



HS2 Phase One Draft Environmental Assessment
Consultation

Response by London Borough of Hillingdon

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1. Executive Summary

1.1. Objections in Principle

1.1.1. Hillingdon Council strongly opposes the HS2 proposal and we are taking legal action to challenge the Government's decision to proceed with the scheme. In the event that the HS2 proposal goes ahead, we would like to be assured that our views are taken into account and acted upon.

1.1.2. The Council believes that the draft Environmental Statement (dES) does not comply with commitments made by the Secretary of State for Transport at the recent court proceedings. In addition, the submitted document shows a failure to comply with a number of the requirements set out in the Environmental Impact Assessment Regulations. An environmental statement is supposed to help a decision maker in reaching the right outcome on a project. In this instance, the dES blindly assesses the conclusions of HS2 without providing any challenge to the merits, even where new environmental information shows the scheme will have significant effects. The main concerns are summarised below:

1. The dES simply assesses the impacts of the conclusions of the DNS. It does not challenge previous conclusions made solely on economic grounds, it does not present alternatives or provide adequate justification for the proposed route even though significant environmental effects are now known.
2. The dES provides no cumulative assessment of Phases 1 and 2, or of a Heathrow Link.
3. The dES includes conclusions on the proposed scheme before the assessments are complete.
4. The dES does not fill the information gap, resulting from a failure by of HS2 Ltd to complete a strategic environmental assessment. It therefore does not adequately assess or present the merits of alternatives to the proposed scheme.
5. There has been a complete failure for the significant environmental effects in west London to be given appropriate weighting in decision making on the proposed route.
6. The dES simply assesses the impacts of Heathrow spurs, but does not assess the merits. This is particularly concerning given their inclusion

results in environmental effects in West London of such magnitude that they cannot be deemed justifiable by a balanced and fair assessor.

- 1.1.3. The Council believes the dES cannot be seen as a fair and balanced document as it is simply an assessment of the conclusions of the DNS. There has never been a fair hearing into the environmental merits of alternative proposals, and as the business case for HS2 continues to plummet, this approach becomes more irrational.
- 1.1.4. Furthermore, the dES was written and submitted prior to recent court proceedings and is therefore does not comply with commitments made by the Secretary of State.
- 1.1.5. The Council considers it wholly inappropriate for HS2 Ltd to retrospectively produce environmental information after conclusions have been made in the dES. It is also wholly inappropriate for HS2 Ltd to prepare an assessment of alternatives whilst still working on the environmental statement to support the proposed scheme.

1.2. Action Required

- 1.2.1. For the reasons above, the Council believes all work must cease on promoting and developing HS2. A robust and comprehensive assessment of alternative measures should be fully developed and consulted on prior to completing an EIA compliant Environmental Statement on a preferred scheme.
- 1.2.2. Notwithstanding the above, it is clear even from the limited information within the dES that the environmental impacts of HS2 will cause considerable hardship in the short term and long lasting damage to residents in Hillingdon as set out in this response. The Colne Valley is an area of immense importance in landscape, recreational, amenity and ecological terms. The proposed viaduct will cause considerable harm to this much loved area, which could be avoided if the proposed 3,840 m long viaduct were to be replaced by 5,780m of additional tunnelling. Furthermore, in Hillingdon we have the tunnel portal just 2,210m away from the viaduct and the area in between will become a massive construction site within a densely populated area with no easy access to the A40 or motorway network. Based on the findings of the dES, we therefore request that HS2 Ltd now take the necessary mitigation action to extend the tunnel from London through to the western side of the Colne Valley.

2. Objections to the Process

The following comments are without prejudice to the legal matters raised by Harrison Grant on behalf of 51M in their letter to the Department for Transport Treasury Solicitor dated 21 June 2013

2.1. Introduction

2.1.1. In June 2013 the Royal Courts of Justice heard an appeal into a Judicial Review judgement handed down in March 2013. Both cases centred on concerns of 51M (including the Council) that there are more suitable transport options than the proposed HS2 scheme. In addition, the Court heard that HS2 was predominantly being promoted on the back of economic assessments at significant environmental costs. There has never been an adequate assessment of the environmental effects of alternatives to HS2, nor are all the impacts of HS2 known. This is primarily because HS2 Ltd believes that the Strategic Environmental Assessment (SEA) regulations do not apply. As a consequence, the environmental merits of alternative proposals have never been adequately presented and the Department for Transport (DfT) is continuing to promote an unsustainable scheme.

2.1.2. The Council maintains that the principles of the SEA Regulations should have been fully applied so that the DfT understood the environmental benefits of alternative schemes. Advancing a major transport proposal with a poor business cost ratio of a little over 1:1 combined with a considerable amount of significant environmental effects is irrational. The primary problem is that the Government has never been in possession of all the relevant information on the all schemes when deciding to promote HS2.

2.2. Outcome of Court Proceedings

2.2.1. This issue has been at the heart of legal challenges. 51M and HS2 Action Alliance have both argued that there was a lack of consideration of alternatives, and that the Hybrid Bill process is incompatible with the EIA Regulations.

2.2.2. The Court heard a number of commitments made by the Secretary of State about how the ES will deliver a lawful and comprehensive tool to assist decision makers in determining the right scheme. These commitments had never previously been made and arrived after the draft Environmental Statement (dES) was submitted.

- 2.2.3. The court heard that the eventual decision by Parliament would be approached with an open mind, would include an assessment of reasonable alternatives and that the environmental statement would therefore assess and invite comments on all reasonable alternatives to the current HS2 proposal. All options need to be adequately assessed to ensure decision makers could come to a fair and balanced decision.
- 2.2.4. Unfortunately, the dES predates the commitments made in Court on behalf of the DfT. As a consequence, the dES does not reflect the suggested approach by the DfT and is therefore obviously inadequate and highly misleading.

2.3. Reliance on the Decisions and Next Step Document

- 2.3.1. A further problem with the dES stems from the fact it is simply assessing the conclusions set out in the DNS in January 2012.
- 2.3.2. The dES does not challenge the conclusions of the DNS despite knowledge on the environmental effects now being known. In doing so it assumes the conclusions reached in the DNS are indisputable. EIA is supposed to influence the design and development of a scheme; in this instance though, the dES merely attempts to justify conclusions made long before environmental effects were known. This also undermines Parliament's ability to approach the decision making with an open mind.

2.4. There is no Assessment of Alternatives

- 2.4.1. Again, contrary to the claims in Court, there is no adequate assessment of strategic alternatives of any merit. The Court heard that there should be a fair assessment of the alternatives allowing decision makers to understand the pros and cons of other schemes. This led to a commitment to append a report to the final ES appraising the attributes of alternative schemes.
- 2.4.2. The dES contains no such appraisal. On the contrary, it merely outlines briefly the alternatives that have been assessed and describes reasons for not selecting them.
- 2.4.3. Furthermore, no fiscal cost has been attributed to the environmental benefits of alternatives. Instead, the dES demonstrates that the economic issues have been solely considered for advancing the HS2 proposals. The reality is that the environmental effects of alternatives have never been adequately considered and therefore weighed in the decision making for the preferred option.

2.5. Conclusion

- 2.5.1. The Council maintains that HS2 Ltd was wrong to avoid an SEA and in turn to not understand the environmental merits of alternative proposals. The approach outlined in Court goes a little way to appeasing concerns that Parliament will be allowed to consider all options; however, retrospectively assessing all the options having spent over £250m and nearly two years pursuing a preferred option is hardly rational or logical. Ultimately, it seems unlikely that alternative options will be given a fair and just hearing.
- 2.5.2. The Council is rightly concerned about this rather confused assessment process belatedly cobbled together and not reflective of a multi billion pound and environmentally harmful transport project. Notwithstanding these, it is necessary to consider whether HS2 Ltd is even on the right lines with the approach set out in Court.
- 2.5.3. The dES was published for consultation prior to Court proceedings. Evidently it was developed with an alternative process in mind than the one set out in Court. It demonstrates a blind commitment to a scheme deemed preferable long before adequate environmental assessments of alternatives which are now proposed to be completed after a preferred option is selected. As a consequence, it is difficult to see how HS2 Ltd can progress lawfully on developing the final ES whilst simultaneously providing a fair assessment of alternatives.
- 2.5.4. The Council is aware that the final ES will approach 55,000 pages, whilst the dES is only 5000 pages. This highlights the amount of work still needed for the final ES which includes undertaking detailed survey and data gathering. The Council cannot see the logic in advancing this work in parallel with developing an assessment of alternatives. This could be a further waste of public money; alternatively, it demonstrates that there is no real intention to fairly considering alternatives.
- 2.5.5. Retrospectively applying the approaches set out in Court is hard enough. But once the dES was published it makes it practically impossible to finalise the ES at great expense as well as setting out the true merits, environmental, social and economic of alternatives.
- 2.5.6. For the reasons above, the Council believes all work must cease on promoting and developing the HS2 proposals. A robust and comprehensive assessment of alternative measures should be fully developed and consulted on prior to completing an EIA compliant Environmental Statement on the preferred scheme.

3. Compliance with EIA Regulations

3.1. Introduction

- 3.1.1. The Council has specific concerns about the dES's compliance with the EIA regulations regardless of the matters set out in the previous chapter.

3.2. Assessment of Alternatives

- 3.2.1. The EIA regulations require ES's to consider alternatives to the proposals presented. Schedule 4, Part 1[2] states that an Environmental Statement (ES) should include:

An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.

- 3.2.2. The assessment of alternatives is presented in only 20 pages of assessment of strategic alternatives in chapter 7 of Volume 1. This covers a range of alternatives in a very brief manner. The preferred scheme is known to have significant environmental effects, yet is being pursued despite no proper understanding of the environmental effects of the alternatives. For example, some of the alternative schemes have been ruled out because of negative carbon impacts, even though the impacts of the preferred scheme are not known and have previously been reported as being potentially significantly adverse.
- 3.2.3. Furthermore, the final ES is a reported 55,000 pages compared with the 5000 page dES consultation. This means much more work is being done to understand the environmental effects of the preferred scheme. It is premature to rule out other options when it is clear that some of the alternatives have much better environmental performance. This is highlighted by the fact that there is a need for a cumulative assessment of Phase 1 and 2, but which is not yet included within the dES. How is it possible to rule out alternatives, without understanding the environmental effects of the proposed scheme?
- 3.2.4. The Council does not believe the assessment of alternatives adequately considers, presents or takes into account the environmental effects of alternative schemes. This is a multi billion pound transport project with significant environmental effects. To present such minimal environmental information, and in some cases none, on the alternatives to HS2 is inappropriate and nor does it comply with the EIA regulations.

3.3. Cumulative assessment with other planned projects

3.3.1. Schedule 4, Part 1(4) of the EIA regulations requires ES's to include:

A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects of the development, resulting from—

(a) the existence of the development;

(b) the use of natural resources;

(c) the emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.

3.3.2. In the context of EIA, the Infrastructure Planning Commission (IPC) set out guidance on what is meant by the “the existence of development” and what needs to be considered in the context of cumulative assessments. The guidance followed two significant Judicial Review decisions on the implementation of EIA. These decisions, Rochdale ex parte Milne (1999) and Rochdale ex parte Tew (2000) are collectively known as the Rochdale Envelope. The advice by the IPC set out in the document: ‘Using the Rochdale Envelope’ in 2011 states:

In assessing cumulative impacts, other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- *Under construction*
- *Permitted application(s), but not yet implemented*
- *Submitted application(s) not yet determined*
- *Projects on the IPC’s Programme of Projects*
- *Identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited*
- *Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward*

3.3.3. Phase 2 of HS2 forms part of the commitment for the wider project. In addition, the inclusion of Heathrow spurs at significant environmental costs also need to be justified as part of a wider project.

3.3.4. The recent Court case also heard submissions and commitments from the DfT about the need to assess the cumulative impacts with Phase 2.

It [written response to grounds of challenge that cumulative impacts had not been assessed] clearly says -- in writing it says that we will expect the environmental statement for the bill scheme to grapple not only with the direct effects of phase 1 but also with the cumulative effects of phase 2.

3.3.5. The dES does not assess the cumulative impacts with Phase 2 but presents conclusions on alternatives having less merit. This has predetermined the cumulative assessment and demonstrates that environmental considerations are not part of the decision to promote this scheme.

3.3.6. In addition, there is a significant lack of detail in both the DNS and dES regarding the need and operation of the Heathrow Spurs. The cumulative impacts of building and operating the whole Heathrow spur must be considered in the dES.

3.3.7. The cumulative assessment is therefore inadequate, and fails to meet the commitments made in Court. Proceeding with this scheme without full information on Phase 2 has been determined to be unlawful in the recent Court cases. To continue to promote HS2 without the information on Phase 2 is not compliant with the EIA Regulations and provides further evidence to the lack of environmental impacts in the decision making chain.

3.3.8. The fact that the dES provides conclusions on the scheme before all the impacts are known is deeply concerning. There is a lack of respect and understanding of the environmental effects of the proposed scheme. Retrospectively providing cumulative assessments after reaching conclusions on the scheme is fundamentally wrong.

3.4. Reliance on Code of Construction Practice

3.4.1. The Council is concerned to see that so much information is yet to be collected as part of the Code of Construction Practice (COCP). For example:

Report 6: Cultural Heritage, paragraph 6.5.2:

A programme of archaeological investigation and recording to be undertaken prior to construction works affecting the assets; and

A programme of historic building investigation and recording to be undertaken prior to modification or demolition of the assets.

Report 6: Land Quality, paragraph 8.5.1:

The draft CoCP requires that a programme of ground investigation would take place prior to construction in order to confirm areas of contamination. A risk assessment would be undertaken to determine what, if any, site-specific remediation measures would be required to allow the Proposed Scheme to be constructed safely and to prevent harmful future migration of contaminants.

Report 6: Ecology, paragraph 7.5.3:

The assessment assumes implementation of the measures set out within the draft CoCP, which includes translocation of protected species where appropriate. Water Resources investigation

- 3.4.2. HS2 Ltd should be aware that the EIA regulations require full assessment of the likely significant effects. Whilst the COCP can include general construction measures such as preventing dust from reaching watercourses, or watching briefs for archaeological reasons, it cannot contain assessments that need to inform the EIA.

