

**Cherwell District Council**

**Formal Response to DfT Consultation on:**

**HS2 *Draft* Environmental Statement  
(May 2013)**

**8th July 2013**

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Cherwell District Councils formal response to the above consultation is in five sections.

1. Executive Summary
2. Response to Volume 1: Introduction to the Draft ES
3. Response to Volume 2: Community Forum Area Report 14 (Newton Purcell to Brackley)
4. Response to the Draft Code of Construction
5. Conclusion

Within sections 2, 3 and 4 there is an opening section reiterating a number of points made by CDC previously in our response to the Consultation on the HS2 White Paper (Spring 2011). These are repeated as we do not consider that they have received sufficient consideration in later published material. Our formal response to the published consultation documents then follows within each section.

## 1. Executive Summary: The anticipated impact on Cherwell District

Cherwell District Council is extremely concerned that the Draft Environmental Statement is just one-tenth of the size of the anticipated final ES (approximately 5000 and 50,000 pages respectively). Further, that the majority of the critical baseline data, on which to assess actual impacts is omitted from the Draft. It is therefore extremely difficult to comment on the anticipated end result without this foundation of baseline data.

To add to these facts, there will not be an opportunity to respond to the final document other than through petitioning, an action which is simply not an option for the vast majority of those individuals, communities and businesses directly and indirectly affected.

Cherwell District is also extremely concerned that common sense principles such as the 'Kent Criteria', which could have significantly reduced the environmental impact of the scheme have not been incorporated despite two years of promotion by Cherwell District Council and Community Forum members;

The Kent Criteria are:

- i. 'To use existing transport corridors (both rail and road) where that can be shown to minimise land take, severance and environmental and noise intrusion.*
- ii. To avoid built development as far as possible where new rail tracks are constructed outside present BR operational land.*
- iii. To take careful account of the constraints arising from different geology and drainage in order to minimise environmental damage from tracks.*
- iv. Construction of rail tracks on lengthy embankments to be avoided to minimise noise and visual and noise intrusion.*
- v. To design cuttings, tunnels, cut and cover screening embankments and acoustic walls to minimise visual and noise intrusion.*
- vi. The greatest possible degree of noise attenuation shall be the aim, and the general standard of protection shall not be inferior to that provided in accordance with best practice elsewhere.*
- vii. There will be a fundamental requirement for the final route alignment to pay regard to existing settlements to an extent that with the use where necessary of protective measures there is no significant deterioration in the noise climate.*
- viii. Protection of communities and the environment from noise intrusion to be planned to the highest modern standards, which take account of the special characteristics and intrusion of railway noise within parameters*

*related to receiver sensitivity, and measured over a period bearing direct relationship to the actual period of operation of the route, and with special consideration being given to any overnight operations.*

- ix. Noise protection to be achieved wherever possible at source by the incorporation of the highest engineering standards in motive power units, rolling stock, the design and construction of tracks, power distribution systems, structures and trackside equipment rather than the insulation of individual properties.*
- x. To design for operating speeds which enable commuter use of new tracks and permit maximum practical flexibility in vertical and horizontal alignments so as to minimise property loss, environmental damage and noise intrusion.*
- xi. Fair, flexible and comprehensive compensation to be speedily settled for affected property, whether for impact from land take, noise or visual intrusion and to include property affected by increased use of existing tracks.*
- xii. Roads and paths to be reinstated where severance occurs.*
- xiii. Agricultural and other land severed to be reassembled to enable good long term management.*
- xiv. Financial provision to be made for full environmental treatment of new and enhanced rail facilities to the highest modern standards, including substantial “off-line” landscaping.*
- xv. Principles and proposals be established for the construction phase including identifying the location and function of each construction site and access to and between them, planning controls to be exercised over the construction stage and included within any Bill proposal; and an environmental code of conduct for the management of the sites.*
- xvi. Principles and proposals be established for spoil disposal and other bulk material movements including identifying disposal sites considered necessary to meet predicted requirements, giving priority to mitigation measures alongside of close to the Rail Link, seeking to use chalk in cement-making or sand in the minerals industry where feasible, taking the opportunity to fill a derelict site (or sites) within NW Kent or the Medway Valley which is otherwise unlikely to be satisfactorily restored, and maximising the transportation of spoil and other bulk materials by rail, overland conveyors or river barges as appropriate rather than by road planning controls to be exercised over the construction stage and included within any Bill proposal, and an environmental code of conduct for the management of sites.*

- xvii. *To design a high standard of safety for both passengers and those living adjacent to the rail lines, and provide suitable means of emergency access.*
- xviii. *To recognise the social and environmental blight created by houses subject to purchase left empty in a community, and prepare and implement a letting, sales and management policy designed to reduce such impact’.*

If the scheme is confirmed by Parliament, it needs to become an exemplar scheme worthy of the nation, particularly as it is the latest transport infrastructure project in UK history. As it stands it will fundamentally & permanently alter communities to the detriment and needs to be radically redesigned.

In addition, Cherwell District Council makes the following observations and will expand on each point within this document.

- The cumulative effects from other plans and programmes have not yet been considered (e.g. Aviation Review)
- Distinct lack of baseline information, specifically baselines on noise, air pollution, water resources/flooding and traffic
- There is no clarity about consultation on the final ES and how this fits with the Hybrid Bill process
- **Community** – significant leisure/business impacts have not been fully assessed.
- There are discrepancies between the plan and profile maps and the map books and narrative under Community Forum Areas, which contains out of date data
- **Community Cohesion**: This will have a direct impact on those who will no longer be able to live within the hamlet of Lower Thorpe and an indirect effect on the two neighbouring communities due to the severance effect of the railway viaduct and the loss of community cohesion that currently exists between two neighbouring villages and the historic community that joins them (Lower Thorpe).
- **Landscape and visual assessment** – There is no mention of having referred to local Landscape Character Assessments. The methodology has recently changed and it is unclear whether the LVIA takes account of this
- **Air quality** – No baseline data. It is not stated whether construction will be by road or rail and this is fundamental
- **Climate** – there is no assessment in the Draft ES
- **Cultural heritage** – there is very limited information
- **Sound, noise and vibration** – there is no background data or baseline. The assumed use of 3m sound barriers is misleading as the character of areas has not been considered.
- **Socio-economics** – no assessments are included. Some businesses will be lost. It is not acceptable that is addressed by off-setting jobs and implying that replacing a lost locally-based motorsport engineer role with a

groundworker from out-of-district is acceptable and hence not significant in terms of loss.

- **Traffic and transport** – the lack of a Traffic Assessment is a fundamental omission at this stage. In addition, the Highways Agency has not approved any routes
- **Waste and Minerals** – nine million tons of ‘surplus excavated material’ and imported aggregates have an interaction with traffic and transport impacts and will affect areas as much as 20 miles from the route in order to access the strategic trunk roads network
- **Water resources and flood risk** – detailed design but no real information. There is no justification of tunnel impacts on groundwater or de-watering on archaeology
  
- **Presentation and layout comments -**
- The Non Technical Summary (NTS) should be a standalone document, ideally avoiding where possible a lot of cross referencing to volumes in the main ES.
- The overall construction programme should be in the NTS and it would be helpful for construction times to be included in each CFA section in the NTS – standalone document.
- Summaries of waste and climate would be helpful in the NTS
- The NTS contains very limited descriptions of the receiving environment.
- Some settlements/features are referred to in the text but not shown on the maps – this should be rectified.
- If referred to in the text it should be shown on the plan – e.g. in NTS only 2 viaducts shown but 3 referenced in text.
- The maps (NTS and CFA Reports) could be clearer, they are quite difficult to read – could the colouring be improved?
- It would be helpful to summarise in each CFA chapter in NTS buildings demolished, roads and PROW diverted.
- NTS should briefly summarise local options rather than just cross ref vol 2.
- It would be helpful if NTS contained bullet points identifying main mitigation measures during construction rather than just referring to CoCP – standalone document.
- More reference to comments of statutory consultees would be helpful.
- Will the SMR form part of the formal ES to enable easy cross referencing?
- When considering cumulative effects with other proposed/likely developments there will need to be liaison with the LPA to ensure all developments are included.
- There are very few references to how comments from communities have been addressed in respect of significant effects. Valued environmental attributes identified by the consultation should be identified as should activities with significant effects on those valued attributes.
- Policy framework should make reference to national policy.
- ES could be arranged clearer so that the significant effects are clearly defined – in places they get ‘lost’ in the text and must have clear prominence.
- It would be useful if all significant effects and residual effects were tabulated. The Draft ES uses tables for some topics but not others

- Chapter summaries would be helpful.

A number of key issues in terms of impact and mitigation are still being considered and are to date unresolved so it's very difficult to offer much detailed comment at this stage. Also therefore we can't be clear on any residual effects.

In addition, not all full methodologies are included so we can't really comment on their appropriateness or otherwise.

Some areas are still very vague – 'potential loss of archaeological features 'could' be significant', 'significant noise effects 'may' occur' – is it or isn't it, will they or won't they? The Landscape/Visual section is particularly vague. Together with noise this is the biggest concern facing this council.

As a result no confidence can be placed in the results at this point in time and Cherwell District Council questions the value of the draft ES and consultation.



## **2. CDC Response to Volume 1:**

Cherwell District is a rural, unspoilt and tranquil place, where a substantial proportion of the population live in villages and countryside; a tranquil environment that this project will destroy.

This part of Cherwell District is not a formal Area of Outstanding Natural Beauty (AONB), but it is an unspoilt ancient landscape with deep history and tranquillity which the Council have always sought to protect.

The Council is committed to 'Preserving what is Special' about the District and in particular protecting the villages and countryside from inappropriate development and developments of scale. It remains very unclear how local character will be maintained. We are surprised that so little work has been undertaken of what will be lost as a result of this project.

This response to the Draft Environmental Statement is driven by a desire to minimise the impact on individuals, communities and fundamental character of the District. We wish to ensure that the final proposal and the ongoing debates on mitigation and compensation minimise impact from the scheme.

We don't believe that rural areas are just blank spaces on the map to be filled with development, but something unique, something to be treasured. We have a duty to 'Preserve what is special' and try to pass it on intact to future generations. The proposed route will pass through a district with Conservation Areas, Listed buildings and a high quality environment. This is what needs to be recognised, both the implications for communities, businesses and individuals now, but the loss to communities of the future too.

