~~March~~ June 2015

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

HOUSE OF COMMONS SELECT COMMITTEE

Petition No. 1809: Residents' Environmental Protection Association (REPA)

Promoter's Response Document

Final Issue

~~Draft Without Prejudice~~

[Version showing track changes]

INTRODUCTION

This ~~draft~~ Promoter's Response Document (PRD) forms the final Promoter's response to Petition No. 1809, from Residents' Environmental Protection Association (REPA). This document follows the draft Promoter's response sent to the Petitioner in March 2015 on a without prejudice basis prior to the Election.

In this PRD, 'the Promoter' means the Secretary of State and HS2 Ltd acting on his behalf.

The purpose of the PRD is to advise you and the Select Committee of the Promoter's position in relation to the petitioning points raised. It is intended that the PRD will alleviate many of the concerns raised in the petition.
~~In order to comply with restrictions on the activity of Government departments during the pre-election period, this response sets out our draft position and is subject to approval by the new Government once it is formed. It does not represent the Promoter's formal response and is provided in draft to enable us to continue to discuss your concerns and explore potential remedies. The Promoter's formal response will be issued once the new Government is formed, following the General Election in May.~~

~~For more information on the restrictions that apply during the pre-election period, please see paragraph 4 of the attached statement made by Tim Mould QC in Select Committee on 16 March 2015~~

~~http://www.parliament.uk/documents/commons-committees/hs2/oral-evidence/160315_Uncorrected.pdf~~

The Table of Contents overleaf lists the page number, petitioning points in the order they appear in the petition, and a summary statement of the issue(s) contained in the petition for quick reference. Other supporting material (e.g. reports, drawings and photographs) referred to in the response points are attached where applicable.

Copies of the Information Papers referred to in the response points can be found at https://www.gov.uk/government/collections/high-speed-rail-london-west-midlands-bill

Department for Transport
High Speed Two (HS2) Limited

BACKGROUND

The Residents' Environmental Protection Association (REPA) is an association of local organisations and individuals who live in and around the South Heath Area, which comprises South Heath itself together with Potter Row, Cudsdens Court, Hyde End and Hyde Heath. It is entirely within the Chilterns' Area of Outstanding Natural Beauty (AONB).

REPA represents over 800 individuals, including the memberships of the twelve local organisations

that are members of the association:

a. South Heath: Ballinger Road Residents' Association; Lappetts Lane Neighbourhood Watch Scheme; Marriots Avenue Group; Sibley's Rise Residents' Group; South Heath Action Group; Wood Lane Residents' Association.
b. Potter Row: Potter Row Neighbourhood Watch Scheme
c. Hyde Heath/Hyde End: Hyde Heath Village Society; Hyde End Residents' Group
d. Others: Barn Management UK (2) Ltd (Cudsdens Court); Grims Dyke (Liberty) Estates Ltd; and The Chesham Society.

PETITION NO. 1809

RESIDENTS' ENVIRONMENTAL PROTECTION ASSOCIATION (REPA)

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ATTACHMENTS

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 13-17.

ISSUE RAISED: Impact on area of natural beauty

PETITION PARAGRAPH:

13. Your Petitioner is particularly concerned by the permanent impacts of the railway. These include: the consequences of ultra-high speed; noise; spoil; loss of ancient woodland and other flora; loss of amenity for residents and visitors; heritage impacts; visual obtrusiveness of HS2 (including introducing balancing ponds; light pollution etc); loss of farmland; impacts on wildlife and habitats; air quality; property blight; harm to the community's health and wellbeing; road safety. Similar concerns apply to the construction phase, involving over 7 years of work.

