Hillingdon's response to the London Assembly Transport Committee Examination on High Speed 2

July 2011

HILLINGDON
LONDON

INVESTOR IN PEOPLE

www.hillingdon.gov.uk

CONTENTS

Introduction

1. As a Borough, Hillingdon is greatly impacted by the HS2 proposal. The Council therefore welcomes this opportunity to contribute to the debate in the London Assembly. We believe that the current consultation on HS2 is inadequate, it has not presented either a robust business case or a supporting environmental case and it has not properly assessed alternatives.

2. The following response to the Assembly Transport Committee is set out in two parts. Part 1 addresses the Committee's first term of reference:

   'To consider the Government's consultation on HS2 with particular focus on the potential effects on London's transport network taking into account the work undertaken in TfL's response'.

3. Part 1 also responds to the Committee's consideration of the strength of the Government's case for HS2 including a cost benefit analysis and the effects on London's present transport network, in terms of the wider issues.

4. Part 2 addresses the Committee's second term of reference:

   'To consider any actions that should be included in the final plan to mitigate any negative impact and ensure maximum benefit for London, should the scheme go ahead.'

5. Part 2 also sets out the effects on London's present transport network, in terms of local issues; the local and regional environmental effects; and any changes to the proposed route in London, or construction, which might lessen social and/or environmental effects.

6. Through this submission, the Council wishes to ensure that the Committee understands our key concerns. Hillingdon has been put into the position of having to commission evidence from experts to help us understand the full impacts of this proposal. HS2 Ltd has not presented sufficient evidence within the consultation documentation. Indeed, many reports have been commissioned by both those who support and oppose HS2 due to the lack of adequate information presented by HS2 Ltd. The Government Transport Select Committee were further under whelmed by the level of evidence and commissioned an independent assessment which was completed by Oxcera in June 2011.

7. We joined forces as part of the 51M Group to help in this process. The Assembly will hear from 51M and associated experts but we would like to reiterate our concerns over this whole proposal and ask that the London Assembly consider the robust evidence submitted within the 51M consultation response and the 51M Transport Select Committee response and support our view in the following areas.

8. Phase 1 of HS2 will have significant impacts on the London Borough of Hillingdon which will see no direct benefits, and very few indirect benefits. However, HS2 will

change the landscape of London's western most borough as well as having significant environmental and social costs.

9. The Council wants to be assured that HS2's potential impacts have been fully assessed, properly acknowledged, and that any proposed scheme represents the most suitable transport solution, in terms of improving capacity and performance of the UK's rail network, and being justified in the national interest on economic, environmental and social grounds, so as to justify the significant adverse effects.

10. The Council will oppose the HS2 proposal as it appears to have been formulated and determined with little or no consideration for the environmental and social effects. The Council also believes a fully robust business case should have been completed to allow a proper analysis of all the options before considerable public money is spent on a new railway. The Council wants to see suitable justification that High Speed rail is the correct path to take for the future of the UK's rail industry and that the Consultation is a proper democratic process that affords respondents the opportunity to comment in an informed manner to decision makers who are willing to take into account all views.

PART 1

Part 1 of this submission relates to the first term of reference, which is 'to consider the Government's consultation on HS2 with particular focus on the potential effects on London's transport network taking into account the work undertaken in TfL's response'. It also meets the Committee's request for written submissions on:

- **the strength of the Government's case including cost-benefit analysis.**
- **the effects on London's present transport network, in terms of wider issues.**

Introduction

11. We have set out below a summary of our opinion on the Government's case for HS2 although the evidence base and more specific data can be found in the 51M response, which the London Borough of Hillingdon has contributed to.

12. In essence we do not believe that the current proposal for HS2 is in the national interest. This is because:

    - It is not set within any national integrated transport infrastructure planning framework.
    - There is no sound business case for it.
    - There are better value alternatives to HS2 for enhancing the capacity and performance of Britain's inter-city rail network to support economic growth.
    - There are no proven social benefits.
    - With regard to regeneration, there is likely to be a drain of economic activity towards London and its surrounding areas, rather than any gain for the UK as a whole.
    - There is no robust quantified evidence to support either an economic or environmental case for the link to Heathrow.
    - A direct link to Heathrow could simply fuel demand for extra capacity at the airport, resulting in increased carbon emissions, increased road congestion and poorer local air quality.
    - HS2 is very likely to increase carbon emissions.
    - HS2 will worsen air quality in areas where EU limits are already exceeded.

13. In terms of the potential effects of HS2 on London's transport network, we would raise concerns in respect of:

- the HS2 to HS1 link (North London Line).
- Euston and the wider implications of this.
- The Great Western Main Line.
- The Chiltern Line.
- The Central Underground Line.
- The Metropolitan and Piccadilly Lines.
- London's bus services and traffic in general.
- The unknown impacts from Phase 2.

Where is the Strategy?

14. Hillingdon is not against the principle of high speed rail, provided that it is properly planned and is set within an overall national integrated transport infrastructure planning framework, and along the most appropriate route. Unfortunately the Government's proposal for high speed rail is not set within any such framework. The proposal can at best be described as a regional scheme that links just 4 cities. Such a proposal reduces the dispersal of the benefits, as there is no integration to other areas of the country, such as the South West, Wales East Anglia and the South.

15. The Consultation documentation states that the proposals for HS2 are derived from the National Infrastructure Plan, which was published on 25th October 2010 by HM Treasury. This Plan has not been subject to any public consultation and nor does it propose a national integrated transport infrastructure planning framework.

16. There has been no appropriate consultation with regard to the role that high speed rail could play for the whole of the UK, but the concept has been assumed to be the right one. Hillingdon Council believes that this inadequacy arises from the remit originally presented to HS2 Ltd in 2009, along with subsequent remit changes along the way, all of which have fundamentally failed to request advice on the issue of whether high speed rail is the best option for a national transportation framework. It would appear that high speed rail was predetermined by Government as being the most suitable transport intervention with little or no assessment of alternative methods for investing in rail more generally. At no point has the Government properly laid out their justification for pursuing high speed rail, or even asking if this was the most appropriate option. At each stage since making this decision, the Government has commissioned work which sets out how high speed rail can be best pursued without ever asking the question of 'what is the best national option for future rail investment?'

17. The Council believes that this failure has seriously distorted the role high speed rail could play and has resulted in flawed specifications. This error has resulted in a failure to consider the full range of possible rail improvement options and instead the Government has incorrectly decided to consult on one predetermined proposal only. A

long term infrastructure project of this magnitude should be part of an over-arching national integrated transport strategy, which seeks to provide a coordinated approach to modernising all aspects of transport in the UK, including rail. This national plan should not only consider rail, but also road and aviation.

18. The Government has set out a strategy for high speed rail, but it has also undertaken work to develop a specific proposed route between London and Birmingham. This suggests that the Government has already decided that the strategy for high speed rail is good for the UK and that the only aspects available for debate is the proposed route. If this is the case, it would mean that the Consultation process is meaningless and fundamentally flawed.

19. HS2 will cost in excess of £30 billion and require a public subsidy of £17 billion. There are a range of other alternative transport solutions to spending such a vast sum on one project. The Government has failed to provide information on whether this large amount of money will consume the transport budget for some years which causes great concern to the Council as there are many other pressing transport improvements that need investment over the coming years. The Government should be duty bound to carefully consider these alternatives and therefore fully justify why HS2 provides the best deal for everybody. Unfortunately, the level of information provided in the Consultation documentation does not do that.

20. There are alternative ways to spend over £30 billion, which would go a long way to help improve the UK's transport infrastructure overall and which will provide a fairer and more dispersed range of benefits throughout the whole of the UK. Such alternatives would also mean that all the 'eggs would not be in one basket' reducing the risks of failure in terms of outcomes.

21. HS2 should not be seen as the solution to the UK's transport infrastructure until the Government can clearly set out the case to support it. The Consultation should therefore be equally about understanding the economic, social and environmental case for HS2. Unfortunately, Hillingdon Council does not believe that the case for HS2 has been properly demonstrated and furthermore, it does not appear to be in the national interest and this Council therefore cannot support the strategy or the proposed route.

Where is the Business Case?

22. The Council believes that there is no sound evidence to support the business case for HS2. The economic benefits presented by HS2 Ltd appear to have been overestimated. The environmental and regeneration costs have not been properly addressed; and the options have not been properly considered. This means that there are a significant number of uncertainties about the evidence contained in the Consultation documentation. Given that the evaluation of HS2, as represented in this Consultation, is seriously flawed, it is inadequate as a basis for making any decisions on the merits of this major infrastructure project.

Optimistic 'transport user benefits'

23. The economic case for HS2 assumes very high 'transport user benefits' which total £38.3 billion, (included in Table 2 of the Consultation document 'Economic Case for HS2'). The economic case for HS2 is heavily reliant on the monetary value attached to time savings arising from shorter journey times, which is based on the assumption that all time spent travelling on trains is wasted. However, this Council believes that this approach is flawed and factually wrong, because it takes no account of modern technology which allows business travellers to work on trains.

24. In the current consultation DfT itself acknowledged that this is an outdated assumption by stating:

> *"rail passengers are increasingly spending at least some of their time in productive activity".*

25. Despite this acknowledgement, time savings are still key to the HS2 economic case accounting for £7.5 billion or 41.9% of the total benefits for the London to West Midlands phase (The Economic Case, Table 10, February 2011). Without this incorrect assumption, there is no business case for HS2.

26. HS2 Ltd have stated in para 7.3.3 of the Economic Case that if productive use of travel time is taken into account, the reduced productivity from having to stand on trains should be taken into account. It goes on to state in para 7.3.4 to explain that if the business value of time is halved and if crowding impacts are adjusted to reflect the loss of value experienced by business passengers travelling in crowded conditions, the BCR would increase slightly. However the details of this calculation have not been provided for scrutiny. Nor have HS2 Ltd taken account of the fact that the much cheaper alternative proposals have lower levels of crowding than HS2 (HS2 predicts load factor of 58% in 2043, whereas the Optimised Alternative has about 52% and even the DfT alternative RP2 has 51%), and can provide additional capacity sooner.

27. There is also a flaw in the unit costs that have been assumed for earnings. The Consultation documentation with regard to the Economic Case relies on figures that translate into a salary of £70,000 per annum in 2009 money. However the ASHE survey of 2009 (ONS survey) refers to a figure of £47,000 per annum as the mean gross annual earnings for 'managers and senior officials', which would be a far more realistic figure to assume for HS2 business passengers. That change in itself would reduce about £7 billion from the £44 billion benefits that HS2 Ltd claim, because it affects time savings and reliability calculations.

Optimistic passenger demand forecasts

28. The Council believes that the passenger demand forecasts for HS2 (which directly affect revenues and the wider economic case) are unrealistically high and are unlikely to be met. The case put forward by the DfT for HS2 is based on a social cost benefit, which assumes that 136,000 passengers would be using HS2 per day by 2043 (Economic Case for HS2, para 3.3.9, February 2011). The benefits for HS2 are

calculated on such forecasts of numbers of passengers that will use the service, otherwise known as the demand forecasts. This has a large bearing on the economic case for the scheme, because passenger numbers directly affect revenue in terms of fares income and the scale of economic benefits accrued through savings in journey times. The Council believes that the passenger demand forecasts for HS2 are unrealistically high for the following 4 main reasons:

- the wrong methodology for demand forecasts has been used
- the growth in rail travel for business passengers has been overestimated
- a very high modal shift from air travel to HS2 has been forecast
- it is assumed that no premium fares will be charged for the service

29. The Council believes that the wrong methodology for demand forecasts has been used. The report published in March 2010 by HS2 Ltd capped background growth demand forecasts at 2033. If this same date was used with the growth figures published in February 2011, the business case for HS2 would disappear. The DfT have therefore extended the forecasting period to 2043, using the PDFH to predict for a massive 35 year period, in order to allow background growth in demand to double.

30. Furthermore, the basis for HS2's demand forecast is based on an out of date version of the PDFH, version 4.1. This version uses income elasticity factors that are higher for longer journeys. This means that long distance trips grow more quickly than shorter trips and therefore this creates unrealistic discrepancies when forecasting for long distance trips. The more up to date version 5 (published in August 2009) has somewhat lower income elasticities and does not use higher elasticities for longer distance journeys, perhaps reflecting the reduction in the impact of the post privatisation influences. DfT have chosen not to use this latest version of PDFH, which would have led to lower background growth forecasts and that would have greatly reduced the business case for HS2. Studies have shown that a revised demand forecast using PDFH version 5 could lead to a reduction in background growth of 29%.

31. The Government estimates that 30% of passengers using HS2, equating to 40,800 passengers per day, will be travelling for business purposes. However this takes no account of the fact that technological improvements are currently making the need for business travel less and less relevant. Video-conferencing and faster broadband connections are reducing the need to travel for all but the most essential trips and this will only get more pronounced in the years running up to 2026 when HS2 is scheduled to open. At the same time that HS2 Ltd and DfT is forecasting a substantial increase in the demand for rail travel for business in 2026, the Transport Minister Norman Baker is now seeking to encourage businesses to travel less and take advantage of technological methods that would both save time, money and help the environment. He is quoted as saying "part of my brief as a transport minister is to sometimes

encourage you not to travel". If he succeeds in this, the business case for HS2, both in terms of predicted demand and economic benefits will be severely reduced.

32. The Council believes that the forecast for modal shift from air travel to HS2 is too high and in reality passenger numbers for HS2 will be lower in practice as less people will actually switch from aviation. It is forecast that 6% of HS2 passengers or 8,160 per day will arise from a modal shift from air travel. This level of shift is facilitated by the DfT forecast of a 128% increase in domestic air travel by 2043. This is unrealistic as evidence shows that demand for air travel has actually been falling since 2004 which means that the scope for this modal shift from air is in fact far more limited.

33. The demand forecasts in the Consultation documentation are also based on the assumption that no premium fares will be charged by HS2. In practice this does not seem credible, as HS2 will be providing a 'premium service' when compared to its competitors such as the West Coast Main Line or Chiltern Railways, particularly with regard to journey time. This is important as HS2 Ltd estimate that 70% of passengers using HS2 will do so for non-business purposes. But non-business travellers are less influenced by journey time and more influenced by price. It seems likely that HS2 will need to charge a premium fare to help recover the huge capital and operational costs of the project.