A scheme of national significance therefore demands the very highest environmental standards to achieve the very lowest impact possible. As what is the price to put on tranquillity, or the heritage and biodiversity that will be adversely affected or lost?

In the Cherwell District the revised 'preferred route option' will have a direct impact on the Fringford district ward.

We believe that it is critical that the wider impact of development on all of the heritage and environmental assets in Cherwell District is considered in more depth than has been the case to date. The impact on the setting of Scheduled Monuments, Listed Buildings and Conservation Areas are required in law to be considered when assessing the impact of a development. Similarly the biodiversity sites all have a wider context and cannot survive if isolated from their surroundings.

The impact work is not just limited to designated or known sites and a major infrastructure project such as this will have a significant impact on the historic and existing landscape of the District.

It is critical that HS2 takes a number of additional studies into account in considering the impact on Cherwell District. These should include Environmental Character Areas, a Green Infrastructure Study and the Landscape Sensitivity Studies in assessing the impact the HS2.

## **Sound and Noise**

The assessment for sound, noise and vibration is based on criteria defined in the Scoping and Methodology Report (SMR). However, whilst assessment criteria adopted for assessing airborne and ground borne sound, noise and vibration impacts from construction activities and operationally static equipment have been based on criteria defined in relevant British Standards and Codes of Practice, no detailed reference or explanation has been provided for the criteria used to assess airborne sound in respect of operational train movements or reasons why other relevant criteria has not.

For example, the absolute sound levels stated in the third bullet point of paragraph 14.3.26 of the SMR. Also, how the criteria for determining the significance of an impact, detailed in paragraph 14.3.31 of the SMR, will be taken account of acoustically in the assessment process particularly the character of the existing environment and any unique characteristics for the train noise in terms of level/spectra differences. All of this information needs to be provided in the final ES in order that any reasoning can be understood and demonstrate adherence to the policy objectives of the National Planning Policy Framework (NPPF) and also the Noise Policy Statement for England (NPSE) concerning the use of robust scientific evidence.

Where assessment has been based on criteria applied in respect of other similar development projects in the UK or abroad then some explanation needs to be provided on the evidence supporting that criteria and/or analysis of post project monitoring after the development was completed and operational.

Whilst a description has been provided in respect of some of the likely construction noise sources no similar description has been provided in respect of operational train noise sources such as from wheel/track interface, aerodynamic noise, and also from infrastructure such as acoustic impacts when trains pass into and out of tunnels/viaducts/cuttings, embankments etc .

This information is important to enable anyone reading the ES to better understand the reasoning behind the assessment.

The comment that HS2 Ltd has the “opportunity to design and specify a complete railway system” including “quieter trains and noise barriers that are effective” (section 6.12) is noted. However, details of the “specifications” would need to be provided in the final ES including comparisons between alternative mitigation options using a “cost benefit analysis” approach (i.e. each measure ranked in terms of level of mitigation provided and costs) as typically used in “Best Practicable Means” for example. This could be used to demonstrate good design practice and drive innovation towards the aims of

the NPPF and NPSE, and also HS2 Ltd Sustainable design aims and Sustainability Policy.

**The Assessment of Noise & Vibration, Air Quality and Contaminated Land**

<b>Chapter</b>	<b>Section</b>	<b>Heading</b>	<b>Comment</b>
1		Introduction	
	1.1	Overview of HS2	No comment but noted that environmental effects that result from train operations have been assessed using the expected Phase Two Operations
	1.2	Hybrid bill procedure	No comment
	1.3	The need for EIA & role of an Environmental Statement	No comment
	1.4	Environmental Minimum requirements	No comment
	1.5	HS2 & sustainability	No comment
2		Background to High Speed 2	No comment
3		The Proposed Scheme	
	3.3	Services & Operating Characteristics	No comment
	3.4	Proposed Scheme description (Aylesbury to Coventry Gap)	No comment
	3.5	Principle features & infrastructure	No comment – but some reference to any specific acoustic attenuation characteristics would have been useful.
	3.6	Construction	No comment – noted that Construction impacts of Phase 1 included in the Noise & Vibration Assessment as based on the Code of Construction Practice and Principles of BS5228:2009 Control of noise and vibration on Construction & Open Sites.

4		Environmental impact assessment	Comments in Section 4.4 General assumptions and limitations- noted
5		Scope & methodology for environmental topics	
	5.3	Air quality	Use of the local authority data and defra background maps for assessing the existing air quality concentrations is acceptable. However, they will still need to be assessed and it is unclear what criteria will be used to assess the significance of any impacts. Previously proposed reduction in emissions due to improvements in vehicle abatement technology driven by EU standards have not delivered the reductions in emissions expected. As such, it should be assumed that emissions will not decrease as previously expected and assumed to stay the same to assume worst case scenario.
	5.9	Land Quality	Appropriate risk assessment is welcome as outlined but the focus should be on demonstrating the development is suitable for use. This is not made clear in this section. There is no specific information included in this section on what criteria will be used to assess. The investigation, assessment and proposals should be provided prior to commencement.
	5.12	Sound, noise & vibration	Noted that assessment for sound, noise and vibration is based on criteria defined in the Scoping & Methodology Report as finalised and published in September 2012. However, whilst assessment criteria adopted for assessing airborne/ground borne noise and vibration impacts from construction activities and operationally static equipment have been based on criteria defined in relevant British Standards and Codes of Practice, no

		<p>detailed reference or explanation has been provided for the criteria used to assess airborne sound in respect of operational train movements or reasons why other relevant criteria has not. For example, the absolute sound levels stated in the third bullet point of paragraph 14.3.26 of the Scoping Methodology Report (SMR). Also, how the factors detailed in paragraph 14.3.31 of the SMR will be taken account of acoustically in the assessment process but particularly the character of the existing environment and unique characteristics for the train noise in terms of level/spectra differences. All of this information needs to be provided in the final ES in order that any reasoning can be understood and demonstrate adherence to the policy objectives of the National Planning Policy Framework (NPPF) and also the Noise Policy Statement for England (NPSE) concerning the use of robust scientific evidence.</p> <p>Also, where assessment has been based on criteria applied in respect of other similar development projects in the UK or abroad then some explanation needs to be provided on the evidence supporting that criteria and/or analysis of post project monitoring after the development was completed and operational.</p> <p>Whilst a description has been provided in respect of some of the likely construction noise sources no similar description has been provided in respect of operational train noise sources such as from wheel/track interface, aerodynamic noise, and also from infrastructure such as acoustic impacts when trains pass into/out of tunnels/viaducts/cuttings, embankments, etc .</p> <p>Such information is important for the</p>
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			<p>lay person to better understand the reasoning behind the assessment.</p> <p>The criteria for determining the significance of an impact, outlined in section 14.3.31 of the SMR with regard to the number and grouping of receptors is still under discussion.</p> <p>The limitations of the assessment are noted.</p>
6		Approach to mitigation	
	6.6	Air quality	No mitigation is foreseen as necessary other than that included in the transport assessment and the CoCP. Without appropriate assessment and understanding of the methodology of assessing the air quality impact as referred to above, this cannot be assumed.
	6.12	Sound, noise & vibration	Noted comment regarding “opportunity to design and specify a complete railway system” including “quieter trains and noise barriers that are effective”. Details of the “specifications” would need to be provided in the final ES including comparisons between alternative mitigation options using a “cost benefit analysis” approach (i.e. each measure ranked in terms of level of mitigation provided and costs) as typically used in “Best Practicable Means” for example. This could be used to demonstrate good design practice and drive innovation towards aims of NPPF & NPSE and HS2 Sustainable Design Aims & Sustainability Policy.
Appendix A		Sustainable Design Aims	No comment but stress the importance of the relevant details being provided in the final ES Report to demonstrate this.



### **3. Response to Volume 2: Community Forum Area Report 14 (Newton Purcell to Brackley)**

The anticipated impact on this section of Oxfordshire is considerable, as a brief description of the line as it passes through the Council's area illustrates:

a) Travelling south to north the line would first enter the district for a short section to the north of Godington. The proposed line is generally following the former Great Central railway line, but north of Godington it will deviate further north on new viaducts (approx 3 metres high) over the Padbury Brook. It is assumed, but not confirmed, that the former railway embankment and bridge will remain in situ and thereby shield the village of Godington to some extent.

b) The route then passes back into Aylesbury Vale DC's area passing the village of Chetwode before passing back into Cherwell to the east of the main part of Newton Purcell village. The line would travel on a raised embankment parallel to, and just to the north of, the former railway embankment. It is not clear if the former railway embankment adjacent will stay or go. The line would then pass over the existing A4421 just to the north of the existing redundant railway bridges and abutments. No information is available whether these former structures will stay or go. The plans submitted with the consultation show a diversion of the A4421 to the north west of the current alignment to pass over the new rail line (at least 8 metres above the new rail height. Long embankments to north and south lift the road to that level. Accommodation works to the existing roadway are needed so that the existing road can still function as the access to houses north and south of the HS2 line and to serve the end of the Barton Hartshorn Road.

c) Proceeding north-westwards the proposed HS2 line regains the Great Central alignment (albeit in wider cutting) and travels in low cut to the A421. A new bridge to take the A421 across the railway would be needed. The line continues north westwards in increasingly deep cutting passing between Warren Farm and The Oaks Farm. Just short of the Mixbury Lodge to Fulwell Road the line would start to deviate north eastwards from the former railway line remaining in deep cutting as it passes under that road and north of Tibbetts Farm. To the north-east of Mixbury the line would need to come out of cutting and pass over a short viaduct to cross the deep valley of a small brook flowing eastwards to the Great Ouse River at Fulwell. The line would then pass back into deep cutting for 300-400m (8 metres deep approx) before re-emerging onto embankment and viaduct (10 metres high) as it crosses the Great Ouse River heading onto Aylesbury Vale again to pass between Westbury and Turweston and hence into South Northamptonshire Council's area to the north-east of Brackley.

HS2 must consider the implications that the scheme has for the delivery of a number of key corporate priorities for the council. In particular, the effect on the A422 and A4421 and the impact on construction when these key projects are under construction, and the A422 and A4421 will be the primary route for construction traffic.