4. Heathrow Spurs and Link

4.1. Introduction

- 4.1.1. The Council is particularly concerned about the inclusion of the London to Heathrow spur within the Phase 1 route, even though the full link to Heathrow is being put on hold.
- 4.1.2. The Council (as part of 51M) challenged the inclusion of the Heathrow link in the DNS. However, the judge ruled that Government were free to make policy decisions within the DNS, predominantly because there would still need to be a presentation of suitable options and assessments of the merits of the spurs prior to Parliament making a decision on them. Furthermore, the appeal case heard clearly, that the DNS does not set a framework for the dES. Therefore, from a legal perspective, Government can pursue a policy decision to promote the Heathrow link, but cannot decide on it until all options have been properly assessed. The ES is the process for setting the case adequately for the spurs, the wider links and to properly justify its inclusion.
- 4.1.3. The dES assesses a scheme that includes the Heathrow spurs, but does not assess whether there should be one in the first place. It is simply assessing the details set out in the DNS. It is assuming the DNS has already determined the spurs are the best solution despite no comprehensive assessment of their merits, either economic or environmental, nor a comparative assessment with alternative options. It therefore only assesses the impacts of the spurs, not whether they should be there at all.
- 4.1.4. Given the lack of assessment of the spurs, and HS2 Ltd blindly following the conclusions of the DNS, it is necessary for the Council to weigh up the justification within the DNS with the environmental effects described in the dES. This will help identify the potential merits of the Heathrow link as part of a comprehensive assessment, which the Court found was necessary, but which HS2 Ltd has failed to do.

4.2. Reason to Pursue a Heathrow Spur

- 4.2.1. The original judicial review heard that the business case for the Heathrow link was very poor, with a business cost ratio of considerably less than 1:1 (the court heard it could be as low as 0.3). Beyond that, the merits or justification were never adequately presented. The DNS (para 4.25) stated:

Some consultation responses questioned the strength of the economic case for providing a direct link to Heathrow. The Government considers that its strong strategic case makes a direct Heathrow link the right approach to take, providing a properly integrated connection between the country's major hub airport and HS2. The economic case of a project is only a single component in a much broader decision making process [emphasis added]

4.2.2. The DNS also stated the objective for the Heathrow link:

The Government believes that there is a strong case for HS2 services to run directly into Heathrow. In particular, improved access to the country's major hub airport for businesses in the Midlands and the North would create new opportunities for growth, and, by better linking these regions into the global reach of Heathrow, make them more attractive locations to invest and do business (para 4.23)

Some responses misunderstood the Government's proposals for direct services to Heathrow once the Y network is in place, believing that passengers would always have to use the Old Oak Common interchange to access Heathrow by changing trains. This is incorrect; under Phase 2 there will be trains direct to Heathrow from the Midlands and the North. (4.36)

4.2.3. Clearly there is an objective to connect the Midlands and North, and this is reflected in the service specification outlined in the August 2012 Updated Economic Case document. In Phase 2, this shows two trains per hour leaving Heathrow to serve the North (Manchester and Leeds).

4.2.4. There is still inadequate information justifying the Heathrow link. There appears to be a belief that it is a good idea, but it can't yet be proved and the dES assesses the Link as if it has already been determined to be necessary regardless of its environmental effects. There is no further justification outside the limited information in the DNS on why a link is necessary.

4.3. Reasons not to pursue a London to Heathrow Spur – Environmental Effects

4.3.1. The DNS and subsequently the dES include two spurs, one serving 'the north' and one serving London. The extremely poor BCR and the lack of information as to what the 'other' strategic reasons are provide a very tenuous case for a Heathrow link at all. However, given the only objective for the Heathrow link would be to serve the 'north and Midlands' (see extract above) there is absolutely no reason for a London to Heathrow spur. This is supported by the fact there are no trains shown to use the London to Heathrow spur which is

hardly surprising given the existing extent of connections to Heathrow, combined with the impending Crossrail link.

4.3.2. In addition, the inclusion of the London to Heathrow spur purportedly prevents the extension of tunnelling from Ickenham through west London and across the Colne Valley. In this area, the above ground line and construction of the tunnel portal will have significant environmental effects as detailed in the dES. More importantly, in some instances, it will not be possible, let alone harmful, for construction vehicles to use the areas suggested:

1. Construction of the tunnel Ruislip tunnel portal has not been adequately thought through and is simply unlikely to be possible due to the complex existing road network. **HS2 Ltd assesses this as significant.** In particular, as shown in Appendix A to this response:
 - a. 'A' Roads will come to halt as up to 3300 lorries per day use the local road network to move spoil, workers and construction material.
 - b. Lorry movements and those likely to come from Old Oak Common will use the A40 as the primary route out of London to the motorway networks; despite the fact the A40 is currently exceeding minimum air quality limits on much of its route.
 - c. Construction traffic will impact on existing significant hotspots of congestion. Some of the routes involve mini roundabouts serving multiple links. It is already difficult for cars to navigate these without large lorries increasing the problems. In some instances, the routes selected simply cannot accommodate the type of lorries proposed.
 - d. There is reference to the possible need to use an alternative construction traffic route via Ickenham Road, High Street Ruislip, Bury Street, Ladygate Lane and Breakspear Road. This is for situations where access under the existing road bridge in Breakspear Road South (carrying the Chiltern Line) is impassable by the vehicles in question. This route would have a severe impact on local roads including a high street and residential roads and a school (Whiteheath School in Ladygate Lane) which is already a daily source of traffic congestion.
 - e. There are many 'A' roads that are currently heavily used to the extent where busses already have problems. The movement of huge goods vehicles, for example along Ruislip High Street, is simply untenable.
 - f. The diversion and use of major north – south networks will hamper anyone living in the north of the borough and trying to reach the south. This is worsened by the need to temporarily close two major roads, Harvil Road, and Breakspear Road South.

2. The dES suggest that some of the Colne Valley lakes may need to be drained. The lakes are home to some of London's most important bird populations and contain a site of special scientific interest. The scheme will also result in the loss of ancient woodland and large areas of the countryside. The mitigation and compensation will never make up for the level of destruction. **HS2 Ltd assesses the ecology effects as significant.**
3. The above ground route will cause unacceptable noise impacts. The noise assessments show impacts that are likely to result in a 10db increase over existing situations. This should be caveated by the fact HS2 Ltd has only shown average noise levels, i.e. the noise spikes as a train passes is averaged out by the few minutes of silence that follows. **HS2 Ltd assesses this as significant.**
4. The viaduct results in the loss of important businesses and community facilities. In particular the highly respected and well used Hillingdon Outdoor Activity Centre will have to close, despite HS2 Ltd suggesting the Colne Valley (refinement 6) removes some of the impacts. **HS2 Ltd assesses this as significant.**
5. The dES suggests there will be significant effects on water resources although these will only be assessed through the Code of Construction Practice, i.e. after the scheme is approved. **HS2 Ltd assesses this as significant.**
6. The viaduct will fundamentally change the landscape in the Colne Valley for the worse. **HS2 Ltd assesses this as significant.**
7. Millions of tonnes of waste material will need to be managed in and around Ruislip and Ickenham. There is still a lot of uncertainty about when and how the excess material will be used.
8. A number of heavily used public rights of way connecting the north of the borough with south are severed.
9. There are three large scale construction sites in close proximity, one either side of the Colne Valley and another at the tunnel portal. The cumulative effects have not been considered.

4.3.3. In addition there are other obvious concerns related to the loss of jobs; the loss of community facilities and the 'wider economic dis-benefits'; the years of blight which has already begun; and the general change in perception of a vast area of west London which will be changed significantly for at least 7 years.

4.4. Reasons not to pursue a London to Heathrow Spur – Cumulative Assessment

- 4.4.1. The spurs are being included to facilitate a possible future connection to Heathrow. The preferred option for this link has been published and shows significant deep bore tunnelling, surface routing, and green tunnelling across the Colne Valley twice. This too will have significant environmental effects and the spurs cannot be considered in isolation.
- 4.4.2. As stated in the previous section, ES's need to consider the cumulative effects of other plans or programmes. The inclusion of the spurs represent a wide series of effects that cannot be dismissed at this stage.

4.5. Reasons not to pursue a London to Heathrow Spur – Heathrow Decision on Hold

- 4.5.1. The decision to connect to Heathrow was put on hold as part of the announcement for Phase 2:

As stated in January 2012, the Government believes that the HS2 network should link to Heathrow and its preferred option is for this to be built as part of Phase Two. However, the Government has since established an independent Airports Commission, chaired by Sir Howard Davies, to recommend options for maintaining the country's status as an international aviation hub.

The Government has therefore taken the decision to pause work on the spur to Heathrow until after 2015 when it expects the Airports Commission to publish its final report. The proposals for the Heathrow spur and station are not planned to be part of the Phase Two consultation. However, there would still be the opportunity to consult separately at a later point and include the Heathrow spur in legislation for Phase Two without any impact on the delivery time if that fits with the recommendations of the Commission.

To avoid severe disruption to the Phase One line after it has opened, however, the Government would consider carrying out the preparatory construction work needed to preserve the option of our preference serving Heathrow in the future. Including this work now could save significant disruption and cost at a later point.

- 4.5.2. Connecting HS2 to Heathrow may never happen and in any event is dependent on an entirely separate decision on aviation. The development of high speed rail in the absence of an integrated transport strategy could therefore predetermine the wrong rail high speed rail links. This is clearly highlighted by

the inclusion of spurs in Phase 1, with all the significant environmental effects they bring, on the off chance that they may one day be needed.

4.6. Summary

4.6.1. All the above significant adverse environmental, social and economic effects provide clear justification as to why the proposed viaduct is untenable and why tunnelling through west London and under the Colne Valley would be hugely beneficial.

Providing a Heathrow Link from HS2	
Pros	Cons
Connecting the Midlands and North to Heathrow	Business Cost Ratio of less than 1
Other strategic reasons (not detailed)	No cumulative assessment of the disbenefits
	Significant adverse transport effects
	Significant adverse effects from construction and doubts about whether it could be achieved
	Significant adverse effects from noise
	Significant adverse effects on air quality
	Significant adverse effects on ecology
	Significant adverse effects on public rights of way
	Loss of public facilities and businesses
	Significant adverse landscape effects
	The connection may never happen
	Significant flood risk effects
	Heathrow may not remain the UK's hub airport

4.6.2.

Providing the London to Heathrow Spur	
Pros	Cons
Facilitates a future connection from London to Heathrow	No trains programmed to use the link
	No business case
	No cumulative assessment with the effects of the future link

	Removes the ability to tunnel across west London
	Significant adverse transport effects to deliver them
	Significant adverse effects from construction and doubts about whether it could be achieved
	Significant adverse effects from noise
	Significant adverse effects on air quality
	Significant adverse adverse effects on ecology
	Significant flood risk effects
	Significant effects on public rights of way
	Loss of public facilities and businesses
	Significant adverse landscape effects
	Heathrow may not remain the UK's hub airport

4.7. Conclusion

4.7.1. There is no assessment of why the spurs are needed or the why the tunnelling cannot be extended across the Colne Valley. Instead the following justification is given:

2.6.17 HS2 Ltd acknowledges that there would be environmental benefits if a tunnel was proposed; however, the use of the viaduct to cross the Colne Valley was based on a combination of practical, financial and safety considerations. The lakes are large former gravel pits and the ground beneath falls well below the water level. This means that tunnelling would likely be more difficult and expensive than elsewhere on the route.

2.6.18 Consequently it was determined early in the project that tunnelling was not appropriate and an option for tunnelling has not been re-visited in detail as part of the work since the announcement of the scheme in January 2012 (Colne Valley Community Forum Area: Report 7)

4.7.2. This is a clear acknowledgement that HS2 Ltd is not prepared to reassess the cost of tunnelling versus the environmental effects even though a considerable amount of environmental and social assessment has been completed subsequently.

- 4.7.3. Furthermore, the statement 'The lakes are large former gravel pits and the ground beneath falls well below the water level. This means that tunnelling would likely be more difficult and expensive than elsewhere on the route' has been given less credence by the submission of the preferred route for the Heathrow Spur. This clearly shows tunnelling across the Colne Valley, at almost the same location where the viaduct goes. In other words, it is perfectly possible.
- 4.7.4. The level of environmental effects west of Ruislip is so significant that there is little option but to tunnel. There is simply no justification, financial or otherwise, for such a high level of environmental harm.
- 4.7.5. The Council believes the inclusion of the London to Heathrow spur constrains the inclusion of tunnelling across the Colne Valley; as a consequence the dES represents an unlawful approach for the following reasons:
1. The DNS is being used as the framework for the dES conclusions on the spurs.
 2. There is no operational, strategic or business case presented to justify the significant effects of the Heathrow spurs and link.
 3. There is no cumulative assessment of the impacts of providing the whole Heathrow link.
 4. There is no adequate justification as to why the tunnelling stops west Ruislip despite the significant environmental effects of the surface route.
 5. There is no adequate assessment of the alternatives to the proposed scheme, i.e. tunnelling beyond the Colne Valley.
 6. The environmental costs have not been considered when deciding on the proposed scheme.
- 4.7.6. The Council requires an urgent review of the inclusion of the Heathrow Link and in particular the London to Heathrow spur. The decision to rule out further tunnelling was made prior to the information in the dES which is likely to present a worse case on completion. The level of environmental, social and economic effects cannot simply be dismissed in a couple of paragraphs. The Council considers the ES is presenting a misleading case to decision makers and is therefore unlawful.

5. General Comments

5.1. Lack of Information

- 5.1.1. It has been reported that the final ES will amount to 55,000 pages. This consultation runs to nearer 5,000. This demonstrates a lack of information being presented to consultees and the amount of gaps in the information. Asking consultees to comment on the environmental impacts when the majority of the assessment information remains withheld or incomplete is not very sensible.
- 5.1.2. The lack of information presents only part of the environmental impacts and leaves consultees guessing or concerned as to whether their issues will ever be considered in the final version.
- 5.1.3. The lack of information also undermines the conclusions reached before assessments have been completed. A number of the topic areas introduce mitigation and conclusions on effects without even knowing all the impacts and receptors.

5.2. Passenger Numbers on HS2: What is being assessed?

- 5.2.1. The Council is also concerned about the level of information presented regarding the operation of the trains. To date HS2 Ltd has never properly outlined how many people will be using the trains throughout the day, and what this means for passenger dispersals at a specific local level.
- 5.2.2. The transport chapters broadly outline what the passenger dispersal numbers would be but these are highly confused and use a variety of different methodologies. Ultimately, it hides the fact that the trains themselves will have little usage.
- 5.2.3. Volume 1 (3.3.5) states there would be 11 trains per hour in one direction during the peak hour which is taken as being 8-9am and 5-6pm. Trains could be 200m (single units) or 400m (double units) depending on demand. The Camden Community forum volume is the only place where the dES set out the types of trains running at peak hours:

On opening, Phase One would run up to 14 trains per hour (tph)¹. HS2 trains would be up to 400 metres (m) long with 1,100 seats during peak hours. Beyond the dedicated high speed track, these high speed trains would connect with and run on the existing WCML to serve passengers beyond the HS2 network. A connection to HS1 would also allow some services to run to mainland Europe via the Channel Tunnel.