34. In conclusion, the evidence presented in the Consultation documentation is not robust in its predictions of future passenger demand for HS2 which appear to be vastly overestimated. These high passenger demand forecasts are the basis for calculating the likely revenue from fares, which in turn will be over optimistic and unachievable, thus resulting in a flawed business case for HS2.

<u>Environmental costs have not been properly addressed</u>

35. The Council is concerned that the environmental costs, particularly those relating to carbon emissions have not been properly quantified. The Council's concerns appear to be supported by the report by Oxera (20th June 2011), that was commissioned by the Transport Select Committee, which states in para 3.44 that

> *"The case for high-speed rail is affected by the impacts on carbon emissions that are quantified, although these do not appear to be included in the BCR. Given the very limited anticipated substitution from air to rail (6%) and car (7%), the substantial volume of new trips (22%) suggested by HS", and the lower rates of emissions from slower trains, the classic rail options could well involve lower overall emissions. This would bring the comparison of BCRs closer together for the Y network and generate an advantage for the classic rail options to Birmingham".*

36. The Council believes that other environmental costs such as impacts on the landscape should also have been properly assessed and costed. The impacts on the landscape in Hillingdon are significant, as they are in the Chilterns Area of Outstanding Natural Beauty and other areas along the route. Again the Council's concerns appear to be supported by the report by Oxera (20th June 2011), which states in para 3.45 that

" The AoS does not explicitly consider the landscape impacts of building a new high speed line, which HS2 Ltd rightly believes would be important. Neither are such effects included in the calculated BCRs, and the extent to which they would reduce the measured value for money of a new line is therefore unclear."

37. Para 3.46 of the report by Oxera goes on to say that:

"Studies do exist of the values attached by people to particular kinds of landscape and Government has in recent years proposed and undertaken new studies. It should be possible to produce broad estimates of the order of magnitude of landscape costs for a new high speed line."

38. The Consultation document includes very little detail on the Y network and therefore there would appear to be a great deal of uncertainty about the likely costs of the full network, in terms of its construction costs, the rolling stock costs and the operational costs. Until the preferred routes have been identified for each of the legs north of Birmingham, and then properly assessed in terms of the requirements for construction costs, the cost estimates for the full Y network must be erroneous.

39. With regard to the operating costs, the report by Oxera (20th June 2011) comments in para 3.30 that

"there is considerable uncertainty surrounding the costs of the full Y network – HS2 Ltd has used a 'higher level approach'. This relates in particular to the costs of delivering a service pattern on the Y network, with no work having yet been undertaken on train diagrams, which would enable detailed assumptions to be made about rolling stock purchases and operating costs. This might be a concern if the case for HS2 rests on its ability to enable the full Y network to be built".

Alternative options would be better value

40. The Consultation documentation wrongly concludes that the economic case for HS2 and the preferred route is stronger than that of other alternative measures or any alternative route. Other options, such as an optimised alternative package of rail infrastructure upgrades and effective demand management measures to absorb peak time overcrowding, can deliver more capacity than is needed, at a much lower cost and can be implemented faster, in an incremental manner that avoids the risks inherent with long term demand forecasting. These cheaper alternative options to HS2 have not been properly considered.

41. DfT's Rail Package 2 was reported by HS2 Ltd to have a 'Benefit Cost Ratio' (BCR) of 2.4 (High Speed Rail Command Paper, March 2010, table 2.4), comparing favourably with the BCR of 2.0 for the London to West Midlands HS2 line, as reported in the current Consultation document (The Economic Case, Table 10, February 2011). Furthermore research suggests that Rail Package 2 was misrepresented by HS2 Ltd in their reports by not using an optimised version of the scheme and by treating rolling stock as a lease cost, while HS2 had its rolling stock treated as capital. If this had not occurred, the BCR of an optimised Rail Package 2 could be as high as 3.63. The

Council therefore believes that a proper evaluation of alternatives would show that HS2 does not represent the best value option for improving rail capacity in the UK.

42. It is worth noting that the report by Oxera (20th June 2011) concluded in para 2.9 that:

> *"The WEIs for the London-West Midlands strategic alternative Package 2 were previously estimated in the 2010 business case. If these were to be added to the current BCR estimates for Package 2 (ie 1.9), its BCR would reach 2.0 – the same as HS2."*

43. The Council does not believe that HS2 provides the optimum solution to the capacity issues on the rail network. The service specification of HS2 does not appear to be realistic because it refers to 18 trains per hour for the Y network (The Economic Case, Figure A2 on page 61, February 2011), which has not been achieved anywhere in the world for high speed rail.

44. There are also further doubts raised about the proposed capacity for HS2 because HS2 Ltd has not built into its current specification the proposed services to Heathrow and the link to HS1, which are likely to reduce capacity on the network as there will be train paths lost into Euston for every HS2 train connecting to Heathrow and HS1. This is also likely to have knock on effects on service reliability.

45. More worryingly, HS2 Ltd's own documentation (High Speed Rail for Britain – a report by High Speed 2 Ltd, para 3.10.17) shows that between phase 1 opening in 2026 and the completion of phase 2 in 2033, there will actually be less capacity on the West Coast Main Line north of Lichfield. At the same time, HS2 forecast passenger growth of 107% for phase 1 (more than three times the current total), and claim reduced overcrowding. This is simply not credible.

46. It is stated in the Consultation document (para 1.49) that:

> *"full and subsequent additional capacity could only be provided by exceptionally expensive infrastructure solutions".*

47. The Council believes that this is erroneous. Detailed work carried out for the 51M Group shows that any foreseeable level of demand growth can be cost effectively met by a range of incremental measures, including some specific infrastructure investment, if this proves to be necessary, without the construction of HS2. These measures include:

- Taking account of the 'Chiltern Evergreen 3' works, which will be completed in 2011 and provide journey speeds from London Marylebone to Birmingham only a few minutes longer than those on Virgin trains. This will reduce demand from Euston and increase capacity, although the works have been ignored in the DfT business case.

- Targeted infrastructure investment to clear selected bottlenecks/pinchpoints to enable frequencies to be increased.

- More effective demand management, including 'smart ticketing' and use of obligatory reservations when appropriate, to even out peak demands.
- Rolling stock reconfiguration, particularly conversion of at least one first class carriage to standard class, which is where the overcrowding occurs.
- Operation of longer trains (all to 12 cars except for Liverpool which would be limited to 11 cars).
- The outcome of the last two measures would be to provide an additional 4 standards cars per train, i.e. 9 standard cars instead of 5.

48. As an alternative to HS2, an optimised package of incremental upgrades and improvements to the rail network and management could deliver a trebling of capacity at a cost of £32 billion, i.e. a 211% increase over the 2008 base. An optimised alternative package also has the advantage over HS2 of being capable of implementation within 5 years. Therefore its benefits can be felt 10 years ahead of the completion date for HS2, tackling the capacity issues now. The Council therefore believes that HS2 is not the only viable method of increasing capacity on the rail network, nor is it the most logical solution. As stated in the Eddington Transport Study:

> *"because the UK is already well connected, the key economic challenge is therefore to improve the performance of the existing network… There are very high returns from making best use of existing network. Large projects with speculative benefits and relying on untested technology, are unlikely to generate attractive returns."*

49. We believe the option of increasing capacity via the existing network should have been afforded a more robust analysis before the option of a high speed rail line was decided.

50. Notwithstanding the fact that other alternatives to HS2 do not appear to have been properly assessed, the Council also believes that other alternative routes for HS2 have not been properly examined. The provision of links to Heathrow Airport and HS1 have been fundamental requirements in the remit of HS2 Ltd from its conception in 2009. The original conclusion of the HS2 Ltd report in March 2010 was that there was no business case for a link to Heathrow Airport and there was also little demand for a link to HS1. Given this information, the Council believes that the Government should have revisited the remit for a high speed rail network. It is a fundamental flaw to have included these two links within the remit of the line. This flaw in the decision making process then heavily influenced the assessment of the alternative routes and hence the choice of the preferred route. It is inevitable that a more northerly route out of London may have been the obvious choice, if the decision to provide a direct link to Heathrow had not been made at an early stage. The Government should therefore re-consider the provision of, and the route of, any future high speed rail network.

Where are the social benefits?

51. The case for HS2 is not based on commercial grounds, but it is justified on the estimated social benefits. The Consultation document, in Table 2 page 12 shows that the capital and operating costs, plus any cost savings to the classic line facilitated by HS2, (which amount to £44.3 billion for the Y network), will not be met by the projected revenues which are estimated to be £27.2bn. This means that there will be a cost to the government of £17.1 billion for the Y network, equating to about £28.4 million per annum for life of the 60 year scheme. This represents a public subsidy to long distance rail users. It has not been explained why this group is worthy of such a subsidy. The evidence shows that long distance rail trips are predominantly made by the affluent with 47% of journeys being made by those in the top 20% household income bracket. Furthermore as pointed out in the report by Oxera (20th June 2011) in para 3.49 that the Economic Case:

> *"estimates that about 67% of the transport user benefits (of the Y network) are likely to go to business users – i.e. individuals who tend to be from higher income groups."*

52. The Council therefore feels that HS2 represents a regressive use of public money. It is worth noting at this point that the £17.1 bn subsidy for the capital and operational costs of HS2 will be on top of the annual subsidy the UK government gives to the rail industry, which is currently between £4-6 bn per year. It is also incongruous that the government should be proposing such a large capital subsidy to HS2 at a time when it has separately commissioned Roy McNulty to investigate the economic state of the UK rail industry in an attempt to reduce its cost to the taxpayers.

Where are the regeneration benefits?

53. There is no robust evidence presented to support the premise that the HS2 network will enhance the North/South economic divide or that the provision of a very high speed network is the most cost-effective or appropriate solution to achieve long term and sustainable economic growth. The Council is of the view that international evidence suggests that High Speed Rail is likely to generate or reinforce territorial polarisation, with growth more likely to accrue to the capital than the regions. The likelihood is that there will be a drain of economic activity towards London and its surrounding areas, rather than any gain for the UK as a whole.

54. The comments in para A2.21 of the report by Oxera (20th June 2011) lend support to the fact that London is likely to gain whilst the north will suffer a drain of economic activity, by stating that:

> *"However, there is evidence that the generation in travel is mostly from outer areas into the city rather than the reverse: in other words, the journey generation is not asymmetric. For example, on the Paris to Rhone-Alps route, flight and train journeys into Paris increased by 144%, but journeys in the inverse direction only experienced a 54% increase due to the high speed rail connection."*

55. A number of previous reports to Government have also questioned whether creating new networks is the most appropriate or cost-effective method to achieve economic growth. The Eddington report in 2006 stated that

> *"… the UK's economic geography means that the principal task of the UK transport system is not, in comparison to the needs of France or Spain, to put in place very high-speed networks to bring distant cities and regions closer together, in order to enable trading and facilitate economies of scale. Instead, because the UK's economic activity is in fact densely located in and around urban areas, domestic freight routes and international gateways, the greater task is to deal with the resulting density of transport demand".*

56. It is the Council's view that the alternatives to high speed rail which support improved transport links at the regional and local level (i.e. within travel to work areas of areas needing regeneration) would deliver greater social and economic benefits to the UK as a whole. Despite this evidence the Government still incorrectly assumes in para 1.82 of the HS2 Consultation document that high speed rail is the best option to promote long term, sustainable and rebalanced economic growth.

Why is there a direct link to Heathrow?

57. The Council is concerned as to how the decision to include the link to Heathrow has been made and what evidence such a decision was based upon. There is no quantitative evidence provided to support the Government's claim that there is a 'compelling strategic case' for the link to Heathrow.

58. The first issue with the Heathrow link is that there is no market for it. TfL acknowledges that London already has sufficient links to Heathrow. Crossrail in particular would provide a journey time of approximately 15 minutes to Heathrow from Old Oak Common. The Heathrow Express takes only 15 minutes from Paddington to Heathrow, and if it were to stop at Old Oak Common, the journey time into Heathrow would reduce to 11 minutes. HS2 Ltd acknowledge the amount of passengers taking HS2 direct to Heathrow will be relatively minimal, and there is unlikely to be that many trains diverted directly to Heathrow. Crossrail combined with the underground services will provide a highly efficient service to Heathrow. However, the Government is still pursuing a Heathrow Link as part of Phase 2 of HS2.

59. It was clear from HS2 Ltd's document 'High Speed Rail A Report to Government' in March 2010, with a policy background of support for a third runway at Heathrow, that there was no compelling case for a link to Heathrow airport:

> *"...the total market for accessing Heathrow from the West Midlands, North West, North and Scotland is currently around 3.7 million trips. Our modelling suggests relatively little of this would shift to HS2, with the rail share increasing by less than 1 percentage point (about 2000 passengers per day, or just over one train load each way)" (Para 3.3.10)*

60. With regards to how a link to the airport should be provided, the spur option was ruled out due its impact on the capacity of the proposed HS2 route and a weak business case for a direct link to Heathrow.

"In the case of a spur option, one complete train path into London would be lost for every train serving and terminating at Heathrow via the spur. Hence it is an unattractive option, as the value of the capacity foregone, threatening for instance the ability to provide a reasonable service to Birmingham or to serve the Leeds via the East Midlands and Sheffield as part of a wider network, would significantly exceed the cost saving of up to £1.5bn. A spur option, therefore, was not considered further." (Para 3.3.21)

61. In March 2010, the Secretary of State for Transport provided a further report to Parliament that concluded:

"HS2 Ltd's analysis also indicates that there is no credible route for a high speed line to the airport – either as part of the main line, or as a loop orspur – which would not pass mainly through residential areas, and would therefore require significant and expensive tunnelling. The only credible option for routing the main high speed line via Heathrow would entail a near-continuous tunnel of around 29 miles – almost the length of the Channel Tunnel – as well as increasing the journey time by around three and a half minutes compared to HS2 Ltd's recommended route. Even if only a spur to the airport was provided, which would substantially reduce the capacity of the line to central London as Heathrow trains would terminate at the airport, the tunnelling required would lead to costs in excess of £1.5 billion." (Para 7.7, High Speed Rail, SOS for Transport, March 2010)

62. However, just under a year from the publication of this Report, it seems nonsensicle that even though a third runway has been ruled out on the basis that capacity at Heathrow will not substantially increase, all of a sudden the principle of a direct link to Heathrow Airport is now an integral component of the Consultation and the Consultation Document in para 3.16 asserts that:

"the strategic case for a direct high speed rail line to Heathrow is compelling".

