is thought that some of the greatest capacity issues are on the West Coast mainline, despite recent investment. In particular Birmingham New Street is a 'pinch point' feeling the pressure of both extensive local and commuter journeys as well as serving as a hub for longer journeys. Those stakeholders in Birmingham and the West Midlands are concerned with establishing good links to London and also in particular with links beyond London, into Europe. The East Midlands are keen to host a station but there is debate to be had around the precise location of this station – in particular whether Leicester, Nottingham or Derby should be served.

There is a view among stakeholders that the role of speed increases significantly for areas where journey time from London is currently more than two hours. This 'bubble' around London reaches almost as far as Manchester and so for cities and regions further away speed has a far greater role. In the North of England there is acceptance among stakeholders that Manchester is a key node for high speed rail. People in the North West

are also keen for Manchester Airport to be linked in, in order to encourage a wider integrated network and connections within the region. Following this there is great concern that the Northern regions are connected among each other, as well as to London. Stakeholders in the North East, North West and Yorkshire are all favourable towards Trans-Pennine connections from cities such as Leeds and Newcastle across to Manchester and Liverpool. The economy in the North of England has a large growth potential and high speed rail is thought to make an important contribution.

The greater the distance from London, the greater is the desire for high speed rail. This holds true particularly in the case of Scotland. Journey times from Scotland to London are not seen to be competitive with air travel and therefore there is great enthusiasm for a high speed line to include Scotland. Interestingly, there were suggestions that construction should not necessarily start with London but perhaps begin with connections between Edinburgh and Glasgow, moving down to the North of England so that the construction of the line meets in the middle. This would bring advantages both to the North and South during the building process.

The South West and Wales are both supportive of high speed rail links and keen to be served. In particular, the economic advantages to Cardiff and to the cities in the South West are the drivers behind this support. It is seen that high speed rail would support new local business development and could perhaps encourage businesses to relocate to the South West. Stakeholders in the South West are also particularly keen to be linked into Heathrow and see opportunities to encourage better connections here.

Finally, in London and the South East area stakeholders highlight some important priorities but also challenges that the area faces. In particular, the challenge of the London economy and the South East is cited. There are opportunities for spreading economic pressures across the UK and high speed rail has the potential to encourage such a development. London already has connections into Europe from High Speed One and this is considered to be very important. The main issue to address in London is how a route would link in to Central London, St Pancras and Heathrow. Wider afield the East of England is keen that Cambridge is linked in so that the areas of growth in technology and science can feed into the capital.

There are widespread positive attitudes towards high speed rail in the UK and yet the detailed economic, environmental and social case is yet to be proven. There are some broad challenges still to be addressed. Particularly, stakeholders are worried about the investment needed for high speed rail being part of a zero-sum transport funding equation. There is generally a consensus that high-speed rail should be part privately and part publicly funded but there is concern that money will be taken away from other valuable transport infrastructure projects or local developments in order to fund high speed rail. The challenges and the details are being addressed in more depth in the SYSTRA-MVA work to answer the questions that stakeholders raised in this consultation.

CHAPTER ONE: General views on HSR

1.1 Introduction

The first chapter considers the general views expressed by stakeholders towards high speed rail. We explore whether or not stakeholders believe there is a need for HSR in the UK, and identify the priorities and key objectives they see for such a network (as well as the possible challenges that stakeholders perceive). We will then examine the five key areas in the Department for Transport's 'Towards a Sustainable Transport System' (TASTS) report. Towards the end of this report, conclusions will be drawn and suggestions will be made for the next steps.

1.2 Is there a need for speed?

In general, participants believe that there are needs within the UK's transport system that should be addressed, and high speed rail – along with improvements to the existing rail network and other modes of transport infrastructure - is seen as one way of meeting these needs. While stakeholders see HSR as a favourable potential development to meet the pressures on the industry, there are also some reservations among stakeholders – particularly when other priorities for the rail network are considered. Almost all participants in the online consultation also think that there is a need for domestic high-speed rail links in the UK, 9 out of the 10 participants think so and only one respondent answers with 'don't know'.

There is wide-spread acknowledgement that the rail network in the UK is facing growing pressures due to congestion, capacity pressure, reliability, increased passenger travel and modal shift. As the UK competes in an ever-growing international economy, a competitive transport system is seen as vital to improve accessibility to and around the UK, for connections internationally, and to address productivity issues in some parts of the UK.

Stakeholders frequently state that the current rail network is facing capacity issues. Most commonly this is mentioned referring to congestion on local and commuter services during peak hours. Stakeholders also acknowledge that there are growing capacity needs, particularly on the West and East Coast mainlines. This is seen as an issue for large cities, and for other regions; indeed, stakeholders are in agreement that the issue of capacity is going to become more severe unless action is taken.

This concern is prevalent among stakeholders from numerous different sectors; including transport executives, regional bodies and passengers themselves. In particular, Passenger Focus's research among current train passengers demonstrates that fare pricing and overcrowding are major concerns for passengers; indeed overcrowding is a top problem cited by rail passengers. It is worth noting that this research was among current train users, and evidence has not been given as to whether this is a concern and even a barrier for those people currently opting to use other modes of transport, instead of the rail network. This research was highlighted by Passenger Focus but also referred to by other stakeholders.

Frequently, increasing capacity on the rail network is seen as a top priority for UK rail. There is a perceived need for improvement in the current network (particularly) infrastructure and planning; for example, this may include longer station platforms, longer trains or more frequent trains. This is seen as primarily a concern for commuters and those making local journeys. However, many stakeholders believe that high speed rail could also provide extra capacity by freeing up space on traditional rail and local services to serve these people and to move longer journey passengers onto high speed rail. Stakeholders also believe that the additional capacity on high speed rail – as well as the freed up capacity on the current rail system – could provide for additional freight capacity. In general, capacity pressures are a serious concern, but it is not seen that HSR is an exclusive solution to it. Participants often state that they are concerned about capacity but not 'speed for its own sake'. One stakeholder mentioned however that the solutions of longer platforms or trains or even more trains on the current network, while perhaps being a short term solution will not meet the long term capacity constraints. Indeed it was thought that longer trains or more trains could eventually only encourage more constraints on the network, for example congestion on the lines or slower journeys.

Stakeholders also note the need to reduce road congestion and domestic air travel. There is a general agreement among most stakeholders, particularly those representing environmental organisations that in order for the Government to meet their CO_2 emission targets, dramatic action needs to be taken regarding domestic air travel. A number of participants highlighted the need for reducing domestic air travel as an important objective of high speed rail, and other participants highlighted that there is a need for a 'cleaner, greener and more sustainable' transport system in the UK.

Although not as significant as air travel in the minds of most stakeholders, there is significant concern over road congestion and motorway traffic, particularly in reference to the environmental consequences. The road network is seen as facing just as many congestion problems, if not more, than the rail network. Reducing the journey time and creating a viable alternative to motorway travelling through HSR would, stakeholders believe, reduce motorway and road congestion. In areas where the journey time is considered to be too long (generally over two hours) there is a greater desire for reducing journey time, both to be more competitive with other modes and to provide more convenient connectivity between cities.

> *"The only way to cut journey times from London to the North is to introduce High Speed Rail"*

In general, the economic benefits of high speed rail are seen primarily as a key driver and objective of high speed rail, rather than a specific need. However, given the current economic climate, stakeholders saw this as an increasingly important factor. Stakeholders note that the arguments around economic competitiveness do not dictate a need for high speed rail in the UK; however, some participants are convinced that the UK needs to compete with the high speed transport networks across Europe. It is generally considered that the UK economy is in need of investment and growth and high speed rail is seen to be a possible stimulus of this.

When discussing the economic arguments for the introduction of high speed rail services, the disparity between the GDP of London (and the South East more widely) and the rest of the country is often noted. A number of stakeholders state their belief that the economy in London and the South East is 'overheating' and there needs to be pressure taken off this area and spread around the rest of the UK. Stakeholders in Scotland, the Midlands and the North of England tend to believe that high speed rail would have a redistributive effect. For example, a representative of Eurostar, states that the construction of high speed rail would lead to more balanced development of the UK economy on a geographic basis.

Stakeholders mention that both national and regional economic needs should be considered. In particular stakeholders from Regional Development Agencies – unsurprisingly – pay particular attention to the economic issues to be considered in each region. There is concern that significant assumptions are being made when discussing whether or not high speed rail would bring economic benefits to a region; specifically, whether or not the alignment would serve a particular region is the subject of much debate. One stakeholder commented that it would be 'a better deal for the winners'; meaning that the areas of current economic growth and development would flourish with improved transport infrastructure, but that those areas in greatest need of regeneration may not receive the economic benefits of improved transport connections. The view that regional regeneration would automatically follow HSR is not held by stakeholders; rather, it is seen as more likely that the development of high speed rail would bring growth in current areas of economic success rather than promote new regional regeneration. A number of stakeholders from different UK regions said that the areas of economic growth should be focused on. There is recognition among stakeholders who raise this that in order to encourage regional regeneration it will require more than improved transport connections.

Stakeholders do see a need to improve the transport infrastructure, as well as a need to relieve capacity constraints; however, do they believe there is a need for speed? In short, they do to some extent, but it is not as important as the other areas mentioned above. However, since reduced journey time is a given with high speed rail stakeholders were positive and well informed on the transformational impact of high speed rail and offer valuable comments on this. It is seen as particularly significant for those with a journey time greater than two hours to London, primarily a key issue for businesses located in the North of England and Scotland. People in the North of England and the South West show greatest concern for reducing journey times by rail, and in Scotland, the issue of the journey time to London becomes very relevant in comparison to air travel. The 'two hour bubble' around London is perceived to go even as far as Manchester and therefore the real speed benefits are considered to be for those further north.

There seems to be a radial distance from London – where the current travel time is approximately two hours or less – within which high speed rail is not seen as the only option. However, a stakeholder representing businesses said that 'speed is not the highest priority, but it does become more important for people who live north of Manchester'. For example they stated a 15 minute improvement in journey time has little benefit but a reduction of 45 minutes or more is seen as a significant improvement. More practical issues are also noted by stakeholders. In particular stakeholders believe that the chosen alignments and the order of constructing corridors will impact the level of infrastructure required and the need for reducing journey time.

1.3 Support or Opposition

Generally speaking, stakeholders are favourable towards the concept of high speed rail. Factors influencing stakeholders include the political debate (particularly from the Conservatives) over HSR, the economic impacts, as well as the European examples (TGV in particular). However, there are reservations that many stakeholders attach to their support.

Those who were least supportive of HSR are stakeholders who believe there are other, more pressing transport needs for the UK. Certain stakeholders see other ways to address the UK's transport needs; in particular, stakeholders are concerned that local transport strategies and planning would lose out to HSR. Some participants are concerned that dealing with capacity problems on the commuter routes is the primary transport issue to be addressed, and the connectivity and accessibility of cities (and the consequent reduced journey times) are secondary to this.

There are two other areas where stakeholders raise concerns about HSR. Firstly, there are concerns around the lack of evidence for HSR, where the case is seen as unproven, or the proposals are too vague. For example, one stakeholder mentioned the Heathrow expansion, where a perceived lack of detail in proposals gave rise to strong opposition; a potential problem for high speed rail if planning, social, economic or environmental concerns were not seen to be thoroughly addressed.