Similarly, there are a number of works required to the A422 and A4421 as a result of these developments and we need to understand if and how these will be affected by HS2 sooner rather than later. Delivering these improvements has been taken into account when considering the viability of these developments and we need to understand the implications i.e. are improvements being sought and made for works that will then be affected by HS2?

### **3.1 Fit with Local Plan Policies**

It is illustrative that the area through which the HS2 route proposes to run is judged locally to be sensitive and significant.

All of the area of Cherwell through which the line passes is a locally designated Area of High Landscape Value (AHLV) in the adopted Cherwell Local Plan. This is not recognised in the ES at all.

The line will be in a mixture of cutting and embankment. The new construction will be a raw feature in the landscape which on-site planting will do little to alleviate in the short to medium term. The impact is not only from the new engineering structures of the line (embankments, cuttings and viaducts) but also from the view of the trains themselves and the overhead gantries. In addition one has to consider the structures that will carry roads and footpaths across the line. The overbridge at Newton Purcell will be particularly prominent, as will the viaduct across the Great Ouse River.

Of lesser visual significance will be the A421 overbridge and the Padbury Brock viaduct but these are still substantial new structures in the AHLV. With regards to the cuttings it cannot be established, on the basis of the submitted drawings, what the land take will be as some of the cuttings are quite deep around Mixbury. It is therefore difficult to assess the true impact. The Council will need to seek mitigation of these impacts both on and off site if the scheme proceeds.

HS2 does not sit well with these policy objectives.

### **3.2 Geology and Topology Issues**

The proposed route in Cherwell District will largely pass through clay. This will have a major impact on how the route is designed.

The experience around Oxfordshire of development in the same rock series has established the need for well shored sides, wider V cuts to avoid under-slip occurring through water and frost effects. This experience suggests that HS2 may need to have a potentially larger land take than might at first be anticipated.

It is this geology that will lead to a larger land take being needed than might first be anticipated as a cutting into clay requires a shallower V to ensure a stable side to the cutting, as the experience from HS1 shows.

This does not appear to have featured in the scheme assessment to date.

CDC believes that a number of issues require more detailed consideration:

- The impact of a loss of high quality agricultural land, minerals areas and potential waste planning sites.
- The scale of the land take required for the line and associated works.
- The locations of land take for new access during and after construction.
- The early identification of where to deposit 1,000's tonnes of waste and most appropriate location in the District for the construction of haul roads and access roads.

### **3.3 Impacts on the Local Environment**

CDC has considerable concern about the impact of the proposal on the environment of Cherwell District.

The environmental issues from HS2 are considerable and include:

- Applying the lessons from HS1 and London Crossrail, that good environmental planning and scheme management is the key to a successful scheme.
- Anticipating construction and operational impacts; considering avoidance (within a broad corridor), mitigation and compensation.
- Completing a full Environmental Impact Assessment and Strategic Environmental Assessment urgently.
- Resolving how the project meets the obligations on the promoters under the Climate Change Act 2008 and contributes to the national plan for emission reduction given the levels of embodied carbon in the construction and operation of the scheme.
- Justifying why HS2 has not considered alternatives that would have a much lower environmental impact.

It is of considerable regret that the protection offered in the Treasury Growth Strategy (March 2011) for Green Belt and sensitive environmental areas such as AONB's as a consequence of the proposed reforms of the Planning system excludes HS2, which undermines the reassurance offered in the Planning Reforms being introduced through the Localism Bill. As para 2.21 records – *'the Government's commitment to maintain the greenbelt, Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty and other environmental designations'*.

This commitment amounts to little of substance in the light of the HS2 experience and communities cannot draw any reassurance from it.

CDC is concerned to ensure that a number of lessons from HS1 are given more detailed consideration ahead of HS2 being submitted for adoption through the planned Hybrid Bill including:

- The implications of removal of vegetation for both route and on sites nearby for construction or access purposes.

- The impact on properties affected by loss of visual amenity close to route and all those with views across the railway.
- The need for high quality mitigation to ensure visual amenity impacts during the construction of HS2.
- The need to aim to ensure that permanent effects are mitigated in some areas once HS2 construction is completed and vegetation becomes established.
- The landscape and visual impact from foot bridges, road bridges and other structures. The HS1 designs were very intrusive visually.

There is a need to consider how the soil type, gradient of cutting and climate change will affect the most appropriate species to plant to secure a rapid reclamation of areas affected by earth movement during construction. The quality of the restoration achieved in Kent after 10 years + of new growth and planting has been impressive as the photograph below shows:



But a major concern for CDC stems from the evidence of the HS1 line in Kent over the height of line and gantries, locations for screening, tunnels and banking. An example from Kent is below shows how visible the route can be:





Cherwell District Council notes the effort made within the context of HS1 to seek to minimise the visibility of the route through lowering of the floor of the cuttings to reduce the visibility of the actual line. We are also clear that this step did not always succeed and the tops of the overhead cables is frequently visible the length of the route through Kent. It is envisaged that this problem is likely to occur to the east of Mixbury where the line is in shallow cutting.

CDC are also keen to avoid the experience of HS1 where poor quality of bridges providing local service access as well as for footpaths and bridleways were provided, with a negative visual impact. An example is shown below:



### **3.3.1 Air quality**

Estimates of background air quality have been obtained from Defra for 2011 and future years (2017 and 2026), and reference has also been made to Cherwell District Council's air quality data. It is agreed that the main effects on air quality will be from construction activities, which will be localised and controlled and managed through the methods outlined in the Code of Construction Practice (CoCP) the general requirements of which will be supplemented by Local Environmental Management Plans and method statements for each community Forum.

No baseline data. It is not stated whether construction will be by road or rail and this is fundamental.

There is considerable potential for localised dust occurrence and the potential for nuisance on residential, business and amenity areas in the construction period that would be necessary to build the proposed HS2 line. This includes the line of the preferred route, the wider land that is planned for acquisition for operational safety.

But air quality impacts can also be anticipated from a number of associated factors, including:

- Traffic impacts during construction and from new road alignments and in particular the proposed new bridge for the A4421 over the HS2 route at Newton Purcell and the air quality impact from the elevated road on nearby dwellings, flora and fauna.

It is of great concern that these issues are not considered in the consultation documents and that an Environmental Impact Assessment is planned some time after the need case will have been considered; thus excluding issues of local impact and potentially costly remediation from the business case assessment.

At the very minimum, should a decision be taken to proceed with the scheme a construction environmental management plan will be required to address mitigation management.

### **3.3.2 Climate**

There is no assessment in the Draft

There is considerable potential for localised dust occurrence and the potential for nuisance on residential, business and amenity areas in the construction period that would be necessary to build the proposed HS2 line. This includes the line of the preferred route, the wider land that is planned for acquisition for operational safety. We expect measures to reduce this to be taken, particularly to the east of the route due to prevailing south-westerly winds.

### **3.3.3 Ecology**

The HS2 route passes through an almost entirely rural setting within Cherwell District. Whilst it is called a Draft ES it is only slightly more detailed than an EIA scoping document. It is very disappointing that we are not being given the opportunity to comment on a full Draft ES. The documents do not provide enough information to comment properly or to assess the impact of HS2.

The Council endorses a series of questions that have been raised by Oxfordshire County Council's Ecologist, namely:-

- What evidence (ecological survey data) are the conclusions in section 8 and Community Forum Area Chapters 13 and 14 of the Draft ES based on? No survey results are included and it states that surveys are ongoing. It is inadequate to base assumptions about likely impacts on insufficient data.
- Para. 5.7.2 of Vol. 1 states that they will be "...guided by the methodology advocated by IEEM...". Why "guided by" and not "adhere to"? The ES should adhere to IEEM methodology.

- There is no assessment of route-wide cumulative impacts on ecology. Cumulative impacts on ecology could be very significant and need to be properly assessed.

Para. 5.7.8 of Vol. 8 states:

“However, it is considered unlikely that HS2 Ltd will gain access to survey all land where access has been requested prior to the submission of the formal ES. HS2 Ltd is currently developing (in liaison with Natural England) a formalised precautionary approach to assessment which is to be followed in the formal ES.”

We do not consider that this is an appropriate way of dealing with this issue. Other organisations and individuals should be given the opportunity to comment on the definition that will be used for the “precautionary approach”. There is an Ecology Working Group of ecology stakeholders along the route and HS2 should agree the definition of the precautionary approach through this group.

Sources of information are incomplete: e.g. the list for the Environmental Features Maps does not include TVERC (Thames Valley Environmental Records Centre), nor does Chapter 13 section 7. Information from TVERC should be included. Woodland is from OS maps – this is a very unusual approach. UK Biodiversity Action Plan Priority Habitats should be included based on information from TVERC, then verified through HS2’s ecological surveys. At present the maps do not show UK Biodiversity Action Plan habitat – this is inadequate. Local Wildlife Sites should include Proposed Local Wildlife Sites. In the Community Forum Chapters the assessment of UK BAP Priority Habitats should include Scrub-dense continuous.

The documents refer to mitigation measures for Great Crested Newt and other protected species, but these are not detailed. These need to be clearly stated.

The route comprises large areas of arable farmland, as well as more valuable areas for wildlife including and protected sites, stream corridors and areas of ridge and furrow grassland. There is therefore a good opportunity for enhancing the wildlife value of this area through mitigation and compensation works.

There will be direct impacts from HS2 on already identified protected sites and habitats and also a loss of connectivity in the landscape, particularly impacting butterflies and mammals.

While there are no international designated sites affected in Cherwell District, there will be an impact on nationally designated sites (e.g. SSSI’s) and regional / local designated sites.



There is a potential for major loss of ancient woodland and historic hedgerows and the Council are in the process of mapping these sites given the incomplete nature of the BAP coverage in the District.

Cherwell DC is concerned at the serious potential for impact on protected species and areas with abundant wildlife.

There will also be an impact on productive farmland in Cherwell District. It is unclear whether there will be restrictions on farming with farm access broken. There is a continuing need for livestock and crop access and new bridges to a width to accommodate farm machinery. The current mapping undertaken by HS2 does not take into account the nature of land ownership and the impact on farm businesses of the route.