14. Your Petitioner is also troubled that the CROW Act, which places a duty on public authorities to preserve and enhance the natural beauty of the AONB, is not applicable to the Promoter because the hybrid bill planning consent route is being used. Your Petitioner supports the view of the Environmental Audit Committee of your honourable House, who are concerned that important environmental protections are avoided by using the hybrid bill process (for instance, no Strategic Environmental Assessment has been carried out). Your Petitioner believes that the disapplication of the CROW Act that otherwise protects the AONB is another example of such avoidance that requires correction by your honourable House, and that this has clear implications for how HS2 should be mitigated.

15. Accordingly, your Petitioner objects to all the impacts of the surface works and operation of the railway within the Chilterns' AONB, and in particular to those works in the parishes of Little Missenden, Great Missenden, Chartridge and the Lee (Scheduled Works 2/1, and 2/13 to 2/21); to the associated land acquisition and its designated uses; to the highways and electrification changes and to the other associated works and acquisitions, as empowered by Clauses 1 to 4 and Schedules 1, 3, 4 and 5 of the Bill and elsewhere.

16. Most if not all of your Petitioner's concerns and objections to the Bill would be removed by the extension of the fully bored Chiltern Tunnel.

17. Your Petitioner respectfully requests your honourable House amend the Bill and/or require the Promoter to give undertakings to ensure that:

a. HS2 run in a fully bored tunnel for the full extent of the AONB, either in accordance with the "Green Route" proposed by Chiltern District Council ("CDC"), or as proposed by CRAG (this latter route has already been considered by the Promoter jin the ES and recognised as being both technically feasible and environmentally superior to the proposals presently in the Bill and advanced by HS2 Ltd).

Your Petitioner believes that Parliament should require the Promoter to afford the Chilterns AONB all the benefits that the CROW Act would otherwise require, and that this requires providing a bored tunnel throughout its length. Currently HS2 traverses the AONB through its widest part with under half (9.4km) in a bored tunnel. Either of these proposals would replace the 11.4km of surface works (in cuttings (6.2km), two viaducts (1km), embankments (1.8km) and two green tunnels (2.4km)), and preserve the whole of the AONB from the vast majority of the adverse environmental impacts. CDC and CRAG contend the extra cost is more than justified by the environmental benefits.

Or, if Parliament does not agree to a fully-bored tunnel solution for the whole of the AONB,

b. HS2 run in the 4 km South Heath Chilterns Tunnel Extension (SHCTE) proposed by REPA between Mantles Wood and Leather Lane (as referred to in the ES, but extended to Leather Lane).

This proposal would replace the 1,2km South Heath green tunnel and two cuttings. It has been the subject of detailed work by your Petitioner and others for some time, sufficient that the Promoter addresses it in the ES, where it is recognised by HS2 Ltd as being technically feasible and environmentally preferable. It would preserve a further 4km of the AONB for current and future generations, preventing permanent severe detriment to the residents of the SHA. HS2 Ltd acknowledges that the SHTCE would provide reduced landscape and visual impacts for the SHA and the AONB, benefits for ecology and biodiversity, reduced operational noise impacts, reduced construction impacts and agricultural land take, and that it will bring community benefits. In particular, the SHCTE would:

- Avoid the loss from, and fragmentation of, three ancient woodlands, which otherwise will together lose 9.3 hectares (over 25% of the ancient woodland destroyed by phase 1) and prevent adverse effects on a fourth ancient woodland.
- Prevent the loss (2.1 km) or fragmentation of the 14 "important" hedgerows, of which seven are "historically important", and preserve 14km of other hedgerows.
- Avoid severance effects for wildlife, as well as the impacts of loss of habitat.
- Prevent the loss of four footpath crossings that would otherwise be lost and avoid the diversion of seven footpaths to run along the top of the cutting (with noise implications);

- Avoid the demolition of 8 homes and 23 outbuildings (and moving two pylons);
- Prevent cultural heritage impacts, including significantly adversely affects upon the settings of seven Grade 2 listed buildings, and impacts on other 'non-designated' properties;
- Prevent losses from the six archeologically valuable sites in the area;
- Benefit the local community (protecting over 500 homes within 1 km of the works), by avoiding permanent noise impacts; extensive construction disruption for over 7 years (including dust and noise, safety risks, road congestion with all local roads being construction routes); and the loss of its gym and restaurant.
- Prevent damage to a nationally important landscape over the 4km length of the SHCTE;
- Remove the need for a 40ha so-called "Sustainable Placement Area" at Hunts Green (in reality, a landfill), as excess spoil would no longer be produced; and
- Avoid the loss of 98ha of farmland;
- Avoids undermining the viability of local businesses.