63. In addition the proposed method of connection to Heathrow in the Consultation Document (in para 3.18) is by means of a spur from the main HS2 line:

"The government considers that the option that best balances the costs of a direct link to Heathrow with its important strategic benefits would be a spur".

64. The insistence on delivering this link against the promoters own advice, provides little choice as to the final route. Consequently, the proposed route was pre-determined regardless of its negative impacts. More importantly, it means the relative merits of other routes have not even been properly explored. The route will have significant impacts upon the London Borough of Hillingdon, yet HS2 Ltd has followed political will to deliver an unfeasible Heathrow spur. This limits the choice of routes available, and further undermines a fair and open consultation process for HS2.

65. If the alternative routes were explored without the unnecessary and costly link to Heathrow being such a pervasive factor, other routes may not have been so easily rejected. Due to the restrictive remit of HS2 Ltd, they could not explore with vigour the more sensible options of leaving Euston Station in a northerly direction. This would have avoided the hugely costly and destructive route through West London and Buckinghamshire, significantly lowering the environmental cost of the scheme.

66. Enhanced environmental benefits may be better achieved in the long-term by a full examination of how existing rail services across the South of England and Wales could better connect with all the airports in the South of the country, rather than just a possible link between the proposed high speed line and Heathrow. Lord Mawhinney's report 'High speed rail access to Heathrow' published in July 2010 also recommended a study into better access to Heathrow by improvements to existing services. Therefore support should be given to the Airtrack scheme, given that Heathrow Airport Ltd have withdrawn its Airtrack Transport and Works Order application. Airtrack would have improved airport connectivity and alongside Crossrail there would have been a considerable shift from road to rail.

What are the implications of a direct link to Heathrow?

67. The Council has serious concerns over the decision behind a direct link to Heathrow. The airport is currently running at near capacity. We believe that increasing the catchment area for Heathrow could fuel demand for travel from the airport. With regard to the moratorium of no airport expansion in the south east, there is also a real concern that the provision of a direct spur to Heathrow could simply put pressure on this policy to be challenged.

68. The link to Heathrow would also undermine a connection with HS1 in favour of international connectivity and long haul flights. This will have a negative effect on UK carbon emissions and further encourage flights from Heathrow and associated Heathrow related activity. This area is already failing its EU Air Quality targets.

69. The Council cannot support a link to the airport that has no legitimate proven business case and could simply fuel demand for extra capacity at the airport, resulting in increased greenhouse emissions and poorer air quality. We firmly believe this option for a link to Heathrow should be dismissed.

70. Like the Y network, this link is being built into this consultation as part of a wider strategy only. No details on how the spur will be constructed or where the airport station will be located are given within the consultation documentation. The cost of the Heathrow spurs is referred to in para 3.17 of the Consultation document as between £2.5 and £3.9 billion. However, no breakdown of these costs is given as apparently, no station or specific route has been decided. The Council has concerns that these costs are likely to be significantly underestimated. If the Heathrow links were to be in tunnel, their length would be about 29km, which compares to the length of the Channel Tunnel. In addition, work commissioned by the Council as part of the 51M Group has

confirmed that passenger volumes would be insufficient to justify the construction costs of the spurs.

71. It is acknowledged on page 66 of the Consultation document that a spur link to Heathrow would have an opportunity cost in terms of capacity to central London, because it would mean that a train path to central London would be lost for every train serving and terminating at Heathrow. To minimise this capacity impact, it is suggested that it would be possible to split trains on-route to provide a reasonable service frequency to a range of destinations further north, although this would extend journey times and impact on reliability of services on the London to Birmingham route. With the Y network described as operating at 18 trains an hour, and, without a detailed timetabling exercise, which it is clear has not yet been carried out, the ability to plan the proposed Heathrow services is unproven and indeed may well be impractical.

72. The Council does not believe a link to Heathrow should be included and it does not believe the decision to do so has been based on published evidence or reasoned assessments.

Where are the carbon gains?

73. The Consultation documentation claims that HS2 is carbon neutral. To have the UK's single largest public transport intervention in the foreseeable future make no noticeable impact on reducing the UK's road transport emissions is a fundamental flaw. What is even more worrying is the likelihood that HS2 will increase the UK's carbon emissions. This goes against everything that the Mayor of London is working so hard to achieve through the Air Quality Strategy and tackling Climate Change policy.

74. HS2 will not be broadly carbon neutral. In theory rail infrastructure should provide a greener alternative form of transportation to road and aviation. This theory has been applied to HS2 and there is now a wide spread misconception that because it is rail, it is green. This is far from accurate. The Mayor of London has ambitious plans for carbon savings. However, HS2 will only have a detrimental impact on these targets.

75. The principles of any high speed rail should fundamentally address the issue of reducing carbon emissions and ensuring that modal shift was a key objective of the scheme. The consultation report for this proposal admits that the modal shift from road is minimal i.e. 1MtCO2 reduction in road emissions over 60 years. When compared to the road transport emissions for 2009 which were calculated as 113MtCO2 this one year alone, the impact is negligible.

76. High speed (340kph) trains have a 90% higher electricity demand than regular (200kph) trains. It is worth noting that the trains proposed by HS2 Ltd will travel at speeds far greater than European high speed trains. In recent months, Chinese high speed rail operators have reduced their high speed trains (340kph+) to reduce the cost of energy. The UK's energy market is neither stable nor self reliant. With reliance on overseas supplies and the decommissioning of several domestic power stations

without any permitted replaces, there is no agreed strategy in place to provide a more stable energy market in the UK to date. Consequently HS2's enormous consumption (upto 18 high speed trains per hour between London and Birmingham) is highly vulnerable to an energy market that has seen dramatic price hikes year on year over the last decade.

77. Furthermore, HS2 relies on satisfying a latent demand in travel to and from Birmingham, i.e. people who are only making the journey because of HS2. The report makes no acknowledgement of the amount of additional HS2 passengers and the associated emissions compared with the fewer passengers using domestic aviation. It is likely that the increased demand of energy intensive rail (HS2) will outweigh any reduction in domestic aviation.

78. There are currently no Birmingham flights to London, and in 2008 rail from Manchester to London already had 80% of the market. This has increased in recent years as major airports such as Heathrow have moved away from less profit generating domestic flights. Therefore a modal shift from domestic air to rail is only likely to occur when links to Scotland are realised. Furthermore, there is no acknowledgement of 'interlining'. Even with a high speed rail link, there would still be a 38% aviation share of the London to Edinburgh route. This further undermines the competitiveness of HS2 on domestic aviation.

79. Phase 1 cannot possibly be carbon neutral given that rail already has majority market share and there are extensive emissions associated with construction and operation. HS2 Ltd confirm this in their report. This means that HS2 will rack up considerable carbon deficits prior to any noticeable impacts on domestic aviation. It is misleading to portray the carbon impacts of a fully operational 'Y' network with links to Scotland without considering the 10+ years of carbon deficit.

80. The Consultation documentation also assumes reductions in carbon emissions from fewer domestic flights, but the reality is that such slots would be taken up by more high polluting long haul flights, resulting in an increase in overall carbon emissions. Colin Matthews, BAA's Chief Executive is quoted as saying:

> …"*BAA would like more passengers to arrive [at Heathrow] by train. High Speed rail would attract people who currently arrive by short-haul flights, freeing slots for more long-haul flights"*.

81. Mention is made of relying on the untried and untested EU Emissions Trading Scheme (ETS) to control the switch from domestic to international slots. As no further work has been done on the EU ETS it cannot be possible to know the impacts it would have on the freed up domestic slots to international flights. Again, the evidence from industry suggests that they would welcome the switch to more international flights regardless of the EU ETS. This means HS2 will free up flight slots for greater emitting long haul journeys. In doing so it has a detrimental impact on the UK's carbon emissions.

82. With reference to our comments above regarding carbon emissions, we would reiterate that there is no robust evidence presented within the Consultation documentation to substantiate the claims of the extent of modal shift from air to high speed rail. Furthermore, there is no mechanism to secure any reductions by means of slot reduction at the airport and therefore no evidence for any corresponding carbon reductions claims. In direct contradiction carbon emissions could in fact rise as, in the absence of any Government policy to allow for slot reduction, the short haul flights could simply be replaced by more polluting long haul flights. In reality the extensive carbon outputs of the construction and operation of HS2 will be added to the carbon outputs of increased international flights.

83. HS2 is likely to have substantial carbon fiscal cost, which should be accounted for in its business case. Due to the lack of data shown, it is not possible to critically appraise the cost of carbon. Nevertheless, HS2 LTD has costed it at somewhere between +£1.37billion and -£4.6billion. However, they acknowledge this could be worse if freed up domestic slots become international flights, which is the more likely option. Again, no figures have been provided or a proper assessment been made. Combined with the unsubstantiated conclusions it is not possible to accurately cost the financial value of the carbon impacts. However, using logical assumptions and more accurate data gathered in other reports, it is more likely that HS2 would be nearer the -£4.6billion than the +£1.37. If the aspirations of the aviation industry are realised, and freed domestic slots are switched to long haul flights, then the fiscal cost could rise further. A multi billion pound transport investment should not have such a high environmental and fiscal cost; costs which will eventually be met by the public in one way or another.

84. The Consultation documentation fails to include a proper appraisal of the impacts of this expensive rail scheme. It is not clear what is meant by the Proposed Route, and nor is it clear whether the 'Y' network is being assessed or just Phase 1. If it is referring to the 'Y' network then the assessment of construction emissions is considerably less (1.2mtCO2) than a previous Booz Allen report (5mtCO2) which investigated a much shorter line. If it does refer to just Phase 1, then all the negative impacts of the shorter route are being assessed against the benefits that can only occur from the completed network. This is misleading and would result in any subsequent support for the project to be fundamentally flawed.

85. There is a considerable amount of missing data and evidence to support the conclusions. There is no mention of the construction of brand new stations, no assessment of the loss of important carbon sinks; no presentation of any flight data; no acknowledgement of a Heathrow Spur at all and the HS2 Report even acknowledges important demand forecasting was unavailable. The HS2 Report is therefore not a suitable evidence base on which to make a decision on a £34 billion 'green' infrastructure project.

Where are the air quality benefits?

86. The Mayor of London acknowledges air quality in London needs to continue to improve. The Mayor states in his Air Quality Strategy that:

"The overarching aim of this [Air Quality] Strategy is to reduce air pollution in London so that the health of Londoners is improved. The most effective means to do this is to achieve the European Union (EU) air quality limit values as soon as possible."

"In theory substantial rail investment should promote a cleaner alternative mode of transportation by generating a modal shift from car (for shorter journeys) and air (for longer journeys)."

87. The HS2 London to the West Midlands Appraisal of Sustainability (AoS) of February 2011, which forms part of the Consultation documentation, recognises that local air quality reduction from a mode shift from car to rail is not expected to be significant. Given that this proposal represents one of the biggest transport interventions that the UK is likely to see for the foreseeable future, it would appear to be a completely missed opportunity not to have looked at alternative options to HS2 or at least to have optimised the route to ensure that modal shift from cars was significant and led to an improvement in local air quality, especially in areas where this is already above acceptable levels.

88. The area around Heathrow is a poor air quality hotspot. If short haul flights are lost to a shift to high speed rail and the slots are then simply replaced by larger aircraft, this could generate even further trips by road from an increase in airline passengers accessing the airport, in an area which is currently suffering from poor air quality. Heathrow is likely therefore to see negative effects. The Council wish to stress that there is no evidence produced to be able to conclude that the local air quality around areas such as Heathrow will not suffer from increased passengers accessing the airport by surface transport, such as road vehicles, as freed up slots are used by larger planes with larger passenger numbers.

89. HS2 Ltd's rationale for including a Heathrow link is to deliver better 'international connectivity'. This implies there is an acknowledgement that freed up domestic flight slots will be switched to international slots. These are larger aircraft carrying more passengers. The Heathrow link will therefore induce more activity around the airport which is not likely to improve air quality conditions.

90. Unless there is a Government intervention to freeze freed up domestic slots and allow no more international flights, HS2 Ltd cannot claim there will be minimal air quality impacts around Heathrow. The UK is under increasing pressure to meet its EU targets particularly within London where there are acknowledged failings. There cannot continue to be support for new schemes that add to the already costly poor air quality in London. Rail is supposed to be seen as an opportunity to reduce emissions. However, HS2 will not compete with domestic car users, and induce far more activity in some of the poorest air quality areas in the country.

91. We understand that Transport for London (TfL) also has concerns regarding the impact of HS2 on Euston and the ensuing passenger dispersal. TfL's own modelling of predicted passenger numbers is significantly higher than the HS2 modelling

forecasts and suggests that a more substantial investment in infrastructure will be needed in order to ensure adequate passenger dispersal is achieved.

92. Without a substantial investment in extra rail infrastructure to alleviate the current underground lines there will be even more pressure on the surrounding road network with regard to cars accessing the site, taxis and buses. All of these have the potential to impact on the local air quality levels. Alleviating the air pollution problem may necessitate extra costs to the project and these should be explicitly allowed for in the economic case.

93. The AoS document correctly identifies the issue of poor air quality in London and in Hillingdon. However, there is a concern that reference is made to the area around Euston still not meeting the annual mean objectives for NO2 or PM10 around Euston station as far ahead as 2026. Para 7.5.15 of the AoS Main Report Volume 1 states that:

"However it is unlikely that the annual mean objective for NO2 or PM10 will be met at Euston station by this time".

94. As these are European Union limit values that the UK is obligated to meet within strict deadlines it would appear inconceivable that the UK Government would allow this situation to remain as far in the future as 2026. The report goes onto state:

"After this time (2026) air quality may deteriorate to some extent as increases in road traffic offset other gains, but this is by no means certain."

95. It is considered to be unacceptable to put forward a high traffic-generating scheme, such as a high speed rail terminal, where it is acknowledged air quality levels are already over the recognised health-based European Union limit values and not to include details of identified measures to be put in place to address this. It is not clear from the documentation as to why this is the case. However, from this restricted analysis it could be concluded that Euston is not the appropriate place to locate a high trip-generating transport hub, which will increase large numbers of extra road movements from cars, taxis and buses.