5.2.4. To understand passenger dispersal from these 11 trains, which is important to assess the cumulative environmental effects on specific location, readers would have to turn to the service specification set out in the DNS accompanying reports. The information is not contained in the dES.

5.2.5. The service specification being used to explain the operation of HS2 shows just 3 trains per hour serving Birmingham (4 at peak times) from London. There would be the same amount of trains moving in the opposite direction. The 4 peak time trains (8 in both directions) could carry up to 1,100 passengers each. This means there is a potential for 8,800 people to move to and from Birmingham.

5.2.6. The Curzon Community Forum Volume 26 states:

12.7.3 ...The Proposed Scheme will result in approximately 2,800 passengers using Curzon Street station in the morning peak hour and approximately 3,200 passengers using Curzon Street station in the evening peak hour in 2026. These numbers increase to approximately 7,000 passengers using Curzon Street station in the morning peak hour and approximately 8,000 passengers using Curzon Street station in the evening peak hour in 2041 (HS2 Phase Two) through increased train frequency and additional national rail destinations. It is expected that over half of the travellers on the Proposed Scheme at Curzon Street station would have an onward rail journey.

5.2.7. Birmingham Interchange Community Forum Volume 24 states:

12.6.3 With the introduction of the Proposed Scheme in 2026, there would be approximately 1,550 rail passengers boarding, alighting and interchanging at Birmingham Interchange station in the morning peak hours and around 1,750 rail passengers boarding, alighting and interchanging at Birmingham Interchange station evening peak hours. These passengers are forecast to generate around 950 two way vehicle trips in the morning peak hour and 950 two way vehicle trips in the evening peak hour.

¹ NB: this conflicts with: "The current assumed initial service pattern is for 11 trains per hour (tph) in each direction during peak hours" (3.3.5 of Volume 1)

- 5.2.8. In the second extract, the figure refers to ‘morning peak hours’ implying the passenger dispersal is taken against the whole three hours in morning (7-10am as set out in the Camden assessment). This results in just 516 passengers for the morning peak hour 8-9am.
- 5.2.9. What this shows is a problematic correlation between the capacity on the trains and those who will actually use it. A potential of 8800 passengers equates to actual passenger numbers of just 3316 in the morning peak hour combined across the two Birmingham stations. It could be that initially the trains will only run as single units, in which case there would be just 4400 passenger capacity.
- 5.2.10. The reality is that there is such a dearth of information that it is impossible to fully understand what HS2 Ltd is assessing. It is fundamentally important to set out all the relevant information on train movements so consultees can understand:
- The interaction of effects across the whole day, not just peak time.
 - The cumulative impacts with existing developments
 - The cumulative effects of different environmental areas, e.g. air quality.
 - The likely socio-economic effects in the off peak
 - An understanding of the energy usage of trains related to passenger numbers. A train at 15% full has a greater carbon impact per passenger than one at 100% full.
- 5.2.11. The problem with the assessment of passenger dispersal is further enhanced by the conflicting methodologies for the London stations. The Euston assessment simply sets out an increase from existing passenger numbers, and not the total as used in the Birmingham assessment. The Old Oak Common assessment is substantially different and presents no assessment at all:
- The Proposed Scheme at Old Oak Common is likely to result in an increased number of trips (both vehicular and non-vehicular) to and from the area. This is anticipated to be a maximum in one direction of 2,500 trips by all modes in the AM peak hour (08:00 to 09:00). (Volume 4, 12.6.3)*
- The assessments in the dES are incomplete, poorly presented, missing information, misleading and ultimately redundant as an exercise to assess the effects of HS2. The final ES must present:*
- Consistent methodologies
 - A full timetable throughout the day including the capacity of each train
 - The likely usage of the trains

- The passenger dispersals at all the stations in the same format
- The amount and mode of onward journeys
- A future timetable for when capacity is likely to increase

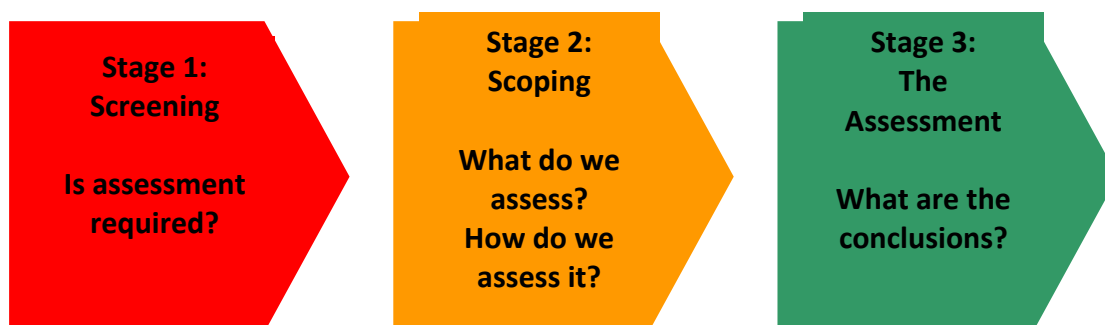
5.2.12. In addition, there is no assessment or details at all about the passenger dispersal north of Birmingham. 7 of the 11 trains per hour at peak time do not stop at Birmingham and head in a variety of northern directions. HS2 will have a direct impact on passenger dispersal at northern stations that also needs to be assessed.

5.2.13. The Council considers it a fundamental failure of HS2 Ltd to not properly outline what they are assessing and using such a range of poorly presented methodologies. It makes for a very poor ES that cannot in any way be effective in aiding decision makers.

5.3. Methodologies

5.3.1. The Council was rightly disappointed by the level of information in the draft Scope and Methodology Report, and not to be consulted on the final Scoping report was considered to be a mistake.

5.3.2. The failure to outline the specific receptors in the Scoping reports has resulted in a dES that is far from adequate. For example, many of the roads shown to accommodate HS2 construction traffic in Ruislip are simply not useable, due to factors such as constrained road width and low bridges. Setting out the likely routes in the scoping reports would have allowed for greater dialogue between consultees, residents and HS2 Ltd which would have resulted in a more robust Environmental Statement.



5.3.3. The general approach to EIA is set out above. HS2 Ltd never adequately agreed or presented the information required for stage 2. Only broad details were presented in the scoping reports but not the specifics required. As a consequence, for the first time, the dES presents consultees with the receptors (but not all) being assessed, the methodologies (broadly) and the assessment

conclusions all at the same time. The problem is that because HS2 Ltd failed to apply the EU guidance on scoping reports, and instead operated in isolation, they have used the wrong methodologies to assess the wrong receptors. This has resulted in inaccurate conclusions.

5.3.4. This is best highlighted in the construction routes outlined in the Ruislip area. Some of the roads shown cannot practically accommodate the traffic being suggested. If the details on construction had been presented earlier and consulted upon, 'what would be assessed' could have been tailored to reflect detailed knowledge of the area. The subsequent dES would have used the correct methodologies to assess the appropriate receptors. However, as HS2 Ltd failed to complete stage 2 at the correct time, they have presented a series of construction routes, complete with conclusions of the impacts based on receptors that do not work. As a consequence:

- The conclusions in the assessment are wrong
- The impacts on air quality need to be reassessed
- The assessment on business impacts needs reviewing
- Noise impacts will now need to be considered for a different construction route

5.3.5. The approach taken shows a lack of understanding of the objectives of EIA and the EU Guidance. It has resulted in a complete waste of resources and needlessly misled residents.

5.3.6. More fundamentally, the report presents misleading conclusions which cannot lawfully be a basis for making a final decision.

6. Site Wide Comments: Carbon Emissions

6.1. Greenhouse Gas Emissions

- 6.1.1. The Council is hugely disappointed that HS2 Ltd has not provided even an initial appraisal of climate change impacts. It is recognised that this is a difficult topic to comprehensively assess, but to provide no assessment at all is deeply concerning. This is likely to be a contentious issue given the many variables that need to be assessed and the widely publicised dismissal of Government's original assertion that this was a green transport scheme.
- 6.1.2. The lack of any information is further complicated by the fact that the only assessment undertaken to date by HS2 Ltd (Appraisal of Sustainability 2) concluded that the carbon impacts ranged from slightly positively to unquantifiably negative; a range that provided very little assistance to understanding the likely impacts.
- 6.1.3. It would have been useful to present an initial appraisal complete with assumptions on certain aspects of the scheme to allow interested parties to have a greater understanding of what will be assessed. The minimum information provided in the dES and final Scoping Report provides only a broad outline, but does not allow interested parties to ascertain the details, for example what assumptions are being made regarding HS2 impacts on flights, long haul and short haul? How much electricity will each train use? What is the modal shift from road journeys?
- 6.1.4. The recent EU guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment states:
Be practical and use your common sense! When consulting stakeholders, avoid drawing out the EIA procedure and leave enough time to properly assess complex information.
- 6.1.5. It is far from sensible to present no information on the assumptions to be used, no information on the forecasting methods, no information on the quantification of significance, let alone not present any of initial findings on such a contentious subject. The first time interested parties will see this will be during the consultation on the final ES and when it gets presented to Parliament. This leaves very little margin for error.

6.2. Presentation of Results

- 6.2.1. The dES presents a situation whereby the conclusions on climate impacts will be portrayed in ranges. This was the approach adopted in the AoS originally. Unfortunately, this shows a misunderstanding of the purpose of EIA. EIA requires the likely significant effects to be assessed. It should inform the decision maker of the effects, not provide a range on which to pick and choose where they believe the project may sit.
- 6.2.2. It is accepted that a number of assumptions will be made for the future impacts, but the principle of EIA is to describe the likely effects. The authors of the climate chapter need to be able to make a specific conclusion on the likely effects. If the decision makers are presented with a range of effects that span a wide order of magnitude then the report cannot be compliant with the EIA Regulations.
- 6.2.3. Uncertainties are inherent in understanding the future implications of the impacts of climate change. However, this should not be a reason for presenting decision makers with a large range of possible effects. The recent EU guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment sets out approaches to how uncertainties should be addressed. It accepts that it is necessary to present uncertainties, but it clearly requires assessments to make a recommendation of the likely effects based on a precautionary approach.

6.3. Methodology: Assessment of Significance

- 6.3.1. One of the biggest concerns regarding the 'climate' chapter is the continuing failure to adequately set out the methodology for defining significance. So far there have been three documents that have broadly covered the methodology for assessing climate impacts. These were the draft Scoping Report, the final Scoping Report, and this dES. They are all written slightly differently, but importantly they have all failed to set out the methodology for assessing significant effects as well as the assumptions that will be used to determine impacts.
- 6.3.2. The latest projections from the Department for Energy and Climate Change carry a lot of uncertainty but suggest that the UK will not meet its targets set for the fourth carbon budget (2023 – 2027), although it will meet the previous 3.
- 6.3.3. Given the level of importance of reducing greenhouse gas emissions, any increase above the baseline should be considered significant and reported to decision makers accordingly. This is a flagship scheme with objectives for

significant carbon reductions. The methodology for assessing the effects should therefore be commensurate with the scale of the project, and should be aligned with the objectives to reduce carbon. If the project fails to adequately reduce emissions in line with the objectives then it should be considered to have an adverse effect. The following methodology should be used in relation to total aviation emissions and separate total transport emissions, as well as for total UK emissions.

Impact on total transport Greenhouse Gas Emissions	
0% + increase	Significant Adverse Effect
0.1 - 1% Decrease	Moderately Adverse Effect
1.1 - 2% Decrease	Slightly Adverse Effect
2.1 - 4% Decrease	Slightly Beneficial Effect
4.1 - 6% Decrease	Moderately Beneficial Effect
6.1% + Decrease	Significant Beneficial Effect

6.3.4. Generally it is considered wiser to produce the method for assessing significance and the assumptions to be used ahead of collecting the data. This removes accusations of author bias and allows interested parties to have input into how the assessment will be completed. Unfortunately in this instance, the author is withholding this information. Therefore, interested parties will see the assessment inputs (assumptions and data), the methodology and the outputs (conclusions) all at the same time. If the inputs are wrong, the whole assessment could be misleading and therefore not compliant with EIA Regulations.

6.4. Methodology: Assumptions

6.4.1. Figure 1 (Page 16) of Report 27 (Site Wide Effects) sets out a hierarchy of influence that HS2 will have on emissions:

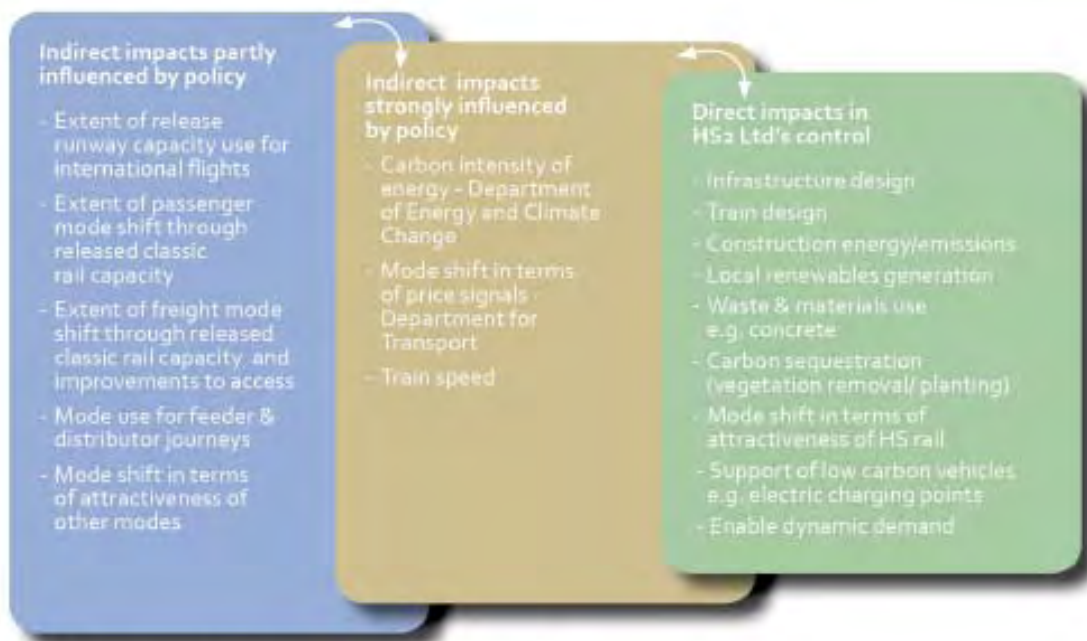


Figure 1: Total carbon footprint of HS2 broken down by influence/control

6.4.2. The report states the following regarding the levels of influence shown in the figure:

These layers of declining influence for HS2 (green being the elements of the footprint it has most influence over and blue the least) mean that some parts of the carbon footprint may be best represented as a range. (5.4.5, Report 27)

6.4.3. There are a number of inaccurate assumptions about the influence of HS2 that is likely to result in author bias and misleading the true effects of HS2. Ultimately this will result in non-compliance with the EIA Regulations.