The Council is concerned to ensure that the correct surveys & assessments are undertaken. An appropriate assessment is required for the project to comply with the provisions of Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (Habitats Directive).

An independent assessment of the environment and biodiversity of the area affected is critical to ensure this is properly considered if the scheme is proceeded with. In addition, HS2 must ensure appropriate surveys are undertaken to identify the potential opportunity for habitat creation and extension in appropriate locations.

### **3.3.4 Loss of Hedgerows**

The area through which the HS2 route proposes to run is judged locally to be sensitive and significant. The Cherwell District- Local Plan Saved Policies has sought to provide protection against the unwarranted loss of hedgerows.

There is no evidence of HS2 taking account of its impact on this sensitive landscape form.

### **3.3.5. Specific Site impacts in Cherwell District:**

We seek to ensure that the real ecological costs of all proposals are understood and taken account of before any decision on High Speed Rail is made.

There are sites where the HS2 route will result in the direct loss and fragmentation of valuable wildlife habitat and impact on many important species of flora and fauna.

We have the following records of species and areas of ecological/ biodiversity interest within 500m either side of the proposed line within Cherwell District:

Protected Species:



- Water vole (protected under Wildlife and Countryside Act 1981 as amended)
- Badger (Protected under Protection of Badgers Act 1992)
- Grass snake (protected under Wildlife and Countryside Act 1981 against killing and injury)
- Common Lizard (protected under Wildlife and Countryside Act 1981 against killing and injury)
- Biodiversity Action Plan (BAP) Priority/ Section 41 Species and notable species:
  - Water flax beetle – Nationally Notable invertebrate
  - Small Heath - BAP/ Section 41 NERC Act species
  - Cinnabar - BAP/ Section 41 NERC Act species
  - Wall - BAP/ Section 41 NERC Act species
  - Shaded Broad-bar - BAP/ Section 41 NERC Act species
  - Basil Thyme - BAP/ Section 41 NERC Act species
  - Wood White - BAP/ Section 41 NERC Act species
  - Dingy Skipper - BAP/ Section 41 NERC Act species
  - Grizzled Skipper - BAP/ Section 41 NERC Act species
  - Small Blue - BAP/ Section 41 NERC Act species
  - Four-spotted - BAP/ Section 41 NERC Act species
  - Figure of eight - BAP/ Section 41 NERC Act species
  - Cuckoo - BAP/ Section 41 NERC Act species
  - *Lebia chlorocephala* (ground beetle) – Nationally notable
  - *Stenus butrintensis* – Nationally notable
  - *Psallus albicinctus* – Nationally notable B
  - Kingfisher – amber list bird

The route passes within close proximity to a number of large ponds and lagoons (close to Finmere and Godington). There may therefore be issues with amphibians, most notably Great Crested Newts to be addressed, which could be using areas to be affected as terrestrial habitat. The lagoons may also be important for water birds which could be impacted by disturbance.

The route also appears to pass through or directly adjacent to a couple of plantation and woodland areas near Finmere. There may be important nesting birds or roosting bats in these areas which would need to be surveyed for.

Bats – there are no specific records for bats but they are likely to be foraging along the watercourses and hedgerows throughout the area as well as the old LNER railway as this forms a major vegetated corridor across the wider landscape and therefore could be important for commuting and foraging bats, which may be difficult to mitigate for.

We have records of water vole throughout the district and it is likely they are present on some of the other watercourses to be affected. Nine crossings of watercourses of various sizes have been identified in addition to on the River Great. Otters may be present on any of these watercourses.

Badgers are also likely to be widespread.

For all these species the principal impacts both during construction and in the long-term when trains are running will be

- direct destruction and loss of habitat
- direct and indirect disturbance due to noise, lighting and habitat
- fragmentation and loss of connectivity of habitats
- isolation of populations
- potentially direct injury and killing of individuals both during construction and when trains are running

There is only one specifically highlighted habitat in our records namely a District Wildlife Site – the Old LNER railway LN2/3. This was previously of Local Wildlife Site value but has been downgraded due to loss of ecological interest. It still contains Lowland Calcareous grassland of BAP priority habitat quality and is important for butterflies and likely to be important for other invertebrates. There would be direct land loss of this area.

The proposed route would necessitate the loss of a number of hedgerow sections which are also likely to be BAP priority habitat and similarly a number of woodland areas which may qualify under lowland deciduous woodland.

The closest local wildlife site is Spilsmere wood 850m to the West. It is not foreseen that there would be any impacts on this, however there may be disturbance from noise.

### **3.3.6 Ecological mitigation and compensation**

Mitigation and compensation needs to focus on protecting and improving protected sites, ensuring connectivity across the route and improving connectivity through the landscape alongside the route

CDC believes it is essential that offsite mitigation / compensation is in place before construction takes place in order to minimise impacts.

Creation of new habitats as a replacement for those lost, potentially fencing during construction and removal of reptiles/amphibians to receptor sites. Replacement bat roosts and bird nesting opportunities. Timing restrictions on work to avoid or coincide with breeding/hibernation times. Bridge designs to cater for bats, otter passes etc...

Attention has already been drawn above to the loss of tree cover. There is a potential for further hedgerow loss as well. The Council is concerned that the level of information provided is currently poor. If the scheme proceeds to the Hybrid Bill stage we will need to ensure that the Environmental Statement is based on current and up to date survey information to ensure compliance with the EEC Directives on the conservation of natural habitats and of wild flora and fauna.

Proposals for the sort of environmental compensation and mitigation necessary to address the impact of the proposed HS2 scheme include:

- Increasing woodland cover in the area
- Enhancement of existing ridge and furrow sites to create flower rich meadows
- Focus of compensation works around areas of existing interest and at potential route crossings for wildlife, as this is where wildlife may become 'funneled'.
- Working with Environmental Stewardship to deliver large scale habitat improvements
- Enhancing existing wildlife corridors such as disused railways and streams

### **3.4 Landscape and visual assessment**

There are few visual representations of the impact on our district with the Community Area Forum Reports. As such, the anticipated impact is requires significant mitigation measures.

There is no mention of having referred to local Landscape Character Assessments. The methodology has recently changed and it is unclear whether their LVIA takes account of this.

CDC is looking for the scheme (if pursued) to be as inconspicuous as possible with minimal impact and change to the character of the District. CDC are concerned with the potential for major visual impact and to ensure rail clutter is screened and kept to a minimum.

Due to the typology of Cherwell District HS2 stands to be very visible from many part of the District. We have particular concerns about the potential visual impact at a number of locations, including the following:

- The line dissects a relatively small area on the eastern side of Cherwell district and although the route physically only occupies 5.5km the visual impacts extend well beyond this.
- The landscape character is one of unspoilt undulating arable and pasture land with good hedgerow and associated tree cover. In places there are small to substantial blocks of woodland. A number of small villages are relatively sparsely located within 5km of the line.
- Area accessible from Godington Footpaths. The line will be on a viaduct at this point as it travels through the valley. From the Cherwell side approaching from Godington there will be some screening provided by the disused rail track which is estimated to be 6m high and has some scrub cover making the screen higher. The power line gantries are likely to be visible. The existence of a disused line very close to a new one may well have the effect of making the area look quite degraded visually as there will be an area of dead ground between the the two lines. It would be preferable to remove the original line and utilise the spoil in constructing the new line. Visual Impact substantial

- Area around Newton Purcell. A sizeable part of the village is within the 500m of the line. The line is 3.5m above grade with a major road bridge over track plus power lines. This will necessitate a considerable bridge and engineering works which will be intrusive on a small village which is very close. It is assumed that some properties will be too close to be retained as the ground re-modelling required will be considerable. Substantial impact +
- Footpath at 627 319 The track is almost at grade here where it runs along the line of the disused railway. Here the impact will be caused by the overhead power lines. The existing track at this point is currently well screened by vegetation but it is not clear if it will be possible to retain this. This may be possible on one side of the track but not the other as there will be some cutting which there is not at present. There is insufficient detail yet available to form definitive opinions upon Impact moderate to substantial.
- Footpath at 624 325. The track will be slightly cut in here. Again due to the earthworks required it may not be possible to retain all the existing screening. Impact moderate to substantial
- A421. The proposed line crosses the A421 by way of a bridge. The landscape is relatively flat and the approach to the bridge along a long straight road. The bridge will rise above the A421 creating a large structure over the road. Substantial impact.
- Featherbed lane. The line will be in cut, not significantly visible at this point but a new bridge will be required with associated earthworks. Impact moderate to substantial
- Mossycorner Lane. In cutting as it passes directly past Mixbury with a small length of viaduct before passing into cutting again. Unlikely to be visible in summer due to intervening vegetation. Likely to be visible in winter. The village is just outside the 500m examination zone. Moderate visual impact, possibly substantial in winter.
- The line ploughs through valleys and raised ground, from cut to viaduct and back, completely dissecting the landscape and interrupting the landscape pattern.
- There will be considerable localised impacts wherever there are substantial sections of cut or fill. In Cherwell the maximum extent of these is 10m. Allowing for 1:5 slopes this could mean cutting or filling for up to 50m either side of the rail corridor. At this stage none of this has been identified and considered. Much less any mitigation of the scars.
- There will be very significant earth moving required in the construction process. Roads in the vicinity of the line are narrow country lanes

unsuited to heavy traffic. Construction impacts will be considerable due to noise, dust, traffic and visual scaring.

- The visual impact of the line will be much greater than shown on the sections as these just illustrate the impact for track levels, and do not include the overhead power lines which add further to the height of the structure above ground. There is also the possibility of noise baffles to reduce the sound impacts creating a further landscape impact which will then require mitigation in themselves.
- A further significant consideration in landscape impact terms is the loss of tree cover. The existing cuttings and embankments provide strong linear features containing established trees. Where the existing alignment is being re-used, or the line runs close to and parallel to the former line, it is considered that most of these landscape features will be lost. This will cause significant harm. In addition between Newton Purcell and Mixbury the line would run adjacent to and through two plantations. These would be severely affected as landscape features. North east of Mixbury the line has to cross a sharp sided valley on a viaduct between two deep cuttings. This is likely to be a significant feature when viewed from the footpath which runs north from Beaumont Lodge.