96. Given that there are no details of construction works within the Consultation documentation, it is not possible to comment on the appropriateness of mitigation measures. Should this proposal go ahead this Council will need to be assured that residents and businesses will be protected from poor air quality levels associated with all of the elements of a construction project of this nature.

97. In particular, it is acknowledged that the Euston station works would take 7-8 years. Air Quality from construction works can be significant, yet this does not appear to have been factored into the HS2 appraisal.

98. We are particularly concerned that the submitted HS2 evidence suggests that London will continue to fail to achieve its emissions targets. This is in contradiction to the policies in the London Plan, which the Government has approved and the Mayor's Air

Quality Strategy which both stress the need to improve local air quality, especially in areas where it is above the recognised EU limits.

99. As a consequence, HS2 will have a detrimental impact on the Mayor's attempts to deliver the objectives of the Air Quality Strategy. In addition, London will further struggle to meet its EU air quality targets resulting in fines. However, the biggest impacts will be on health and the environment of Londoners which is contrary to the Mayor's ambitions.

What are the potential effects of HS2 on London's transport network

<u>The potential effects of the HS2 to HS1 link</u>

100. Though we fully support in principle a link being provided between HS2 and HS1 we do not agree with the current proposals to use existing track on the North London Line (NLL). Recent upgrade works, made in response to passenger demand, have resulted in longer trains and more frequent services. The line is also an important route for freight transport. Passenger growth and demand for freight are both expected to continue to grow in the coming years, and therefore use of the NLL by high speed rail could not only impact on existing services but also on the possibility of future improvements. Furthermore TfL modelling contradicts HS2 Ltd's assertions that the NLL link would provide capacity for three high speed services an hour, indicating that capacity would be limited to just one service an hour. We do not believe that this solution would build enough capacity and resilience into the network to allow it to adapt to future travel patterns.

101. We note that the original brief given to HS2 Ltd. by the DfT was to explore the business case between HS2 and HS1 based on predicted traffic flows between Birmingham, Paris and Brussels. However, when phase two of the project is complete, and increased high speed connectivity achieved in mainland Europe (for example links to Spain and Germany); traffic between the UK and further continental destinations may be significantly higher. It would be appropriate for HS2 Ltd. to look again at this business case with a wider brief and consider what the implications of this could have for constructing a link between HS2 and HS1 by other means, for example, by tunnelling.

102. The construction of the link between HS2 and HS1 will almost certainly result in a huge disruption to the NLL services.

<u>The potential impacts for Euston and the wider implications of this</u>

103. The Council is concerned that the magnitude of the work required to incorporate HS2 at Euston has not been factored into the Consultation document. HS2 Ltd is therefore providing a misleading assessment of the impacts which undermine the economic case. This was a concern raised in July 2010 in the Report to Government by Lord Mawhinney:

"I am concerned that adhering to the proposals that Euston should be the terminus from the outset could make the cost prohibitive and therefore threaten the whole project."

104. With regards to passenger dispersal, the Consultation Document, in para 5.4 acknowledges that:

"By 2043, as a result of the proposed line, the number of passengers per day using Euston Mainline Station is estimated to increase by 31,700."

105. It goes on to describe the impact on the London Underground lines as:

"In the three hour morning peak, would mean 5,500 additional passengers using Euston Underground Station. Both the Northern and Victoria lines which stop at Euston are likely to be heavily crowded even without HS2."

106. However, TfL modelling predicts far higher passenger numbers. It anticipates that in 2033 (with no high speed rail) 30,000 passengers a day would disperse from Euston. The completion of phase one of the high speed proposals would bring this up to 39,000 and phase two to 57,000 passengers a day. Clearly the infrastructure at Euston will not be able to cope.

107. The above concerns are also shared by the Mayor of London, who states in a letter to the Cabinet Member for Transport at Bucks County Council that:

"TfL estimate that there will be more than twice as many passengers arriving at Euston station in the morning peak period as a result of HS2 and the only way this can be accommodated is through additional investment in Underground capacity. I wanted a commitment from Government that their proposals for HS2 would include new underground rail capacity between Euston and Victoria. They do not and on this basis I cannot support the current proposals. "

108. The Council believes that the Euston connection will put an unsustainable amount of pressure on public transport services into and out of Euston. HS2 Ltd's assessment raises many questions about one of the most important interchanges in London and how it can link with the London Underground. HS2 is proposed to connect the West Midlands to London and not just Euston. The dispersal of passengers is therefore fundamental to the objectives of HS2 Ltd.

109. However, it would appear that not enough thought has gone into the amount of people travelling through Euston everyday. Without any commitment for funding, which would impact negatively on the business case, it is not possible to accept that this is the best route.

110. In addition to the amount of passengers going through Euston, the Consultation Document, para 2.68, indicates how long the construction phase is likely to take:

" …the major redevelopment project necessary at Euston station, lasting between seven and eight years…"

111. It is likely that train services into Euston will have to be reduced and disrupted for considerable periods during the construction works. The reduction in the number of platforms available during construction and a reduced number of approach tracks will disrupt Euston's ability to function properly. This is likely to affect both Inter-City and commuter services. There is no indication of how the work would be phased, for how much of the seven to eight year construction programme existing services will have to be reduced or whether the cost implications of the reduced services have been accounted for in the economic case.

112. The Northern and Victoria Underground Lines are already congested and will remain so even when the current upgrades are completed. However because London's Underground network is a complex interconnected system, there are likely to be significant knock on effects on other underground services, including the Metropolitan Line, if there is a vast increase in the numbers of passengers at Euston.

113. The Rail Utilisation Strategy prepared by Network Rail outlines the benefit that the proposed Chelsea-Hackney line would bring to alleviating overcrowding. It would make sense for the Chelsea-Hackney line to be developed alongside phase one of high speed rail to ensure that London's infrastructure can support predicted passenger numbers.

114. Whilst it may appear to HS2 Ltd that there is a lack of direct disruption to the underground lines serving Hillingdon (Piccadilly and Metropolitan), this is in fact a misrepresentation. In reality, any disruption suffered on the underground around Euston will have significant impacts on the services to Hillingdon. The Underground is a complex network that is notoriously sensitive to disruption.

115. The Council does not believe HS2 Ltd has fully assessed or understood the impacts of several years' disruption at Euston which is particularly important when considering the economic case. Instead, HS2 Ltd appeared to have taken a more focussed assessment of developing a solution purely for Euston. This itself is questionable, but more so when the wider impacts on London and the transport networks are considered.

<u>The potential effects for the Great Western Main Line</u>

116. The HS2 proposals would mean that in practice it would appear that all GWML trains will have to stop at Old Oak Common. This would add about 3 - 4 minutes to all commuter journeys. In addition, there would be 4 minutes added for Heathrow Express and 5 minutes for InterCity trains. Other services potentially impacted include Crossrail and the Heathrow Express. The Council is concerned about the impact that an interchange with Old Oak Common will have particularly in relation to these services and as to whether this has been factored into the economic case appropriately as disbenefits. Using the DfT methodology on time savings, this should result in a cost of the HS2 project, but this is unaccounted for.

117. The Mayor of London also raises concerns regarding the interconnectivity between HS2 and London. In particular the links with Old Oak Common and HS1 do not appear to be properly considered. HS2 Ltd need to appreciate that the London link does not simply stop at the interchanges and that there is a network of services that are co-dependent. The disruption or loss of any of these services is an impact on wider network of London and not just the direct connections.

118. There are major construction works required at Old Oak Common, which will almost certainly result in a huge disruption to train services for a significant time.

119. The Council believes that the choice of Old Oak Common as a west London interchange station has been, like the whole of the preferred route, chosen because of its proximity and convenience for Heathrow airport. In the light of the weak business case for linking HS2 to Heathrow and given that the airport is at capacity with no scope for expansion within existing Government policies, the London terminus strategy of HS2 should be re-examined.

The potential effects for the Chiltern Line

120. The HS2 route is to go alongside the existing Chiltern Line from Northolt to West Ruislip. The construction works are likely to affect South Ruislip and West Ruislip Stations. They will also involve the reconstruction of road bridges, which are used by the Chiltern Line, so that HS2 can pass over Long Drive, Bridgewater Road, West End Road and Breakspear Road South and under Ickenham Road. This will undoubtedly cause significant disruption to Chiltern Line services for a significant time.

The potential effects for the Central Underground Line

121. The HS2 route is to go alongside the existing Central Line from Northolt to West Ruislip. The construction works are likely to affect South Ruislip, Ruislip Gardens and West Ruislip Stations. They will also involve the reconstruction of road bridges, which are used by the Chiltern Line, so that HS2 can pass over Long Drive, Bridgewater Road and West End Road and under Ickenham Road. This will undoubtedly cause significant disruption to Chiltern Line services for a significant time.

The potential effects for the Metropolitan and Piccadilly Underground Lines

122. The HS2 route is to pass over the Metropolitan and Piccadilly Underground Lines near West Ruislip, although these construction works should be capable of being carried out with minimal disruption to services.

The potential effects for the London's bus services and traffic in general

123. The construction of HS2 proposal will require new bridges at Long Drive, Bridgewater Road, West End Road, Breakspear Road South and Ickenham Road. Harvil Road is also to be permanently diverted over a new HS2 bridge. These works are likely to take up to 2 years and will cause disruption to all the north to south routes in the borough. This will result in significant traffic congestion on roads and also cause

considerable disruption to bus services when roads are closed, or as a result of traffic congestion is the road widths are restricted. These impacts will be felt on neighbouring authorities, as people try to find alternative routes.

124. The Council is concerned at the certainty of disruption, some of it potentially long-lasting, to the five crucial bus routes which cross the alignment of HS2. The borough already faces poor quality north-south transport links, a subject of high-level member and officer engagement with the Mayor and TfL directors, and the impact of diversions that will almost inevitably be required as a consequence of HS2 construction are a matter of serious concern both to the council and to our residents. The construction works are likely to affect the routing, frequency and reliability of bus services.

125. The key Metropolitan Town Centre of Uxbridge lies some way to the south of the proposed HS2 alignment, and yet a significant proportion of the borough's residents - many of them older people - live in areas well to the north of the HS2 route. For many residents, public transport to Uxbridge and beyond is an essential lifeline and with the relative paucity of direct high-quality road links, any disruption to the affected bus services will seriously affect their quality of life.

126. Harvil Road, to the west of the Borough, carries a typical daily flow of around 10,000 vehicle movements and carries the U9 bus route, a critical link between the village of Harefield and the major employment, retail and transport hub in Uxbridge. The major disruption and diversions indicated at the intersection of HS2 and Harvil Road are likely to have severe and possibly long-lasting impacts on the U9 route. The 331 bus route also serves Harefield and links with Uxbridge via an alternative route, through Denham, via Moorhall Road. It is also likely to be affected by the HS2 works, in particular to the viaduct.

127. Near West Ruislip Station, the U1 bus route will be severed by any closures in High Road Ickenham. This route links Ruislip and Uxbridge, a popular destination via a typically very busy road. Further east, West End Road, which is one of the borough's more highly congested routes, linking the town centres of Ruislip and South Ruislip with the A40 Western Avenue, the E7 bus route links Ruislip LUL station ultimately to Ealing Broadway, and is therefore a highly important longer route of particular importance to older residents. This bus route will also be adversely affected by the Hs2 works.

128. Further specific details on the more local impacts on transport in Hillingdon are set out Part 2 of Hillingdon’s response.

<u>Unknown Impacts from Phase 2</u>

129. Even if the Phase 1 was considered appropriate and built, it should not be assumed that Phase 2 would be agreed and built. In cumulative terms, the impacts on London’s transport network of Phase 1 combined with Phase 2 are likely to be even greater and could undermine the scheme entirely. But with no assessment of Phase 2, it is not possible to assess the combined effects now.

130. Phase 2 will inevitably generate many more people travelling to London, which would increase the subsequent impacts on air quality and carbon emissions. This also includes a link to Heathrow (shown on Appendix 1), although it is not clear where this link would go. Once Phase 1 is approved, this can only have a significant adverse impact on Hillingdon, the adjoining areas and at vast cost.

131. When the Phase 1 impacts are more fully understood, through the more detailed Environmental Impact Assessment stage which will follow if the proposal is approved, it is likely many more discussions would then be required for Phase 2. As an example, in Hillingdon with the Y network involving a significant increase in the number of trains per hour, impacts such as noise will have to be reinvestigated.

132. As no assessment of Phase 2 has been completed, the extent of the impacts, environmental, social and economic cannot be properly understood. Phase 1 should not be viewed in isolation. It predetermines the route of Phase 2, and it also increases impacts on Phase 1 which have yet to be assessed. The two phased approach on Consultation that has been carried out on the HS2 proposal, with a proposed route on phase 1 and no details on phase 2, is therefore totally unacceptable.

PART 2

Part 2 of this submission relates to the second term of reference, which is 'To consider any actions that should be included in the final plan to mitigate any negative impact and ensure maximum benefit for London, should the scheme go ahead.' It also meets the Committee's request for written submissions on:

- **the effects on London's present transport network, in terms of local issues;**
- **local and regional environmental effects along HS2 route in London;**
- **Any changes to the proposed route in London, or construction, which might lessen social and/or environmental effects.**

Introduction

133. The proposed route goes right across the London Borough of Hillingdon, running through its dense urban areas at surface level and then across its valued Colne Valley by means of a viaduct. This will inevitably affect large numbers of people and yet very little consideration has been given to the impacts of HS2 and no mitigation measures have been put forward. The proposal to provide a Heathrow Link will also have devastating impacts on the Borough and yet again, there are no details provided on this.

134. We have therefore briefly set out below what we understand will be the impacts of HS2 on the Borough, and what might be done to mitigate these impacts. From our assessment we consider that the HS2 proposal will dramatically change the character and nature of the Borough in the same way that the Runway 3 proposal at Heathrow would impact, if not more so.

135. Given the scale of impacts on the Borough that are outlined below, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on the Borough. However, if the proposed route were to go ahead, the only sensible mitigation would be for tunnelling across the whole of the Borough.