Secondly, there is a concern around the costs of creating a HSR network. Stakeholders are concerned that any investment in HSR would be part of a zero sum transport funding equation, where other projects lose out. There is a general consensus that high-speed rail should be part private and part public funded, but there is concern that money will be taken away from other valuable transport infrastructure (particularly local developments) in order to fund high speed rail. There is a broader concern among some stakeholders that HSR would have huge cost implications, and as such, the idea of a whole network may not be realistic. However, while this is a concern for some stakeholders, others comment that if the project receives the political backing it needs then it will be able to get off the ground despite the costs.

It is also important to highlight the concerns that regional bodies, in particular Regional Development Agencies, have in comparison to national organisations. There are local and regional concerns which have been highlighted and these are discussed in greater depth later in this report. However for the areas which may not be served by a high speed rail line there is concern that those regions may be negatively impacted.

1.4 Objectives of HSR – capacity, journey times, economic, social, environmental

Economic Growth

In general, stakeholders are in agreement that the primary objective of a high speed rail network in the UK would be to encourage economic growth. There is some disagreement around the prioritisation of the political issues, as well as the national and regional economic issues. The economic growth objective is an umbrella covering a wide range of possible benefits and objectives that stakeholders hope that high speed rail may bring; these are discussed in greater depth in chapter two, but are outlined here first.

They include improved accessibility from city to city (to enable better communication and access from business to business), the possible relocation of businesses outside London and the South East, reduced journey times allowing more efficient travelling – and therefore increasing business productivity – and encouraging new growth and development in emerging urban growth centres. Stakeholders argue that there are significant capacity issues on the rail network at present, and the greatest priority for business users is that they are not overcrowded and that the trains are reliable and trustworthy. A stakeholder in the business sector commented that 'businesses primarily need a punctual and reliable service'. Reduced capacity constraints, better accessibility between cities and a more reliable service are all seen to benefit businesses.

There is a strong feeling that whether or not high speed rail will bring economic growth is the biggest question to address before next steps are taken. If the business case is proven, stakeholders believe this will give the political case the spark to begin the process. One stakeholder said 'what will high speed rail do for UK plc?' and many others alluded to this in their comments.

The predominant view among the online stakeholders here is that the impact of the introduction of high speed rail would be positive for the UK economy. One way through which this beneficial outcome could be achieved is through decentralisation. Different regions in the UK will be able to contribute more to the output of 'UK plc.', although the impact on regions directly will vary, depending on how they are served by high-speed rail. However, one stakeholder also raises the possibility that high-speed rail could be largely redistributive between regions and thus create negligible net economic benefits. Another stakeholder mentions dependence of regional performance with high-speed rail on good connectivity with existing networks both in the UK and Europe. These views are similar to those in the main consultation

Capacity

The current and predicted capacity restraints on the rail network are the main concerns among stakeholders and the top priorities to be addressed on the rail network, as highlighted above. Stakeholders identify the benefits of freeing up capacity on the existing network, which could be used for both local passenger journeys and for freight. Many stakeholders say that this would be a key objective for a high speed rail network.

Impact of freight

Many stakeholders believe it is important that the issues of freight transport are not ignored as passenger rail improvements are considered. Freight transport also faces issues of capacity and the current high use of road travel for moving freight is considered to be both costly and less environmentally friendly. Freeing up freight capacity within the existing network is seen as a significant secondary benefit (it has been highlighted that this is an important area that has to be planned at a national level). There is some doubt among stakeholders about whether or not freight can be taken off the roads; however, there are seen to be potential benefits for both the environment and for the economy if this does happen.

"It would be ridiculous to put freight trains on HSR"

There is understanding among stakeholders that freight should not be moved onto a high speed line, as there is little need for the faster travel time. However if passenger journeys were moved onto a high speed line then using the current network for freight travel would be both faster and greener, compared to road travel.

Environment

It is important to most stakeholders that the sustainability and environmental cases for high speed rail is proven. Replacing domestic air travel, primarily by competing with air travel on journey time, is also mentioned by a number of stakeholders to be a key objective of high speed rail. In general, there is a perception that high speed rail is greener than air or road travel (but there is not complete agreement on the level of evidence for this).

The main environmental concerns are around fuel consumption and where the energy supply to power such a network would come from. It has been highlighted that nuclear or renewable energy resources would have to be considered, particularly given the increase in fuel consumption as the speed of travel increases. As the Department for Transport is keen to move towards a sustainable transport system, this objective – one shared with the Government – is key, and could hold influence over potential support for high speed rail. The other issues that were raised include air travel, energy, the impact on the landscape, CO_2 emissions and noise pollution; these are discussed later on in depth.

Participants in the online consultation were asked to rank each of the following objectives on a scale of 1 to 5, where 1 = not at all important and 5 = very important. Interestingly, as the qualitative research brought up the top issues with high average scores are increasing capacity, reducing domestic air travel and increasing economic growth. All of the areas addressed are seen as being important with average scores of 3.5 of greater out of 5. This is summarised in the table below.

Objective	Average score
Increase the future capacity of the transport system	4.4
Reduce overall carbon emissions from the transport system by reducing short-haul air travel	4.4
Increase national economic growth	4.2
Reduce overall carbon emissions from the transport system by reducing car travel	4.2
Reduce regional economic disparities	3.6
Stimulate economic development and regeneration	3.6
Encourage sustainable patterns of economic development in towns and cities	3.5

Table 1.1 Mean scores of importance attributed to a number of objectives of high-speed rail

1.5 What a successful HSR network in the UK would have to consider

The most frequently mentioned challenge for the high speed rail network in the United Kingdom is the potential cost burden associated with the scheme.

It is apparent, however, that participants do not feel that the costs associated with the introduction of high speed rail are prohibitive. A well informed stakeholder notes that the UK's existing 107km of high speed railway track and a new terminal at Ebbsfleet in Kent cost £5.8 billion to construct, while the construction cost of the controversial Heathrow Terminal 5 building exceeded £4 billion. While aware of the fears of those who express scepticism towards high speed rail on the basis of cost, he urged people to look beyond the initial 'headline' cost of any scheme and recognise that such a scheme would be constructed over many years, with annual capital expenditure on the project not exceeding 0.1% of GDP. Similarly, a representative of West Yorkshire Passenger Transport Executive disagrees with the suggestion that the project is unaffordable, by highlighting that the total government funding required to construct a UK-wide network pales into insignificance alongside the vast amount of money the Government was able to "find" in order to support the British banking system in the past months.

"The biggest barrier is raising the funding in the current economic climate"

Interestingly, this consultation took place as the UK faced a turbulent time in the economy. Given the current economic climate stakeholders are concerned about where the funding is found and what impact, if any, this would have on local and national transport budgets. Stakeholders believe that the successful introduction of high speed rail in the UK would require both a large investment of private capital and also require the Government to draw significantly upon the public finances. They also note that both the Labour and Conservative parties have, in the past months, made favourable policy statements in support of high speed rail. These announcements have been perceived as lacking clarity in terms of the level of funding they may be willing to provide for the introduction of the services. A stakeholder representing Birmingham City Council argues that, for high speed rail network plans to progress, Government and opposition parties need to provide detail on this issue. While all the main parties have been positive towards high speed rail, many stakeholders perceive political opinion to vary depending on which party is in Government.

In addition to the cost burden associated with the project, one stakeholder is particularly critical of politicians of all persuasions for their failure to adopt a long-term, strategic vision for the British transport system. In order for long-term transport infrastructure improvements such as high speed rail to be implemented, it is argued that it is necessary for governments to recognise that the project will not take five or ten years, but rather decades to complete. A stakeholder commented that at present, large-scale rail infrastructure improvements in the UK are limited to projects such as the reconstruction of the East London Line, with full details regarding the London Crossrail scheme still to be determined.

Regional Concerns

It is seen as important, given the very nature of high speed rail services, that services must not stop at too great a number of stations. It is clear, however, that participants from across the United Kingdom all wish for any future high speed rail network to serve their city or region. There is a realisation among many stakeholders that, in order for the scheme to be a success, tough political decisions will need to be taken about where stations are located. This decision-making process will, in itself, pose a significant challenge to the introduction of high speed rail network in the United Kingdom.

The majority of participants from regional and local organisations, while recognising the impact of high speed rail upon the transport infrastructure of their own communities and surrounding regions, pay less attention to the impact of the introduction of high speed rail on the national transport network. A stakeholder representing the Highways Agency, however, has spoken of the need for high speed rail links to be strategically integrated into the road network to take into account larger or small traffic flows along particular routes. In constructing a high speed rail network, he concluded, one would not simply be building a railway line but fundamentally altering the balance of the UK's transport system. This highlights a widespread view among stakeholders, especially at local level, that the integration of different modes of transport and linking in transport hubs is key to a successful network.

1.6 The business case versus the policy case

> *"Choosing exemplary routes needs to be explained. We would choose one with the best business case"*

Stakeholders believe it is important that any HSR network should be based on evidence that it would bring real economic benefits. A participant from the CBI states that HSR could not be built as a 'pet project' of any party or minister, but rather would need to have proof that the routes being built were delivering real benefits. This is seen as the primary driver and proving the business case is often seen as Greengauge 21's first priority. Having said this, stakeholders understand that there would have to be political support behind any HSR project, and while the political case should not be as important as the business case, the politics cannot be ignored and are vital for the successful implementation of such a scheme.

Looking at what contributes to the policy case, participants highlighted the importance of government support in order to progress with high speed rail. They commonly think government support could have a knock on effect in terms of private investment decisions. Regarding the political case for high speed rail, stakeholders said that the economic, social and environmental consequences must be demonstrably considered. The business case needs to be proved for different alignments and routes, both for UK plc and regional economic development. As has been touched on before, stakeholders agree that if the benefits outweigh the costs then the business case will be clear.

Respondents in the online consultation were asked to select their top three attributes from the list in the table below. The ten stakeholders in this consultation selected increased capacity and faster journey times as the most valuable attributes of a high speed rail system. The totals are summarised in the table below.

Attribute	Count
Additional capacity for intercity rail services	6
Fast journey times between cities	5
Freed capacity on the existing network for additional local or regional passenger rail services	5
Freed capacity on the existing network for additional rail freight services	3
Improved reliability	2
Improved train frequencies	2
Lower carbon emissions than other modes of transport	2
Attracts more people onto the rail network	1
High safety levels	0
Quality of service	0
Show Britain leads the way in rail technology	0

Table 1.2 Most valuable attributes of high-speed rail

CHAPTER TWO: Productivity and Competitiveness

2.1 Introduction

There is disagreement among participants as to what importance to place on national economic growth and regional economic growth. Unsurprisingly, Regional Development Agencies are primarily concerned with regional growth and development and about how they will be affected by the development of a high speed line. Stakeholders from RDAs identify local needs and development issues which need to be weighed up if looking at future alignments.

An additional question raised was 'what will high-speed rail do for UK plc?' and there is cited a general need for further economic analysis to be provided on both the economic and agglomeration benefits. This evidence base is believed to be currently lacking and needs to be provided for both the effects on local and national economic growth. This is vital as most stakeholders see the economic benefits being the primary driver to introducing high-speed rail.

2.2 National economic impact

Businesses are overwhelmingly supportive of the principle of high speed rail. Stakeholders recounted how a recent survey of British Chamber of Commerce members showed more than three quarters (76%) of participants said that rail would be the most viable alternative to road for freight. Indeed, stakeholders from the business sector appear to believe that momentum is behind the campaign for high speed rail.