6.4.4. HS2 has been promoted as a competing transport option for both air and to a lesser extent, road. It is also designed to 'free up capacity' on the existing rail network. The Decisions and Next Step Report (January 2012) states:

The quicker journey times that high speed rail systems can achieve are key to their competitive position in relation, in particular, to air travel. Providing an attractive and considerably lower-carbon alternative to much domestic and other short-haul aviation is an important objective

6.4.5. In other words the very purpose of HS2 is to generate a modal shift. For the author to suggest that modal shift is an indirect impact of HS2 is fundamentally wrong and highly misleading. If HS2 is not going to have a direct influence on modal shift, what is the point in building it?

- 6.4.6. The real problem is that the author has failed to set out the forecasting methods for assessing effects as required by the EIA Regulations. They have also failed to understand the impacts of other plans and programmes.
- 6.4.7. For example, if HS2 achieves its objectives it will have a direct impact on domestic air journeys. Currently, there is no policy or legislative interventions that can control what happens to the freed flight slots. If a domestic flight slot freed by HS2 becomes a long haul flight, then HS2 is having a direct and adverse influence on carbon emissions.
- 6.4.8. If there were suitable plans and programmes in place to control what happens to flight slots, then it could be argued that released capacity is outside of the influence of HS2. However, the ES needs to present the case of what is likely to happen given the existing plans or programmes. If this means HS2 has a negative impact, then this needs to be presented to decision makers who may be inclined to set mitigation to rectify the adverse effects.
- 6.4.9. Similarly, if HS2 results in the loss of some classic line services, and therefore increasing local road journeys, then this also needs to be considered a direct influence and assessed accordingly.
- 6.4.10. The inclusion of train speed in the indirect impacts box is also peculiar. The speed of the train is part of the operational requirements of HS2 and therefore a direct part of the scheme. The assessment therefore needs to be clear about the impacts of the train speed on the energy demand, and in turn the resulting emissions.
- 6.4.11. The emissions relating to the energy consumption of HS2 is a direct impact of the scheme. It is accepted that the carbon emissions are directly related to the national grid energy sources and therefore dependent on the future energy mix. However, as stated above, the ES is supposed to include the methods for forecasting environmental effects. The scoping reports and this dES should have therefore set out what the author considers to be the likely carbon intensity of the national grid in the future. This could then be agreed with interested parties and thus removing results that show a range of effects. These impacts would then be reported as direct. Instead, it is likely that a range of conclusions will be presented to decision makers which will fail to comply with the EIA Regulations.

6.5. Methodology: Scope of Assessment

- 6.5.1. All three methodologies presented to date by HS2 Ltd in the scoping reports and this dES do not fully set out the details of what will be assessed, let alone

an initial assessment. It is therefore necessary to set out some of the topics that need to be considered alongside the HS2 Ltd's broader topics. The assessment should include:

- The assumptions and assessment of onward movement from passenger dispersal.
- The assumptions of traffic generated by those travelling to new stations and the subsequent impacts. For example, how many journeys to the new Birmingham Interchange station will there be. High number of movements in areas with poor air quality are considered to be likely significant effects and therefore need proper assessment.
- The assumptions on the loss of classic line services and subsequent likely impacts from increased road journeys.
- The assumptions about the reduction of journeys by air as a result of HS2, including, the details on the number of planes impacted, and the amount of passengers.
- The assumptions of the impacts of any freed up domestic slots being switched to long haul flights and the likely destinations. A realistic scenario should be adopted about where these flights would be switched to. It should be assumed that these freed up domestic slots are likely to be long haul given there are no plans and programmes controlling flight destinations. Furthermore, the ongoing rhetoric about the UK missing out on 'emerging economies' and the need for urgent capacity to serve these countries means that destinations such as China and Brazil would be first on the list for any freed up domestic flights slots.
- The assumptions for construction traffic and the subsequent emissions. The information on the construction traffic impacts is scare, but does show areas in Birmingham and London where congestion is likely to be a significant problem. A lorry moving swiftly on an open road emits a lot less than one stuck in busy urban traffic. This needs to be factored into the assessment.
- The environmental effects of operations at alternative slower speeds need to be considered and presented appropriately. As no adequate assessment has been undertaken to date, and the final route already determined, it seems unlikely that climate impacts featured in the decision making process. It may therefore be difficult to achieve a fully compliant EIA.
- The assumptions relating to the likely impacts from construction and transportation of the rolling stock needs to be presented and assessed. Whilst rolling stock is omitted from business cost analysis, EIA does require

all parts of the project to be assessed. A precautionary approach should be adopted.

- Assumptions over the future emissions of non HS2 modes of transports.
- Clear appraisal of the cumulative impacts of Phase 1 and Phase 2 combined.

6.6. Carbon Timetable

- 6.6.1. HS2 was initially badged as being 'broadly carbon neutral'. This finding was later criticised by the Transport Select Committee who concluded that this should not be sold as a 'green scheme'. It seems unlikely that a detailed assessment of HS2 will be able to determine that it has a beneficial impact on carbon emissions, particularly given the current forecast for the carbon intensity of the national grid, and the lack of controls over aviation.
- 6.6.2. However, even assuming a best case scenario it will take a long time for HS2 to become carbon neutral and then beneficial (if at all). It is therefore important to present a carbon timetable for decision makers. It will be some time after opening before any positive (if any) impacts on carbon emissions will be realised, and if this hinders meeting legally binding carbon reduction targets then it needs to be presented.
- 6.6.3. On the other hand, significant investment in the whole of the UK's existing rail infrastructure will achieve a greater competitor to road journeys much quicker. It would also have less operational and construction impacts.
- 6.6.4. The conclusions on carbon emissions therefore need to be presented in a timeline to assist decision makers.

6.7. Cumulative Impacts

- 6.7.1. The initial carbon appraisal (Appendix B, AOS) was highly confusing and poorly presented. It is not surprising that the carbon credentials of the scheme were heavily questioned.
- 6.7.2. One of the main problems with the initial report was it was not clear about what was being assessed, whether it was Phase 1, or Phase 1 and 2 combined. The final ES must make a clear assessment of Phase 1, setting out the assumptions to be used, and then clearly set out the cumulative effects of Phase 1 and 2.

7. Site Wide Comments: Socio Economic

7.1. Inconsistencies in Assessment

- 7.1.1. There are discrepancies in the presentation of the number of jobs being lost in the site wide assessment (Report 27) and the individual reports. Report 27 states:

So in total approximately 2,190 jobs could be lost route-wide from businesses affected during the construction phase, which would be a moderate adverse effect and therefore considered to be significant.

- 7.1.2. The following extracts are taken from the 7 London related Community Forum Area reports:

Report 1

It is estimated that the Proposed Scheme would result in the displacement or possible loss of a total of 2,570 jobs within this area.

Report 2

It is estimated that the Proposed Scheme would result in the displacement or possible loss of around 150 jobs within this CFA.

Report 3

It is estimated that the Proposed Scheme would result in the displacement or possible loss of around 50 jobs within the study area.

Report 4

It is estimated that the Proposed Scheme would result in the displacement or possible loss of around of 750 jobs within this CFA.

Report 5

It is estimated the Proposed Scheme would result in the displacement or possible loss of a total of around 20 jobs within the area.

Report 6

It is estimated that the Proposed Scheme would result in the displacement or possible loss of a total of up to 230 jobs within this area.

Report 7

It is estimated that the Proposed Scheme would result in the displacement or possible loss of a total of up to 5 jobs

Report 26

Across all the employment areas reviewed, an estimated 2,850 jobs will either be displaced or possibly lost in the wider West Midlands region

- 7.1.3. In total London loses nearly 4,000 jobs, and the West Midlands region loses 2,850. This does not take into account the 18 other individual Community Forum Area reports. The total in the site wide assessment (2190) is considerably different from those presented in the individual reports. None of this is evidence based, none of it supported by data, and none of it properly detailed.
- 7.1.4. The final ES must make a better attempt at being consistent, and must also use clear and consistent methodologies.

8. Detailed Comments on Community Area Forum Reports

8.1. Introduction

8.1.1. The following sections relate to the specific information set out in the Community Area Reports. The Community Area Forum Reports referred to are:

- Report 6: South Ruislip to Ickenham (“Report 6”)
- Report 7: Colne Valley (“Report 7”)

8.1.2. The comments are provided in environmental topic areas and separated to the Community Area Forum Reports where appropriate. The concerns of the Council are often generic to both Reports, primarily because of the stage at which the assessments have been presented. It is therefore more appropriate to set the comments out regarding the environmental topic areas.

8.1.3. In general, the Council believes that the dES is far from heading in the direction of a well informed and compliant EIA. In too many instances conclusions have been reached without full knowledge of the impacts and receptors.

9. Agriculture

9.1. Overview

9.1.1. The Council is unable to comment on the Agriculture and Forest chapters in much detail, because the quality of information in these chapters is so poor. The information presented contains too many gaps and there is an element of flippancy regarding the impacts. There is no assessment, simply a description of the impacts. This is not in compliance with the EIA Regulations.

9.1.2. In particular, the Council is surprised to see that there are no maps included whatsoever of the areas referred. For example Report 6 states:

3.5.10 At the height of construction there would be a significant effect on six holdings due to the proportion of the farm that would be removed (described above). Two would also be significantly affected by property demolition (Oak Farm and Gatemead Farm).

3.5.11 Following the construction phase much of the land would be restored and returned to agricultural use, and there would be no significant permanent residual effects associated with the construction of the Proposed Scheme.

9.1.3. Similarly, Report 7 states:

3.5.10 Three holdings would be affected in this area. Based on the information currently available, it is likely that three holdings – Park Lodge Farm, Home Farm and Denham Park Farm – would experience significant effects due to the proportion of land loss during construction.

3.5.11 Following the construction phase, much of the land would be returned to agricultural use. As a result, the permanent land take for two of the holdings would involve only modest proportions of the holdings and would not be likely to have a significant effect. For Denham Park Farm, however, the permanent loss of land is still considered likely to represent a significant proportion of the farm (though accurate farm details are still awaited).

9.1.4. There is no information on the amount of land impacted, 'how much of the land' will be restored and not one map showing the areas effected. Consultees have not been given the necessary information to provide adequate comments.

9.1.5. The errors in the assessment are made worse by the fact that HS2 Ltd has not even collected adequate information on the farms to be impacted as set out in Table 4 of Report 6:

Holding	Primary farming activity
Priors Farm, Ruislip	No data available
Oak Farm	Small-scale beef rearing
Gatemead Farm	Small-scale beef rearing
Brackenbury Farm	Grazing, limited data available
Copthall Farm	Grazing, limited data available
Harvil Farm	Grazing, limited data available

- 9.1.6. HS2 Ltd cannot possibly be in a position to determine the scale of effect without 1), knowing the details of the farms impacted and 2) consulted and engaged with farmers/landowners about the extent of land to be lost.

Mitigation

- 9.1.7. EIA Regulations require ES's to include:

A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment. (Schedule 4, Part 1[5])

- 9.1.8. The assessment concludes that there will be significant environmental effects on agriculture but does not meet the requirements set out above. There is no proposed mitigation for the loss of agricultural activity during construction, the loss of the farmland or ability to manage it.

Interaction of Effects

- 9.1.9. The impacts on farming and on those employed on the areas affected are not reflected in the socio-economic assessment.

Forests

- 9.1.10. The Council is also concerned by the level of consideration given to forests in the area. Report 7 states:

3.5.9 Loss of commercially managed woodland and forestry land would be mitigated, where practicable, by replanting in nearby locations. In this area some 13.0ha has been identified, south of the main construction site, for woodland planting and it is proposed that soils displaced from Wyatts Covert would be used in this woodland creation. Although the loss of forestry land would be a significant effect during the construction phase, the effect would become insignificant as planting matures.

9.1.11. There are number of problems with the statements in this paragraph that clearly shows limited assessment as taken place:

- 1 There is no indication of where the deforesting will occur.
- 2 There is no information on the type of forest, although the ecology section states there will be a loss of ancient woodland. This is irreplaceable and no mitigation can overturn the significance of this loss.
- 3 There is no information on where the mitigation will go, and on what or whose land it is.
- 4 There is no information on the management and maintenance of mitigation which if being relied on to reduce the significance of effects is a fundamental issue to be resolved before determination.

Conclusion

9.1.12. The Council finds the information within the Agriculture chapters to be of such a low quality that it is unable to provide detailed comments. The lack of any mapping or presentation of the areas discussed is highly disappointing.

Furthermore, landowners in the area, of whom the Council is one, cannot possibly concur with the conclusions. No assessment has been presented, i.e. the types of impact (soils removed, length of time where land is unavailable) or the receptors (the specific locations, the areas lost). It is therefore not possible to determine the effects (i.e. the impacts on the receptors).

9.1.13. The final ES needs to improve considerably and clearly set out all elements of the assessment. If it takes the form of the dES the Council considers that there is sufficient information missing to be not compliant with the EIA Regulations.

10. Air Quality

10.1. Overview

10.1.1. The dES states it is not necessary to undertake any background air quality modelling since the collation of local monitoring and modelling data has been deemed sufficient. It should be noted there are no automatic air quality monitoring stations in Hillingdon close to the areas of concern and therefore this needs to be examined in more detail. It is not clear what process has been established to ensure that the statement regarding local monitoring and modelling data being sufficient is valid and robust.