What are the potential effects of HS2 on London's transport network

136. As stated in Part 1, the construction of HS2 proposal will require new bridges at Long Drive, Bridgewater Road, West End Road, Breakspear Road South and Ickenham Road. Harvil Road is also to be permanently diverted over a new HS2 bridge. These works are likely to take up to 2 years and a key issue of concern in Hillingdon is the disruption to traffic on all the north to south routes in the borough, over an extended period during construction, especially to a network of roads that is already heavily

saturated due to the relatively poor links to major distributor roads in the area. Much of the commercial and commuter traffic in the vicinity already relies upon the A40 Western Avenue, one of the busiest and least efficient radial corridors in London. This will also cause considerable disruption to bus services when roads are closed, or as a result of traffic congestion if the road widths are restricted. These impacts will be felt on neighbouring authorities too, as people try to find alternative routes.

137. In order to appreciate the scale of the concerns, we have described below some of the issues that will arise locally. Firstly we have outlined the scale of the transport engineering works that are proposed and then we have considered the impacts on the road network.

Transport engineering

138. Bridges over Bridgewater Road, Long Drive (South Ruislip Station), West End Road and Breakspear Road South will need to be reconstructed to carry HS2. The existing headroom for the roadway under these existing bridges is low. They are prone to accidental damage by vehicles and the new HS2 bridges will make the situation worse. Therefore, the new HS2 bridges would need to be raised to give a minimum headroom of 16'6'' (5.03m). They should also be moved away considerably from the side adjacent to the existing bridges, as being too close to them would create a tunnel effect for the road users. However, unfortunately moving the new bridges away from the existing bridges would seriously impact on nearby properties. Therefore, to not worsen the current situation, either the headroom below the existing bridges should be raised to not less than 16'6'' (5.03m) or the existing bridges should be re-constructed at a higher level. Such works would however inevitably cause huge disruption over years to traffic and public transport services.

139. The works will also require the temporary diversion of utilities in the existing road and their reinstatement after the completion of the works. Road and lane closures will be required to carry out the works and again this will certainly cause much disruption on the roads.

Ickenham Road Bridge at West Ruislip Station

140. HS2 Ltd has proposed a new bridge above the high speed line to carry Ickenham Road. It should be noted that Ickenham Road is a busy dual carriageway route over the bridge and already has a steep vertical alignment due to the existing rail lines below.

141. However, if the existing bridge is replaced with a new longer bridge or if a new bridge is built beside the existing bridge, it will extend the vertical alignment and would affect many properties on both sides of the road. The construction of a new bridge is most likely to require closure of Ickenham Road for a long period, about a year. This will cause much disruption and delays on the borough road network as motorists will be forced to take whatever route suits their journey. The works will also require the

temporary diversion of utilities in the existing road and their restoration after the completion of the works.

142. If the new HS2 line could be constructed within a tunnel under the road, the existing vertical alignment would be retained. A tunnel through the borough in this locality would also enable the road to be kept open, save Blenheim Care Centre from demolition, leave the golf course and the car park unaffected.

Permanent diversion of Harvil Road.

143. Harvil Road is proposed to be permanently diverted over a new HS2 bridge. The present bridge carrying Harvil Road over the railway is to be retained, but it is on a sharp bend and the cause of many recorded accidents. Therefore, we consider that the proposed diversion is ill considered and should be rejected. Instead, we propose that if the proposed route is to go ahead, that a tunnel be built. Otherwise, as a minimum, the existing road bridge should be demolished and Harvil Road re-aligned with a new bridge over each of the existing railway and HS2 lines. This would however require significant mitigation to limit the inevitable disruption that it would cause.

The 3.8 km viaduct west of Harvil Road

144. The 3.8 km viaduct west of Harvil Road appears to have a pier very close to the Hillingdon Outdoors Activity Centre. Part of the Centre may have to be demolished to enable the construction of the pier as shown on the route plan. However, by re-arranging the location of the pier, it may be possible to retain the building itself, although there are other issues about HS2 which may result in the Centre closing.

145. Although the piers are shown spaced at 50m centre, they will appear to be closely spaced when viewed from a distance and effectively slice the open land in two. This will also limit the potential of this vast swathe of land for future recreational and leisure uses. We consider that the piers are spaced at much greater centres and the vast area of open land be used to build an attractive bridge to enhance the surroundings.

146. It is assumed that a construction of a number of temporary jetties will be required for the building of piers and foundations over the water. These will mean that the lakes will not be open to the public for years and they may not be suitable or attractive for boating and fishing uses once HS2 is operational. Any measures that will be taken to restore the site used for temporary works to its original condition are not known at this stage.

147. Given that the noise from the high speed trains may disturb the wildlife and become a nuisance to people undertaking leisure activities, it is the Council's view that if the proposed route proceeds, a tunnel in lieu of the proposed viaduct should be built.

Impacts on South Ruislip

148. The A40 is a feeder for traffic between central London and the M25 and to destinations beyond, and is therefore a logical route for much of the commercial road traffic in the South Ruislip area, whether servicing areas further in towards central London or outlying areas in the counties around west London.

149. The only accesses for larger commercial vehicle traffic between the South Ruislip Industrial Estate and the A40 is via the junctions at Target Roundabout and the Polish War Memorial Roundabout. Both junctions are, however, only indirectly linked by two key routes and both of these are already severely constrained by rail over-bridges with limited height clearances.

150. The route to and from the Target Roundabout runs via Field End Road towards Northolt, under a rail bridge between the junctions with Bradfield Road and Rabournmead Drive. The route then continues within the London Borough of Ealing, into Mandeville Road, past Northolt LUL station (also likely to be affected by the HS2 proposals) and then to the Target Roundabout.

151. In practice, the more favoured route from South Ruislip to the A40 tends to be via the Polish War Memorial roundabout. This route runs via Victoria Road, Station Approach/ Long Drive and West End Road, passing under the rail overbridge at South Ruislip station. The bridge at South Ruislip station is in fact a series of separate bridge decks, carrying the Central Line and Chiltern Line. Despite over-height vehicle detectors, bridge strikes are not unknown, which reinforces the case that this is a critically important route for commercial vehicle traffic.

152. Residential roads to the north of Station Approach also suffer to a significant extent from heavy goods vehicle traffic, which use these roads as a means of getting between West End Road and Victoria Road. The attraction of these roads, (some of which nevertheless have restrictive weight limits, one-way working, width restrictions and other traffic calming measures) is that they are perceived as a means of bypassing Station Road/Long Drive and in particular the limited-height rail bridge.

153. Initial discussions with HS2 Ltd have indicated that a new bridge will be constructed at South Ruislip, although it is as yet unclear how this bridge will be fabricated. It mat be built in a nearby site, constructed in situ or brought from a remote site. If the new bridge were to be constructed at the same level as the existing Chiltern Line and Central Line bridges, then there would presumably be potential to use the existing bridges for temporary diversions of rail services during construction, but at the cost of exacerbating the existing height clearance problem for the road underneath, without substantial and invasive excavation.

154. If on the other hand, the new rail bridge were to be constructed at a greater height than the existing bridges, then the potential to divert services between them would appear to be more limited, and the existing bridge height would remain as an unresolved issue that already blights the area.

155. Construction of the new bridge is likely to cause major traffic disruption, as there is relatively little working space owing to the immediate proximity of South Ruislip station to the road, and other buildings nearby.

156. As part of the construction process, it is highly likely that HS2 Ltd's contractor will seek to identify a major compound within the HS2 corridor, and potential candidates for this include part of the Waste Transfer site in Victoria Road. This would add considerably to the volumes of heavy goods traffic in the area, which would still be forced to rely on the inadequate road network referred to above.

Impacts on Ruislip Gardens

157. The next major road crossing disruption along the HS2 corridor comes at Ruislip Gardens, where the existing steel truss bridge crosses West End Road at an angle and already passes near a number of existing properties. To the west of this site is a long, narrow LUL depot site that services the Central Line. It is conceivable that HS2 Ltd will wish to explore using some of this site as a construction compound, which will inevitably add to local traffic levels over and above the disruption caused by demolition and construction associated with the new bridge crossing.

158. Residents in the large area of Ruislip Gardens to the south and west of this site rely entirely on West End Road as their link to destinations in the north of the borough. A school which is situated at the western extremity of the area also has associated vehicular and pedestrian traffic from the wider catchment area.

Impacts on West Ruislip

159. There is likely to be major disruption to the existing road links by West Ruislip station, which at present serves both the Chiltern Line and forms the western end of the Central Line. A new bridge is proposed, to the north of the existing road bridge. The road itself, Ickenham Road, is one of the few links for residents of Eastcote and Ruislip who wish to travel to and from the A40. Traffic levels are already very high at peak periods and this is expected to grow in the coming years as the large housing development on the former RAF West Ruislip site is redeveloped.

160. Construction details of the new bridge are again unknown, although because of the spans required it seems likely to involve at the least substantial in-situ bridge piers and possibly in-situ construction of the bridge itself. The proximity of the rail sidings by the Central Line and Chiltern Line may prove attractive as a compound, with all the consequent heavy goods traffic that it would generate.

Impacts on Breakspear Road South

161. Despite its deceptively rural appearance, Breakspear Road South is an important link between, on the one hand, Harefield, Northwood and Ruislip, and on the other, Ickenham, the A40 and Uxbridge. Morning southbound peak traffic often queues from the junction with Swakeleys Road, as far as the junction with Copthall Road West, and the route is very susceptible to downstream traffic congestion.

162. The alignment of HS2 shows that an all-new rail bridge will be required to the south of the existing Victorian Chiltern Line bridge. The narrowness of Breakspear Road South at this point, and the close proximity of highway and property boundaries, suggest that significant long-duration road closures may be required during construction. This will impose substantial additional pressures on to the local network, with traffic being forced onto other routes such as Ickenham Road and Harvil Road, which is also affected by the other planned HS2 road crossings.

Impacts on Harvil Road

163. Harvil Road is a vital link for Harefield to and from Ickenham, the A40 and Uxbridge. One of the few bus services that links Harefield directly to the heart of the borough is the U9, which runs along Harvil Road. At present, the existing road bridge over the Chiltern Line, just north of the junction of Harvil Road and Skip Lane, is a sub-standard width structure, which is also very poorly aligned and has been the site of several serious road accidents in recent years.

164. Traffic queues from Harefield in the morning peak, heading towards Ickenham, frequently tail back from the junction with Swakeleys Road well beyond the junction with The Drive and sometimes as far as Skip Lane. This is a clear demonstration of the crucial importance of this road to Harefield. Some peak traffic also comes from Ruislip via New Year's Green Lane, and more is likely to divert here in any periods if and when Breakspear Road South is closed.

165. The present details of the road links and bridge works proposed by HS2 here are again unclear. The Consultation documentation appears to show Harvil Road being diverted onto the unclassified road that serves the Hillingdon Outdoor Activities Centre (HOAC). This has been poorly thought through, and is unlikely to be feasible.

166. The Mayor's Transport Strategy shows that more than 70% of trips of under 5km are made to access schools, local shops, leisure centres, health centres and banks and that all journeys tend to start and end on the local transport network.

167. For many residents in Harefield, already disenfranchised by a low level of public transport provision, and no access at all to London's rail services, the need for these short journeys is especially acute and the disruption due to HS2 construction will be immense. Car-borne traffic between Harefield and Uxbridge is likely to rise sharply, in stark contrast to the transport modal shift aims that the Mayor and the council share.

168. Three key routes serve Harefield and West Ruislip; namely Ickenham Road, Breakspear Road South and Harvil Road, with a tangential link from Harvil Road/ Church Hill to Denham via Moorhall Road. All will be affected by HS2 in some way, and the traffic and public transport disruption will place enormous strain on the remaining minor accesses to the A40 and beyond.

169. Traffic levels along Moorhall Road (which carries the 331 bus route) to and from Denham are likely to be greatly increased as Harvil Road itself is affected by HS2 construction. Some of the more rural routes from Harefield, such as Park Lane,

Springwell Lane and Woodcock Hill that link to Rickmansworth and the M25, may suffer much more commuter traffic at levels not normally seen. Many of these roads, quite apart from their quiet rural nature, are simply unsuited to heavy use, in particular by larger commercial vehicles.

170. The importance of this issue should not be underestimated. The disruption to Harvil Road in particular, due to the major construction and earth-movement work associated with the road diversion, viaduct construction and the creation of a massive open-cutting scoring through New Years Green Covert will, quite apart from the environmental destruction, cause major disruption to this crucial road link.

171. The Council has actively sought additional investment by the Mayor into public transport routes to better serve these residents, only to be told that the necessary funding for new or significantly better routes is not available; the sums required would be a tiny fraction in proportion to the levels of investment planned for HS2, even if this is factored to consider only a local element of HS2 investment.

172. The Mayor has committed in his Transport Strategy to develop the bus network to support other transport infrastructure investment, citing Crossrail as an obvious example, but as HS2 has no interaction within Hillingdon in transport terms, this would appear to disqualify the Borough and in particular the residents of Harefield for such critical public transport investment based on these parameters.

Impacts on the wider area

173. Major disruption to the existing local road network, in particular the three key routes in the west affected by HS2, namely Ickenham Road, Breakspear Road South and Harvil Road, will inevitably put great strain on the remaining access routes to the A40 and beyond.

174. Traffic levels along Moorhall Road, to and from Denham, are likely to be greatly increased as Harvil Road itself is affected by HS2 construction. Similarly some of the more rural routes from Harefield, such as Park Lane and Woodcock Hill that link to Rickmansworth and the M25, will suffer much more commuter traffic at levels not normally seen. Many of these roads, quite apart from their quiet rural nature, are simply unsuited to heavy use, in particular by larger commercial vehicles.

How could the adverse transport of HS2 on the transport network be addressed?

175. As we have outlined in Part 1, we do not believe that the HS2 proposal has been justified in terms of the economic or environmental case. It does not have a sound business case. It should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact upon Hillingdon's roads. However, if the proposed route were to go ahead, the only sensible mitigation would be for a tunnel across the borough.

Impacts on noise

176. HS2 will potentially have a substantial noise impact as the route passes through Hillingdon. The trains in the HS2 proposals, travelling at the high speeds described in the Consultation documentation generate more noise than existing services. With regards to the impact on Hillingdon there are two distinct noise issues of concern. As the route passes through the urban areas in Hillingdon, passing close to residential housing and other sensitive receptors such as schools and residential care homes, this will add considerably to existing noise levels. In addition, as the route leaves the current rail corridor and onto a newly formed track on a viaduct this exposes new, currently tranquil areas of the borough to substantial new noise levels.