Regional Development Agencies clearly state the perceived advantages to businesses that improved transport infrastructure can bring and encourage. These are viewed by all stakeholders as key objectives for businesses in the UK as a whole and ways in which high speed rail could benefit UK plc.

Improved accessibility and connectivity between UK cities is said to be vital. Primarily stakeholders in city councils and regional development agencies are concerned that UK cities are connected to London and on from that into international links into Paris and Brussels. However business organisations and RDAs both emphasise the importance of being connected to other cities for growth. In particular in the northern regions of the UK connecting up the main economic growth cities is seen as very important for trade, supply and business expansion.

As well as making London and other major cities more accessible to businesses elsewhere in the UK, there is a strong sense among stakeholders that travelling time is valuable to business and productivity is linked into the cost of staff and working hours. Currently if employees spend a lot of time travelling this is seen as down time and loses valuable working hours. However, the improvement of the current rail network and the introduction of technology including wi-fi access on trains is perceived to have significantly benefited businesses. Both reduced journey time and increased productivity on the journeys are seen as valuable to helping businesses be more profitable.

As has been mentioned, stakeholders view an additional benefit in being more competitive with European countries who already have a high speed network in place. Interestingly they also suggest that better connections into Europe would encourage more international business and growth for UK businesses.

It is believed that high speed rail could release the pressure on London of holding the weight of the whole economy. The UK as a whole is seen to benefit if some of this business was relocated to other areas of the UK. In particular, it is seen that high speed rail would encourage more businesses to relocate outside of London or indeed for companies and government bodies to relocate some of their back offices elsewhere. This is considered to engender employment opportunities, the spread of GDP and help to cool down the economy of the South East. It is believed that this would distribute work, people and wealth to bring overall benefit to UK plc.

Stakeholders also believe that high speed rail could impact on commuter patterns in the UK, providing greater choice for people as to where they live and how far they travel to work. This is an area that could be seen to have positive impacts or negative impacts depending on where people choose to locate their homes and their businesses.

While all these areas are perceived to be potential impacts of high speed rail on the national economy, there is a big unanswered question as to where the evidence of economic growth is, and it was hoped that this would be covered by future work and the strategic planning workstreams.

"You need to look at it as investment, not expenditure"

There are concerns, highlighted later that the costs and funding for high speed rail need to be considered and stakeholders consider this a caveat to their support in general. However stakeholders do comment that it would be a valuable investment and not necessarily a drain on funds but rather a benefit for the economy.

2.2 Local economic impact (analysis of different regional issues)

North/South connection:

Perhaps unsurprisingly, the further away participants are located from London, the less satisfied they are with their existing transport links – both road and rail – to the capital.

It was notable, however, that while a large majority of participants favoured the initial construction of high speed rail services on a London to Birmingham to Manchester route, dissatisfaction towards the existing West Coast mainline services to the Manchester city-region was limited. The present two hour journey time between London and Manchester is viewed as being widely acceptable. Capacity issues are believed to be a greater problem than the need for high speed.

Several participants, mindful of the considerable investment provided to the London to Manchester link over the past decade, questioned the wisdom of the inclusion of the city in the first tranche of high speed rail construction, instead stating a preference for initial investment to be diverted towards the poorly-regarded East Coast main line.

Local government authorities and Passenger Transport Executives do not believe that the benefits of the introduction of high speed rail would be confined to city limits but rather see the scheme as providing broader regional benefits in terms of both improved transport access and economic regeneration. Birmingham City Council, for example, believes the introduction of high speed services to the city would provide benefits to nearby cities and towns such as Coventry and Bromsgrove, while a participant from Tees Valley Regeneration stressed the likely benefits that residents of the wider Tyne and Wear region would obtain from the services as a result of local tram services connecting to high speed rail hubs. Stakeholders frequently cited the importance of addressing the agglomeration benefits to surrounding areas that high speed rail lines serve. For example, the perceived benefits that Liverpool would receive as a result of being well connected into Manchester were highlighted by Merseytravel.

It has been notable throughout the consultation that, while participants have been conscious high speed rail links may need to be constructed on an incremental basis in order to achieve the long-term objective of a country-wide high speed services, there has been an overriding expectation that services from Scotland and the North of England would ultimately directly connect through to continental rail services. Greater connectivity into Europe is seen as a strong benefit to all sectors of UK business.

2.3 Regional regeneration

In general stakeholders consider regional regeneration with some uncertainty. While the impacts on areas of economic growth centres of introducing high speed rail are considered to be generally positive there is a sense of the unknown when it comes to regional regeneration. While proponents of high speed rail do consider that regional regeneration will be a benefit of high speed rail, most stakeholders are not currently convinced. There is a hope that it will be a result of high speed rail development but it is not assumed as a certainty.

"The regeneration benefits may be exaggerated"

Some stakeholders did specifically mention areas where they hoped that high speed rail would encourage regional regeneration. In particular Tees Valley and Tyneside are areas in the North East which are hoped to receive benefits of regional regeneration if served by a high speed line. The Thames Gateway was also mentioned as an area in need of regeneration, which may benefit from high speed rail development.

The primary reason for stakeholders' uncertainty about regional regeneration is that transport alone is not viewed in itself as being able to prompt regional regeneration. The case is believed unproven as to whether or not there would be development or housing, employment and other services in an area. Ebbsfleet was cited as an example where there are signs of regeneration and growth due to high speed rail but stakeholders are unsure if this would be the case, or indeed the priority, elsewhere.

Employment opportunities

The proposed introduction of high speed rail services in the UK is widely considered to be a factor that would have a considerable impact upon access to employment opportunities across the country. The planned £300 million development adjacent to Newcastle-upon-Tyne railway station, for example, which will provide 3,000 to 4,000 new jobs to the region is viewed as a harbinger of things to come if a high speed link to the city is constructed.

It has been noted by Tees Valley Regeneration that high speed rail would bring about a likely shift in the location of "back office" jobs from the expensive London and South East England regions to the north of England, a region with considerably lower wage costs.

2.4 The economic risks

In general, the greatest risk of looking into high speed rail is considered to be the lack of an evidence base for the economic case (this is an area that, while complex, Greengauge 21 can address). In addition to this there is some concern over whether high speed rail may cause some urban areas to thrive and others to suffer. Some participants mentioned that there was a risk of smaller local economies being sucked into larger areas of economic growth, with businesses moving away from areas of lesser growth and particularly if people commuted further then local work forces would be sucked into larger areas. Some stakeholders are worried that it could fuel the already over heating big local economies, especially London. However this, while a risk, is considered to be outweighed by the potential benefits. One way of overcoming this problem is believed to be making sure that stations are not located too close to each other.

Considering different sectors of the UK economy, the two sectors which are expected to benefit most are the finance sector and leisure and tourism. The finance sector, which is seen as being primarily London based is expected to benefit from moving offices outside of London and also having access to a wider work force. The leisure and tourism sector is thought to enjoy a boost as there is easier access around the UK for both international visitors and UK residents to travel more. In some regions in particular this is seen as a benefit. For example, Liverpool as the 2008 European Capital of Culture was considered as an example of where high speed rail could have enabled many more visitors to the city.

2.5 Cost

Affordability of high-speed rail is a key challenge to both the government and private sector. Especially in light of the current economic situation it is understood by most stakeholders that funding would have to come from both private and public funding and serious government backing would be required to get this off the ground. It is understood that it will be a costly investment but if the business case is proven for economic growth and benefit for UK plc then it is worth it. The two main concerns over cost were firstly, whether money would be withdrawn from other public funding, in particular current transport infrastructure plans and developments and secondly whether it would be unwise to plan for a whole network, rather than just one route at a time given the current economic situation.

Interestingly, when modal considerations are discussed a number of participants mentioned having 'working time' on the train. This is a strong advantage for businesses over air or road travel as the easy access to the internet or technology use means that time on trains can be more productive.

This has both positive and negative implications for the prospect of high speed rail. Firstly, should HSR be introduced then making it business friendly by incorporating wi-fi access, electricity supplies and any other business requirements is essential in making it a feasible option for people when then are considering travelling by high speed rail. However, on the negative side, as time use is more efficient on trains and it is not seen so much as down time then journey time is less of a concern for business travellers. This is interesting to note as it has been viewed as being a strong advantage of HSR that journey times are reduced. But when the value of the time on a train is almost as valuable as the time spent in the office then journey time is a lesser consideration for business travellers. Since journey time, in general, is a greater priority to business passengers rather than leisure travellers then this again points to the question of whether or not there is a need for speed.

With regards to the cost of high speed rail, some stakeholders also highlighted the importance of the pricing and ticketing not disadvantaging any groups and remaining competitive. This will be discussed later on.

CHAPTER THREE: Equality of Opportunity

3.1 Introduction

The consultation also addressed the issue of equality of opportunity. Stakeholders were asked how they view regional issues and the perceived advantages and disadvantages for different groups like business and social rail users.

Among stakeholders surveyed there is a considerable level of scepticism about the ability of high speed rail to provide for passengers other than business users, principally as a result of the perceived cost of the links. Much of this perception appears to derive from participants' experiences of encountering high ticket prices on existing inter-city links from the north of England to London with one respondent offering the example of a standard class open return costing as much as £250 on the existing Newcastle to London service.

Participants clearly feel that the present structure of rail pricing is both confusing and, in some cases, acts as an impediment for leisure users to access rail services. Confidence that high speed rail services would use anything other than a confusing ticketing system is limited. In order to remedy this perception, several participants have expressed a belief that a more unified and simplistic pricing structure for high speed rail services must be adopted from the outset. It is clearly unacceptable, one respondent argued, that identical tickets purchased on the same day can cost £100 when brought online and £300 when purchased at the railway station. Fears undoubtedly exist that high speed rail would be an "elite service".

3.2 Commuters/Business travellers/Leisure travellers

It is perceived that HSR is seen as primarily a benefit to business consumers before leisure or commuter travellers. There are seen to be advantages to all three groups but these are viewed as secondary effects or have caveats attached.

Business travellers:

HSR is seen as being primarily advantageous to business travellers. It is believed that they are often facing the greatest capacity issues due to travelling at peak hours or taking last minute journeys; similarly journey time and reliability are seen to be more important to business travellers than leisure travellers. It is thought that business travellers are most likely to be making city to city journeys and therefore perhaps most likely to see the benefits of an HSR line. Since economic drivers are viewed as a top priority then part of the assumed benefit comes from improved links between companies and service providers. The ability for people to travel to meetings in other parts of the UK easily and without having to travel over two days is also highly favoured.

It is considered that business travellers look primarily for reliability, speed and productivity. This means that stakeholders highlight that they generally favour city to city access so that people can get between meetings more easily and have improved connectivity. In addition productive travel time that can be used as work time is considered a big advantage for business. Train travel is considered to be much more

productive than road or air travel due to being able to access technology or the internet on the train.

Some stakeholders highlighted that business travellers often fly instead of taking the train due to the shorter journey time, particularly from Scotland. However this is viewed as less environmentally friendly and a less productive use of time.

"The amount of flying from London to Scotland is unacceptable"

Leisure travellers:

While most people assume that business travellers will be the primary customers on an HSR network, it is thought that business travellers alone would not make it a viable investment. Leisure travelling, especially off peak, would be expected to be a large income generator and therefore it is thought HSR would have to be suitably planned and structured so as to meet the requirements and needs of different types of travellers. Leisure travellers are mainly concerned with congestion, over crowding and reliability rather than speed. The case for how HSR could meet these would be of great importance. On top of this leisure customers are most likely to be concerned over the price of the journey and would therefore be willing to be flexible on travel time and mode to save money. For high speed rail to be a viable option for leisure travellers ticket prices would have to be competitive.