Mitigation of landscape and visual effects is most effective if it is designed into a project at inception stage as this gives opportunities to avoid, reduce, offset and if possible remedy the effects of the development. Adding on cosmetic measures such as screen planting are likely to be less successful.

The landscape is very sensitive to this development because of its nature and scale, the distribution of visual receptors and the extremely limited scope for mitigation. Accommodating a development like this without a detrimental effect to the landscape character of the area is considered to be impossible.

This is a major project in terms of size and scale. It will create a significant artificial linear structure in landscape and visual terms and a resulting substantial adverse impact with few if any benefits. Protection and enhancement of the landscape is one of the objectives of the Transport Analysis Guidance. The Council cannot see how this project achieves these aims.

Specifically, in relation to the design of bridges and acoustic barriers, CDC does not support 'standard' concrete bridges and barriers regardless of pigmentation/colour. The visual impact needs to preserve what is special. We expect to see locally distinctive materials and appropriate design – e.g. use of natural and locally sourced stone facings.

CDC is concerned to ensure that a number of lessons from HS1 are given more detailed consideration ahead of HS2 being submitted for adoption through the Hybrid Bill including:

- The implications of removal of vegetation for both route and on sites nearby for construction or access purposes.
- The impact on properties affected by loss of visual amenity close to route and all those with views across the railway.
- The need for high quality mitigation to ensure visual amenity impacts during the construction of HS2.
- The need to aim to ensure that permanent effects are mitigated in some areas once HS2 construction is completed and vegetation becomes established.
- The landscape and visual impact from foot bridges, road bridges and other structures. The HS1 designs were very intrusive visually.

There is a need to consider how the soil type, gradient of cutting and climate change will affect the most appropriate species to plant to secure a rapid reclamation of areas affected by earth movement during construction. The quality of the restoration achieved in Kent after 10 years + of new growth and planting has been impressive as the photograph below shows: -



But a major concern for CDC stems from the evidence of the HS1 line in Kent over the height of line and gantries, locations for screening, tunnels and banking. An example from Kent is below shows how visible the route can be:





Cherwell District Council notes the effort made within the context of HS1 to seek to minimise the visibility of the route through lowering of the floor of the cuttings to reduce the visibility of the actual line. We are also clear that this step did not always succeed and the tops of the overhead cables is frequently visible the length of the route through Kent.



CDC are also keen to avoid the experience of HS1 where poor quality of bridges providing local service access as well as for footpaths and bridleways were provided, with a negative visual impact. An example is shown below:



Engineers at a consultation event on June 3<sup>rd</sup> 2013 confirmed that it would be possible to add pigment to colour concrete infrastructure. Whilst we are keen to investigate this further as a visual impact mitigation measure, we emphasize the need for the use of local materials and design styles to sympathetically incorporate harsh modern infrastructure into soft historic landscapes.

Careful blending of tones and use of locally sourced facings could significantly reduce the blight caused by standard white concrete architecture which, as the local planning authority, we will not accept under any circumstances.

### **3.4.1 Power and train servicing points**

It is known that the HS2 will be electrified and will need connection to the National Grid with suitably located transformer compounds. No information is available about the location of these sites which will also need road access for maintenance. To the east and north of Mixbury an existing high voltage pylon-line crosses the proposed railway and then runs along the former Great Central railway line. At least one pylon would need to be relocated to facilitate the building of the railway. This is at the point where the Mixbury Lodge to Fulwell road crosses the line, and therefore is road served. From seeing such power take-off compounds in Kent when viewing HS1 it is considered that this feature would also be harmful to the visual amenity of this part of the countryside which is classified as being of high landscape value.

It is clear from the experience the communities in Kent that were affected by the HS1 project that there was a substantial effort in places to mitigate and compensate for the worst effects of the line. CDC would expect no less than



they received and for lessons from HS1 and the 18 Kent Principles to be applied to the design and development of HS2.

CDC notes that there were unexpected late additions to the 'architecture' of the scheme, with power download facilities and train servicing centres that were not revealed in the consultation phase. From the HS1 experience in Kent CDC is also concerned to ensure that the land take required for all elements of the scheme is provided to the public in advance.

To avoid this situation with the HS2 project CDC want to know up-front the locations of power supply facilities and rolling stock support points which would be visible intrusions across the District. These issues should be covered in the 'permissive provisions' and deemed consents parts of the Hybrid Bill.

It is of profound regret that HS2 has not sought to provide any detailed information on the locations for:

- Electricity Substations
- Service & Maintenance roads and access points

The proposed location of electricity substations is a key issue. CDC would be concerned about new overhead pylons being erected to provide electricity connections.

The visual intrusion of such substations in Kent illustrates how intrusive this industrial architecture can be and requires substantial screening:



### 3.5 Sound, noise & vibration

The basis for the operational train noise assessment criteria needs to be explained as detailed in the comments to Section 5 of Volume 1 (see above).

The potential for significant noise effects is dependant on the baseline data and the change in sound level brought about by the Proposed Scheme (paragraph 11.6.5). However, with the limited information provided with regard to baseline data it is not possible to determine the likely impacts at receptors in terms of the criteria specified in 14.3.26 of the SMR.

Further information needs to be provided in the final ES to explain how the criteria in 14.3.31 of the SMR, used in assessing whether an effect is potentially significant at a residential receptor, will be applied.

The significance of an impact at all receptors should be assessed regardless of their number and grouping. The decision on whether or not to consider mitigation for isolated or small groups of receptors then needs to be explained and reported in the final ES in terms of cost benefit analysis and sustainability, and not just discounted on the basis that there are five or less.

It is noted that further assessment work is being undertaken to confirm operational sound and vibration significant effects that will include further baseline monitoring and the consideration of additional mitigation. This should all be detailed in the final ES and having regard to the comments above.

CDC want to ensure that the final line if approved has as little noise impact as possible.

The AOS identifies only 3 or 4 properties at Newton Purcell as potentially experiencing high noise levels, with further housing nearby potentially eligible for noise insulation (implying relatively high noise levels). The same plans show four properties in Godington, all the remaining properties in Newton Purcell and five outlying properties (Cross Farm, Widmore Farm, The Oaks Farm, Warren Farm (4 properties), Tibbetts Farm, and Beaumont Lodge) as potentially experiencing a noticeable noise increase. It is not explained why the The Oaks Farm, which is located immediately adjacent to the line is not categorised as experiencing high noise levels. Two areas, close to the railway at Newton Purcell, and around Warren Farm are also annotated as "preliminary candidate areas for mitigation".

There are two other areas for concern.

- Firstly to the north east of Mixbury the line crosses a short viaduct between two cuttings. It is thought likely that high speed trains crossing this at full speed will send a pulse of noise up and down the valley to each side, with properties at Mixbury and Fulwell likely to experience this sudden repetitive noise event. This could have a significant detrimental affect.

- To a lesser extent Fulwell may also experience noise from the much longer viaduct across the Great Ouse River. The AOS recognises the potential for noticeable noise in Westbury, but not in Fulwell.

In their Appraisal of Sustainability document at Appendix 5.4 the HS2 organisation sets out the criteria it proposes to assess the impact of noise and vibration generated by the planned high speed rail project.

In the opening paragraphs of the report the case is made for the use of the LAeq unit of noise measurement to assess and quantify the noise levels produced by trains. A time period of 18 hrs has been chosen as the appropriate averaging period over which the LAeq is to be applied. The 18 hr time period is defined as 'daytime' between 06:00 and 00:00 (midnight). It is suggested that the LAeq measure 'correlates best with the annoyance caused to humans by noise'

Whilst it is accepted that LAeq is a commonly used noise measurement the claim that it correlates as an index of annoyance is to be questioned particularly in the case of rail noise where individual noise events typically involve large amounts of sound over short periods of time followed by periods of time when the 'nuisance' is entirely absent. In these circumstances the use of a maximum event noise level such as LAmay may more accurately reflect the noise impact. Equally the LAeq measurement does not accurately reflect the additional impact caused when for example a train emerges from a cutting or tunnel and a nearby sensitive receptor is suddenly exposed to a significant volume of noise. This effect is in part addressed later in the report when the issue of tunnel boom is considered. It is felt that due to the depth of some of the cuttings to be employed this effect or elevated levels of noise could be a problem in these locations.

In addressing ground borne vibration mention is made of the variation in effect that can arise as a result of the underlying geology. Whilst the report is by nature general in its terms it is felt that this point is significant and should have been addressed in more detail with reference being made to specific rather than general local conditions.

Another significant omission is an appraisal of noise impacts on non residential receptors as the affect of noise on the ability for individuals to work productively and effectively should not be under estimated.

In predicting noise levels that are likely to be generated by the HS2 rolling stock reference is made to quantitative noise measurements obtained from a survey of operation of TGV rolling stock. These trains typically operate at speeds up to 300 km/hr yet the aspiration for HS2 is for trains to operate at 360 km/hr or faster. The report does concede that data for aerodynamic noise from trains travelling at 360 km/hr or faster is not currently available and as a consequence modifications to the Calculation of Rail Noise Methodology cannot be made at this time. This shortcoming does call in to question any use of an unmodified model for predicting noise levels.

Noise from the operation of the high speed railway originates from a number of sources:

- Mechanical noise from motors, fans and ancillary equipment
- Rolling noise from wheels
- Aerodynamic noise from airflow
- Catenary noise from the power pick up from the overhead lines.

It is considered that lowering the height of the line may assist further around Mixbury/Finmere, with perhaps the use of a “green” (cut-and-cover) tunnel to avoid the deep cuttings. This would have the added advantage of lowering the viaduct over the Great Ouse River. Particular concern is also expressed about the noise impacts at Newton Purcell. As the line is elevated relative to the nearest properties, noise barriers would be the only technical solution, but it is not possible to assess their effectiveness on the basis of the information currently provided.

The operating hours of 5am to midnight give the Council cause for concern. Both early hours operation and evening/night operation will be at times when the background noise level is low and the consequent impact of the noise generated by the trains will be higher and more harmful to the quiet enjoyment of nearby houses. It is therefore suggested that the operating hours should be shortened.