177. The Council is also particularly concerned regarding the lack of acknowledgement of Phase 2 impacts. Phase 1 cannot be considered independently. People living along the route in Hillingdon are likely to be subjected to unacceptable noise levels as a result of Phase 1. However, Phase 2 will increase the amount of trains at certain times, which may take the noise levels beyond thresholds of acceptability to a lot more people. By the time this is determined though, it would be too late to find appropriate mitigation.

178. HS2 Ltd was keen to attempt to reassure the public that noise impacts would be minimal and went as far as installing noise booths in their public exhibitions to demonstrate the impacts of HS2. The overall impression given was that the noise impacts would be minimal. Hillingdon have serious concerns over the use of the noise booths. The representation was portrayed at a distance of 75m from the proposed track with an apparent high barrier in place. This does not represent the situation in Hillingdon where properties are within a few metres of the line and there may not be sufficient room for mitigation barriers.

179. The Council has employed experts to assess the noise assessment as provided within the Appraisal of Sustainability (AoS). A number of faults have been identified with regard to the accuracy of the information supplied, and more detail is provided in the Hillingdon Response to the HS2 Consultation. In summary the main concerns include:

- Use of inappropriate noise criteria with regards to the impact of noise levels on residents, no assessment at all for community facilities or other non-residential buildings.
- No assessment of the peak noise level impacts, of the night noise impacts, of the actual magnitude of the noise increases or of ground borne noise and vibration.
- Insufficient evidence regarding mitigation measures such as predicted reductions in noise levels from future trains, ability of noise barriers to mitigate the noise levels.
- Insufficient detail as to whether adequate mitigation measures can be set in place in areas where the train passes close to residential areas and on the

viaduct where noise impacts will be propagated from height across a tranquil valley.

180. The Council firmly believes that the noise assessment supplied in the consultation does not portray an accurate representation of the impacts, either in urban areas or in the tranquil areas. The inadequate quality of the information in the AoS does not form a proper basis for making such significant decisions that could affect the quality of lives of so many people.

Impacts on landscape

181. Hillingdon provides the western gateway to London and to Buckinghamshire. This important gateway to London is represented by a uniquely important open countryside that has been developed out of man made gravel pits. The Mid Colne Valley is a Regional Park, which is a site of Metropolitan Importance for nature conservation. It also contains a number of Special Sites of Scientific Interest. The route of HS2 is proposed to run through this highly valuable area to the west of London. The importance of this cannot be understated in terms of its landscape value and its use for recreational and leisure purposes and biodiversity. Appendix 2 provides a visual representation of the existing landscape.

182. The AoS considers the potential beneficial and adverse, national and regional, sustainability impacts of the proposed scheme. In Volume 1 of the AoS (paragraph 7.4.1) it is stated that:

"Natural and cultural resource protection and environmental enhancement, at this level of appraisal, considers statutorily protected environmental features (of international and national importance), and other relevant non-statutory features where information is readily available. No site surveys have been undertaken at this stage. The resources considered by the AoS are listed below and illustrated within the detailed plans, contained in Volume 2 to the main report. - National Parks, AONBs, London Protected Views, and Local Landscape Designations."

183. It should be noted that there is no mention of Regional Parks in the AoS, such as the Colne Valley Regional Park, or the London Regional Landscape Framework (2010). It is therefore apparent that HS2 Ltd has not given any weight to the regional impacts that the route would have on London's important landscape. The failure to consider the London Regional Landscape Framework is particularly concerning as that was published in 2010.

184. Again, as stated in Part 1 of our response, the Council's concerns appear to be supported by the report by Oxera (20th June 2011), which states in para 3.45 that

" The AoS does not explicitly consider the landscape impacts of building a new high speed line, which HS2 Ltd rightly believes would be important. Neither are such effects included in the calculated BCRs, and the extent to which they would reduce the measured value for money of a new line is therefore unclear."

185. Para 3.46 of the report by Oxera goes on to say that:

> *"Studies do exist of the values attached by people to particular kinds of landscape and Government has in recent years proposed and undertaken new studies. It should be possible to produce broad estimates of the order of magnitude of landscape costs for a new high speed line."*

186. In Volume 1 of the AoS (paragraph 4.1) it is stated that:

> *"Further appraisal and assessment (as part of EIA) would be integral to design development through close working with both HS2 Ltd and the wider engineering team; and conclusions that emerge from the AoS would feed the independent reporting of scheme performance and would assist the future consideration of mitigation to help overcome particular issues of concern."*

187. If Phase 1 is approved, it will be too late to consider the landscape impacts which should be mitigated through avoidance, unless there was a commitment by Government to tunnel through this Borough. The full impacts of Phase 1 on this important landscape should not be left until post determination, they should be integral to the decision.

188. From Old Oak Common towards the M25, the route would run along the Chiltern Line corridor to West Ruislip and then cut across the Colne Valley Regional Park on a two mile (3.8km) long viaduct before entering a six-mile long tunnel immediately before the M25 junctions. A future connection to Heathrow would be provided in the section between West Ruislip and the M25.

189. In addition, it is explained in Volume 1 of the AoS that:

> *"Just beyond Northolt station the proposed scheme would include a grade-separated junction to enable a future connection to Heathrow airport. This would necessitate a corridor width sufficient to accommodate the twin Central Line tracks and the four HS2 tracks and the junction, but the link itself would not form part of the proposed scheme."*

190. In Volume 1 of the AoS (Paragraph 7.4.3) it is mentioned that Natural England has defined (in 2009) national character areas of broadly homogenous landscape. Defining what makes the character of these areas distinct helps to identify the features that give a locality its 'sense of place', and pinpoint what makes it different from neighbouring areas. In this way it is possible to understand what elements of each landscape are relatively more sensitive to change and equally what kinds of change might be deemed more acceptable. Twelve character areas are crossed by the proposed route.

191. The AoS refers to impacts on 6 national character areas in the South East and London region as designated by Natural England. However, the AoS fails to acknowledge the Thames Valley character even though the viaduct would run cross this character area.

192. The Thames Valley (Landscape Character Area 115) is described by Natural England. as:

- Hydrological floodplain of the River Thames as a landscape feature provides unity to the large areas of fragmented poor agricultural land.
- The western Thames valley is wide and flat with the river barely discernible, occupying only a small part of the wider geological floodplain.
- Woodlands characterise the north-western area, the wooded character extending up to the southern edge of the Chiltern Hills.
- To the south, the open Thames floodplain dominates with its associated flat grazing land, becoming characterised by a number of formal historic landscapes on higher ground such as Windsor Park.
- Towards London in the east, the natural character of the area is overtaken by urban influences; a dense network of roads including the M25 corridor, Heathrow Airport, railway lines, golf courses, pylon lines, reservoirs, extensive mineral extraction and numerous flooded gravel pits.

193. Natural England further define the character area of the Colne Valley:

"rapid development has often left new structures and buildings unrelated to the landscape around them…' and 'The M25, M40 and M4 corridors are a major feature of the Thames Valley with associated development often poorly contained and tending to dominate the floodplain. The fringe zone to Greater London has seen rapid and often haphazard development which gives the overall impression of a lack of co-ordination between the numerous activities and land uses. Heathrow Airport is a large dominating influence in the flat landscape around the M25…(Natural England, LCA 115, 2009)."

194. The character areas above should have been taken into account by HS2 Ltd, but they have not. However, it is also important to further define the areas within the character areas. The area HS2 will cross is not the same as the southern areas of the Colne Valley which have already had considerable impacts from major infrastructure. It is interesting that the approach to HS1 was to develop a route that follows existing transport networks, and therefore landscape impacts from crossings of rivers and open areas was minimised by existing infrastructure.

195. The Council believes the HS2 viaduct would be another 'haphazard' development superimposed on part of the valley that is not currently dominated by development unlike the area around Heathrow Airport to the south, west of Slough. The Mid Colne Valley Regional Park in this area is devoid of 'eyesores' to the same extent as the southern areas. The viaduct would therefore have a much greater impact than HS2 Ltd currently acknowledge.

196. The London Regional Landscape Framework was produced in April 2010 and identifies the Colne Valley as one 22 Natural Landscape Areas (NLA). The Framework describes the Colne Valley as:

"fast-flowing, clean river set within floodplain meadows bordered by damp woodland' and identified as 'one of the finest river systems in London"

197. The 3.8 km long HS2 viaduct between the high ground on the western and eastern sides of the valley, and up to 15m above the valley floor / floodplain, would be a dominant, alien and urbanising feature in the northern Colne Valley.

198. The AoS fails to give proper consideration to the Colne Valley Regional Park, which covers about 110 km² (43 square miles) of countryside, lakes and rivers, from Rickmansworth in the north and Staines in the south, on the west side of London, and includes several country parks, including Bayhurst Wood (in Hillingdon) and Denham.

199. In 2007 as part of a project, English Heritage, Buckinghamshire County Council and Groundwork Thames Valley undertook a historic landscape characterisation for the Park, and identified several distinctive historic characteristics including the series of flooded mineral extractions sites between Batchworth Lake and Denham Quarries, and the registered historic park at Denham (Country Park).

200. In the Project Report, the 19 km² of the Park in the London Borough of Hillingdon is noted as representing 'one of the better-preserved areas of pre-twentieth century landscape, and due to the creation of the Green Belt, the settlements in this area remain small and the majority of the landscape varies from the pre 18th century to 19th century farming landscapes'. It also noted that 'the landscape immediately to the east of the River Colne and separating Buckinghamshire from Hillingdon exhibits the highest level of modern impact through the extensive network of flooded mineral extraction sites that stretch from Rickmansworth to Denham'.

201. The landscape of the Mid Colne Valley was born from previous human interventions. The extent of the gravel pits would once have dominated the western edges of what are now the western boundaries of London. This landscape also represents what can be achieved once man made landscapes are returned to natural features. Whilst the southern areas of the Colne Valley have had to accommodate new infrastructure and extensive development, the northern areas are relatively free from impacts.

202. It is clear that HS2 Ltd has not properly considered the impacts on the Mid Colne Valley. They omit references to important documents outlining the importance of the character areas, and by not properly liaising with Local Authorities, they have missed out on recent character assessments.

203. As a consequence, HS2 Ltd has completely underplayed the value of the northern areas of the Colne Valley where a 3.8km viaduct will travel. There is no existing infrastructure that minimises impacts as there was with HS1, making a HS2 a visible and unsightly addition to the western boundary of London.

204. This assessment of HS2 Ltd's appraisal was supported in Oxera's report to the Government Transport Select Committee which stated:

"3.45 The AoS does not explicitly consider the landscape impacts of building a new high speed line, which HS2 Ltd rightly believes would be important. Neither are such effects included in the calculated BCRs, and the extent to which they would reduce the measured value for money of a new line is therefore unclear.

3.46 Studies do exist of the values attached by people to particular kinds of landscape, and Government has in recent years proposed and undertaken new studies. It should be possible to produce broad estimates of the order of magnitude of landscape costs for a new high speed line." (Review of the Government's case for a High Speed Rail programme June 2011)

205. HS2 Ltd need to reconsider the landscape impacts of the scheme given appropriate weight to the Colne Valley Regional Park and the 3.8km of viaduct. However, the Council has concerns about the methodology for seemingly ignoring the impacts on the Park. Once again, a proper appraisal may unbalance the limited benefits HS2 Ltd has set resulting in a negative scheme. It should be noted though that the Council already considers the scheme highly negative and this is just another example of HS2 Ltd not fully considering London impacts.

<u>What should be done to mitigate against the landscape impacts</u>

206. Although it may be possible in some areas for mitigation to be achieved by utilising existing topography and land use features to screen views of the line this type of information has not been included in the Consultation documentation. Bunding and additional planting may help to reduce the impact of the line on wider views, however, given that the route passes through some tightly developed areas, there are some locations where mitigation may not be possible. In addition, some features, such as the viaduct, are extremely large and cannot be screened, in such cases the quality of their design will be paramount. As yet, there are no draft designs for these structures, which would help assess their impact. Furthermore, there is no commitment from HS2 Ltd to set out clear guidelines on their proposed approach to mitigation.

207. Given the scale of impacts on this highly valued landscape, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on Hillingdon's landscape. However, if the proposed route were to go ahead, the only sensible mitigation would be for a tunnel through the borough.

Impacts on biodiversity

208. HS2 will have a significant negative impact on wildlife and biodiversity within the borough. The borough separates its important sites into 'sites of important nature

conservation (SINCs)'. These are defined by a 4 tier hierarchy of status below the nationally designated Sites of Special Scientific Interest (SSSI):

- Metropolitan: These are designated by the Greater London Authority and are considered regionally important.
- Grade 1: These are designated by the Borough and are considered to be some of the most important nature conservation sites to Hillingdon.
- Grade 2 and Local: These are designated by the Borough and represent sites with more local importance.

209. All the sites above are important to the Borough and any loss or adverse impacts are to be avoided wherever possible. Appendix 3 shows that HS2 is located within or in close proximity to a number of SINCs (either proposed or designated). The AoS does not give any consideration to the borough grade SINCS within Hillingdon and provides minimal information on the impacts on the Mid Colne Valley Metropolitan site and SSSI. With regards to the SSSI, the AoS states:

"The proposed scheme would also cross the southern and western-most part of the Mid Colne Valley SSSI on a viaduct, but effects on the site and particularly open water habitats are likely to be limited by the alignment of the route."

210. Appendix 5.2 of the AoS only sets out the broad assessment of the biodiversity impacts. Instead it relies on approaches used for HS1 to suggest possible mitigation measures. However, HS2 Ltd has not done a proper assessment to be able to fully understand what the impacts would be. For example, the quote above seems to imply there would be limited impact on a SSSI and Metropolitan Site of Nature Conservation. This is wildly optimistic and not an evidenced base assessment. Adverse impacts on critical sites such as the SSSI cannot be overcome by funding enhancement works elsewhere along the route. HS2 Ltd has suggested that they have tried to avoid major impacts where possible, yet the route goes straight through a SSSI. HS2 Ltd does not provide an explanation as to why these impacts could not be avoided, either via a tunnel or an alternative route.