Commuters:

In comparison to leisure and business travellers, commuters are not seen to be directly impacted by high speed rail in the same way. The two areas which are believed to affect commuters have been mentioned already. Firstly, it is believed that high speed rail would free up capacity on the existing rail network and this would free up capacity for local and commuter journeys. Reducing overcrowding and making the current services more reliable, as a side effect of high speed rail, is believed to be a strong advantage. Secondly, the reduced journey times are considered to be advantageous in allowing people to commute longer distances for work as the radius for attracting workers increases around major cities.

3.3 Corridor analysis (advantages/disadvantages of suggested corridors, with focus on London-Birmingham-Manchester)

This next section examines the regional issues that were discussed in the interviews and draws together views of people in different areas.

In general there is agreement with Greengauge 21's suggested prioritisation of corridor one, which would go from London to Birmingham to Manchester. It appears that most national organisations both understand and accept the reasons for Greengauge 21 prioritising this route and see this as a good place to start. However, unsurprisingly there are different regional issues and it is important to note the regional arguments in support or opposition of high speed rail corridors while regional bodies tend to favour the corridors which are most likely to serve their region, there is an understanding of the need to prioritise corridor one (even if, on occasion, with reluctance).

As a general view, if a corridor or number of corridors are taken forward in the future then it is vital that the case is presented as both a national and a regional argument and that both points of view are taken into account. Stakeholders are concerned that each corridor needs to be considered and tested under the same criteria so as to enable sensible conclusions to be drawn.

A stakeholder representing Centre for Cities commented that people are tempted to take an all or nothing approach when it comes to considering a high speed rail network in the UK. Rather they suggest Greenguage 21 should focus on one particular line and then think about how to deliver agglomeration benefits from that line. A number of stakeholders suggested a route from London to Birmingham to Manchester then towards Yorkshire and the North East perhaps servicing Leeds, York or Newcastle. Four or five stakeholders, mainly from national bodies, cited that priority should be given to an extended version of corridor one – which would go from London to Manchester and then to the North East. This is coupled with the fact that, particularly with stakeholders in the North of England, the Trans-Pennine route is highly favoured. This was frequently cited and a number of people comment that the first line cannot stop at Manchester. Others suggested this same route and recommended continuing it on to Scotland. As this route was discussed a couple of stakeholders raised the question of whether, should this go ahead, it would be constructed from South to North or North to South. There was agreement among these stakeholders that there is benefit to the North of the UK if construction began at both ends so that Northern cities and Scotland could be linked up first then joining into the London link.

It is worth noting that one line that goes from London to Manchester then to the North East was seen in positive light due to the benefits of linking the Northern cities together, It also seemed that the East Coast corridor was viewed as being a lower priority than the West Coast corridor

Corridor one is favoured because the biggest populations are within the West Midlands conurbations, Greater Manchester and the North West and it is felt that the chosen route should serve the greatest number of people possible. It was also acknowledged that the West Coast mainline is facing increasing capacity issues and that the large number of

journeys in that region as well as the predicted increases could provide the evidence for the need for further transport investment.

Below we shall address some of the key regional issues that were raised and highlight key areas that Greengauge 21 may wish to consider. It was mentioned that it is important for Greengauge 21 to understand that there are tricky political issues by region, and these need to be managed carefully and their eventual initial route defended well.

Stakeholders in the online consultation were asked whether they agree or disagree with Greengauge 21's prioritisation of the London-Birmingham-Manchester route. Agreement and disagreement with the stated reasoning (see question in Appendix) is fairly evenly split. Four stakeholders say that they agree, four say that they disagree and two say that they don't know. Of those who voice disagreement, one says that the reasoning on which the selection of a high-speed rail route should be based should be that of replace most short-haul domestic flights and that the current reasoning is not entirely clear.

One stakeholder says that the existing line speed between London and Birmingham and Manchester is good enough for the benefits of HRS to be minimal (though not zero). The argument that it would be a good value for money way of providing new rail capacity needs to be articulated in detail. The value of links to London Heathrow and Eurostar are contentious: the case has to be made.

Another stakeholder who voices disagreement says that there has been a lot of investment recently into the West Coast Mainline, while the Midlands Mainline remains underfunded. They say that a high-speed rail line should be devised so as to serve the three East midland cities as well as longer distance destinations. Another stakeholder who disagrees with the tested reason says that 'the London to Bristol/South West should have priority in view of peripherality and government PSA targets to reduce inequalities and address congestion on the M4/Great Western main line'.

London

While there is almost unanimous agreement that London needs to be on the high speed network there is disagreement among stakeholders as to how this will work and where it should go from in London.

"There's no need to bring HSR into central London, you could just link it in with Thameslink and Crossrail"

While in general most stakeholders did not suggest that there could be a detrimental effect on local economies, some suggested that there is the risk of people and business from areas surrounding London being 'sucked into London'. It was argued that this should be avoided and in fact that a high speed rail network should instead encourage regional economic growth and improve the flow between regions so as to bring agglomeration benefits and improved productivity. There is a perceived risk that since Birmingham could be within commuting distance from London that valuable members of the Midlands workforce could be drawn out of Birmingham and into London.

On the other hand a number of stakeholders suggested that in fact there would be greater benefits than disadvantages to the areas that would be brought into this orbit around London. In particular it was suggested that some of the 'back office functions' of businesses currently based in London could relocate to other areas in the Thames Valley, Reading area, or even towards the Midlands and Milton Keynes. This would both ease the economic pressure and reliance on London and the South East but also provide an opportunity for businesses to relocate or save money and provide more jobs by basing some office functions outside the London area.

When evaluating the possible impact of high speed rail upon London, a participant in London expressed reservations about the scheme on the basis of fears transport funding in the capital may be reduced in order to accommodate further inward links into an already-overcrowded transport system in the capital city. If London was, however, to accommodate further transport links then this would have to be well planned. A possible solution to domestic rail gridlock that was suggested could be to reclassify Euston as a long-distance hub, transferring capacity for other journeys from the station to other stations in the city.

There is some disagreement among stakeholders about how London as a city would connect into the high speed network. There are three areas which are considered to be important and the opinion on how to prioritise these is divided. Firstly, a high speed link to the capital would need to service central London. If the centre of the city was not served then the benefits to business of accessibility to the business hub would be diminished. It would also create additional problems of how to move these passengers on to other modes of transport to enable them to access the centre. Secondly, links to St Pancras and High Speed One links to Europe are considered a high priority for all types of travellers. It is considered that the most suitable way to do this would be to link into St Pancras but this is understood to be less practical for areas of the south east and south west that have easier access to south London. While the exact structure of this is unknown, a link into European high speed links is considered important. Thirdly, links into Heathrow are considered vital. Neither a city centre link nor Heathrow links should take greater priority but most stakeholders think that a line should indeed service both the capital centre and 'the largest UK transport hub', as one stakeholder referred to Heathrow.

"Our members don't want different tiers within the network; it needs to be integrated"

Birmingham and West Midlands

Birmingham City Council is firmly supportive of high speed rail and has taken part in a national conference earlier in the year looking into the future of high speed rail. They see it as a major component of regeneration in both the city and wider afield in the West Midlands region. The city council hope that Advantage West Midlands, Centro and the Birmingham Chamber of Commerce will unite with the view to move forward on high speed rail. They also hope to encourage environmental groups to support an HSR link into the city so that Birmingham can present a united pro-HSR alliance.

From a Birmingham perspective it is vital that a high speed rail route links into international services to Europe. The connection, in some way, into High Speed One and therefore to Brussels and Paris is key to Birmingham. With the geographical location of Birmingham the journey times to London are not considered the top priority. In fact a number of stakeholders from outside the West Midlands region would consider that Birmingham is too close to London to warrant a high speed rail link as the journey time is already considered to be good. In contrast representatives of cities further north in the UK think that there is a stronger case for reducing the journey time.

It was highlighted that there are two main objectives from the point of view of Birmingham. Firstly, to encourage improved transport links, especially in the centre of Birmingham and in Birmingham New Street Station where there can be capacity issues and secondly to engender economic growth. It is hoped in Birmingham that high speed rail would bring the GDP of Birmingham and the West Midlands region up to the national average, which it currently lags behind. Birmingham is keen to see this region become more competitive with other UK regions. It was quoted that studies show that the cost/benefit ratio of constructing HSR in the London to Birmingham region could bring in excess of £30 billion of benefit the city.

Birmingham New Street Station is considered to be a major transport hub and links into there, or indeed into Moor Street, would be expected to free up local capacity and freight capacity.

North West

There is a broad acceptance among the majority of stakeholders surveyed from across the United Kingdom that Manchester is both a likely and acceptable candidate for inclusion in the first tranche of any high speed rail project.

A representative from North West Rail campaign is, however, keen to stress that West Coast main line services from London to Manchester have already been improved significantly over the past few years, with journey times falling from 2h40 to 2h05. As such, for any high speed rail link to be effective, it would have to provide a considerable reduction in existing journey times. Additionally, it was noted that existing service capacity at Manchester's two major rail hubs of Piccadilly and Victoria is already considerably overstretched and that considerable upgrade work would be necessary in order to accommodate high speed services.

If high speed services are to be introduced in Manchester, difficult strategic decisions will need to be made about the location of the high speed rail terminal. At present, rail links across Greater Manchester are somewhat disjointed, with a stakeholder from Manchester Airport illustrating the problem of services from Piccadilly and Victoria stations serving different parts of the metropolitan area, with poor inter-connectivity between the two stations. In order for the city of Manchester to derive the maximum benefit from high speed rail, it would be necessary to take steps to integrate the rail network so as to avoid parts of the conurbation being able to benefit from direct links to the rail terminal and others being effectively frozen out.

From a Manchester perspective, the direct linkage of the airport to the high speed rail network is a key priority. As the UK's largest airport outside of London, stakeholders envisage significant opportunities for the expansion of 'rail-air' services, therefore reducing capacity demands on the capital's airports while also providing significant economic opportunities for the Greater Manchester area.

As with other regions in the North of England, respondents from the North West were severely critical of the existing transport links that exist on an East/West axis such as those linking Manchester to York and Leeds. Significant support exists for the introduction of either a high speed or significantly improved service along a 'trans-Pennine' axis so as to improve transport links and economic development across the north of England. Stakeholders in the North East, particularly Newcastle, also cited the problems facing connections across the North of England and the benefits that improved connections could bring.

North East

Representatives from organisations in the North East of England are tremendously enthusiastic about the possibility of a high speed rail link between London and the region. Indeed, a stakeholder from Tees Valley Regeneration was quick to mention the economic benefits already secured by the region as a result of the existing East Coast mainline service to Newcastle. The planned £300 million development adjacent to Newcastle-upon-Tyne railway station, which will provide 3,000 to 4,000 new jobs to the region is viewed as a harbinger of things to come if a high speed link to the city is constructed.

The economic benefits derived by the North East of England following the introduction of high speed rail are believed to be vast with one stakeholder suggesting that government departments and companies which had previously been hesitant to locate 'back office' staff in the region may be attracted by the lessening of journey times to London.

The importance of integrating the whole transport network was highlighted by participants in the North East. For example it was said that the Tyne and Wear Metro has brought benefits to 650,000 people and this should be linked into a high speed line if it served the Newcastle area.