10.1.2. There is no discussion on what is considered as significant in regards to air quality impacts. The Council considers the following a significant effect:

1. Any increases in air quality emissions in areas already exceeding EU limit values
2. Any increases in air quality emissions that tip areas into the exceedence of EU limit values.
3. Any increases in air quality emissions in areas that are likely to exceed EU limit values in the future.

Baseline Assessment Methodology

10.1.3. The Defra background maps have been used to characterise the baseline conditions in the Colne Valley Area (Report 7). The GLA background maps have been used to characterise the baseline conditions in the South Ruislip to Ickenham area (Report 6). It should be noted that the GLA background maps are more appropriate for use in areas of Hillingdon as it provides more detailed regional data as opposed to national data. As the Colne Valley Area 7 includes parts of Hillingdon, it would be more appropriate to use the GLA background maps in this area.

Identification of Receptors

10.1.4. The methodology focuses on identifying human receptors that could experience an air quality impact as a result of the scheme and also ecological receptors sensitive to dust and nitrogen deposition. Receptors have been identified as residential and some commercial premises within 350m of construction activity

and within 200m of the roads affected by changing traffic flows. It is not possible to support the assumption that 350m or 200m assessment zones are appropriate due to the lack of information. Full details of the final construction routes combined with an understanding of congestion areas, may require a review of the scope of assessing receptors. This highlights a problem of not knowing the impacts, before understanding the range of receptors.

- 10.1.5. It is difficult to assess whether the approach is sound without the detail of the study area, the receptors chosen and the baseline assessment from which the future predictions will be made. Traffic impacts may result in a wider study area needed for the air quality assessment as the local road network could see substantial increases in traffic volumes which could have significant effects over a wider area.

Construction Traffic Baseline

- 10.1.6. The main air quality impacts in Hillingdon will arise from the construction phase. Both reports stated that HGVs would be expected to form a relatively high proportion of overall traffic flows and increases of over 30% on forecast baseline levels could be expected.
- 10.1.7. It is simply not possible to agree to the scope of the assessment without knowing the full routes of the construction traffic or the type and quantity of vehicles. All this should have been set out in the scoping report, but even in this dES, the information is not available. It is therefore not possible for the Council to conclude that the impacts on air quality have been appropriately considered.
- 10.1.8. The Council has found it necessary to use the information provided to develop its own strategic understanding of the traffic impacts. The construction routes simply stop at the edge of maps. There is no wider assessment of where all these routes end up. The Council cannot see why this information was not provided by HS2 Ltd, instead, lines on map simply end. This was extremely unhelpful for such a contentious topic. From the Council's mapped information provided in the main construction routes will be through densely populated areas. The A40 corridor is a busy through route in the northern part of the borough. It is therefore at least a regional level receptor. The roads leading to and from this main route are congested and experience levels of pollution above the EU minimum limit values. The borough has a monitoring station on West End Road which in 2012 monitored levels of 52ug/m³ annual mean nitrogen dioxide (nb EU limit value for annual mean nitrogen dioxide is 40ug/m³). On Warren Road, a residential street off Swakeleys Road, there is a

pollution monitor which has measured levels consistently above the EU limit value over the last 5 years; in 2012 this was 44.6ug/m³. The impacts of a 30% increase in traffic, especially in the more polluting vehicles such as HGVs, could be highly significant and must be robustly addressed.

- 10.1.9. The Council considers this a likely significant effect and one which needs full appraisal within the final ES.

Likely residual significant effects

- 10.1.10. HS2 Ltd is relying heavily on the Code of Construction Practice to limit impacts on air quality. As stated previously, the COCP cannot be relied upon to assess and reduce effects. Significant effects need to be fully appraised in the final ES and presented to decision makers.

- 10.1.11. Notwithstanding the above, the borough will be seeking detailed Local Environment Management Plans for construction sites, construction routes and roads. No mention is made in regard to the use of low emission vehicles or the use of the cleanest vehicles in order to reduce pollution impacts from construction traffic. This aspect must be addressed in the final ES and a clear commitment made for the use of low or zero emission vehicles wherever feasible.

Monitoring

- 10.1.12. Air quality objectives have hourly, daily and annual limits for the protection of health. Where construction sites and routes are in close proximity to sensitive receptors, monitoring will be needed to ensure all such limits are not exceeded. Given the duration of the construction phases, the provision of long term monitoring will need to be considered. This must include appropriate pre-construction monitoring to establish a robust baseline from which to assess compliance and impacts. Full details on how compliance will be enforced also needs to be submitted.

Conclusions from Assessments

- 10.1.13. Given that the construction maps only show part of the routes and no strategic mapping is provided, there is a wholly inadequate amount of evidence to conclude that there will be no air quality impacts arising from the construction stages.

10.1.14. The most acceptable way to mitigate any potential air quality impacts is not to route construction traffic through populated areas. The final ES should address this issue as an alternative to the proposed scheme.

10.1.15. The success of mitigation will depend upon the robustness of the measures and their enforcement. This includes aspects such as avoiding congestion, no idling, ensuring no re-suspension of tracked out dust on construction routes. These issues must be addressed by HS2 Ltd. Extending the tunnel west of London across the borough and under the Colne Valley, instead of the proposed viaduct would enable more direct access for construction vehicles onto the M25 and avoid construction traffic using busy local and regional roads within Hillingdon and west London.

Operational Impacts

10.1.16. In regard to operational impacts, the main air quality impacts will arise from any permanent changes to the road alignments. Conclusions cannot be reached until this work has been completed.

11. Community

11.1. Overview

11.1.1. The Council is concerned that the level of information presented about communities cannot provide residents with a full understanding of the impacts. The lack of maps is once again frustrating in this regard. In addition there is no presentation of any other data particularly on the potentially effected areas, and no survey data. There is no indication of when surveys were undertaken, or who was consulted in providing the information presented.

Inter-relationship of Effects

- 11.1.2. Once again there is a lack of correlation with other environmental topics; in particular, the transport sections. EIA needs to consider the interaction of effects, and therefore the impacts on traffic, road congestion, and lorry movements needs to be considered carefully within the community sections.
- 11.1.3. As the transport sections for both Reports 6 and 7 are based on inadequate assessments, it is not possible to understand the impacts on the communities in these areas.
- 11.1.4. Furthermore, the reports acknowledge significant effects relating to transportation, landscape, loss of community and business facilities, noise, ecology, and public rights of way; however there is no assessment of the inter-relationship between these, and particular the impacts on the community.
- 11.1.5. For example, there is acknowledgement that Ruislip Shooting Club will be lost, Ruislip Golf Course will be constrained, and the Hillingdon Outdoor Activity Centre will be lost. Furthermore, the assessment makes no consideration for the impacts on the communities who use these facilities.
- 11.1.6. Finally, the blight and noise impacts from operation are likely to have significant permanent effects on the community which have not been adequately considered.
- 11.1.7. The lack of an assessment of the inter-relationship of effects does not comply with the EIA Regulations.

Cancellation of Community Forums

- 11.1.8. One of the reasons for failures in the community sections stems from HS2 Ltd's decision to cancel Community Forums. This was done early in the process, when communities had very little information to inform them about HS2. The reality is that the lack of respect for communities and the potential impacts has resulted in a poorly informed dES.

Lack of Methodology for Report Significance

- 11.1.9. Like many of the other chapters there is not enough information for readers to understand how significance is measured. This is fundamental to the purpose of EIA. The presentation of conclusions can only be considered to be author subjectivity which raises concerns of bias. For example Report 6 states:

5.5.3 It is considered, in the context of the community assessment, that the permanent loss of these dwellings is a minor adverse effect and is, therefore, not considered significant.

- 11.1.10. It is not clear why the author believes the loss of these units would be considered insignificant or the measurements techniques used.

Public Rights of Way

- 11.1.11. The Council does not understand the purpose of presenting no information on the Public Rights of Way for both Reports 6 and 7. There will be a significant effect on existing routes, but there are also opportunities to create new rights of way as well as protecting existing routes.

- 11.1.12. The Council can only pass substantial comment once full details of the construction routes, the length of diversions, the construction and operational exclusion zones, the location of construction compounds are all overlaid onto a meaningful rights of way map.

11.2. Specific Comments: Report 6 Ruislip to Ickenham

Lost Community Infrastructure

- 11.2.1. There are a number of community facilities to be lost in this area. However, there is no mitigation presented. Report 6 states:

5.5.4 The licence conditions of the Rifle Club require the club to be in continuous operation which means that an alternative site would need to be found prior to the commencement of construction works.

- 11.2.2. HS2 Ltd cannot wait until construction to find solutions. EIA requires “a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.” The dES contains no such information. The final ES must include the mitigation solutions for the loss of full usage of Ruislip Golf Course, the loss of the Rifle Club, and the mitigation for the impacts on Copthall Covert.
- 11.2.3. This information must be presented to the decision makers in the final ES. There must be no reliance on future solutions that are unknown at the decision making stage.

Public Rights of Way (PROW)

- 11.2.4. Report 6, section 2.3.27 refers to two Public Footpaths, these being:
- **PROW adjacent to Ickenham Stream.** In conflict with the text in the dES there are no public footpaths marked on the map book. Obviously this makes assessing the comments in dES impossible. The report could refer to public footpaths U81 & R146, which connects the Greenway with Ruislip golf course.
 - **Bridleway to east of Breakspear Road South.** Again, no public footpath is marked on the map and there is no Bridleway shown. A Bridleway does exist on the west of Breakspear Road South and the report should refer to public footpaths U45, U46 & U47. Again with no further information available, no further comment can be made.
- 11.2.5. The routes above also carry the Hillingdon Trail and Celendine Route trails.
- 11.2.6. Bridleway U42 which runs from Breakspear Road South to Newyears Green Lane will undoubtedly be affected as the start of the Bridleway encompasses the access road to Schering Plough, which in part will be demolished as part of the project.
- 11.2.7. It is not possible to provide detailed comments on the impacts on rights of way due to the poor presentation of data. The Council is aware that the Ramblers Associations in the area are significantly concerned with the level of information presented and the conclusions from the assessment.

11.3. Specific Comments: Report 7 Colne Valley

- 11.3.1. The level of information presented in this Report is particular disappointing. The route is above ground and crosses the Colne Valley, which is a heavily used and a highly regarded asset that attracts people from far and wide. To

present no meaningful assessment and to leave it all to the final ES defeats the purpose of consulting on the dES. It also means the Council is constrained as to the level of comments it can provide.

- 11.3.2. Of particular concern though is how after 2 years, there is still a lack of understanding as to the role of the Hillingdon Outdoor Activity Centre or suitable mitigation for its loss.
- 11.3.3. This must be resolved in the final ES. It is an asset of beyond local importance and therefore a solution needs to be found prior to decision making.

Public Rights of Way (PROW)

- 11.3.4. Paragraph 2.3.29 refers to Public Footpath U34 which runs from Moor Hall Road to Dellside, Harefield. The report states a permanent diversion via the west and south side of the proposed Harvil Road auto transformer site will be required. No further information is given and the map book highlights no public footpath. It is not possible for the Council to comment. There may be potential to extend and connect U34 / Harvil road to Breakspear Road South alongside the track, therefore creating a link into Buckinghamshire from Ruislip.
- 11.3.5. The Council can only pass substantial comment once full details of the construction routes, the length of diversions, the construction and operational exclusion zones, the location of construction compounds are all overlaid onto a meaningful rights of way map.

12. Cultural Heritage

12.1. Overview

- 12.1.1. The information presented in Reports 6 and 7 do not amount to an assessment on which the Council can comment. The inputs and assumptions presented are purely subjective, and without the supporting background information, i.e. survey information, landscape assessments etc it is not possible to provide detailed comments at this stage.
- 12.1.2. In addition, it does not appear that HS2 Ltd has used local data but instead has taken only the information from English Heritage. The cumulative impacts on local assets of heritage value need to be fully assessed. Information is available on the Council's website.

Non Compliance with EIA Regulations

- 12.1.3. One of the main concerns regarding the assessment of Cultural Heritage is that an important part of understanding the effects will be done as part of the Code of Construction Practice, i.e. after the decision. Report 6 states:

6.4.10 HER data identified a further 25 assets within the study area. This includes archaeological evidence of an Iron Age to Romano-British settlement that may extend into the permanent land take or temporary land take. There was also evidence for archaeological remains from the prehistoric to post-medieval period and three 20th century assets relating to the RAF Northolt site.

- 12.1.4. The failure to present the assessment methodology means readers are not aware of how receptors such as the "Iron Age to Romano-British settlement" have been categorised. Any effects on such a historic asset would be considered to be significant however, the assessment is left to the Code of Construction Practice which will include:

A programme of archaeological investigation and recording to be undertaken prior to construction works affecting the assets; and

A programme of historic building investigation and recording to be undertaken prior to modification or demolition of the assets. (6.5.2 of Report 6)

- 12.1.5. As repeated throughout this response, the COCP cannot be left to assess significant effects. Full investigations and surveys need to be presented to decision makers in the same way as an EIA would support a planning application.

12.2. Specific Comments: Report 7 Colne Valley

- 12.2.1. The Widewater Lock Conservation Area (CA) appears to be incorrectly shown on the relevant map (CT-01-10) in the Vol 7 map book. The repositioning of the viaduct brings it much closer to the boundary of the CA.
- 12.2.2. Whilst Local Plan: Part1 policies are noted, the proposed Colne Valley Archaeology Priory Zone (APZ) is not identified in the text, nor is it shown on the corresponding maps. Whilst not yet formally designated, it will come into force during the lifetime of the scheme and the updated evidence base for the APZs is currently being drafted, which should again be noted.
- 12.2.3. Para 6.5.7 covers comments on the residual impact of the construction of the viaduct on Cultural Heritage. Bizarrely, it notes that the construction would have no long term residual effects, but in the same section notes that Dews Farm and archaeology on the route would be demolished or removed.
- 12.2.4. The gravel workings and the resultant landscape are all part of the heritage of the borough and were a consideration when the local conservation areas were designated. To say that they have not compromised the historic landscape setting of the area shows a lack of understanding of the history of the valley and a lack of appreciation of its unique character.
- 12.2.5. The impact of the viaduct on the setting of the Widewater Lock CA and on views from the open fields on the lower, north western slopes and open areas of the Harefield Village CA seem not to have been fully considered. The impact of the viaduct on Dews Farm, Harefield, a Locally Listed Building, is noted in the text at paragraph 6.5.8, but this is not shown on the corresponding maps.
- 12.2.6. The Council believes the value of the Colne Valley as a historical receptor has been undervalued. However, as no information is present, it is not possible to understand how it has been valued, or how all the heritage assets have been considered. A considerable amount of work needs to be undertaken to ensure this chapter is comprehensive.