211. In addition to the above, the following provides examples of areas that will be significantly adversely impacted include:

- Mid Colne Valley Site of Special Scientific Interest (SSSI)

212. Within the Borough of Hillingdon, HS2 will cross the Mid Colne Valley SSSI, which also runs into South Buckinghamshire District Council. The Mid Colne Valley is of significant ornithological interest, particularly for the diversity of breeding woodland and wetland birds, and for the numbers of wintering wildfowl. On the eastern valley slope is one of the last remaining examples of unimproved chalk grassland in Greater London. The ornithological interest of the site is considerable with over 70 breeding and 80 wintering species of bird regularly recorded. This high diversity reflects the close proximity of the wide range of habitats present: woodland, scrub, grassland,

running and standing water, marginal fen and gravel banks. Breeding woodland birds include kestrel, lesser whitethroat, nuthatch, tawny owl and three species of woodpecker. The gravel pits and River Colne attract one of the most important wetland breeding bird communities in Greater London and the Colne Valley: coot, greylag goose, little ringed plover, kingfisher, mute swan and tufted duck nest regularly, while others such as gadwall and shoveler are resident and occasionally breed. Recently a heronry has become established on the islands in Broadwater and is expanding rapidly. Many species of wintering wildfowl are attracted to the extensive water areas; the numbers of tufted duck frequently reach levels of national importance, and pochard and shoveler occasionally reach levels of similar significance.

- Mid Colne Valley (Metropolitan Site)

213. This section of the Colne Valley includes a diverse range of high quality habitats. Several waterways include the Frays River, from which 53 species of aquatic and wetland plants have been recorded. The unimproved wet pastures of Frays Farm Meadows (a Site of Special Scientific Interest and Local Nature Reserve managed by the London Wildlife Trust and Hillingdon Natural History Society) support a very rich flora, including locally uncommon species such as marsh-marigold and ragged-robin. The invertebrate fauna includes the locally declining glow-worm. The meadows support wintering waders such as snipe, as well as a population of harvest mice. The adjacent Denham Lock Wood (also Site of Special Scientific Interest) is one of few wet alder-willow woods in London, and supports a rich fen flora including the very localised small teasel. Invertebrates here include the nationally rare species Desmoulin's whorl snail and the balsam carpet moth. The extensive flooded gravel pits are very important for breeding and wintering waterfowl, and also for passage migrants. The site is important for its population of the specially-protected water vole and there are also recent reports of otters in the vicinity.

- Newyears Green Covert (Borough Grade 1 Importance)

214. This woodland is believed to have been planted in the late 19th century. The canopy is dominated by pedunculate oak, ash, hornbeam, English elm, blackthorn, hawthorn and hazel. Also present is the locally scarce, buckthorn along with Midland hawthorn, spindle and field rose. The ground flora is dominated in parts by bramble and common nettle with some germander speedwell and violets. It estimated that the construction of the route of HS2 will require the removal of up to 3,000 trees from this site.

215. There are a number of other sites along the route that will be impacted in some way. The biggest concern at this stage of the Consultation is that HS2 Ltd has not committed to any strategy for mitigating loss. Simply relying on offsetting impacts, by allocating funds for as yet ‘unknown’ projects is not acceptable. Furthermore, the Council needs to understand as much effort has been made to avoid the impacts. The fact that HS2 Ltd has simply dismissed any possible impacts on the Mid Colne Valley SSSi, suggests that the first consideration was to appease concerns by offering ‘offsite compensation’. This is unacceptable.

What should be done to mitigate against the biodiversity impacts

216. The Council accepts that any new major infrastructure project will have negative impacts on the land. However, in these circumstances, the Council would expect much clearer evidence that the route designers have tried to avoid the impacts. If it is still not possible, following alternative route optioneering, to avoid adverse impacts it is necessary to develop strategies that commit design and implementation stages to appropriate mitigation.

217. It is also difficult for the Council to understand why one of its most important biodiversity features, the Mid Colne Valley, has to be the preferred location for HS2 to go through, without any proposed mitigation measures. HS2 Ltd appears to have adopted approaches used on HS1 particularly regarding offsite compensation works. HS2 Ltd should provide sufficient evidence to demonstrate that a) all the impacts are known, b) attempts have been made to avoid the impacts and c) there are suitable opportunities near to the impacts to provide compensation.

218. Given the scale of impacts on biodiversity in this area, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on Hillingdon's biodiversity. However, if the proposed route were to go ahead, the only sensible mitigation would be for a tunnel across the borough.

Impacts on Rights of Way

219. There are 8 Public Rights of Way U34 & U75 and U42, U45, U46, U47, U81 & R146 taken from the LBH Definitive Map & Statement (there are maps of these in pdf format). In addition, the links to two important trails across Hillingdon will be impacted:

- Celandine Route: A walk of 12 miles along the River Pinn from Pinner to the Grand Union Canal at Cowley. This goes through green spaces, conservation areas and wildlife havens. HS2 intersects with this right of way where it crosses the River Pinn to the east of Breakspear Road.

- Ickenham Marsh Trail: This runs from Ickenham Marsh Nature reserve to Ruislip Lido. HS2 intersects with this right of way as it runs parallel to the Chiltern Line train tracks within the grounds of Ruislip Golf course.

220. These Public Rights of Way and trails are well used and valued by the local communities and those in adjoining areas. Some of these also provide necessary routes linking the north and south of the borough and it is crucial that they are not severed. It is also important that the attractiveness of these routes are maintained to ensure that they continue to be well utilised and valued by the public in the long term.

Impacts on Heritage

221. HS2 will have an impact on a number of designated and identified historic assets and their wider settings within the borough. These include listed buildings, conservation areas, Locally Listed Buildings and a Scheduled Ancient Monument. There may also be hidden assets that are revealed during the course of works, an approach to which has yet to be agreed. The impacts along the route are as follows:

Eastern Borough boundary to South Ruislip

222. This section of the route would have a direct impact on the setting of South Ruislip Station and also that of the Middlesex Public House, both of which are Locally Listed buildings. The former is a particularly attractive building with a polygonal clerestory and entrance hall designed by F F Curtis. Both of these are landmark buildings and have strong community associations.

South Ruislip to West Ruislip

223. The proposed embankment runs immediately south of The Bell Public House, which is an attractive 1930's building with a large half timbered gable corner feature. This is a location where lack of space may make mitigation measures difficult.

West Ruislip to Harvil Road

224. The route runs north of the existing railway embankment and the Brackenbury Farm Moated Site Scheduled Ancient Monument. This site also includes the Grade II listed Brackenbury House and Farmhouse. Whilst it is unlikely that construction work would have any direct implications with regard to the archaeology of the ancient monument, or the fabric of the listed buildings, there are concerns that additional noise and disturbance from the new line may have an impact on the long term viability of the site.

Harvil Road to West Boundary

225. Within this area the new line would cut through designated Green Belt land, crossing the Colne River Valley, which includes numerous flooded gravel pits and the Grand Union Canal. This area has an attractive and distinctive character and contains a number of heritage assets. The route would cross close to the southern part of the Widewater Lock Conservation Area and the proposed viaduct, which would be 15 m high and 3.6 km long, would be widely visible from this area, the neighbouring Black Jacks and Copper Mill Lock Conservation Area and in longer views from the Harefield Village Conservation Area.

226. The viaduct would also be located very close to the Locally Listed Dews Farm Cottage. This was originally a 15th century farm house associated with the Brackenbury Estate, which was largely rebuilt in 19th century. The building has an attractive garden setting and a rebuilt walled garden. The close proximately of the viaduct would seriously detract from the setting of the building and potentially endanger its long term viability as a residential unit.

227. HS2 will also run through an area along the western boundary of Hillingdon that is to be designated as an Archaeological Priority Zone. This has not been formally adopted but it is an extensive area where archaeology will be a key consideration for any development.

What should be done to mitigate against the heritage impacts

228. Although it may be possible in some areas for mitigation to be achieved by utilising existing topography and land use features to screen views of the line, this type of information has not been included in the Consultation documentation. Bunding and additional planting may help to reduce the impact of the line on wider views, however, given that the route passes through some tightly developed areas, there are some locations where mitigation may not be possible. In addition, some features, such as the viaduct, are extremely large and cannot be screened. In such cases the quality of their design will be paramount. As yet, there are no draft designs for these structures, which would help assess their impact. Furthermore, there is no commitment from HS2 Ltd to set out clear guidelines on how impacts will be mitigated.

229. Given the scale of impacts on heritage in this area, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on Hillingdon's heritage. However, if the proposed route were to go ahead, the only sensible mitigation would be for a tunnel across the borough.

Impacts on flood risk

230. Parts of the proposed route that follow the existing lines in Hillingdon cross areas with a 'High Probability' of flooding. These are shown in Appendix 4. The AoS does not properly acknowledge the extent of flood risk, which should be given further consideration. In the urban areas, the extent of further works could increase the risk of flooding to people and property and should be given sufficient weight in developing the proposed route. It is not clear if this has been done.

231. Outside of the urban areas, HS2 will be constructed in greenfield areas, some of which is designated as floodplain. As the AoS fails to acknowledge the level of risk, it is not clear whether HS2 Ltd has given the correct amount of weight to the issue of flooding. HS2 is unlikely to significantly increase the risk of flooding to people and property to extensive rural areas. However, there is concern of the increased risk of flooding to the operations of HS2.

232. HS2 Ltd has not adequately considered flood risk and therefore mitigation measures are not acknowledged. HS2 could result in increased flood risk to people and property, along with operational concerns from flooding. The Council would expect HS2 Ltd to acknowledge the levels of risk and provide commentary on the approaches

to be adopted. In particular, if HS2 has a flooding impact on people and property, then there should be scope for future mitigation and compensation.

Impacts on water resources

233. The AoS describes both sections of the route, Old Oak Common to West Ruislip, and West Ruislip to Aylesbury, as being unsupportive of HS2 Ltd's water resources objectives. This is largely due to the presence of ground water protection zones on principal aquifers as shown on Appendix 5.

234. The proposed route will require significant works on highly sensitive areas of groundwater, which has not yet been given proper consideration. Source protection zones (SPZ) are areas around water abstraction points and are separated into a 3 tier hierarchy. SPZ1 is the area in need of the most protection, as it represents the least time for water to travel to the point of abstraction. Any adverse impacts on these areas could undermine the abstraction point, in terms of quality and quantity. Engineering solutions are available, but can be costly on a scale of development this large. No mitigation is proposed by HS2 Ltd and there is an assumption that solutions will be found at a later date.

235. No work has yet been done to demonstrate that the impacts would not be adverse, and HS2 Ltd has acknowledged the high level of risk. Other routes may provide less risk, or not require significant levels of investigation at later dates. However, as no proper assessment has been undertaken, it is not possible to determine if the level of risk is appropriate. Given the lack of information on mitigation, the Council believes that no decision should be made on the HS2 proposal until further details are made available.

Loss of the Victoria Road Waste Transfer Site

236. Unlike the rest of London where HS2 is to be tunnelled, in Hillingdon the proposed HS2 route runs at surface level through a heavily built up area. As a result HS2 will directly and indirectly affect a significant number of businesses and some will need to be demolished, but no mention is made of these in the published literature. Of particular concern is the loss of a major waste site that serves West London.

237. West London Waste Authority's Solid Waste Transfer Authority's site at Victoria Road is used for the bulk removal of all types of waste. The Consultation documentation does not refer or consider the potential impact of HS2 on this regional facility. The Waste Authority officers believe that a 15 metre wide strip of land along the southern side of the boundary will be lost. This strip of land includes the rail sidings. This facility is reliant on removing waste by rail and will not be a viable refuse site without its railway siding, as moving the huge quantities of waste by road will be impractical owing to the existing road access and traffic problems in this area.

238. The facility is not only used by Hillingdon, but also by the neighbouring London Boroughs, Harrow, Ealing and Brent. This is the only facility which handles hazardous waste and its loss will mean that materials such as asbestos may well get fly tipped.

The high cost for the removal of the fly tipped material within the borough boundary by specialist waste removal companies will have to be met by Hillingdon's Waste Services.

239. The Victoria Road Solid Waste Transfer station is located in South Ruislip and is run by the West London Waste Authority. Its primary purpose is to bulk up locally collected waste from four boroughs, namely Hillingdon, Harrow, Brent and Ealing. This waste is then loaded onto a train for transfer by rail, for landfill disposal in Buckinghamshire. The site is safeguarded within the London Plan as an existing waste management site, and any detrimental impacts on this facility will be contrary to the Mayor's Waste Strategy. The site is currently the main waste transfer station in the north of the West London Waste Authority's area, accepting direct deliveries of municipal waste from Hillingdon, Harrow and Ealing. Commercial waste is also accepted at this site at present. The site is licensed to handle 263,000 tonnes per annum and in recent years has been transferring approximately 160,000 per annum.

240. Loss of this site will have huge implications for Hillingdon and other west London authorities. This will also have knock-on effects on road traffic and carbon emissions, as removing waste from London by rail from South Ruislip is a far more sustainable way than the alternative road options that will be used if this site is forced to close.

241. The timing of the Consultation could not have come at a worse time for the West London Waste Authority. The Authority is urgently seeking alternative waste treatment facilities to move away from landfilling waste for obvious environmental improvements and financial improvements. The Authority has secured agreement with its leased holder to redevelop the site by the addition of extra plant and equipment to allow waste to be processed on the site with materials such as recyclate and refuse derived fuel being exported from the site by rail. The Authority is in the process of procuring a private sector partner to provide waste treatment for up to 300,000 tonnes of waste per annum. It is estimated that the value of the contract over a 25 year period could be up to £485 million. Of the three sites within the Authority's control that could be redeveloped as part of this procurement process, Victoria Road is by far the best in terms of total size and shape. However the potential development of the site is severely compromised by the potential impact of the proposed HS2 route, and particularly the uncertainty and blight that this poses, which is already having an impact. Yet, it is unclear how any business loss will be mitigated or its loss compensated.

242. The site is referred to as a 'good site' in the emerging West London Waste Plan and therefore may be suitable for expansion due to its links with the railway. Whilst the decision on HS2 remains pending, there is unlikely to be any investment in this site. If HS2 were to proceed on the proposed route, then it would be highly unlikely that further investment would be put into this waste site.