In addition participants in the North East highlighted that for the region the sea ports at the Tyne and in Teeside are key to local businesses for delivering goods and freight. While not relevant to all of the UK, if addressing freight were to be considered then connectivity with seaports should be addressed.

Stakeholders in this region, while primarily looking to have a faster connection to London, see that there are benefits to the North East of being connected into Scotland, primarily Edinburgh, as well. In addition, as has been mentioned before, stakeholders in the North East are also concerned that major Northern cities are connected. Primarily this is seen to encourage economic growth and provide better accessibility and connectivity throughout the North.

Yorkshire

In Yorkshire, and the North in general, high speed rail has been identified as a key strategic priority for the long term. In particular it is suggested that connections are needed to London, other northern cities, the Channel Tunnel and both Heathrow and Manchester airports. In particular two priorities for the Yorkshire economy were mentioned: firstly, expanding the labour market (particularly by linking across the trans-Pennine route) and enabling more movement of the workforce around the northern regions; secondly having better business links between cities and businesses to encourage economic growth.

"Leeds is the forgotten Cinderella, it has yet to realise its potential"

From a Yorkshire perspective, Leeds is the key city to have on the network, followed by Sheffield. It is also seen as vital that there are North East to North West links. It was mentioned that there are political issues that need to be addressed as to which northern cities are served and this would have to be carefully considered.

East of England

A representative in the East of England welcomed the potential introduction of high speed rail services in the United Kingdom. The chief benefit derived by the Eastern region would be that of increased rail capacity as opposed to considerable improvements in journey times.

The East of England region is, however, concerned at the possible impact of high speed rail services between the north and south of England upon the economy of the region which, unlike northern regions, is a net contributor to the Treasury. One participant does not believe that high speed rail should be designed to bring about regional regeneration but rather as a tool to support existing areas of economic success. One example that was mentioned was making good use of connecting Cambridge by enabling the science parks and technology development to be connected into the rest of the UK both to serve the economy and also provide better access for Cambridge to other areas. Cambridge is perceived to be a centre for growth and development and therefore participants in the region consider it a high priority.

South East

Wider afield in the South East it is considered that, with London, there is significantly more economic output in this region than other UK regions. In light of this, the benefits for the South East economy are particular opportunities to encourage growth in areas of current success for example the Thames Valley, and promote new development and regeneration in areas, such as the Thames Gateway. Journey time to London is not a priority since the area is already a journey from the capital, however over crowding and commuter services are seen to be in need of improvement.

The South East is seen to benefit from the experience of high speed one and the current access to Europe. The lessons learnt in Kent and the continuous investment into areas around new stations for example at Ashford and Ebbsfleet is considered to be beneficial to the region. However it was cited that from the experience in Kent it is vital to carefully address planning considerations.

While considering the impact of high speed rail in the South East it is also important to bear in mind the current investment – both in high speed one but also in Crossrail. It is perceived that Crossrail will bring benefits both to the regional economy and by improving accessibility within the region. Due to this current investment and the proximity to London, the case for high speed rail is not as strong as other regions.

Scotland

Rail stakeholders in Scotland are, without exception, enthusiastically supportive of the introduction of high speed rail services to the country. A representative of the Strathclyde Partnership for Transport argued that any high speed link must link directly to Scotland in the first stage of development. Similarly, while a stakeholder from Sestran suggested that existing rail routes in England such as those between Leeds and Newcastle and London are already of such a high quality that construction of high speed services ought to start in Scotland and gradually be built southwards.

While significant improvements have been carried out on the existing rail links from Edinburgh and Glasgow to London, stakeholders argue that the recent reduction in journey times of fifteen to twenty minutes does not allow for rail to compete with existing flight times. A high speed rail link of less than three and a half hours, such as that which could be provided by high speed rail, he argued, could bring about a significant reduction in the 100+ daily flights between London and Glasgow and Edinburgh.

While stakeholders in the majority of regions stress the importance of high speed rail links to London as being their main concern, significant support exists in Scotland for a high-speed link between Edinburgh and Glasgow. One stakeholder has however, highlighted significant problems with Scotland's present rail infrastructure capabilities, noting that only two stations are able presently to accommodate high speed rail services. Therefore significant additional investment would be required if services were to be extended to accommodate links to other large conurbations such as Aberdeen, Dundee and Inverness, such is the desire of one Scottish stakeholder.

It is notable, however, that while the Scottish respondents are enthusiastic about the introduction of high speed rail services, there is a degree of reluctance towards Scotland's inclusion in any future project among some English respondents. The main reason behind the lack of support from these people is based upon the present political climate in Scotland. There is concern over the uncertainty of how the financial burden of high speed rail would be spread if Scotland were to become a separate, independent state.

East Midlands

There is some concern in the East Midlands that it is not left as 'part of the scenery' in the high speed network - they are keen as a region to host a hub. In population terms it is said that the East Midlands is the fastest growing region but interestingly, other than Birmingham, there is no obvious candidate for which of Leicester, Derby or Nottingham would be served. However it is seen that if one city benefited then it could bring secondary benefits to other cities and the region as a whole. Within this region the question is raised as to whether high speed rail would be an engine for economic growth and how it would impact the commuter flows around the region.

The main priorities are to consider the 'two way street argument' as to whether high speed rail would bring more benefit to the region than it would draw away in terms of both people and resources. There is a worry that there could be the risk of commuters working outside the region. In general, as with most regions the perceived benefits are seen to outweigh the disadvantages and connection into a high speed network is seen as a positive move.

South West

As a region, the South West is ambitious to have a sustainable transport system and to improve connectivity to London. In particular the cities in the South West which are currently over two hours from London, or even more than three hours to Plymouth, are seen as in need of better connections. High speed links to the centres of the major cities are seen as a priority and in particular Bristol, Bournemouth and Swindon are mentioned. In addition Exeter, Plymouth and Taunton are other cities which could see the benefit of better connection to London. It is considered that if there were better connections then this would provide an economic boost to cities furthest away from London in particular. Connections into Heathrow are also considered a top priority for people in the South West. 25% of air passengers from the region use Heathrow and so it was stated that this link is very important.

Wales & Cardiff

Cardiff City Council is strongly supportive of the introduction of high speed rail services. A representative of Cardiff City Council has, however, articulated the city's considerable sensitivity towards the project, fearing that it may not be included in an early stage of development to the considerable advantage of "competitor" cities. It is firmly their belief that Cardiff and the west of England should be provided with a comparable high speed links either concurrently or ahead of cities such as Leeds and Newcastle.

It is argued that the introduction of a London to Cardiff high speed rail line would act as a stimulus for Cardiff to develop high-value business development clusters in areas such as life sciences and business development, thus supporting the city's efforts to move away from its industrial past.

Cardiff City Council is presently working to bring together partners in the South Wales region to coordinate a regional position in support of high speed rail.

The online consultation asked stakeholders to rate each of the five corridors that are being considered on scale of 1 to 5, where 1= a low priority for your organisation and 5= a high priority for your organisation. The average scores are given below. In this sample of people the London-Birmingham-Manchester route is of highest priority.

London-Birmingham-Manchester	4.2
London-Cambridge-North East	4.0
London-Bristol-Cardiff	3.7
Anglo-Scottish (North England-Edinburgh/Glasgow/Aberdeen)	2.8
Trans-Pennine (Liverpool-Manchester-Leeds-Hull)	2.3

Table 1.2 Mean scores of ratings of priority for different proposed routes

3.4 Integrating the network

"It's desperately important to integrate networks"

Connecting into transport hubs and other modes of transport is seen as very important and vital for successful connections into cities. Different corridors are favoured by different regions but most stakeholders understand the prioritisation of the London-Birmingham-Manchester route. Links to Scotland and the Trans-Pennine route are also broadly popular. There is unanimous agreement that a concerted effort should be made to link a new high speed line into current transport infrastructure. This includes linking into city centre transport hubs, and connecting into the existing rail network and other modes of transport. It is seen as vital that connections into local bus or tram routes and other rail is addressed at the planning stages. There were a number of reasons given for this. Firstly, so as to enable ease of travel and movement and to avoid any further congestion. Secondly, so that other factors do not impede the advantages of reduced journey time by adding on further travel considerations at the start or end of the journey. And thirdly, so that high speed rail does not encourage additional car usage to access stations.

When discussing the advantages and disadvantages for parkway stations versus city centre stations there were some different opinions raised in the interviews. While different views were discussed, the majority of stakeholders favour city to city connections that serve central urban areas. The reasons for this have been highlighted before: that business travellers need the time savings on inter city business journeys; it would not encourage additional car usage and parking; and it is seen to be more environmentally friendly.

Having said this, some of the advantages of parkway stations that were mentioned include that they are considered to perhaps be more cost effective than large scale urban development, that they could stop outside cities and continue on slower routes on the current lines into city centres (however this was rejected by other stakeholders). The example of Ebbsfleet was discussed in both positive and negative terms. It is considered that due to the large parkway it has actually caused additional congestion on the roads and car usage which may be unnecessary. However in contrast the way that it has encouraged development, out of town shopping centres and employment opportunities is seen as positive. The audience we are dealing with are well informed on the issues around choosing station locations and while city centre stations are favoured, in agreement with the Atkins report, it was acknowledged that it needs to be considered on a case-by-case basis.

The online consultation also examined the issue of how, if at all, a high speed network should be integrated with current transport infrastructure. Respondents were asked to rate each on a scale of 1 to 10 where 1=not at all important and 10=very important. The table below summarises the scores given.

"High speed trains need to go into city centres, but they're pretty full"

	Score
City centre stations	9.6
The current rail network	9.1
International gateways including Heathrow Airport or High Speed 1	8.4
Regional airports	7.1
Local bus, tram or light rail services	6.2
Out-of-town parkway stations	6.2
Sea ports	4.6

Table 1.3 Impact of high-speed rail on a variety of transport means

Participants were also asked to name their top priority out of these transport links. 4 respondents named the current rail network as their top priority and 6 nominate city centre stations. 3 respondents name links with international gateways.

3.5 Infrastructure considerations

There was some discussion in the interviews about whether or not high speed rail would run on a new dedicated line or whether it could utilise current rail infrastructure. A minority of stakeholders believe that there are advantages to making good use of what is in existing infrastructure. This was cited primarily due to the cost benefit and environmental benefit that this would bring and here was some apprehension about the scale and cost of completely new dedicated lines. However, the stakeholders who are perhaps more informed on this particular issue agree that it is important that, if introduced, the HSR would run on a dedicated line. This is for a number of reasons. Firstly as it would be more reliable and punctual if it were not using the same lines as current trains and instead had high-speed inter-city dedicated lines. Secondly, some of the longer distance journeys could run on the high speed line which would free up capacity on the current network. This capacity could be used to bring benefits to both local travel, particularly commuter traffic, and also to freight. Some direct links which have been lost due to capacity pressures could be reinstated (for example London to Milton Keynes). It is considered impractical to aim to run all high speed trains on current lines, which would not sufficiently address the main need of dealing with capacity constraints on the current network.

The views of stakeholders from Birmingham and Manchester – cited as the second and third largest cities in the UK respectively – as to the ability of existing rail termini in the two cities to cope with the demand high speed rail would place upon the existing rail infrastructure in the two cities is mixed. A representative from Manchester Airport argued that existing service capacity at both Manchester Victoria and Piccadilly stations is already at capacity while conversely, stakeholders from Birmingham City Council and Centro believe that 'protected' rail corridors leading into the centre of the city would accommodate any planned high speed service.