This 4km SHCTE tunnel extension is environmentally superior and your Petitioner has provided justification to HS2 Ltd to demonstrate that it costs no more than the current scheme proposed by the Bill and by HS2 Ltd, and that this is before account is taken of its extensive environmental benefits or the costs, in both time and money, of the additional mitigation that would otherwise be required if the Promoter's scheme remains as presently proposed. In addition, your Petitioner believes that the SHTCE will not delay the project timescales.

c. If the Bill is not altered to provide at least this minimum SHCTE bored tunnel extension to Leather Lane, numerous mitigations will be required to ameliorate the worst effects of the Promoter's present scheme, which would be costly of both time and money. The costs of these mitigations to the proposed surface construction route mean that the minimum 4km extension your Petitioner proposes will achieve both a substantial saving and far superior environmental mitigation.

PROMOTER'S RESPONSE:

Impacts of the Proposed Scheme in the Chiltern Area of Outstanding Natural Beauty (AONB)

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1. The effects of the Scheme on the Chilterns Area of Outstanding Natural Beauty (AONB) have been the subject of extensive consideration both in the identification of the route and through the assessment in the Environmental Statement (ES).

2. The current Proposed Scheme, as specified in the Bill and described in the ES, now includes the extended twin-bored tunnel, 13.5km long including portals, of which just under 9.6~~approximately 9.55~~km lies within the AONB. Going north through the remaining 11.2~~5~~km section of the AONB, the

route includes several lengths of cutting and the two green tunnels at South Heath and at Wendover, now approximately 1.2km and 1.3km long respectively. Two viaduct structures with short sections of embankment leading up to them are included: one crossing a dry valley at Wendover Dean and one crossing the A413 and the Marylebone to Aylesbury railway line.

3. Of the 20.8km of route in the Chilterns AONB, approximately 46~~%~~ percent of the length is proposed to be in bored tunnel; approximately 12~~%~~ percent in green tunnel and approximately 26~~%~~ percent in cutting. Thus, in total, some 84~~%~~ percent of the route in the AONB is now below ground level or in tunnel. The only sections on embankment or on viaduct lie between the Wendover Dean viaduct and the Wendover green tunnel – that is, along the most developed section of this part of the AONB, crossing the existing transport corridors of the A413 and the Marylebone to Aylesbury line. This section will be further screened by false cuttings, planting and noise barriers where appropriate.

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~~*Impacts of the Proposed Scheme in the AONB*~~
Environmental ~~E~~effects and proposed mitigations - construction

4. Paragraph 2.5.25 of the ES, Volume 3 sets out the key impacts on the landscape of the AONB during the construction phase as follows:

- The removal of woodland including 10.2ha of ancient woodland (including 6.2ha at Mantle's Wood, 0.5ha at Farthings Wood, 2.5ha at Sibley's Coppice and 1ha at Jones' Hill Wood), substantially altering the character of parts of the Misbourne Valley but only slightly altering the overall wooded character of the AONB as a whole;
- The loss and severance of agricultural land, including the loss of mature hedgerows, locally altering the rural agricultural character; and
- The removal of small areas of historic sunken laneways at Bowood Lane and Leather Lane, and a section of Grim's Ditch scheduled monument.

Ancient ~~W~~woodland

5. It is recognised that ancient woodland is irreplaceable. In terms of landscape character, the proposed planting would quite substantially mitigate the significant adverse effects reported for year 1 and 15 of operation.