Noise nuisance is also a function of the frequency of the noise events – the number of trains per hour and per day. The 18 trains per hour in each direction which is proposed at peak hours i.e. 36 trains (less than 2 minutes between each noise event potentially) is considered excessive and unreasonable to endure for the occupiers of nearby properties.

#### Specific Noise issues

<b>Chapter</b>	<b>Section</b>	<b>Heading</b>	<b>Comment</b>
1		Introduction	No comment
2		Newton Purcell to Brackley	
	2.1	Overview of the Area	No comment.
	2.2	Description of proposed scheme	No comment.
	2.3	Construction of the proposed scheme	No comments
	2.4	Operation of the proposed scheme.	Some information needs to be given with respect to likely frequency/duration of inspection and maintenance works and likely noise impacts.
	2.6	Route section	See comment on 2.2 above.

		main alternatives.	
4		Air quality	<p>No comments. But noted that estimates of background data have been obtained from Defra for 2011 and future years (2017 and 2026), and reference has also been made to CDC's air quality data. Main impact will be from construction activities, which are covered by the CoCP.</p> <p>The assessment and screening criteria used to assess the impact of the scheme on air quality are not clear. What criteria have been used to see whether further assessment criteria is required and what guidance has this been taken from? This is not stated in this report and should be clarified with additional details on how the conclusions were reached.</p>
8		Land Quality	<p>Section No comments 8.5.3 makes reference to contaminated land but should be extended to include "land affected by contamination".</p> <p>Section 8.5.3 makes reference to measures outlined in the draft CoCP to be implemented to manage the effects of land affected by contamination. One of the general provisions reported in section 11.1.2 of the draft CoCP is the potential to affect aquifers but there is no mention of other sensitive receptors and these should be included. It is noted that these are referred to later in the draft CoCP.</p> <p>It is also not clear where there are any areas of public open space or public access within the scope of the construction area which will need to be included as human receptors in pollutant linkages. This should be noted and included in the</p>

			<p>risk assessment as necessary to ensure the appropriate screening criteria are utilised, particularly if fill materials will be left exposed.</p> <p>The testing of soils for redistribution detailed in the CoCP is welcomed but it is not clear how and when this will be undertaken e.g. at the end of the construction phase to demonstrate the soils are suitable for use? Or earlier as part of the land quality risk assessment process. This should be clarified and how this is proposed to be presented to demonstrate the land is suitable for use.</p>
11		Sound, noise & vibration.	
	11.4	Environmental Baseline	Needs to be defined with measurement data having regard to comments on the SMR as detailed in the comments to Chapter 5 of Volume 1 (see above).
	11.5	Construction	Noted that further work is being undertaken to confirm significant construction noise and vibration effects, including any temporary effects from construction traffic, and mitigation measures that may be needed.
	11.6	Operation	<p>The basis for the operational train noise assessment criteria needs to be explained as detailed in the comments to Section 5 of Volume 1 (see above).</p> <p>The potential for significant noise effects is dependant on the baseline data and the change in sound level brought about by the Proposed Scheme (paragraph 11.6.5). However, with the limited information provided with regard to</p>

			<p>baseline data it is not possible to determine the likely impacts at receptors in terms of the criteria specified in 14.3.26 of the SMR.</p> <p>An explanation/information needs to be provided as to how the criteria used in assessing whether an effect is potentially significant in accordance with the criteria specified in 14.3.31 of the SMR will be applied.</p> <p>No significant effects have been identified for Public Rights of Way (paragraph 11.6.8)</p> <p>The significance of an impact at all properties should be assessed and reported in the final ES regardless of the number and grouping of receptors affected. The decision on whether or not to consider mitigation for isolated or small groups of receptors then needs to be explained and reported in the final ES, in terms of cost benefit analysis and sustainability, and not just discounted.</p> <p>Noted that further assessment work is being undertaken to confirm operational sound and vibration significant effects that will include further baseline monitoring and the consideration of addition mitigation. This should all be detailed in the final ES and having regard to the comments above.</p>
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### 3.6 Water resources and flood risk assessment

Detailed design, but no real information. There is no justification of tunnel impacts on groundwater or de-watering on archaeology.

CDC is concerned that the business case and earlier consultation documentation gave minimal regard to the challenge of potential flood risk and this still remains insufficiently dealt with.

CDC believes that a number of issues must be considered in more detail including:

- A full flood risk assessment of the river crossings required and the diversions that may be appropriate.
- The impacts on aquifers and in the Cherwell District case vulnerable flood risk areas.
- Impacts on rivers, streams and ponds and in particular an assessment of historic and environmentally.
- Compliance with the Water Framework Directive and the need to maintain high water quality.
- The potential for use/need for demountable flood defences and their cost impacts.

CDC has particular concerns about the need for the Water Framework Directive to be respected.

Cherwell District is a high water quality area by virtue of being located at the top of the river catchment area. We note that under Article 4.7 of the Water Framework Directive there should be no diminution of that high water standard whereby development cannot reduce the quality of an areas water from 'high' to 'good' without meeting the provisions of the article, which is in the 2003 UK Act that transposed the EU Directive into UK law.

CDC has seen no evidence of how this challenge has been addressed.

Whilst the ES maps the flood plains (Padbury Brook north of Godington, the River Great Ouse north of Mixbury/Fulwell, and its small tributary running from Fulwell towards Mixbury) and comments briefly on the aquifer situation the documentation is short on detail information and impact assessment. This will need to follow in the Environmental Statement if the application is to proceed. However, with particular regard to the protection of water quality this makes assessment at this time difficult. This part of Cherwell, together with the adjacent areas of Aylesbury Vale and South Northamptonshire is a high water quality area by virtue of its position at the top of the river catchment area.

Article 4.7 of the Water Framework Directive states that there can be no diminution of that high water standard from high to good as a result of development without meeting the provisions of that Article.

CDC has seen no evidence of how this challenge has been addressed.

### **3.7 Community**

The impact of the new railway upon residential amenity is greater than the imposition of noise nuisance at whatever level it is experienced. It is also the



affect upon the tranquility of a rural location, or the interruption of a rural landscape by modern transportation infrastructure. This impact affects communities/properties such as:

- Godington – A remote village accessed off of a dead end lane. The village which contains 15-20 properties, is tranquil and unaffected by road noise. It will in the future, if this proposal goes ahead, have significant train noise albeit that the trains will not be visible.
- Newton Purcell – A small village astride the A4421 the noise/disturbance and division by a road carrying relatively high volumes of HGV and other traffic transiting from the A34/M40 to Milton Keynes and the M1. The imposition of frequent train noise is an unreasonable extra burden.
- Warren Farm/The Oaks Farm – A secluded group of former farm buildings and working farm north of the A421. The proposed line charges between them in low cutting. The noise, visibility of the overhead lines/tops of trains and the accommodation works to ensure that the private access road is maintained will have a significant affect upon the whole group, especially The Oaks Farm which will be very close to the line.
- Mixbury – A Conservation Area, which is predominately an old estate village. Despite the relatively close proximity of the A43 and A421 roads the village is relatively tranquil. The train noise which will be apparent will detract from this heritage asset and the residential amenity of villages.
- Fulwell – A remote hamlet in a secluded and tranquil location. Concern is expressed that sudden noise events will result from the proposed track configuration near Mixbury, and longer noise occurrences from the River Great Ouse viaducts which are both up-wind of the hamlet.

Community Integrity – This is an issue where a community is sub-divided by transport infrastructure. It is considered that this is a significant concern in two locations. Firstly, at Newton Purcell -the few properties to the north of the proposed railway line will be segregated from the remainder of the village if the existing route under the Great Central Railway is to be blocked and a long and circuitous journey by foot or vehicle is necessary to get from these properties to the Church, public house, or other houses. This is unfortunate and at the very least consideration should be given to providing a footpath connection under the line.

The second location of concern is at Warren Farm/The Oaks Farm north of the A421. These isolated properties form a small integrated grouping. The railway will split them apart, and unless the accommodation works for the access is well done they will feel dislocated from one another, and the Warren Farm set of properties will be further removed from the main road

### 3.8 Impacts on Local Conservation and Heritage

The Draft ES offers very limited information on this issue.

Historic significance must inform the strategic choices about route alignment. We need a clear recognition of historically sensitive areas. We expect to see a deeper process of character assessment to identify significance and to ensure mitigation is appropriate and sufficient, but where this cannot be secured that compensation is of a scale proportionate to the loss.

The Draft ES overview itself contains very little information regarding the potential impacts on any heritage assets and is actually more of a scoping report setting out what the final EIA will contain. However the Community Forum Area reports do contain an assessment of the potential impact of this scheme.

In general this is acceptable however there are two omissions that will need to be highlighted in the final document.

Section 6.4.7 Non-designated assets: The area from Mixbury to the Brackley has seen little formal archaeological investigation and therefore there is the potential for previously unknown archaeological features and deposits to be present which would be disturbed by this development.

The Area report should therefore highlight the potential for previously unknown buried archaeological remains along the proposed route.

Understanding and defining a heritage asset involves more than simply recording the appearance of that asset and drawing a line around it on a map.

The *character* of a historic place is the sum of all its attributes. These include: its relationship with people, now and through time; its visual aspects; and the features, materials, and spaces associated with its history, including its original configuration and subsequent losses and changes.

The *context* of a historic place embraces any relationship between it and other places, which are relevant to its heritage values. These relationships can be cultural, intellectual, spatial or functional and apply irrespective of distance, extending well beyond what might be considered a place's setting. As well as a place's relationship with its immediate physical surroundings, context can include the relationship of one historic asset to other assets of the same period, or serving the same function, or designed by the same architect, no matter where they are situated.

Placing a slightly different construction on the term 'context', it can also be seen that all new developments have a context that includes the character of the historic place within which it is located and the settings of adjacent heritage assets. It also includes taking account of other attributes including the relationship of the asset with their surroundings and their setting.

The desirability of protecting the settings of important heritage assets is well established in UK statute and in national policy guidance. Sections 16(2) and 66(1) of the *Planning (Listed Buildings and Conservation Areas) Act 1990* refer to setting with Section 66(1) stating that:

*“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses”*

The importance attached to setting is also recognised by the Government’s Planning Policy Statements with the general requirement to enhance and protect the historic environment, landscape, and townscape character, being set out in *Planning Policy Statement 1: Delivering Sustainable Development* (ODPM 2005).