13. Ecology

13.1. Overview

- 13.1.1. The Council is surprised that HS2 Ltd has managed to conclude that there are limited environmental effects without undertaking detailed survey works. This is even stranger given the line of route crosses the Colne Valley one of the most important areas of wildlife for London and Buckinghamshire.
- 13.1.2. In general, EIA requires information on impacts and receptors to be collected before concluding on the assessment. It is interesting to see that the authors of the ecology sections have managed to reach conclusions on the effects without undertaking assessments.
- 13.1.3. The Colne Valley in particular, is a highly valuable resource and the levels of impacts are being completely under valued. The dES represents a highly misleading and questionable assessment.
- 13.1.4. Ultimately, the predetermination of the conclusions without any proper assessments or surveys is a matter of significant concern. The fact that statements on the significance of effects have already been made raises doubts of lawful compliance with the EIA Regulations even if further information will be produced to try and justify conclusions already made.
- 13.1.5. Baseline
- 13.1.6. The Council cannot understand how the author is able to present the environmental baseline position without referring to the amount of survey work or its location, although it does state in Report 7:
- 7.3.4: Field surveys undertaken to date have been limited to locations where landowner permission has been obtained and to areas accessible to the public, largely in the Mid Colne Valley SSSI.*
- 13.1.7. This further undermines any conclusions reached and demonstrates the author's lack of understanding of EIA and ecology assessments.

Methodology

- 13.1.8. The lack of a suitable methodology also fails to comply with the EIA Regulations. The author is required to set out the methods for assessing significance. For example Table 6 of Report 7 advises readers that bats are considered to be up to “county/metropolitan” value. Bats are European protected species and therefore of international importance. It is unclear how the author has managed to demote bats to a county level particularly as no assessments have taken place. The same applies to great crested newts which have been classified as “district value”.

Approach to Assessment

- 13.1.9. EIA requires the significant effects to be assessed and the measures to reduce or remove those effects. The assessment must therefore assess the development pre and post mitigation proposals. The best form of mitigation is to avoid the impacts in the first place and particularly for ecology impacts where mitigation takes many years to establish and will never mitigate for the intervening years of harm.
- 13.1.10. The final ES must assess the scheme proposals, clearly setting out all the information and survey data, and then make an assessment based pre and post mitigation proposals. The period before mitigation establishes must be given sufficient weight. The dES misrepresents these intervening years, and focuses on the results once all mitigation has been established.

Lack of Information

- 13.1.11. The assessment also suffers from a lack of mapping showing the areas to be impacted. Describing broad areas in the text does not constitute an assessment. This makes it impossible for consultees to provide assistance or comments and undermines the point of a consultation.

EU Directive

- 13.1.12. The Council feels it necessary to remind the author of this chapter that the EU Directive, in particular article 16, still applies to HS2 Ltd and the proposed scheme. This requires consideration of European protected species prior to decision making.

Mitigation

13.1.13. The Council is surprised that mitigation is being proposed long before the assessments are undertaken to understand the impacts that need mitigating.

13.1.14. Consultees cannot therefore provide comments on the level of mitigation at this stage.

13.2. Specific Comments: Report 6 Ruislip to Ickenham

13.2.1. The second bullet point of 7.5.2 provides a description of the impacts on Ickenham Stream. There is insufficient information to justify the conclusions made. There is no information on the amount of open watercourse to be lost, nor how this will be done. There is no information on the interconnecting habitats. The section refers to habitat creation 'associated' with the Ickenham Stream diversion in the southern part of West Ruislip Golf Course. There are a number of problems with these statements:

1. There are no maps supporting the text which makes commenting impossible.
2. There are no details of the habitat creation. Losing 600m of open water channel will require significant mitigation. There is mention of creation of a "sinuous watercourse" but this is meaningless without detailed information. As no assessment has been provided as to the areas lost, it is not possible to comment as to whether the "sinuous watercourse" is acceptable mitigation, or even feasible.
3. The creation of the "sinuous watercourse" will only "partially" mitigate for the loss of breeding bird, reptiles and invertebrates. This is unacceptable.
4. There is no understanding of who would manage the mitigation areas, or how much of the golf course, already impacted, will be affected.

13.2.2. The third bullet point in 7.5.2 refers to information not provided. It suggests that the 'flood attenuation' mitigation will include wetland habitats. However, there are no details on what this actually consists of or where it will go. Given the author does not know what the impacts at Ruislip Golf course are, it is difficult to conclude that these will be offset by the flood attenuation which the author of the water resources chapters does not know about. In theory this sounds plausible, but EIA does not work on the basis of the theories of authors. It requires assessments of fact, none of which have been provided.

- 13.2.3. Paragraph 7.5.3 suggests that the Code of Construction Practice will include details on the translocation of protected species. Decision makers will require full information on the impacts on ecology before they can make their decision. This requires assessment of the protected species to be impacted, and where translocation would take place. All these details need to be in place before the decision makers can make their determination. Parliament is not outside of EU Law and the principles of the *Wooley v Cheshire* case will still be applicable.
- 13.2.4. Paragraph 7.5.4 suggests that tunnelled sections of the route will not impact on ecological features. This is not possible to conclude without full details of the impacts on the water environment, particularly groundwater which feeds many important ecological features.
- 13.2.5. Paragraph 7.5.5 includes conclusions which cannot be reached until assessments are made. It also uses ambiguous phrases such as ‘a small number of trees’, details of which are not provided. The Council agrees with the conclusions that the loss of woodland would be significant and the author should also be mindful of the conclusions from Report 7 even though the findings from the reports are presented in an inconsistent manner. For example some loss of trees and vegetation is given in hectares, whilst the impacts on sites are given as percentages (sometimes in the context of what is lost, other times what remains). Despite that it is clear to see that across Reports 6 and 7 there would be levels of loss that go to regional/national levels of concerns including 20% loss of woodland supporting the SSSI along with over 50 hectares of other lost vegetation (potentially as much as 100 hectares but the poor presentation makes it difficult to assess).
- 13.2.6. The impacts in Report 6 cannot be considered in isolation. The cumulative impacts on ecology alone make the decision not to tunnel through the Colne Valley purely a fiscal option. Compliance with the EIA regulations is therefore questionable.

13.3. Report 7

- 13.3.1. The contents of Report 6 were not sufficient to support the conclusions made, raising doubts about the ecological objectives of HS2 Ltd. However, Report 7 is of an even lower standard. Once again mitigation has been proposed before the effects are adequately known (Paragraph 7.5.2). Furthermore, no information on the mitigation is proposed, including the advanced planting mentioned in the third bullet point. This refers to the creation of new woodland as close as possible to the SSSI. It would have been much more helpful to provide the location of this on a map so consultees could offer comment as to

whether it is even practical. A map would also have allowed landowners of the site in question to have some sort of idea what is being imposed on them.

- 13.3.2. Paragraph 7.5.3 once again relies heavily on the role of the Code of Construction Practice. Decision makers will require full information on the impacts on ecology before they can make their decision. This requires assessment of the protected species to be impacted, and where translocation would take place. All these details need to be in place before the decision makers can make their determination. Parliament is not outside of EU Law and the principles of the *Wooley v Cheshire* case will still be applicable.
- 13.3.3. The conclusions in 7.5.4 need to be supported by adequate assessment of the migration patterns of the wintering birds referred to. To suggest that there are other lakes in the area therefore losing one would not result in any problems does not constitute an assessment. A full ecological impact assessment of the Colne Valley needs to be undertaken.
- 13.3.4. Again, 7.5.6 refers to new woodland planting but there are no maps. It also suggests that the huge loss of woodland (in excess of the 15 hectares created), including irreplaceable woodland would result in significant beneficial effects. There are a number of issues with this assertion:
 1. There is no supporting evidence making it meaningless.
 2. There are no assessments of the existing woodland lost, so no information on the effects.
 3. There is no information on the receiving land, so who will manage and maintain this new woodland and does the landowner know what is being imposed on them.
 4. 15 hectares does not make up for the loss or function of the all areas impacted.
 5. It will take decades for the new planting to have any level of positive gain, and the loss in the intervening years has not even been considered.
- 13.3.5. The author of the report appears to be assessing a theoretical approach to a scheme in the hope that it works. There is no relationship between the conclusions reached and evidence presented. The author now has to attempt to match the assessment to the conclusions which is inappropriate and likely to result in an obviously misleading output.

- 13.3.6. Paragraph 7.5.9 suggests that approximately 20% of the Mid Colne Valley SSSI woodland and supporting wetland vegetation would be lost. It then concludes that the mitigation would provide greater habitat than that lost. This is an interesting conclusion to reach based on the presentation of no supporting evidence. The Council will wait to see the assessment as to whether it can support this highly unlikely conclusion.
- 13.3.7. Paragraph 7.5.14 suggests that there are no predicted significant effects on water quality. However, there is insufficient evidence available to support this claim, and importantly, Report 7 (water chapter) suggests that the gravels may need to be drained to construct the viaduct. Considerable levels of work need to be undertaken to support the conclusions reached.
- 13.3.8. Paragraph 7.5.21 states that 4 Daubenton's bat roosts will be removed. This is a rather random comment thrown into the 'assessment' without any evidence and after admitting bat surveys are required. The extent of woodland to be lost including 20% of the SSSI will have significant impacts far beyond 4 Daubenton's roosts. The Council expects to see much greater survey data to support the claims made.

13.4. Inter-relationship and Cumulative Effects

- 13.4.1. The ecology impacts are obviously heavily interlinked to other topics. For example, the water chapter in Report 7 suggests that some of the Colne Valley gravels will need to be drained. There are also impacts on groundwater that need to be considered. Noise impacts across the Colne Valley also need to be considered.
- 13.4.2. There is a lot of work to be done to the ecology chapters in themselves, but there is a lot of work required on other topics before the ecology chapters can be finalised.

14. Land Quality

14.1. Overview

- 14.1.1. The Council is concerned that there will not be sufficient investigative works prior to determination. The majority of the investigative works will be undertaken through the Code of Construction Practice as stated in Report 7:

8.5.2 The draft CoCP sets out the measures and standards of work that would be applied to the construction of the Proposed Scheme. Its requirements would involve detailed ground investigations in order to confirm the full extent of areas of contaminated land.

- 14.1.2. The Council believes that this approach is only suitable in areas where there is unlikely to be a significant environmental effect.

14.2. Specific Comments: Report 7 Colne Valley

- 14.2.1. There is an extensive area north of Dews Farm that is known to be heavily contaminated. This is in close proximity to existing water abstraction points but also near historic points that would benefit from being reopened.
- 14.2.2. HS2 Ltd's failure to set out the methodology, i.e. what receptors are nearby, how receptors are graded makes it difficult for the Council to put the likely effects on this area in the context of the dES.
- 14.2.3. However, the Council considers that the above ground works would have a high level of impact on a highly sensitive receptor. The sensitivity of the receptor relates to both the existing level of contamination and the location of potable water abstraction points that serve large parts of the Colne Valley area. The effects are therefore of more than local importance and could significantly impact a highly important water resource for the region.
- 14.2.4. As a consequence, there is likely to be a significant environmental effect that cannot be investigated after determination through the COCP. There would be failure to comply with the EIA regulations if a decision were taken without an understanding of the effects in this area.

15. Landscape

15.1. Overview

- 15.1.1. The Council received a desk top survey of visual receptors in 2012. The Council undertook a site visit with HS2 Ltd officers in late 2012. No further discussions or information was received until the dES consultation. This is disappointing given the level of information presented is far from sufficient for readers to understand the landscape impacts of the scheme.
- 15.1.2. Furthermore, new information has subsequently been submitted, regarding the movement of the route, the construction compounds and ancillary equipment such as feeder stations.
- 15.1.3. This has effectively rendered the 2012 discussions outdated, and the Council advises that a new approach to the landscape assessment is agreed given the changes. This will require new viewpoints being established.
- 15.1.4. There is little else for the Council to comment on given the paucity of information available.

Inadequate Photomontages

- 15.1.5. The photomontages shown are misleading and clearly demonstrate author bias, e.g. the light grey viaduct on a light grey lake, with a light grey sky demonstrates an attempt to understate the prominence of the viaduct. This is simply inappropriate. However, the Council is aware the impact assessment is being developed further and it needs to be in accordance with the new guidance on landscape impact assessments. This would result in a suitable assessment that can be used in a meaningful manner.
- 15.1.6. The Council agrees that the impacts on the Colne Valley are significant. The level of mitigation proposed will therefore need to be clearly set out in the final ES. This includes a lot of planting to act as 'buffers' and screening. A timetable for planting would need to be included to ensure that mitigation is properly considered i.e. advance planting should be undertaken wherever possible at the outset of the work so it is in place and part established on opening.

Quality of the Viaduct Design

- 15.1.7. In addition, the Council is aware that the design of the viaduct is still being developed. The Council maintains that the level of significant environmental effects in the areas covered by Reports 6 and 7 are of such a harmful magnitude that they far outweigh the costs involved with tunnelling. However, if HS2 Ltd is to pursue a viaduct then the Council would expect as a minimum, a commitment to an iconic design ideally through a design competition. This would need to be reflected in the landscape assessment.

Landscape Character Assessment

- 15.1.8. There is no reference to Hillingdon's Landscape Character Assessment which is an error and results in an inappropriate assessment. This is an adopted document and should provide an objective baseline on which to base the assessment. The authors cannot use their own interpretation of Report 6 and 7 areas. EIA requires consideration of other plans and programmes of which the adopted landscape character assessment is one.

Mitigation

- 15.1.9. There should be a much greater commitment to high finishes on ancillary infrastructure such as feeder stations and rail related buildings. The report refers to possible green walls and roofs, but these should be deemed necessary and not an option, particularly in the rural locations of the Borough.

Construction

- 15.1.10. As stated above, the original viewpoints were taken before changes to the route were known (as set out in the route refinement consultation) or details provided on the construction compounds.
- 15.1.11. The Council does not agree with HS2 Ltd's assertion that a 7 year siting of construction compounds is just a 'temporary' impact and therefore of minimal significance. This is an unusually long, intensive and extensive construction operation that will have significant effects for a large period of time. To under value the level of effects as 'temporary' is inappropriate.
- 15.1.12. The Council considers that the construction compounds will have a highly negative impact for a period of at least 7 years on a highly sensitive receptor. The impacts are of more than local importance and require assessment in the ES. In particular, HS2 Ltd need to develop a mitigation approach to the construction compounds to minimise the impacts.