From an infrastructure perspective, Scotland is perceived to be almost uniquely poorly prepared to accommodate high speed services. It was mentioned by one stakeholder that there are only two existing stations in the country able to accommodate high speed services meaning that significant additional investment would be required if services were to be expanded beyond the cities of Glasgow and Edinburgh.

The introduction of the form of high speed rail services proposed by Greengauge 21 is deemed to be both desirable and comparatively affordable from an infrastructure perspective and the required new build is an accepted factor.

A representative of Transport Times argued that while Maglev services such as those presently tested in Japan may bring huge benefits in terms of speed and eliminating negative externalities such as excessive noise and vibrations, the project would require the wholesale construction of a new railway infrastructure. As such, the trains designed to operate on Maglev lines would be unable to integrate with the United Kingdom's existing railway line network thereby reducing the scheme's accessibility while at the same time contributing significantly to the cost burden of high speed rail. While one or two stakeholders in Scotland considered Maglev to be a positive development for the UK there was in general disagreement primarily due to the fact that it would not create a suitable network or link into current rail easily due to the differences in the infrastructure.

Some participants from transport companies, and those with in depth technical knowledge, commented that depending on Greengauge 21's approach to high speed rail there will have to be important technical decisions made. These are cited as being the gauge size, depending on the size of the railway, the size of the train and the size of the line. The TGV rail used a UIC gauge in comparison to the GB gauge which was mentioned as the Pendolino gauge. This is cited as a fundamental decision as it would affect the speed and infrastructure of the rail system. Stakeholders recommend that Greengauge 21 think hard about these issues. It was suggested that the UIC gauge was better than the current GB gauges. It was also cited that it is most efficient to have big trains. A number of reasons were given for this: firstly, there is greater capacity on bigger trains and the CO_2 emissions per passenger are therefore lower; and bigger trains are considered to be more efficient due to the drag on bogies.

3.6 Airport Links

While there has been a considerable amount of discussion among participants about the potential reductions in domestic air travel that could arise from the construction of a UK high speed rail network, there can be no doubt that access to air travel is viewed as an integral component of the network.

A few stakeholders, in highlighting the importance of linking into Heathrow, stated that the decision about high speed rail and Heathrow should not necessarily be linked to the proposals for an extra runway. Both high speed rail and an additional runway are considered to be significant decisions but stakeholders think that they should be addresses separately.

> *"Heathrow needs more runway capacity; it's the big issue, and HSR doesn't take away from runway demand"*

The benefits of high-speed rail links to London Heathrow in particular have been widely lauded by participants – particularly those in the South West, Midlands and North of England. Indeed, it has been argued that many of the contentious issues surrounding the proposed expansion of Heathrow airport could be addressed by the introduction of high speed services. However, a number of stakeholders mentioned that high speed rail should be considered completely distinct from the Heathrow expansion and discussions should be kept apart.

A stakeholder representing Centro has argued that a direct link between the West Midlands cities and Heathrow would both free-up capacity at the London airport while providing economic benefits to Birmingham in the form of greater employment opportunities and inward investment from companies keen to be located close to air terminals.

Despite the broad enthusiasm which exists towards linking regional airports to the high speed network, in the East of England concerns were expressed at possible implications of the expansion of Stansted airport. While the stakeholders in the East of England supports the construction of a high speed link to the airport, considerable reservations exist about the impact the expected ensuing growth of the airport would have upon the local environment.

The South East of Scotland Transport Partnership (Sestran) does not believe that connecting Heathrow airport to the high speed rail system should be a priority. Sestran instead favours placing an emphasis on the provision of fast and effective links to Paris and Brussels which would in turn free up capacity at Heathrow.

There is a view among participants that high speed rail would decrease the total amount of domestic flights taken in the United Kingdom, although this view is not one that is universally shared. A participant from the Highways Agency, for example, has argued that while high speed services may end the commercial viability of the London to Glasgow route, existing services from London to Birmingham and Manchester have such a small market shared when compared to even the present rail links that the abstraction of the market would be severely limited.

Heathrow is considered to be a key transport hub. Connections by air and also by other modes of transport are key to making it a successful transport hub. Stakeholders said that a proportion of transferring traffic through Heathrow comes from Birmingham, Leeds and Manchester airports and high speed rail could make that more sustainable. Participants from the aviation sector commented that not all airports are hubs but Heathrow needs to compete with other airports like Paris and Frankfurt for international connections. A high speed link to Heathrow is expected to encourage this.

It is worth noting that there is a general view among stakeholders that the northern airports are seeing increased use for international flights and there is the possibility of growth, for example at Leeds and Manchester airports. If this were the case, connecting these airports into a high speed network is considered to be advantageous.

CHAPTER FOUR: Sustainability, Climate Change and the Environment

4.1 Introduction

As outlined in Chapter One, sustainability and the environment are seen as very important issues to consider when looking at high speed rail in the UK. Some stakeholders say that it is a top priority and many think that it is a key issue to prove the political case for high speed rail in the UK. Within the interviews, stakeholders discussed their overall opinions on rail in comparison to other modes of transport in terms of environmental impact but also addressed specific environmental issues to consider and research which is needed in relation to high speed rail. We found that these stakeholders make up a very well informed audience, particularly in light of the Climate Change Bill and the familiarity with the Department for Transport's 'Towards a Sustainable Transport System' report.

The Department for Transport has highlighted the need to move towards a sustainable transport system. At the Rail Safety and Standards Board (RSSB), the team working on the sustainable rail programme has drawn together some of the key objectives for this, and this summarises the concerns of a number of other stakeholders. These are environmental (including climate change, noise and vibration, land take and pollution), economic (capacity, performance, government policy, regional development and costs) and social (accessibility, affordability, customer prices and safety).

4.2 General perceptions

There is a general perception among stakeholders that rail is 'greener and cleaner' than other modes of transport (in particular road travel and air travel). It is presumed that high speed rail is an environmentally friendly option and part of the solution to meeting the government's targets for CO_2 emissions. A number of stakeholders say that they may not have seen the evidence for rail's green credentials but presumed that high speed rail is environmentally friendly, given that rail currently is a cleaner mode of transport than some others. Feedback obtained during the discussions demonstrate that this issue is more complex and many factors need to be taken into consideration. Firstly, as has been highlighted earlier in the report, there is, to some extent, a perception of a lack of evidence proving or disproving the environmental credentials of high speed rail. Stakeholders mentioned that this is an area where they would like to see more evidence provided by Greengauge 21. For example, while there is an assumption about carbon emissions for rail, this remains unproven to many stakeholders and their final view will depend on the information they are given on the capacity of the train, the speed and the weight of the train. All of these factors need to be considered.

4.3 Energy

The biggest environmental issue that stakeholders raise is where the energy supply would come from to power high speed rail. It is acknowledged that high speed rail has a high fuel consumption and this is the primary area where stakeholders are concerned that it may not meet the initial assumptions about its "green" credential that people have. A number of stakeholders highlighted that it is important to make sure that energy policy fits in with future policy on high speed rail. In particular the planning will need to take into account how much energy will be consumed by a high speed rail train and how the weight, speed and capacity impact on this.

Electrification is seen as a positive way forward to deal with the issue of using up valuable oil or gas supplies and it is also seen as a cleaner way to power the trains. Some stakeholders in fact cited it as the only viable way to run trains at that speed. A number of participants stated that perhaps nuclear power would be the solution to providing renewable and cleaner electricity to power high speed trains. It was suggested that different scenarios should be tested to determine the environmental consequences of travelling at different speeds both in relation to the amount of fuel or energy used and also in relation to the emissions or pollution from running high speed trains.

4.4 Climate Change Bill and CO_2 targets

A detailed comparison between rail and air travel, particularly in relation to CO_2 emissions needs to be considered in order to determine how, if at all, a high speed rail network would contribute to meeting the targets set. The Conservatives have spoken of making high speed rail a central part of their transport policy and that it represents a step forward for the future. There is, however, some concern that the party's support for high speed rail is focused too closely on their opposition to the expansion of Heathrow airport. There is though a belief that the party's announcement has played a key role in bringing high speed rail to the attention of the general public.

As such, there is a view that the Conservatives' emphasis on the environmental benefits of high speed rail and the way in which it fits in with the Climate Change Bill must be treated with care as it could be used just as an expedient political tool.

4.5 Reducing road and air travel & modal comparison

One of the key environmental objectives for high speed rail as considered by stakeholders is to reduce domestic air travel.

It is clear from the comments of many contributors that, while high speed rail would be likely to bring about a reduction in the level of domestic air travel, it would not entirely replace existing services. A representative for infrastructure at the Confederation of British Industry was keen to state that high speed rail should be seen as something to complement domestic aviation as opposed to a direct replacement for existing air services.

The ability of high speed rail, while being able to have a considerable impact upon journey times between different cities, to eliminate the need for domestic air travel is further hampered by the UK's existing transport infrastructure. A stakeholder at North West Rail argued that while high speed rail services to central London may cut journey times from Manchester to central London, flying from Manchester to Heathrow may remain a more attractive option than rail travel for those travelling to West London and the West of England. Similarly, while existing and high speed rail services would link Manchester with the centre of London, if one was seeking to travel to towns such as Brighton on the south coast then travelling to Gatwick airport and connecting with local public transport links would remain a more attractive travel option.

4.6 Habitats, scenery and wildlife

Many respondents claimed that opposition to the introduction of high speed rail services will exist on a 'NIMBY' ('not in my back yard') basis from urban communities affected by the imposition of disruptive building work and rural areas unhappy about the use of 'green field' land for the construction of new rail corridors. Such opposition is not based on scientific environmental concerns but rather upon a wish to avoid disruptive construction work being undertaken in close proximity to their homes. Striking a historical note, one stakeholder suggested such 'NIMBY' objectives should be expected given the hostility the initial construction of the railway network received during the Victorian era.

In order to minimise opposition to the introduction of high speed rail, one stakeholder argues that it may be necessary for rail companies to carefully design their routes so as to avoid placing links through environmentally-sensitive areas such as government-designed Areas of Outstanding Natural Beauty. Clearly, there would be significant cost implications associated with the need to alter the route of proposed railway lines in order to incorporate these considerations. Similarly, a representative of the West Yorkshire Passenger Transport Executive argued that some tunnelling may be required in order to avoid sparking 'NIMBYish' anger regarding the damage to individual landscapes, a factor which will contribute significantly to construction costs.

A few stakeholders noted that objections to high speed rail services may be levelled by those living in rural areas as a result of the noise and vibrations which may emanate from the service. Such problems, it was argued, can be easily overcome through intelligent engineering solutions and the provision of noise barriers.

"Lots of work has been done on CO2 emissions, but not on noise pollution or land take"

A stakeholder from an environmental organisation, striking a cautious note, which reflects internal differences towards the issue, neither expressed a preference for or against the introduction of high speed rail. While some people from environmental organisations view the introduction of high speed rail services as something that could reduce the need for future airport expansion, others are concerned that the services could merely expand the number of people commuting and lead to further housing pressures on land north of London.