243. If the site were to be able to continue operating with the loss of the rail sidings, there would need to be a significant modal shift from rail to road. This vast increase in additional heavy goods vehicles would create huge difficulties on the surrounding road

network. It is far from clear how this would be achieved. The loss of this important waste transfer site would not be consistent with the London Plan, which was approved by the Government. The Council does not believe that the scheme should progress to the next stages without any clear understanding of the future operation of the waste site and general waste arisings in west London.

244. This site could be avoided if other better value alternatives to HS2 were properly considered, or an alternative route. If it is decided to proceed with the proposed route, HS2 should run across Hillingdon in a tunnel, which would leave this site unaffected.

Impact on other businesses

245. Many businesses are likely to lose some land and possibly face threat of at least partial demolition. These have not been specifically identified in any of the Consultation documentation. The Council believes that this information is known by HS2 Ltd and should have been provided within the Consultation documentation, so that consultees were fully informed of impacts when responding to the Consultation. Even without the direct loss of property, some businesses as a result of their close proximity to the proposed railway may no longer be viable. These include the Days Hotel in South Ruislip and the Bell Pub in Ruislip. It is unclear how any business loss will be mitigated or its loss compensated.

246. The Blenheim Care Centre is affected by the bridge works at Ickenham Road adjacent to West Ruislip Station and would almost certainly need to be demolished. The HS2 will also require land from the nearby car park and the golf course (see below).

247. The route will pass through the fields of Park Lodge Farm, leaving one field potentially inaccessible. It is again unclear how this loss will be mitigated.

Loss of housing and garden land take

248. The route of HS2 in Hillingdon will require the demolition of properties and loss of large amounts of land, including residential, commercial and community facilities. The Consultation Document acknowledges potential demolitions in the Hillingdon area (para 5.69):

> *Along the route between Old Oak Common and West Ruislip, where around 15 residential properties would be demolished.*

249. The direct loss of housing should not be disregarded. This will have an enormous impact on existing communities and families. The lack of early and sympathetic engagement with these communities will develop mistrust for authorties and future decision making. HS2 Ltd will not absorb the burden of the impacts that HS2 will have on communities. This Council has previous experience of blight due to Runway 3 and it will 'pick up the pieces' after HS2 has inflicted such blight. This would have been easier to manage had HS2 Ltd given due consideration to the local impacts and in particular those whose homes will be lost and which communities will be affected.

250. Hillingdon already faces serious issues of blight in the south of the borough which has arisen from the Heathrow Airport expansion proposals. Since March 2010, such blight is now severely affecting the north of the borough and impacting on the property market. The areas affected in the north of the borough are well established residential areas with a high proportion of families. The likelihood is that families will move away and properties will become rented out, resulting in a total change in the communities.

251. This lack of sympathetic consideration is compounded by HS2 Ltd's reluctance to actively engage with all those affected. Belatedly, those who will lose their homes were contacted, but after much discussion it became evident that HS2 Ltd is also aware that the scheme will have much greater impacts on homes.

252. During the Consultation period it came to light that HS2 Ltd had developed buffer zones along the route which showed the amount of garden landtake required to accommodate the high speed line in Hillingdon. HS2 Ltd has acknowledged the loss of houses, but has not given much consideration to those houses that remain but who will lose vital amenity space. This generates further blight which HS2 Ltd has so far kept to themselves and maps have only been produced upon direct requests to HS2 Ltd, and once they were known about. The Council believes that this information should have been provided as an integral part of the Consultation so that residents could fully understand the impact that this scheme will have upon their property.

253. These have not been specifically identified in any of the Consultation documentation. Based upon the line drawings supplied by HS2 as part of the Consultation, the Council believes a large residential Care Home is also under threat of demolition.

254. The lack of this suitable consultation further undermines HS2 Ltd approach to route selection and engagement of those along the proposed route, particularly given that Question 7 of the Consultation asks respondents to comment upon what scheme best suits individuals. It also demonstrates that HS2 Ltd has undertaken considerable work on the proposed route without disclosing information. If this is a true consultation, and the routes are subject to discussion, then it seems strange that HS2 Ltd has undertaken so much additional work for only one of the routes.

Loss of community facilities

255. A number of key community facilities will be severely affected in Hillingdon. Examples of these are detailed below and these indicate some of the areas that HS2 will need to consider with regard to mitigation measures.

256. The Hillingdon Outdoor Activity Centre (HOAC) is an important community facility for water sports and educational activities and it is used widely by schools and voluntary groups from across north-west London. The facility has an average visitor rate of 40,000 a year, which has developed over a number of years. The Consultation documentation indicates that this facility will be crossed by HS2 on a viaduct directly over the main building and would require significant land take. The site is an educational and recreational facility which is reliant on its unique setting, tranquillity

and open space on land and water, and it will not be viable either during or after HS2 has been constructed. The freehold to the site is owned by London Borough of Hillingdon and leased to the registered youth educational charity, HOAC. In terms of practicality there are very few other suitable sites that this hugely valued community facility could relocate to, and certainly none within Hillingdon or the local area, that could be leased to HOAC on favourable terms. It is unclear how, or if indeed it is even possible, for this loss to be mitigated.

257. Ruislip Golf Club will see a strip of land taken by HS2 of between 20 and 30 metres wide, which will cause disruption. This will potentially require the redesigning of parts of the course. This would incur costs to the operator and possibly to the Council, who own the site, and whilst these works take place parts of the golf course will not be available for use. Any prolonged temporary closure will result in the loss of the regular customer base, which has taken a considerable time to develop. Directly in the line of the proposed HS2 route within the grounds of Ruislip Golf Club lies Ruislip Rifle Club, that will also be lost. Unfortunately it is not clear how these losses will be mitigated.

258. Two recreation grounds in Hillingdon, including school playing fields will see land taken to construct HS2, as well as the ensuing loss of tranquillity in these locations once the railway becomes operational. Unfortunately it is not clear how these losses will be mitigated;

259. Two quarries that are used for fishing in the borough will be unavailable for use during construction. The lakes contain valuable fishing stock and it is likely that the fish will have to be transported elsewhere. There do not appear to be any suitable sites locally. The likelihood is that construction works may render these lakes unsuitable after the construction works have been completed, because they will not be such appealing sites for fishing. Unfortunately it is not clear how these losses will be mitigated.

260. Given the scale of impacts on community facilities in this area, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on Hillingdon's community facilities. However, if the proposed route were to go ahead, the only sensible mitigation would be for a tunnel across the borough.

Unknown Impacts from Associated Infrastructure

261. HS2 Ltd has presented a fairly lightweight assessment of the impacts of the proposed route. But no information has been presented regarding impacts from associated infrastructure such as transformer points, or feeder stations. The London Assembly should be mindful of the Council's concerns regarding the location of this additional infrastructure. The Council considers that the environmental and social impacts are already at such an extent that the proposed route becomes untenable, particularly as

there is no comparative assessment of other alternatives. However, HS2 Ltd has not set out how much worse these impacts will get with the location of essential infrastructure to support HS2.

262. HS2 Ltd has not been forthcoming with the extent of other infrastructure required to aid the operation of an ultra high speed line. The line itself is of great concern, but it was only through discussions and a later invitation to a HS1 tour that the Council learned of other impacts. The lack of open acknowledgement or assessment of these additional impacts further concerns the Council as to the level of work undertaken by HS2 Ltd. In particular Hillingdon has concerns that such impacts have not been taken into consideration when assessing the viability of this scheme. With such a lack of transparency in the assessment process, the Council is wary of what other information may be available to fully portray the impacts. Without access to the full details of the scheme, the Council has not been able to assess the potential impacts of HS2.

Route Selection Methodology

263. The London Assembly Transport Committee has asked that submissions cover:

> *"Any changes to the proposed route in London, or construction, which might lessen social and/or environment effects".*

264. It is difficult for the Council to comment on any alternative route because HS2 Ltd has provided very little assessment of alternatives. The AoS has looked at three routes, with additional slight variations for a 'preferred route' that was proposed in March 2010. A map of the routes is included within Appendix 6. No other routes appear to have been assessed.

265. Two of these routes have almost identical impacts. The preferred route of March 2010 is very similar to the alternative shown as 2.5 on the attached plan. It is very difficult for the Council to say which has the lesser impact. Only route 4.0 would not affect Hillingdon, but it would be remiss of the Council to suggest this is as being favourable simply because it is not in our borough as it has not been properly assessed. Furthermore, the reference numbers of these routes, indicate many more were considered, but these do not form part the consultation. To complete a proper assessment would require a much more rigorous open and transparent assessment of all the routes. That would enable the Council to be able to suggest an alternative based on a meaningful analysis.

266. Furthermore, the assessment makes no reference to a 'Heathrow Link' which emerged after the route selection for the AoS. This undermines the appraisal as the Heathrow Link has a significant bearing on cost and environmental performance of HS2, even though it forms part of Phase 2.

267. The principles for avoiding harm have been set out in the AoS. At this stage of the process, the only mitigation put forward has been to design the route to minimise impacts.

268. No evidence has been presented as to why HS2 Ltd considers this scheme is the best route when compared to the alternatives. More importantly, it is not clear how HS2 Ltd developed the route through the west of London and Hillingdon. For example, the AoS states that generic mitigation measures for biodiversity include:

> *As far as is reasonably practicable, the proposed route alignment has been developed to avoid large areas of open water to minimise adverse operational effects on birds.*
>
> *Routes would be aligned to avoid designated habitats as far as possible; for example the proposed route has been placed in tunnel to avoid impacts on Long Itchington and Ufton Woods SSSI near Brackley.*

269. The first part of the new line that leaves Ruislip in West London travels directly through a Site of Special Scientific Interest and within 3.7 km of viaduct over the Mid Colne Valley Country Park, home to vast expanses of water that attract rare wintering birds.

270. It is difficult to believe that HS2 Ltd has tried to avoid impacts on SSSIs and large expanses of water bodies by seeking alternative routes.

271. Furthermore, one of these lakes that will accommodate the viaduct houses Hillingdon's Outdoor Activity Centre, which as stated previously is an important community facility for water sports and educational activities and it is used widely by schools and voluntary groups from across north-west London.

272. The development of the proposed route has not been done in an open and transparent way, nor has it involved any local considerations. The first that HOAC knew about the impacts of HS2 was in February 2011 when the Consultation document was published. The first contact that HS2 Ltd had with HOAC concerning the impacts was prompted by HOAC themselves. This reflects a poor understanding of the local impacts and the importance of this major public facility. It also demonstrates the lack of regard HS2 Ltd have had for local issues and the negative impacts of this scheme. Furthermore, it demonstrates the quality of assessments undertaken by HS2 Ltd if they were completely unaware of the impacts on HOAC.

273. In general, the methodology for selecting the proposed route remains unclear. HS2 Ltd has provided no evidence to support the case for dissecting a SSSI and vast expanses of water, which is in direct conflict with their attempts to reduce impacts.

274. Once again, the Council cannot support the proposed route as being the best option because of a complete lack of a comprehensive assessment of alternatives and the myriad of negative impacts associated with it. In addition, the section of the proposed route through Hillingdon is contrary to HS2 Ltd's own objectives. It is therefore impossible to support this as the best option. HS2 Ltd certainly cannot claim that the impacts are less than alternative routes, because they have not properly assessed them.

Potential solution

275. The Council cannot support the proposed route, and nor does it accept that HS2 is in the 'national interest'. Given the scale of impacts on Hillingdon, the Council believes that as the HS2 proposal has not been justified in terms of the economic or environmental case and it does not have a sound business case, it should therefore be dismissed. There are better value alternatives to improving the capacity and performance of the national rail network, and there are alternative routes which have not been properly considered, which would not impact on Hillingdon. However, if the Government were to ignore the local impacts, or the lack of a sound business case, or the fact that the proposed route has not been measured against alternatives, and persist with the proposed route, then the Council would suggest it runs through Hillingdon in a tunnel in order to minimise the environmental and social harm.

276. The cost of tunnelling is stated in the Consultation to be up to five or six times more expensive than an equivalent surface route. In a supplementary route report by HS2 Ltd, the extra costs of a tunnel under Northolt and Hillingdon was estimated at £275 million in November 2010. This represents 1.6% of the total cost of the HS2 project for the London to West Midlands route. However we believe that this option will have large cost savings for HS2 including:

- No impacts on Chiltern Line, foregoing the need to realigning the tracks at South Ruislip, which would require major engineering works and weekend closures for the company, which would both require compensation.
- No impact on Victoria Road Waste Transfer Station, which under HS2 proposals would lose the heavily used railway siding. Major compensation would be required for the West London Waste Authority and the four London Boroughs who utilise the site.
- No impacts on the six busy north south roads in Hillingdon while engineering works take place on their bridges. The associated economic costs of delays and disruption on local road and public transport services would be significant.
- The costs saved in not having to construct the six extra bridges in Hillingdon, including the large scale works required to remodel the bridge at West Ruislip Station.
- No compensation necessary for the demolitions of at least the 10 residential properties due to be demolished in Hillingdon due to HS2. The compensation that will be due to the dozens on homes blighted by increased noise levels under statutory compensation schemes will also be foregone.
- No compensations would be necessary for the numerous businesses lost or that need to be relocated due to HS2.

277. The extension of the tunnel throughout Hillingdon would not only minimise the social and transport impacts outlined above, but would significantly reduce the harm to

natural and landscape assets. The viaduct through the Colne Valley, which includes a SSSI would have huge negative impacts. Oxera has stated that landscape has not been given the economic consideration it deserves, and the Council does not believe that it has been given the social or environmental weighting it deserves either.

278. The Council believes that if the current HS2 proposal was to proceed, a tunnel under Hillingdon could be a solution to minimising the identified impacts. However, given the costs attached to the tunnelling option, Hillingdon believes this could have yet another detrimental impact on an already poor business case.

279. The Council believes that the Heathrow Link has even less of a business case than Phase 1 of HS2. It appears to be based on a political decision with no sound, environmental, social or economic benefits. Heathrow is already well served by London transport networks including Crossrail. The Council would expect this link to be removed from Phase 2, although this would likely result in a reassessment of the whole of the proposed route which the Council would support.