Mantle's Wood, Farthings Wood, Sibley's Coppice and Jones' Hill Wood

6. The ES, Volume 2, CFA 9 report, acknowledges that construction will remove 6.2ha (31 percent~~%~~) of woodland from Mantle's Wood, of which 4.2ha is ancient replanted woodland and 2.0ha is ancient semi-natural woodland. The construction of the Chiltern tunnel north portal will also sever Mantle's Wood creating two smaller woodlands (7.8ha and 6.3ha north and south of the route of the Proposed Scheme respectively),(see paragraph 7.4.3).

7. At Farthings Wood construction will remove approximately 3.5ha (27~~%~~ percent) of woodland, 0.5ha of which is ancient replanted woodland and the remainder is lowland mixed deciduous woodland, a habitat of principal importance, (see paragraph 7.4.4).

8. Construction will remove 2.5ha of woodland, affecting the southern part of Sibley's Coppice Local

Wildlife Site (LWS). As the entirety of the LWS is ancient woodland, its extent is important to its integrity, as is maintaining a minimum viable area. (The latter is defined as the smallest possible size (extent) at which the woodland can maintain its biological and ecological functions (for example, being species-rich) and exist without being damaged due to increased vulnerability by external environmental factors), (see paragraph 7.4.5).

9. Five areas of lowland mixed deciduous woodland (of 16ha, 8ha, 3ha, 3ha and 10ha respectively) will be created near South Heath. This will compensate for the loss of woodland at Mantle's Wood LWS, Hedgemoor and Farthings Wood LWS and Sibley's Coppice LWS (7.4.23) and will result in a net increase in the extent of woodland (see paragraph 6.4.2).

10. This new planting will provide an overall increase in secondary woodland cover of approximately 40ha of lowland mixed deciduous woodland (a habitat of principal importance) (see paragraph 7.4.24).

Jones' Hill ~~w~~Wood CFA 10

11. The ES, Volume 2, CFA 10 report, paragraph 6.4.19 confirms that land will be required for the construction of the Proposed Scheme from Jones' Hill Wood (DWH030), ancient woodland of high value. Construction of the South Heath cutting was stated to~~will~~ remove approximately 0.9 ~~-~~to 1ha of the existing woodland. Subsequent consideration of the works in this area has identified that the temporary material stockpile and haul road can be relocated outside Jones' Hill Wood. These proposals would reduce the amount of existing woodland to be removed from approximately 0.9 to 0.44ha (approximately 0.44ha of woodland will still need to be removed for the cutting).

12. The loss of ancient woodland from Jones' Hill Wood will be compensated through a range of measures. Ancient woodland soil with its associated seed bank will be salvaged and trans-located to the ecological compensation area east of Jones' Hill Wood and planted with broad-leaved trees so as to increase the extent of woodland and increase connectivity across the landscape. This new planting will provide connection between Jones' Hill Wood, and the un-named wood 180 metres to the south-east. In turn, this will provide a good habitat connection between Jones' Hill Wood and Rushmoor Wood, the ancient woodlands in this district. Other measures such as planting native tree and shrub species of local provenance and translocation of coppice stools and dead wood will be undertaken in accordance with the ecological principles of mitigation (ES Volume 5, ~~:~~ Appendix CT-001- 000/2) (see paragraph 7.4.30). Consideration is currently being given to moving the temporary material stockpile to a location outside Jones' Hill Wood.

Loss and severance of agricultural land

13. The Promoter has undertaken extensive investigation of the effects of the scheme on farms, estates and rural businesses, through a programme of farm and business impact assessments, environmental surveys and direct discussions with farmers and landowners along the route of the Proposed Scheme, including the effects and the possible mitigation options arising from land severance which fed into the ES.

14. Development of the scheme proposals to date has been informed by the information and intelligence gathered through these programmes.