National planning policy on development affecting the setting of heritage assets follows this and is set out in detail in *Planning Policy Statement 5: Planning for the Historic Environment* (PPS5). Policy HE9 of that document confirms that the significance of a designated heritage asset can be harmed or lost through development within its setting and sets out the basis on which local planning authorities should weigh the public benefit of a proposal against the harm to an asset’s significance, including through development within its setting.

The importance of protecting the setting of heritage assets is also recognised internationally. For example, in the Xi’an Declaration (ICOMOS 2005), which recognises the importance of protecting the settings of heritage structures, sites or areas, and in the Washington Charter (ICOMOS, 1987), which underlines how important it is that new development reflects the historic character and functions of urban areas, the relationship between buildings and green spaces, and the relationship of the town to its surrounding setting.

More locally Article 3 of the European Union Environmental Impact Assessment Directive (85/337/EEC as amended by 97/11/EC and 2003/35/EC) requires the appropriate identification, description and assessment of the direct and indirect effects of projects on - *inter alia* - landscape, material assets and cultural heritage.

Article 4 of the Directive stipulates that where consideration of cases is being undertaken to determine whether Annex II projects should be subject to an environmental assessment, selection criteria (Annex III) should have due regard to the environmental sensitivity of ‘landscapes of historical, cultural or archaeological significance’.

Appendix E to the Directive includes the following subjects to be considered in scoping and preparing an Environmental Statement:

- Effects of the development on the architectural and historic heritage, archaeological features, and other human artefacts, e.g. through pollutants, visual intrusion, vibration.
- Visual effects of the development on the surrounding area, visitor and resident populations and landscape.

The information that has been considered so far as part of the HS2 consultation and business case is limited in this regard by being concerned with pollutant impacts and does not appear to fully grasp the significance of the heritage assets and the issues surrounding their conservation.

The character and setting of historic places are clearly of importance with setting being defined in Annex 2 of *Planning Policy Statement 5: Planning for the Historic Environment* (PPS5) as:

*“...the surroundings in which an asset is experienced. All heritage assets have a setting, irrespective of the form in which they survive and whether they are designated or not. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral.”*

Setting is generally more extensive than curtilage, and its perceived extent may change as an asset and its surroundings evolve or as understanding of the asset improves. Setting embraces all of the surroundings (land, sea, structures, features and skyline) from which the asset can be experienced or that can be experienced from the asset. Setting does not have a fixed boundary: construction of a distant but high building, a development generating noise, odour, vibration or dust over a wide area, or a new understanding of a relationship between neighbouring places may extend what might previously have been understood to comprise its setting.

The setting of a heritage asset is also likely to include a variety of views of, across, or including that asset. In this regard HS2 raises particular challenges for a District with many Conservation Areas and Listed buildings where setting is as significant as the form of the building or buildings themselves.

Setting relates not only to buildings but also to areas and whole settlements. With paragraph 1.5 of *Planning Policy Guidance 2: Green belts* (DETR 2001) making it clear that historic settlements are regarded as having a setting.

This can be clearly seen in relation to the settlements of Cherwell District where individual assets of various types and designation interrelate to create interesting locations and places of significance. It is in such locations that additional values arise from seeing the assets as a group where the significance of the whole is greater than the sum of its parts. These are often the cumulative result of a long history of development and the gradual accrual of aesthetic and communal values.

The route of the proposed HS2 will undoubtedly have an impact on the setting of a number of heritage assets both within and beyond the district of Cherwell

District. This impact is unlikely to be positive and a greater understanding of the impact of the route on the district heritage asset is needed before the proposals progress.

### **3.8.1 Conservation and heritage impacts on Cherwell District**

The consultation underplays the significance of local designations of Conservation Areas. There are a number of local heritage sites that stand to be affected by the implementation of the route of HS2 in Cherwell District.

The historic aspects of the environment are a key part of the quality of places. But conservation and heritage is not just about nationally registered heritage sites. Conservation Areas are a substantial part of the character of Cherwell District and give it the form that we see today. Respecting the place of Conservation Areas will require a substantial package of mitigation.

There has been no obvious effort made by HS2 to maintain the local character of the conservation areas affected in the District.

CDC is concerned at the potential for major blight effects from the line and associated infrastructure on historic buildings and their wider context. One lesson from HS1 was the importance of understanding proximity, alignment and visual impact. The cumulative impact of development and the impact of development is a major concern for CDC and especially in those areas where there is an apparent hotspot of sensitivity.

Heritage issues concern listed buildings (detail on characterisations and their relative importance), historic fields and archaeology. We are concerned at the impact on setting that can make a listed building 'unviable' and so may require moving. Archaeology needs to be integrated into the development and construction programme which is not now an optional extra following the publication of the new Government Planning guidance set out in the revised PPS5, as discussed earlier. These considerations must begin early in the scheme when service diversions are planned to commence.

CDC is seriously concerned about the cumulative impact of the proposed HS2 scheme on a number of sensitive conservation and heritage landscapes, villages and buildings.

The Cherwell District Conservation Strategy is a fundamental first step to 'preserving what is special about the district' and ensuring that its exceptional heritage is recognised, valued, enhanced, explained and made accessible to as many people as possible. It sets out the Council's responsibilities and aspirations for the historic environment within the district, the resources that are available to it and a programme for how it intends to undertake this task over the next five years.

The key objective for the strategy is to protect what is special in Cherwell District's historic built environment by preventing loss, managing change effectively, promoting understanding and contributing to sustainable

development. The strategy also reflects a range of national, regional and local policies affecting our heritage and is a framework for Cherwell District Council for how it will manage the historic environment of the district whilst allowing the growth and for the vitality of our towns and villages to be strengthened.

Historic character must inform the strategic choices about route alignment. We need a clear recognition of historically sensitive areas. We expect to see a deeper process of character assessment to identify significance and to ensure mitigation is appropriate and sufficient, but where this cannot be secured that compensation is of a scale proportionate to the loss.

As a generality the ES significantly underplays the significance of local designation such as conservation areas. Grade II buildings are recorded, but in our opinion an assessment of their significance should be made and so should an assessment of the impact of the proposal upon them.

The issues of concern are:

- Mixbury Conservation Area should have been recognised as a heritage asset.
- Mixbury also has a Grade II\* listed building and the Beaumont Castle Scheduled Monument. It is assumed that English Heritage have been asked for their comments upon the setting of the Scheduled Ancient Monument.
- There are two Grade II listed building in Godington, 8 in Newton Purcell and 4 in Mixbury which should be taken into account.

### **3.5 Impacts on the Local Economy**

The line of the proposed HS2 route stands to impact on the rural economy of the north east of Cherwell District.

The rural economy of Cherwell District is substantial and includes village shops, rural businesses and business units, farming, equestrian and market garden businesses.

CDC is working to maintain rural communities that are sustainable, vibrant and thriving. We aim to strengthen our village economies to help make them more sustainable. Through the implementation of our Economic Development Strategy we are promoting tourism into our villages through our Tourism Guide and the promotion of walking, cycling and equestrian activities to draw people to the villages increasing the footfall for village based enterprises and to maintain the current high levels of rural employment.

CDC have sought through our planning and conservation policies to retain village confines and preserve landscape setting as well as maintaining and extending the coverage of existing conservation area designations, protection of listed buildings, historic houses, parks and gardens, scheduled ancient monuments and landscape designations as they all have the potential to form a part of a new green tourism approach for the District. All this stands to be put at risk by the proposed HS2 route.

The 'preferred route option' for HS2 raises substantial policy implications for development in the open countryside.

The rural economy is about more than just those employed in farming and includes home based businesses, secondary employment and associated rural industries in our market towns.

The direct impact from HS2 on land based businesses; both farming and equestrian are expected to include:

- Separated fields.
- Separated fixed machinery.
- Loss of farm land for production and secondary food processing.
- The potential for the loss of access routes along bridle paths and lanes.
- In the case of equestrian businesses the impact of visual and noise intrusions affecting sensitive and valuable horses.
- A substantial impact from blight and the need for early compensation and avoiding lengthy payments.

No assessments have been included of the socio-economic impact. Some businesses will be lost. It is not acceptable that is addressed by off-setting jobs and is therefore not significant (i.e. replace 1 technical consultancy jobs with 1 groundworker). The jobs that are created, how local they will be, i.e. will the contractors just be bringing in lots of workers along the line as it is built?

The line of the proposed HS2 route stands to impact substantially on the rural economy of the west of Cherwell District.

The rural economy of Cherwell District is substantial and includes village shops, rural businesses and business units, farming, equestrian and market garden businesses.

It is unacceptable to state that the significant socio-economic affects are currently being assessed and will only be reported in the final ES.

In short, it is impossible to make a full judgement on the anticipated impact until the final ES is produced, assuming that the later document will go into considerably more detail.

In much the same way as a motorway it is possible that a new railway line may cut off one part of a farmer's land from the rest of his land or his farmstead. It has not been possible to establish whether this type of impact is likely, but it is known that in some locations the farmers make use of the former railway to transit between parts of their holdings. It may be necessary to consider if further accommodation bridges or underpasses are necessary to ensure the continuation of those farm enterprises without detriment to their viability. Such bridges may of course add to the visual harm of the railway by introducing yet more transport infrastructure into open landscape.

There are storage activities being undertaken on the old station site at Newton Purcell and the proposed alignment and the overbridge for the A4421 seems to eliminate this as a business enterprise.

The proximity of the line to the farmhouse at The Oaks Farm seems to call into question its viability as a dwelling. It is believed that this is the only house associated with this farm business. If this enterprise cannot function without a dwelling it may be necessary to fundamentally change the farming enterprise, or to consider the construction of a replacement dwelling further from the line.

The economic benefits of the scheme for the District are likely to be insignificant locally.

It is anticipated that there will be a progressive shift of the economic geography to the area surrounding the location of the proposed stations which over time may undermine the economic advantages the District has in terms of major transport links due to its access to the M1, M40 and the A422.

There are set to be a significant set of local economic impacts from the preferred route option of HS2, from disruption during the lengthy construction phase and the direct impacts of the route on businesses close to the line.