If, however, high speed rail services are to go ahead, there are environmental concerns highlighted that should be considered according to stakeholders. Firstly, damage to the landscape must be minimised by utilising existing railway alignments and providing noise barriers. Secondly, it is thought that the amount of energy used in the construction process and to operate the service on an ongoing basis must be minimised, even if this results in a reduction in the speed of services. Thirdly, new services must be designed to act as a substitute for existing journeys undertaken by car or plane rather than generate new travel, in particular commuting. Lastly, high speed lines that enable the reopening of local stations and the increased carrying of freight should be given particular consideration in the planning process.

In common with the concerns about the possibility of high speed rail services to expand the levels of commuting and travel, another stakeholder group has identified considerable problems with the principle of high speed rail from an environment perspective, arguing that if rail capacity is increased this is likely to lead to an exponential growth in carbon dioxide emissions. Increased rail capacity, they argue, will result in more passengers travelling where they would not before, as faster trains can encourage people to travel more often and over longer distances. As such, if high speed rail is to be constructed then the group believes that policy measures must be implemented in order to ensure that carbon emissions are cut, despite rail growth to meet capacity demands.

Some environmental stakeholders believed that if it was possible to guarantee a modal shift from air to rail (whether high speed or not) or road to rail then considerable environmental benefits could be derived from a high speed rail scheme. Similarly, they are strongly of the belief that high speed rail termini should, unless entirely unavoidable, be located in city centre areas in order to eliminate the need for the construction of large 'parkway' stations in rural areas or to generate additional travel from city centre areas to suburbs. In terms of reducing the overall environmental impact of the scheme, it was suggested that upgrades could be carried out to the existing West Coast mainline link as opposed to constructing new railway lines.

A participant from the environmental sector commented that despite having a lower impact on the environment compared to other modes, rail still must meet the highest environmental standards. To this end, the energy consumption needs of high speed rail will need to be demonstrated.

One stakeholder expressed concerns that the viability of the service could be dependent to a great extent on the proposed energy source of the project, believing the UK's current coal and gas base is neither economically or environmentally sustainable. Similarly, another respondent expressed his reluctance to make a final assessment of his views on the attractiveness of high speed rail until he has seen evidence outlining the total energy-take of a train travelling over 120mph as compared to other forms of transportation.

One stakeholder commented that, while higher rates of fuel burn are associated with high speed rail travel, there is clearly a trade off between living standards and economic growth and environmental impact with the alternative, air travel, being even less palatable from an environmental perspective. Making reference to the energy needs of air travel, it was suggested that while aircraft cannot move beyond their reliance on fossil fuels, high speed

rail services can be powered by environmentally-sustainable means such as nuclear power. As such, another stakeholder argued that the debate over whether or not high speed rail will ultimately prove environmentally superior to domestic aviation will be one of the greatest challenges for the project.

A representative from Eurostar however is considerably more positive about the environmental impact of high speed rail, arguing that the new generation of high speed trains are at least 30% more efficient than the existing Eurostar trains travelling on the UK's existing 107km of high speed tracks. Similarly, another stakeholder believed that while emissions will be generated by high speed services, these will be less per passenger than those derived from comparable air travel.

CHAPTER FIVE: Quality of Life

5.1 Introduction

As in the TASTS report, quality of life is closely linked into the economy, environment and social inclusion. Some of the areas previously discussed including employment opportunities, regeneration and equality of opportunity for different groups of people contribute to the impact on quality of life. In particular there is a sense among stakeholders that the impact on people's quality of life could not easily be assessed before alignments were chosen. These areas mentioned and discussed earlier are significant contributors to quality of life and some other areas highlighted are discussed below.

5.2 Development around stations

The social benefits of HSR are somewhat unknown as it seems to all be dependent on the location of the network. While it is considered that HSR has the potential to bring increased social benefits, this is inextricably linked to the economic and agglomeration issues. For example if HSR encourages relocation of business and increased growth, then this in turn could provide for further employment opportunities and perhaps new housing developments. It would also be expected to bring more people into new areas of economic growth but interestingly also allow for longer distance travel, meaning that people may commute over longer distances.

Participants noted that there are both social advantages and disadvantages of longer commuter journeys. The advantages are that people have greater choice in where they live and this may also encourage more affordable housing and better development. It is also hoped that people may bring their income to invest in the area, and that even when the earnings may be outside a region, that regions will draw in money from their residents. However this also highlights an area for concern in some regions where the introduction of HSR could draw both people and investment out of a region if their region did not benefit from the network.

As considered before in the chapter on equality of opportunity it has been highlighted that the majority of stakeholders view HSR as a development primarily designed with business users in mind. The greatest needs appear to be capacity issues at peak times and increased accessibility and journey time for business to business journeys. It is understood that, in order to be profitable, like the current network, it will be important to have a fare pricing strategy which will mean that there is no discrimination of people on different incomes or social groups.

It was notable that, while the majority of participants felt that high speed rail would have a significant positive impact upon the area immediately surrounding any newly-constructed station, this was by no means a universally held view. One stakeholder praised the regeneration benefits provided to the Kings Cross-St Pancras area of London as a result of the arrival of the new Eurostar terminal in the winter of 2007. Similarly, others have praised the positive effects of the introduction of Eurostar upon Lille and the surrounding area. Conversely, however, several participants expressed doubt at the amount of regeneration benefits derived by the long-standing Ashford International terminal.

One stakeholder from Transport Times openly expressed his scepticism at the claims of many proponents of high speed rail that its introduction will automatically deliver regeneration benefits, chiefly as a result of the location of new termini. Most stakeholders believe that more than just new transport infrastructure is needed for regional regeneration. If built outside of city centre areas, he argues, there is a risk that the economic focus may shift away from town centre areas towards out of town locations, thus having the undesirable effect of bringing about new economic hardship in town centre areas of communities served by high speed rail links.

A number of stakeholders highlighted the example of Ebbsfleet as an area which has seen significant development as a result of the High Speed One station there. One stakeholder highlighted this as an example of where development had encouraged regional regeneration, employment opportunities and better quality of life as local residents had further access to services that have developed around the station. The community benefits of planning gain could be an additional benefit to local people but this only was only cited occasionally by stakeholders and overall high speed rail is not seen primarily as improving quality of life apart from in the areas mentioned.

In the online consultation stakeholders were asked if there are any sectors of society or of the economy that they believed would be negatively affected by high speed rail. The majority of the comments to this question concerned the comparison of the origin of funding for high-speed rail and the net benefits to end-users. Most stakeholders in this consultation named the likely users of high-speed rail as coming from better-off segments of society. Should the network be financed through general taxation, where this money could have benefited less well-off segments of society through other uses, this would constitute a loss to those less well-off segments. One stakeholder also says that there are some sectors of the economy which do not rely on long-distance travel and which might equally lose out in the problem outlined above. Two stakeholders said that such negative effects could be ameliorated through an appropriate fare system. There was also concern among stakeholders of the need to be careful not to take funding and capacity for high-speed rail from bus networks and local train services which usually benefit less well-off and less mobile people.

CHAPTER SIX: Health, Safety and Security

6.1 Current safety of rail

The consultation process determined that concerns surrounding the safety of high speed rail are minimal.

"The rail sector is at the lowest risk and best safety level it's ever had"

It is a view generally held that rail is a very safe mode of transport in comparison to other modes of transport. This is continued when addressing high speed rail. The rail sector is generally thought of as the lowest risk transport sector and has always had a good safety record. Currently participants said that the rail safety record is at the best it has ever been.

6.2 Confidence in the future

From an overall point of view then consideration needs to be given to issues facing all rail networks. This includes autumn leaf fall and increasingly now flooding and extreme weather events. It was highlighted that these safety issues can cause business interruption but it has not been made clear that this business interruption will be greater or lesser than on conventional rail.

It was recommended that security and fencing of a high speed line would be important to avoid fatalities by trespass or suicides. However this is not considered a greater risk than for conventional rail. Interestingly, while the UK is viewed as having one of the safest rail networks in the world, one participant noted that the high-speed rail network already in operation in Japan is considered to be safer still.

CHAPTER SEVEN

7.1 International lessons

At present, the United Kingdom is home to only 107 of the more than 15,000km of high speed railway lines in Europe. Frequently participants cited the examples of high speed lines in France, Spain, Germany and elsewhere and commented on the lessons that could be learnt and the pros and cons of the current high speed lines internationally. The Japanese *Shinkansen* was seen as world renowned and viewed very favourably.

It was clear from the comments made by participants representing a range of sectors from local government authorities to domestic rail operators, that the perceived success of existing high speed rail services currently in operation on the European continent have contributed greatly towards the appetite for high speed rail services in the United Kingdom. Other stakeholders mentioned that it has also given the UK an appetite to compete with our European neighbours with modern transport infrastructure.

The High Speed One link to France has shown that there has been some modal shift from air to rail and since rail goes into cities it has an advantage over air travel. Rail is also more productive than air for businesses as they can work from point to point. However it is perceived that flights to Paris and Brussels have not dramatically decreased and there has not been complete modal shift.

The existing Eurostar link from London St Pancras, connecting Ebbsfleet International and Ashford International to Paris and Brussels, has already in the minds of those interviewed demonstrated the clear benefits of a modal shift from air to rail. In terms of a reduction in reliance on air services between London airports and Paris and Brussels, participants have praised both the environmental benefits associated with eliminating the need for these short-haul air links as well as the economic benefits of freeing-up landing space at Heathrow and Gatwick airports in order to strengthen the ability of the two airports to cater for long-haul traffic. It is widely believed that the existing High Speed One services between London and the two European capitals are faster than air services in terms of point-to-point journey times and considerably more conducive to working while travelling.

Some respondents also highlighted the difference in planning laws and regulation in the UK compared to other European countries. In particular, Spain was highlighted as having different planning regulations which means that the whole network was built on a new line with new gauges and it was large scale, whereas due to tighter planning law in the UK this task is seen to be a lot harder here than in some parts of Europe.

Aside from the ability of high speed rail to deliver fast journey times, participants believe that the British railways must learn a number of other lessons from foreign rail operators. One respondent, mindful of his experience of the Japanese rail network, suggested that future rail infrastructure in the UK be built with integrated diagnostic technology in order to prevent line failure as opposed to simply reacting to it. Similarly, it was noted that all maintenance on the Japanese network was carried out at night, thus ensuring a reliable service that consistently performs in line with the expectations of consumers.

Several participants, mindful of the internationally-recognised reputation of rail services such as the French *TGV* and Japanese *Shinkansen*, stated their belief that the introduction of high speed rail services would enhance the United Kingdom's attractiveness to inward investors. It is clear that considerable national prestige can be derived from large transportation projects; be they the German *autobahn* road network or rail services such as the aforementioned services in France and Japan.

Conclusion

As has been seen throughout this report, high speed rail is seen as a positive investment for the UK and most stakeholders are favourable towards the proposals that Greengauge 21 have put forward. The greatest opposition is from people who are risk averse and are seeking more evidence of the benefits before committing support. There is also concern over the cost of high speed rail and whether or not the whole network would have to be agreed on or whether it would be a staged process. One stakeholder said 'Greengauge 21 are perceived to be an all or nothing organisation and this may cause people to think 'don't bother''. While positive about the work of Greengauge 21 the stakeholder highlighted the risk of aiming too high in the current financial climate. It was suggested that this would not be a problem if transport was higher up the political agenda but since this is not the case then it is important that Greengauge 21 are more specific and lay out very clear plans and budgetary requirements. Another stakeholder commented that it is vital to have 'clarity of objectives with government buy in and funding'. As mentioned the policy case and the business case needs to be proven. In moving forward Greengauge 21 need to answer the questions that have been raised in this consultation and also be very clear as they move forward about the planning and the design criteria.