16. Socio Economic

16.1. Overview

- 16.1.1. The Council does not consider the information contained in the socio-economic chapter to be at all helpful.
- 16.1.2. There is no information on what was surveyed and when; or how the figure of jobs lost (230 in Report 6 and 5 in Report 7) has been calculated.
- 16.1.3. The Council is also concerned about the presentation of construction jobs in 'person years' when describing jobs created, and the actual number of jobs when presenting the number lost. This does not allow for a meaningful comparative assessment.
- 16.1.4. This chapter also suffers from the lack of inter-relationship assessments, for example, it does not consider what the impacts on jobs of increased congestion or severance of roads would have on the area. It also does not consider the blight, perceived or otherwise, on the character and operation of the areas, particularly Ruislip.
- 16.1.5. The Council could have provided more meaningful comments at this stage had HS2 Ltd presented information on the methodology and provided the baseline information particularly regarding the 235 (both reports 6 and 7) jobs lost.
- 16.1.6. The Council is concerned that Report 7 only acknowledges the loss of 5 jobs which clearly does not include the Hillingdon Outdoor Activity Centre.
- 16.1.7. It is not appropriate to ask for comments on such a poorly informed topic. The Council will await the final ES before commenting fully.

17. Sound and Vibration

17.1. Overview

- 17.1.1. Once again there is a lack of data on the impacts and receptors. An appropriate assessment is therefore not possible to be presented. Withholding baseline information and parts of the assessment is also inappropriate. These are set out in more detail below.
- 17.1.2. Noise impacts are perceived to be significantly harmful for high speed trains. To be compliant with the EIA regulations, HS2 Ltd need to be honest and open about the level of noise from the scheme. The dES does not provide a good start. It includes assessments using biased and misleading calculations, and does not include information where this would normally be provided.
- 17.1.3. Decision makers should be given a full and comprehensive assessment on which to base a judgement. Misleading assessments would not comply with the EIA Regulations.

Assumptions

- 17.1.4. A number of assumptions have been made about the technology to be employed in particular the rolling stock. Report 1 states:
- 5.12.21: It has been assumed that HS2 trains will be specified to be quieter than the relevant current European Union requirements and this will include reduction of aerodynamic noise from the pantograph that would occur above 300kph(186mph) with current pantograph designs, drawing on proven technology in use in East Asia. It is also assumed that the track will be specified to reduce noise, as will the maintenance regime.*
- 17.1.5. It is important for the final ES to set out the specifics of the technology being used in the assessment. This should include what level of noise characteristics are expected from the rolling stock. These assumptions should then be used as the specifications for future tendering or commissioning of work. The final ES should therefore set the specifications and not assume that these will be set elsewhere. The final ES needs to provide the clear project description. The specifications outlined above, along with all those used in assessments need to be adequately described in the final ES. These should then inform the construction and operation stages.

Withholding Information

17.1.6. The Council is concerned that the dES refers to assessments which have not been included. In particular Report 1 includes:

5.12.5: The lowest daytime sound level contour shown on the maps is 50dB. For HS2's envisaged operation this is equivalent to a night-time sound level of 40db. In general below these levels adverse effects are not expected. In assessing the risk of sleep disturbance, the maximum noise level for each train pass by has also been calculated and considered in this initial assessment.

17.1.7. The Council cannot understand why the information referred to (underlined) has not been disclosed. HS2 Ltd was well aware that there are considerable concerns about noise and therefore to present only averages which distorts the true impacts and withhold maximum levels is highly frustrating. It does nothing to support HS2 Ltd's assertions that noise impacts will be minimal.

Construction

17.1.8. Noise impacts from construction vehicles are being left to the Code of Construction Practice to be assessed. As set out previously, this is not satisfactory. The amount of lorries moving through Ruislip in particular will generate significant amounts of noise; although it should be noted this is based on a precautionary approach due to limited amount of information on transport movements. However, 7 years of construction vehicles followed by the operational impacts will have a significant effect in certain areas. These effects need to be assessed in the ES and not left until after the decision in the COCP.

Environmental baseline

17.1.9. Detailed results of baseline surveys have not been included in the dES. Assessments cannot be completed without disclosure of the baseline noise levels. These should have been included in the dES and must be fully disclosed within the final ES. These should be set out as noise contour maps so a comparison can be made with the contour maps for the operational noise.

17.1.10. It is noted that the methodology only considers absolute noise levels and not changes. The Council considers that significance can also result from noticeable changes in noise levels even if absolute levels do not reach 'significant'. This is particularly important in the Colne Valley (Report 7) where baseline noise levels are unlikely to be very high.

Methodology

17.1.11. It is extremely important for the final ES to include noise maps that show the baseline noise levels, the noise impacts from HS2 and the baseline overlain with the HS2 impacts. Two versions of each of these maps should be provided, one for the average noise levels, and one for the maximum noise levels.

17.1.12. The Council cannot understand why HS2 Ltd is insisting on assessing night time noise levels at 55dB in contrast to EU guidance. Report 6 states:

11.6.4: Residential receptors within the daytime 65dB contour, and therefore the night-time 55dB contour, have been identified as being likely to experience a significant adverse effect from HS2 noise alone. This is in line with the daytime threshold for in the Noise Insulation Regulations and the interim target defined in the World Health Organization's Night Noise Guidelines

17.1.13. The World Health Organisation guidelines state:

Considering the scientific evidence on the thresholds of night noise exposure indicated by $L_{night, outside}$ as defined in the Environmental Noise Directive (2002/49/EC), an $L_{night, outside}$ of 40 dB should be the target of the night noise guideline (NNG) to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly. $L_{night, outside}$ value of 55 dB is recommended as an interim target for the countries where the NNG cannot be achieved in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach.

17.1.14. There is no logical reason for using the interim measurement for HS2. The Council maintains that the 40dB level should be the assessment point for the impacts of night time noise for HS2.

17.1.15. The Noise Insulation (Railways and Other Guided Transport systems) Regulations state the daytime period is taken to mean 06:00 to 24:00 but HS2 Ltd use the daytime period as 07:00 to 23:00 hours.

Mitigation

17.1.16. Details on the triggers for mitigation have still not been provided. The dES concludes that areas within the Borough will suffer from significant effects although how these will be reduced is unknown. The final ES must clearly state what triggers mitigation. This should not be left to the Code of Construction Practice. Decision makers need to be made fully aware of all the significant effects and the measures to reduce them.

What is assessed?

17.1.17. It is not clear from the assessment what is being considered. The project could result in 18 trains per hour operating at 250mph. The final ES must make it clear that it is assessing the maximum noise levels and the average levels must make allowance for a number of higher end noise impacts, for example, two trains passing at 250mph out of a tunnel.

17.1.18. If the final ES does not clearly state what is being assessed then it will not be compliant with the EIA Regulations.

17.2. Specific Comments Report 7: Colne Valley

17.2.1. The Council is surprised to see that the noise contours for the Colne Valley where the network runs 15m high on a viaduct in a river valley are the same as the surface route where the trains emerge from a cutting.

17.2.2. The Council will await the final evidence to support this but must point out that a pre and post mitigation assessment needs to be carried out.

18. Traffic and Transport

18.1. Overview

- 18.1.1. The Council has serious concerns about the level of information presented, and lack of assessment relative to the affected areas.
- 18.1.2. The main traffic impacts will be caused by the 7 year construction period to manage tunnel spoil, build a viaduct, excavate a ventilation shaft and support construction compounds. The area selected for this intensive and extensive operation is a highly constrained urban area in Ruislip and Ickenham, as well as the main north-south transport routes in the Borough.
- 18.1.3. The map books include routes of the construction traffic, but importantly, these only show a small part of the journeys. The lines representing the traffic routes simply stop at the edge of each map, and many areas are not mapped, which means there is a vacuum of information. No strategic network has been presented. Again, the Council finds it surprising that HS2 Ltd is withholding such important information relating to a highly contentious subject. The Council has had to interpret the limited data available, and generate the likely strategic transport network. This is attached at Appendix A.

Baseline

- 18.1.4. No baseline information has been provided, and there is a small amount of detailed information on the existing use of the roads. The Council is also concerned about when the surveys were taken. Report 6, 12.4.1 states:
- A combination of desktop research and observational traffic and transport surveys have been undertaken in order to understand the 2012 baseline transport situation within the vicinity of the construction site compounds in the South Ruislip to Ickenham area.*
- 18.1.5. At the end of 2012 the Council was consulted on a safeguarding consultation that showed the construction compounds in a completely different location to those in the dES. It is therefore necessary to fully detail where the survey work was undertaken in relation to the construction route maps. It is likely that some of the roads considered for the old construction compound locations would not be relevant to the new locations.

- 18.1.6. In general, the baseline traffic situations have not been adequately presented for all the roads to be impacted. Furthermore, there is no detail on the assumptions used for forecasting traffic.
- 18.1.7. Chapter 12 of Report 6 provides some detail on the traffic and transport impacts envisaged by HS2 Ltd. This detail is inevitably limited and paragraph 12.3.2 acknowledges:
- ...it should be noted that the transport and passenger modelling of HS2 is continuing to be developed and therefore the assessment will be updated for the formal ES.*
- 18.1.8. The lack of information makes it difficult to fully appraise the dES. Furthermore, there is a lack of information on the concurrent movement of traffic serving different parts of the construction. The Council cannot ascertain the cumulative level of traffic impacts. The information on diversions is also minimal. Road closures can have minimal impacts if they last only a weekend, but they will have significant effects if they last through the week, or even years.
- 18.1.9. Finally, it is unlikely that the baseline position takes into account significant development proposals in the area that will fundamentally alter the traffic regime.
- 18.1.10. Such an inadequate amount of information does not allow the Council to provide meaningful comment on the baseline position. The Council will have to wait for the final ES before understanding the baseline position. This is a worry, because if this is wrong, the whole assessment is wrong.

Inter-relationship of Effects

- 18.1.11. The lack of baseline, and therefore the inadequacies of the assessment mean that it is not possible to fully understand other environmental impacts, particularly related to air quality and noise. All these assessments are predicated on the baseline position being accurate. The Council considers HS2 Ltd has missed a significant opportunity to present meaningful data on which consultees can provide insightful comments.

18.2. Inappropriate Level of Impacts

- 18.2.1. The information provided demonstrates that Ruislip and Ickenham will be subjected to a 7 year long construction operation. The Council has significant concerns about the cumulative environmental effects of this construction work,

but with regards to transportation the Council does not believe that it is even physically possible for the following reasons:

1. The construction traffic is routed around Ruislip and includes a busy high street with on street parking. Busses already have difficulty navigating this route. HS2 Ltd has targeted this route for hundreds of HGV movements a day.
2. The attached map at Appendix A shows areas of significant congestion, on and off peak. Some of these roads will see hundreds of additional movements per day.
3. Some of the roads highlighted as being used for HGVs simply cannot accommodate them due to on street parking restrictions, or mini roundabouts with numerous access and egress points.
4. The majority of traffic will eventually use the A40 to link up with more major transport networks such as motorways. This road is heavily used with the connecting local network at capacity at points.
5. The area targeted for additional traffic movement contains air quality levels that exceed minimum EU standards.

18.2.2. The information provided in the Draft Environmental Statement shows that the scale of the impacts on Hillingdon are worsened because the tunnel portal at West Ruislip and the start of the Colne Valley viaduct are just 2,210 metres apart. This means that there is a vast construction site between Harvil Road and the proposed cutting for HS2 through New Years Green Covert, and a further large construction site at the tunnel portal near West Ruislip Station. We believe that if the 3,840m long proposed viaduct were replaced by a 5,780m tunnel under the Colne Valley, then the immense misery from the construction and operation which Hillingdon's residents and businesses will experience could be avoided. The information provided in the Draft Environmental Statement shows that the transport impacts on Hillingdon include the following:

- 'A' Roads will come to halt as up to 3300 lorries per day use the local road network to move spoil, workers and construction material.
- These lorry movements and those likely to come from Old Oak Common will use the A40 as the primary route out of London to the motorway networks; despite the fact the A40 is currently exceeding minimum air quality limits on much of its route.

- The attached map (Appendix A) shows the construction traffic will impact on existing significant hotspots of congestion. Some of the routes involve mini roundabouts serving multiple links. It is already difficult for cars to navigate these without significant numbers of large lorries increasing the problems.
- A key access point to the site of the West Ruislip tunnel portal is indicated as being via Hill Lane, a narrow road with very poor visibility splays at its junction with Ickenham Road and also the only access to and from Ruislip Golf Centre, a restaurant, residential side roads and a pedestrian/ cycle route leading to the residential areas of West Ruislip. If, as is suggested, up to 800 lorry movements a day are to use this short road and junction, the Council consider that adequate road safety measures including the possibility of traffic controls would be needed, which would in turn add to the high existing levels of traffic congestion in Ickenham Road.
- There is reference to the possible need to use an alternative construction traffic route via Ickenham Road, High Street Ruislip, Bury Street, Ladygate Lane and Breakspear Road. This is for situations where access under the existing road bridge in Breakspear Road South (carrying the Chiltern Line) is impassable by the vehicles in question. This route would have a severe impact on local roads including a high street and residential roads and a school (Whiteheath School in Ladygate Lane) which is already a daily source of traffic congestion.
- There are many 'A' roads and local roads that are currently heavily used to the extent where busses already have problems. It is very likely that buses will experience considerable disruption to their timetables for several years. The movement of large heavy goods vehicles, for example along Ruislip High Street, is simply untenable because there is simply not enough room for large vehicles to pass one another.
- It is likely that the fire service and other emergency vehicles may experience difficulties as a result of increased traffic on already congested roads and the problems of roads not being wide enough to cope with two large vehicles needing to pass one another.
- The diversion and use of major north – south networks will hamper anyone living in the north of the borough and trying to reach the south. This is worsened by the need to temporarily close two major roads, Harvil Road, and Breakspear Road South.
- Heavy and prolonged use of the borough's north-south roads (such as Harvil Road, Ickenham Road, Breakspear Road South and West End Road) by construction traffic is likely to impinge on people's ability to get to and from work, which will have an impact on businesses and the economy.
- The bus map (see Appendix B) for the whole of the Hillingdon illustrates the poor existing connectivity between the north and south areas of the

Borough. Comparison with the construction routes plan (which includes the relevant bus routes shaded in green) makes it clear that a number of key bus routes will be severely impacted for a period of up to seven years.