A more precise economic impact analysis of HS2 on local businesses is required.

### **3.9.1 Impact of Development on Open Countryside**

There are long established national policy objectives for the consideration of development in rural areas, as now set out in the National Planning Policy Framework ( for example paras 109, 114, 118).

The the chosen route for HS2 is likely to have a negative impact as the construction and appearance of the railway with its associated facilities and service paraphernalia will detract from the qualities of the landscape which make this district special. This has been set out at Section 3.4 above

### **3.10 Traffic and Transport**

No traffic assessment is included and there is no tangible detail or baseline. .

CDC is encouraged that the impact on the footpath or bridleway network has been minimised, but the impact on the highways network of the proposed scheme looks substantial.

A number of strategic highways and local roads will need to be bridged Sites that are split will require new road access to the road network. Of particular importance will be the crossing over the A4421 near Newton Purcell (and the disruption during construction).



We also wish to ensure that the design of any bridges is to a higher standard than that delivered on the HS1 project, to be of a less visually intrusive design than were provided for HS1. Landscape sensitivity is a major issue for the District. CDC is encouraged that Engineers have confirmed that coloured concrete infrastructure is being considered.

Careful blending of tones and use of locally sourced facings could significantly reduce the blight caused by standard white concrete architecture which, as the local planning authority, we will not accept under any circumstances.

Whilst it is clear that the trunk and major roads network, in particular the A43, A421, and A4421 and access to the M40 will be impacted by the project, the lack of transport assessments or clarity about how spoil is removed and ballast is imported to the construction sites is unclear and in turn unhelpful.

While there is no specific section relating to PRow issues we are pleased to note that in CFA Report 14 – [Newton Purcell to Brackley] the impacts of the scheme are considered in relation to a number of key areas: construction, community, noise, sound and vibration, visual assessment and traffic & transport. There is also a table outlining the length of the proposed diversions [2.3.26 pg.22 – Chapter 13] and statements regarding the use of temporary diversions during construction under 12.5.2 pg. 85 [Chapter 13]. Mitigation and reducing the impact during and post construction is considered alongside more ‘major’ issues e.g. road closures and as a consequence is fully integrated in the scheme plan, rather than an ‘add on’ which can then impact on other aspects of the scheme delivery or ignored altogether.

Progressing from south to north the following highway crossings are affected by the proposals:

- a) Bridlepath north of Godington – currently passes under Great Central line by underbridge – would need to be accommodated under the new viaduct.
- b) A4421 Newton Purcell Road currently passes under Great Central line with redundant bridges still in place. Proposal appears to be to leave underbridge but stop through traffic under new line (?). New overbridge with lengthy approach embankments and diversion of line of A4421 to west proposed.
- c) Bridlepath from Home Farm Shelswell to Finmere crosses line of old railway. No accommodation works shown. Bridge would be required.
- d) Bridlepath from Widmore Farm to Finmere crosses line of old railway. No accommodation works shown. Bridge would be required.
- e) A421 near Warren Farm. Relatively recent diversion of road south of old bridge point on embankment. Old bridge works remain. New bridge proposed still further south. Unclear what happens to old bridge works.

f) Footpath from Tibbetts Farm to Warren Farm alongside (north) of former railway line. Will need accommodation works associated with (g) below.

g) Roadway from Mixbury Lodge to Fulwell. Current overbridge over dismantled railway will need to be replaced.

h) Bridlepaths north from Beaumont Lodge and north east from Mixbury Lodge meet and continue to Westbury. The meeting point will be at a deep cutting point on new line. Will need overbridge.

It is considered important to ensure that all existing footpaths and bridlepaths are properly accommodated during construction of, and after the opening of, any new railway line. The Council recalls that during the M40 construction (another government promoted scheme) a large number of footpaths were truncated or had significant diversions made to them. These were never replaced satisfactorily. Objections are raised if assurances are not forthcoming that this will not be repeated as a function of this scheme

Of particular concern are the proposals relating to the routeing of the A4421 across the proposed railway at Newton Purcell. Rather than take the road under the railway as currently the proposal is to divert the road over the line further to the west. No explanation has been given as to why it is not possible to continue with an underbridge. Because of the height of the line relative to surrounding land levels the proposed bridge has to be approached via lengthy and high embankments. These would be harmful to the character and appearance of the landscape. The embankments will also have a significant impact upon the amenity of the two houses on the western side of the A4421 at this point. Indeed it must be questioned whether these will be viable houses after this construction, particularly that one to the south of the railway line, Station House, which will be dominated by the new railway and road infrastructure and suffer high noise levels. The raising of the road will also have the effect of raising the road noise source and may have an effect upon the amenity of the houses in the vicinity. The plans available do not make it plain whether the existing roadway under the railway will remain open.

The amenity of rural footpaths and bridleways will be fundamentally affected by the proposal. The footpath north of Godington has a particularly remote and tranquil feel to it. This will be lost completely. Similarly the two footpaths/bridleways north and east of Mixbury, which form part of a well used dog-walking loop, will have an entirely different character once the railway is constructed. They will no longer be a source of tranquil remote recreation, but will instead be subjected to the frequent passage of trains travelling at maximum speed. Again similar expressions of concern should be expressed about the footpaths which cross or are close to the line between Mixbury and Newton Purcell.

### **3.11 Impacts on Utilities and Services**

A large proportion of the route is at or below current ground level and has the potential to be a major disturbance to the water table and its natural environment.

Large areas of land adjacent to the route will also need significant re-engineering of both the natural and man-made water courses. This re-routing and associated penalty costs will also run into many millions and risk damaging the delicate eco-systems during construction. These natural systems may not return to their pre-interference state for many years, if at all.

The extent of the disruption to utilities (gas, water, electric and fibre-optic) has not been identified. Reinstatement of the existing utilities should not be underestimated and can be expected to exceed tens of £1000's per route mile (£M's for the entire route).

## 5. Response to the Draft Code of Construction

### Impact during construction

CDC is concerned with ensuring that the impact during construction is minimised and that contractors do not introduce changes we have not agreed to.

CDC will play close attention to the breadth of 'permissive provisions' and deemed consents to ensure all impacts are anticipated and planned for. CDC notes the high standards of design and construction impact minimisation achieved during the construction of the London Cross Rail scheme and expect a similar sensitive approach to be taken were the HS2 scheme to be approved.

The Council have proposed that the Cherwell Local Plan (currently at Pre-submission stage) includes provisions for considering the HS2 proposal, as follows

#### ***Policy SLE 5: High Speed Rail 2 - London to Birmingham***

*The design and construction of the High Speed 2 Rail Link must minimise adverse impacts on the environment, the local economy and local communities and maximise any benefits that arise from the proposal.*

*The implementation of HS2 will also be expected to:*

- *Deliver high quality design to protect communities and the environment from noise and visual intrusion*
- *Manage the construction to minimise the impact on communities and the environment*
- *Adopt sustainable procurement and construction methods*
- *Minimise adverse social and economic impacts, by maintaining accessibility and avoiding the severance of communities and agricultural holdings*
- *Ensure that community and other benefits are fully realised.*

If the decision is taken to proceed with HS2 Cherwell District Council will expect any impacts on the District to take account of all the above elements as an absolute minimum requirement.

Our concerns centre on:

- The potential size of noise panels and intrusive concrete screening to baffle noise and not delivering the noise reduction sought.

- The overhead cabling generating additional noise..
- The use of cuttings to reduce noise, which in an area such as Cherwell District with a geological structure that is primarily clay will lead to shallow sided cuttings and a greater noise effect than occurs with steep sided cuttings where the noise is funnelled upwards.
- The impact of vibration from the route. (We are aware that vibration has been an issue for residential properties at Bluebell Hill on the HS1 route in Kent, where the line sits in a deep tunnel in chalk)

The experience of the HS1 route through Kent illustrates that the nature of noise attenuation matters both for how noise is reduced and for how intrusive the scheme is visually.



Other noise issues concern a) Construction noise & vibration and b) Operational noise & vibration.

The impacts include:

- Noise from fixed installations
- Line Maintenance
- Reradiated noise from tunnels

We expect mitigation to consider:

- Route alignments
- Location of planned tunnels and additional ones
- Location, depth and cut of cuttings



- Location of barriers and sound insulation
- Potential for relocation during construction

Cuttings are the cheapest option for developers but maximise environmental impact.

Cut and Cover is a compromise between a cutting and tunnel. The “Cut and Cover” approach is suggested in the Route Engineering report for some communities along the route. The experience of HS1 has shown that cut and cover options can be an effective compromise between cost and community concerns, but raises substantial issues of the level of disruption to be generated during construction.



CDC wish to ensure that the impact during construction is minimised and that contractors do not introduce changes we have not agreed to.

CDC will play close attention to the breadth of ‘permissive provisions’ and deemed consents to ensure all impacts are anticipated and planned for. CDC notes the high standards of design and construction impact minimisation achieved during the construction of the London Cross Rail scheme and expect a similar sensitive approach to be taken were the HS2 scheme to be approved.

If the final parliamentary decision is taken to proceed with HS2, Cherwell District Council will expect any impacts on the District to take account of all the above elements as an absolute minimum requirement.

## **6. Conclusion**

Cherwell District Council is extremely concerned that the Draft Environmental Statement is just one-tenth of the size of the anticipated final ES (approximately 5000 and 50,000 pages respectively). Further, that the majority of the critical baseline data, on which to assess actual impacts is omitted from the Draft. It is therefore extremely difficult to comment on the anticipated end result without this foundation of baseline data.

To add to these facts, there will not be an opportunity to respond to the final document other than through petitioning, an action which is simply not an option for the vast majority of those affected.

If the scheme is confirmed by Parliament, it needs to become an exemplar scheme worthy of the nation, particularly as it is the latest transport infrastructure project in UK history. As it stands it will fundamentally & permanently alter communities to the detriment and needs to be radically redesigned.

As a result no confidence can be placed in the results at this point in time and Cherwell District Council questions the value of the draft ES and consultation.

## **10. Contacts**

Adrian Colwell – Head of Strategic Planning and the Economy  
Bob Duxbury – Development Control Team Leader

Cherwell District Council  
Bodicote House  
Oxon  
OX15 4AA

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