The realities of the planning process are most commonly mentioned by stakeholders in the online consultation as the main difficulties surrounding high-speed rail. The impact and feasibility of routes is mentioned by most stakeholders. One stakeholder showed particular concern about the location of termini, especially in London, and the noise and visual intrusion created by routes. Almost the same concerns are mentioned by another stakeholder. They also raise the issue of finding routes that are able to cater to multiple demands.

Related to the issue of the route network is the concern of NIMBY problems mentioned by one stakeholder in the online consultation and that of the 'national will' mentioned by three others, which might delay the planning process. The second most prevalent difficulty is the funding and investment side of the process as well as the long time needed for the planning process and procurement.

This consultation adds to the work conducted for the Atkins study in 2003. It complements the consultation and research conducted then and while a lot of the opinions are still maintained there are some new findings and changes as a result of this work.

This consultation shows agreement among stakeholders that the priorities should construct a passenger only line and the benefit for freight using freed up capacity was particularly drawn to attention in this study. Capacity constraints are a big concern, greater than faster journey times which shows that this is currently the biggest challenge facing the network.

There is still a great concern that that any new lines are well integrated with the current network, this is a view that is unchanged from the Atkins report. Similarly city centre stations are favoured above parkways – as was seen in the Atkins report – however stakeholders understand that careful consideration needs to be taken on a case by case basis with the stations.

Interestingly, the Atkins report concluded that high speed rail should be a premium product compared with existing rail services. While stakeholders agree that high speed rail will primarily be of benefit to business users they highlight, perhaps more strongly than previous studies, the importance of making it a viable option for people of all social groups and both business and leisure passengers. Therefore careful consideration of the fare structure and pricing should be addressed so that it is not exclusively an elite service.

There is agreement with the results from the Atkins study that in order for high speed rail to be feasible it would be a project that is delivered through partnership between the private and public sectors. Given the current economic climate the concerns around where the funding comes from is higher up the agenda. Primarily stakeholders are concerned that local transport funding is not withdrawn in order to fund a new high speed project.

In general the findings from the Atkins report are supporting in this new consultation and the issues raised in 2003 are now being addressed in greater depth through this consultation and the ongoing workstreams and strategic planning.

In order to fill in the gaps and to answer stakeholders concerns the following questions need to be answered by Greengauge 21, some of these may already have been covered in the strategic planning workstreams. All of these are dependent on the last question cited, which is looking at the exact alignments.

- What are the economic benefits nationally and regionally?
- Who will pay for it?
- What will be the capital and operating costs?
- When will people in cities and regions see the benefits?
- What are the timescales?
- What will be the comparison with CO_2 emissions compared to air and road travel?
- Where exactly will the alignments go?

"Let's get this scheme off the ground"

As Greengauge 21 move forward stakeholders hope to see more detailed plans covering the economic, social and environmental consequences of high speed rail in addition to detailed plans of routes.

It is clear that these questions will have to be answered to the wide variety of stakeholders who are affected by a potential high speed rail line or network in the UK, and indeed those who will be impacted as the project progresses. One way of distributing these explanations easily and effectively could be through the formulation of an 'FAQs' or 'Q&A' document, with a paper devoted to each issue.

These issues will also need to be addressed in the second round of consultation based on the 'emerging findings' of the SYSTRA-MVA workstreams. The design of the second round consultation will also take note of paper prepared by Bircham Dyson Bell on the statutory processes to ensure that its scope is sufficient. Stakeholders will not only expect to be engaged further but will also want to know how their previous comments have been taken into account or answered.

One recommendation that arose on multiple occasions throughout this consultation exercise was the insistence from stakeholders on government support for the project. The recent announcements by both the Conservative Party and the Liberal Democrats in support of high speed rail in the UK, and the effect of these in prompting government rhetoric on the issue, suggest that this support should not be out of reach. The fact remains that government support will be paramount in pushing forward the case for high speed rail in the UK, regardless of the governing party's colours. The need to work with Network Rail was also cited, however with slightly less immediate importance given the New Lines study currently being undertaken by the organisation.

While it is foreseeable that there will be disagreement over the prioritisation of routes and the placement of lines, it is clear to see from this consultation exercise that there is an accepted consensus on the need for high speed rail in the UK.

Appendix A: Other studies, research and policies

Participants in the stakeholder consultation cited the following studies and documents as further work that should be considered. These were obtained to pass on to SYSTRA-MVA to help with the strategic planning workshops.

- BCC's 'The Congestion Question' study
- CAA Passenger surveys
- Channel Tunnel Initiative Report, all-party group representing the Local Government Association, the Convention of Scottish Local Authorities, the Welsh Local Government Association, the Association of London Government and the Public Transport Consortium
- Improving public transport access to Heathrow Airport, Heathrow Airtrack, Consultation Brochure 2, October 2008
- Local Transport Plan, Halton Borough Council, 2006/7 to 2010/11, Mid-Term Review – Sept 2008
- Merseytravel – Making Merseyside move
- National Passenger Survey, Spring 2008, Passenger Focus - putting rail passengers first
- Network Rail's New Lines Study
- On the Move: delivering integrated transport in Britain's cities, John Preston, Adam Marshall & Lena Tochtermann, Centre for Cities, November 2008
- Passengers' priorities for improvements in rail services, Summary of research conducted by SYSTRA-MVA Consultancy for Passenger Focus, Passenger Focus - putting rail passengers first
- Productivity Benefits of Transport Investment in South Yorkshire' (November 2007)
- Public Transport Consortium SIG
- Scottish Parliament's Transport, Infrastructure and Climate Change Committee's inquiry into the potential benefits of high-speed rail services (written submissions)
- SEStran, South East of Scotland Transport Partnership, Annual Report 2006-2007
- SEStran, South East of Scotland Transport Partnership, Regional Transport Strategy, 2008 – 2023
- Sheffield City Region Development Plan
- Strategic direction for transport (Northern Way)
- Atkins
- Sustainable futures for the rail industry, Rail Safety & Standards Board
- The Mersey Gateway Project – Environmental Statement, Non technical Summary, March 2008

RDAs and other regional bodies also mentioned their Regional Economic Strategies, Regional Spatial Strategies and Regional Transport Strategies.

Appendix B: Stakeholder List

National public bodies
Office of Rail Regulation
Highways Agency
Passenger Focus
Civil Aviation Authority
Rail Safety and Standards Board
Public Transport Consortium (LGA)
Transport Providers/ Bodies
Eurostar
BAA
ATOC
Transport for London
Network Rail
Rail Industry Association
Manchester Airport Group
Business Groups
CBI
British Chambers of Commerce
Environmental Organisations
Campaign to Protect Rural England
Friends of the Earth
Regional Development Agencies
South West of England RDA
East Midlands RDA
East of England RDA
Advantage West Midlands
Yorkshire Forward
South East England RDA
North West RDA
One North East
Northern Way
Passenger Transport Executives
Passenger Transport Executive Group
West Yorkshire PTE
South Yorkshire PTE
Nexus
Merseytravel
Centro

Government Offices
Government Office for the North East
Government Office for the East of England
Government Office for the South East
City Councils
Birmingham City Council
Cardiff City Council
City of Edinburgh Council
Glasgow City Council
Other regional bodies
North East Assembly
Tees Valley Regeneration
The West of England Partnership
City of London Corporation
Scotland
High Speed for Scotland
SEStran
Strathclyde Partnership Transport
Transform Scotland
Transport Scotland
Other
Centre for Cities
Transport Times
Campaign for Better Transport

Appendix C: Greengauge 21 Consultation Online Questions

1. **Do you think that there is a need for high-speed rail links to be developed in the United Kingdom or not?**

   Yes/ No/ Don't know

2. **Do a) you personally and b) your organisation, support or oppose the development of high-speed rail links in the United Kingdom?**

   Support/ Oppose/ Neither support nor oppose/ Don't know

3. **Thinking about the over-arching objectives of a high-speed rail system, how important or otherwise do you think each of the following objectives is?**

   Please rank each on a scale of 1 to 5 where 1=not at all important and 5=very important.

   Increase the future capacity of the transport system
   Increase national economic growth
   Reduce regional economic disparities
   Stimulate economic development and regeneration
   Encourage sustainable patterns of economic development in towns and cities
   Reduce overall carbon emissions from the transport system by reducing short-haul air travel
   Reduce overall carbon emissions from the transport system by reducing car travel

4. **What do you believe to be the main practical difficulties in developing a high speed rail network in the UK?**

5. **In terms of the wider British economy and the economic development of individual regions, what do you think the likely impact of the introduction of high-speed rail links would be?**

6. **If an HSR network was developed, are there any sectors of society or of the economy that you believe would be negatively affected, and if so, how?**

7. **Please read the following statement:**

   Greengauge 21 is developing a high-speed rail strategy for five corridors in Britain. It has been suggested that the London-Birmingham-Manchester corridor should be the priority for "High Speed Two", the next high-speed railway line in Britain. This is because the line could connect London with the two biggest English cities and also benefit Scotland and Wales, plus a number of other reasons, including rail capacity pressures and the potential to link both to Heathrow and to Eurostar services.

   Do you agree or disagree with this reasoning? If not, what are your reasons?
   (Agree/Disagree/Don't know)

8. **Considering Greengauge 21's five possible corridors for high speed rail, please rate them on a scale of 1 to 5, where 1= a low priority for your organisation and 5= a high priority for your organisation.**

   London-Birmingham-Manchester
   London-Cambridge-North East
   London-Bristol-Cardiff
   Transpennine (Liverpool-Manchester-Leeds-Hull)
   Anglo-Scottish (North England-Edinburgh/Glasgow/Aberdeen)

   Please give your reasons for this prioritisation.

9. **Which of the following attributes of a high-speed rail system do you feel would be most valuable?** *Please select the top three valuable attributes*

   Fast journey times between cities
   Additional capacity for intercity rail services
   Freed capacity on the existing network for additional local or regional passenger rail services
   Freed capacity on the existing network for additional railfreight services
   Improved reliability
   Improved train frequencies
   Lower carbon emissions than other modes of transport
   High safety levels
   Quality of service
   Attracts more people onto the rail network
   Show Britain leads the way in rail technology
   Other (please specify)

10. An HSR network can be planned as a development of the existing rail network or as a completely self-contained and segregated network. Which of the following do you think is most important?

    Integration with the existing rail network so that through HSR services can be provided to a wide range of destinations OR
    Segregation from the existing rail network so that ultra-high reliability and speed can be achieved.

11. If a high speed rail network were introduced in the UK how important or otherwise do you think it would be that the network would link into or serve each of the following?

    Please rate each on a scale of 1 to 10 where 1=not at all important and 10=very important. Please also tick your top priority.

    The current rail network
    Local bus, tram or light rail services
    Regional airports
    Sea ports
    City centre stations
    Out-of-town parkway stations
    International gateways including Heathrow Airport or High Speed 1

12. Which particular issues or policy areas that you are involved with or aware of do you feel will be of most importance when debating the introduction of high-speed links?

13. Are there any particular issues relating to high-speed rail links that you would like to raise or any strong arguments supporting or opposing such schemes which we have not covered during the course of this questionnaire? Please give comments below.

14. Would you be interested in receiving further information about Greengauge 21's 2008/09 High-Speed Rail Development Programme, and offering your views on future consultations?

Yes
No