- This may need TfL to consider curtailing, diverting or splitting these bus routes into two halves and at the very least will severely detract from service capacity and delivery. Key routes affected include the U9 (one of the very few public transport links of any kind that serves the village of Harefield), the U1 and U10 (both important routes linking Ruislip and Uxbridge, the latter also serving Ickenham).
- Also affected are the special schools - only 697 and 698 services, which connect students in the south of the Borough with faith schools in the north.
- The severe disruption due to the adverse transport impacts during the 7 year construction period will have severe implications for the local and regional economy, including loss of jobs as people find that they cannot satisfactorily access their workplace.

18.3. Specific Comments: Report 6 Ruislip to Ickenham

18.3.1. South Ruislip Vent Shaft: access to this is shown running from Victoria Road, near the site of the proposed re-development of the former Express Dairy site. Some detail on construction proposals is given on page 86 of the Community Forum Area Report for South Ruislip to Ickenham. It is not clear whether this involves temporary or permanent impact on the immediate area, although the vent shaft itself sits over the proposed tunnel alignment, possibly on Chiltern Railways land on the opposite side to Trenchard Avenue.

18.3.2. Bridgwater Road: the tunnel passes under Bridgwater Road at a depth of around 25 metres below ground level. It is likely that this road will suffer significantly from detours due to road works, closures and diversions on the other roads in the area.

18.3.3. West End Road: at the point where the tunnels cross the line of West End Road, on roughly the same alignment as the existing LUL Central Line and Chiltern Rail lines, the long section provided in the DES shows the tunnel inverts (lowest point) to be some 29 metres below ground level. There is therefore no direct impact on the road network of the tunnels themselves. However, it is likely that here as elsewhere, work will need to be undertaken to divert, strengthen or otherwise modify some of the adjacent mains (in particular high voltage power supplies and water mains) and depending on the work involved (not clear at this stage) and the short to medium term impact on traffic on West End Road is likely to be severe.

- 18.3.4. West Ruislip Tunnel Portal and Ickenham Road: the tunnels emerge from the previous section at West Ruislip, across the road from West Ruislip LUL and Chiltern Line station, in Ickenham Road. This involves the construction of a massive tunnel 'headhouse' which will have a serious impact on Ruislip Golf Course.
- 18.3.5. The construction traffic trip generation table on page 85 of the Community Forum Area Report for South Ruislip to Ickenham indicates that this site will involve 'in excess of 800 trips per day by Light and Heavy Goods Vehicles' over a seven year period.
- 18.3.6. It is not clear how construction under Ickenham Road will be handled. The proposed HS2 alignment runs slightly north of the Chiltern Line at this point. Ickenham Road already crosses the Chiltern Line on a substantial road bridge and this may prove advantageous in terms of the tunnel construction, but this is not clear at this stage.
- 18.3.7. The DES plans show a local construction access route via the short section of Hill Lane which presently serves as the road access to the Golf Club as well as the residential Harwell Close. It is likely that residents as well as patrons of the Golf Club will suffer considerable impact from this construction traffic, for an as yet unknown duration.
- 18.3.8. A construction phase plan within the 'Map Books' document indicates a construction route running north along Ickenham Road through the White Bear Roundabout towards Ruislip High Street, but there is no indication of the route on the plans provided northwards thereafter. The traffic impact of construction traffic on the already busy White Bear Roundabout and the junction of High Street and Ickenham Road will be severe.
- 18.3.9. Buried within the documentation is a reference to the possible need to use an alternative construction traffic route via Ickenham Road, High Street Ruislip, Bury Street, Ladygate Lane and Breakspear Road. This is for situations where access under the existing road bridge in Breakspear Road South (carrying the Chiltern Line) is impassable by the vehicles in question. This route would have a severe impact on local roads including a high street and residential roads and a school (Whiteheath School in Ladygate Lane) which is already a daily source of traffic congestion.
- 18.3.10. In a similar manner, the construction phase plan shows the route southwards heading past Heacham Drive in the general direction of the Ickenham Road/ Swakeleys Road junction, another section which already reaches saturation at peak times, but again the detail on the plans stops at their edge. However it is

possible to surmise the likely extended route despite the lack of detail from HS2 Ltd and the impact on, for example, the retail area in Ickenham Village (in Swakeley Road) is likely to be severe.

18.3.11. Ickenham Road carries the U1 and U10 bus routes and these will clearly suffer if the road is closed for any extended period of time.

18.4. Specific Comment: Report 7 Colne Valley

18.4.1. Breakspear Road South: this road is one of only three viable north-south traffic routes for much of the local neighbourhood (the others are Ickenham Road and Harvil Road). The proposed HS2 route runs to the north of the existing Chiltern Line and will, like the latter, cross Breakspear Road South via an overbridge.

18.4.2. The Construction Phase plan indicates that there will be both a 'temporary' and a 'permanent' bridge at this point.

18.4.3. Construction of this could be undertaken either as an entirely in-situ process or could rely on some pre-fabrication. The former would involve longer time and in particular severely impacting road closure; the latter would either involve local fabrication (and a compound on which to do this) or transport to site in sections by road.

18.4.4. The DES plans show a significant amount of excavation and construction work in the section to the east of Breakspear Road South, including accommodation of the point where the new line crosses the River Pinn as well as a major canal feeder diversion. Transport to and from this area by any other means (in particular rail) could be impracticable, not least because the Chiltern Line is several metres above ground at Breakspear Road South.

18.4.5. The new alignment will lead to the need to construct a new private access road just north of the HS2 crossing point and pairs of 'emergency access points' and 'maintenance access points' on the western side of Breakspear Road South.

18.4.6. Harvil Road: the most significant direct highways impacts would appear to be at Harvil Road, which is the sole practical traffic route between Harefield and Ickenham. Harvil Road carries the U9 bus route, a critical link to Ickenham and Uxbridge for the residents of Harefield whose only alternative is the 331 via Moorhall Road and Denham.

18.4.7. The proposals call for the construction of new section of Harvil Road, running from a point south of its present junction with Skip Lane to a point where Harvil

Road currently crosses a stream via a short section of overbridge ('Harvil Road Newyears Green Bourne Bridge').

- 18.4.8. It is likely that some of this major construction work could be undertaken while the existing section of Harvil Road between these points (including the narrow, awkwardly skewed road bridge over the Marylebone to Aylesbury branch of the Chiltern Line) remains open to through traffic.
- 18.4.9. However even during this period it is likely that there may be extensive and long duration earth movements by road arising from the major open-cut excavation for the section of HS2 which slices through the area to the south of New Years Green Covert.
- 18.4.10. This open cut section is described on the plans as being required for 'Heathrow Link passive provision' which appears to mean that this method of construction and open cut has been pre-determined solely to protect the proposals for a possible future Heathrow spur, irrespective of counter arguments in favour of tunnelling through this area.
- 18.4.11. The Construction Phase plans in the Map Book indicate the creation of a major 'Harvil Road Construction site' which appears to take the form of a substantial, roughly triangular area forming a construction compound, where it is likely that construction materials and site arisings will be stored. Road traffic is shown on a related plan running both north and south from the junction of Harvil Road with Swakeleys Road but as with Ickenham Road, the construction route details run over the edge of the plans provided.
- 18.4.12. To the west of the new section of Harvil Road a large compound is indicated with an 'ATFS' in the centre, which refers to an 'Auto Transformer Feeder Station' which is associated with power supplies for the line.
- 18.4.13. Any disruption to Harvil Road is likely to have a major traffic impact on other local roads, as drivers try to find alternative routes. New Years Green Lane is already used as a commuter rat-run between Breakspear Road South and Harvil Road, with traffic using it to travel between West Ruislip (and from areas to the east) to Ickenham, Denham and Harefield and this is likely to increase significantly.
- 18.4.14. To the west of Harvil Road, the proposed HS2 line runs westward towards South Buckinghamshire with a major viaduct over the current site of the Hillingdon Outdoor Activity Centre (HOAC). At this section, the DES plans change from the so-called 'London Metropolitan' section to the 'Country South' area.

18.4.15. It is unclear at this stage what the split will be between access from the Harvil Road side and the Denham/ Maple Cross side, although the indication of 'temporary exit slip roads from M25 for construction' suggests the latter. The proposed HS2 route enters a tunnelled section just to the east of the M25 and westwards from this point runs beneath the Chiltern hills.

18.5. Conclusions

18.5.1. Even from the limited information available in the draft Environmental Statement documentation it is apparent that the consequence of not tunnelling under the Colne Valley will cause considerable hardship in the short term and long lasting damage (as set out above in our response to the HS2 Design Refinement Consultation), which could be avoided if the proposed 3,840 m long viaduct were to be replaced by 5,780m of additional tunnelling. Otherwise in Hillingdon, we have the tunnel portal just 2,210m away from the viaduct and the area in between will become a massive construction site within a densely populated area with no easy access to the A40 or motorway network. We therefore request that HS2 Ltd now take the opportunity to extend the tunnel from London through to the western side of the Colne Valley.

19. Water Resources

19.1. Overview

- 19.1.1. There are a number of conclusions reached in the dES that are not supported by any evidence. EIA is required to assess all likely significant environmental effects. The diversion of rivers and watercourses, and the tunnelling through aquifers are all considered to be likely significant effects and need full assessment in the EIA.
- 19.1.2. The proposed diversions of the Ickenham Stream and River Colne will also impact on the hydrology of these areas and potentially increase flood risk. These have not yet been investigated to understand the full impacts and feasible mitigation and therefore which is the best environmental option. To omit these assessments, or leave them to the Code of Construction Practice would be in breach of the EIA Regulations.

Conclusions before Assessments

- 19.1.3. No acknowledgement of the potential impact of diversions on flood risk have been recognised within the dES. It is simply stated the channels will be maintained on a like for like basis and therefore no impact is likely. A Flood Risk Assessment must be undertaken in order to ensure the all the risks and implications have been properly considered and assessed. The temporary works will be in situ for a considerable period of time and would also have a considerable impact and should be located outside the floodplain wherever possible. This is not currently the case.

Lead Local Flood Authority

- 19.1.4. It is surprising that Reports 6 and 7 refer to surface water flooding but make no reference to Lead Local Flood Authorities in establishing the baseline or developing the assessment. Surface water management is now in the remit of Lead Local Flood Authorities, of which the Council is one. Discussing surface water management with the Environment Agency does not fulfil objectives of the Flood and Water Management Act and is likely to result in conflicting advice, since it is the Council has the local expertise and knowledge.
- 19.1.5. Consent for works on ordinary watercourses is required from the LLFA. Consent could be withheld if it is consider impacts have not been properly assessed or will lead to significant likelihood of flooding.

Baseline and Assessment

- 19.1.6. The dES has been based on information on 'the flood map for surface water' obtained from the Environment Agency. However later on it refers to the use of the surface water management plan (SWMP) produced by the Council as base line information. Clarity should be provided on the use of the best available information.
- 19.1.7. The Council has undertaken a SWMP which is also referred to within the dES. This shows that the proposed route runs through a number of Critical Drainage areas and areas at risk of local flooding. The works are therefore likely to exacerbate the risk of flooding to people and property. A more detailed site specific Surface Water Monitoring and Management plan must be undertaken in order to ensure all the risks have been properly considered and assessed to inform the proposal options. For example the proposed option of lowering Breakspear Road, which already has extensive flooding problems, would exacerbate local flood risk identified in the SWMP. This cannot be left to the COCP.

Policy Requirement

- 19.1.8. The water chapters fail to acknowledge the London Plan's policies on the Blue Ribbon Network. The proposals cross a number of watercourses within the area and these proposals do not comply with the enhancement of these watercourses as required the Blue Ribbon Policy. This includes for example the narrow 8m span bridge crossing for HS2 across the River Pinn, which would detrimentally affect the Blue Ribbon Corridor in this area. The policy should be acknowledged and the proposals reflect their aims.

Increasing Flood Risk

- 19.1.9. The preferred option is to divert the Ickenham stream (Canal Feeder) to the River Pinn rather than continue the current line of the stream. This would compound a flood risk situation by diverting flows back into the River Pinn rather than removing them to a different catchment. This would prevent the use of this stream as a flood relief channel to deal with flood flows from the Mad Bess Brook. The overall impacts of this are assessed to be minor without a full assessment of the flood risk implications, or the implications on the downstream stretch of the canal feeder and removing the flow feeding it. The Council considers this to be a significant environmental effect which needs proper assessment in the final ES.

19.1.10. Between Harvil Road and Dews Lane there is reference to a small ditch within the temporary land take area. No assessment of its catchment area or even reference to how this will be dealt with is included within the report.

19.1.11. New Years Green Bourne is proposed to have a new bridge over it in the form of a new Harvil road realignment. This river causes a number of flooding problems upstream on New Years Green Lane, with constant water fed from groundwater in the surrounding hills feeding the New Years Green Bourne. There are potential benefits to a clear span crossing but also implications to downstream receptors which it is acknowledged needs to be investigated further to confirm implications. This needs to be considered as part of the final ES and not left to the COCP.

19.1.12. The proposed diversion of the River Colne due to the viaduct location is given limited assessment. The change in the water management regime in the area could result in changes in the extent of floodplain which could in turn have harmful impacts on flood risk management. The river also forms the county boundary at this location, which would result in more complex management arrangements for the area.

19.1.13. Paragraph 13.4.10 states:

The National Grid Feeder Station is part of the Proposed Scheme and would be partly located within Flood Zone 2 and Flood Zone 3 of the Newyears Green Bourne catchment. At this location flood flow velocities are expected to be low or stagnant since this is an area of ponding.

19.1.14. The Council has serious concerns about placing a feeder station in the floodplain. There have been countless 'lessons learned' documents (starting with the Pitt Report) from recent flood events that advise against this. Given the vast array of land not at risk of flooding in the area, and to the west of the Colne Valley, there seems little obvious reason why it has to be placed in an area at risk of flooding.

Reliance on the COCP

19.1.15. Once again, the COCP is being relied upon to provide assessments and ensure the proposals will not have adverse effects. The proposals have the potential to increase the risk of flooding to people and property and should not be left until after the decision to be assessed. This is in breach of the EIA regulations.

Drainage at Breakspear Road South

19.1.16. It is unclear how drainage of HS2 will be dealt with yet the implications are significant. The Council has closed the Breakspear Road South on a number of occasions due to the safety implications from the flooding of the road from surrounding ordinary watercourses and surface water. The proposals to lower the road in this area needs serious consideration. This would increase the flooding frequency of an important north-south connection and therefore a significant effect that needs assessing.