15. As HS2 Information Paper C2, Rural Landowners and Occupiers Guide sets out, the provision of permanent accommodation works will depend on the individual circumstances on the holding and will usually be developed as the detailed design of the Proposed Scheme is undertaken. (Accommodation works are taken to include accommodation bridges and access arrangements and will have regard to the commercial justification by the land owner, such as the value, use and location of the lands concerned.)

16. The nominated undertaker will discuss with each land owner the provision and timing of accommodation works as part of the compensation package.

Reinstatement of agricultural land and maintenance of access

17. In relation to reinstatement of agricultural lands, HS2 Information Paper C2 sets out that the Environmental Minimum Requirements (EMRs), including the Code of Construction Practice (CoCP) will:

- Provide effective planning, management and control during construction to control potential impacts upon people, businesses and the natural and historic environment; and
- Provide the mechanisms to engage with the local community and their representatives through the construction period.

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18. Controls will be implemented to mitigate potential avoidable impacts on soils, farms and farm-based businesses, including maintaining access. For further information, see HS2 Information Papers E24, Private Means of Access and HS2 Information Paper D11, Maintaining Access to Residential and Commercial Property During Construction. There can be no standard approach to dealing with existing private means of access. Each location has to be considered on a case-by-case basis on its own merits. These controls will also provide for the reinstatement of any agricultural land which is used temporarily during construction, where this is the agreed end-use.

Loss of mature hedgerows

19. The Proposed Scheme includes a comprehensive package of measures to avoid and mitigate detrimental effects on the environment. These include the reinstatement and introduction of hedgerow planting to reconnect severed lengths of hedgerows and to break up the linear alignment of the Proposed Scheme, integrating it into existing vegetation patterns.

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20. In order to restore, recreate and enhance the habitat connectivity provided by hedgerows, many of the replacement hedgerows will fall within the zone required for construction. There will be phased restoration of land that is temporarily required and hedgerows will be planted as soon as possible. Where necessarily, for example to retain an important bat commuting route, temporary replacement features that can be moved during the main construction works will be used.
In relation to woodland areas within the AONB, approximately 50ha of new woodland planting is proposed to replace areas of lost woodland and to introduce new areas of woodland to break up the linear alignment of the Proposed Scheme, integrating it into the existing vegetation patterns

Leather Lane

21. As the ES, Volume 2, CFA 9 report sets out, optioneering in relation to the proposed new road

overbridge at Leather Lane has sought to minimise impacts on its trees and embankments (see paragraph 2.6.41 – 2.6.44), so that the selected alignment 'will avoid the loss of mature trees and an established farmland pond' (paragraph 7.4.1). There will be a loss of hedgerows 'between Jenkin's Wood and Leather Lane', however, proposed mitigation measures provide for their re-instatement (see paragraph 7.5.1). As paragraph 9.5.96 of the ES, Volume 2, CFA 9 report sets out:

> 'By year 15 and beyond to year 60 of operation, a linear swathe of planting will have established to form an effective screen of the Proposed Scheme in cutting. Embankments associated with Leather Lane bridge will be further screened as mitigation planting matures, softening and integrating the Proposed Scheme with the surrounding landform thereby reducing effects to being non-significant. These are reported in Part 4 of Appendix LV-001-010 (Volume 5)'.

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Bowood Lane

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22. As the ES Volume 2, CFA 10 report sets out, Bowood Lane will be temporarily closed and re-aligned to accommodate the works for the Proposed Scheme, but then subsequently restored along its original route (see paragraph 2.3.25). Proposed mitigation planting on the embankments of Bowood Lane will be important in linking existing woodland in and around Jones' Hill Wood with new mitigation planting on the western side of the route (see paragraph 7.4.34). The creation of planted embankments at this point will encourage bats to fly at a safe height over the Proposed Scheme.

Grim's Ditch

23. Since deposit of the Bill, the Promoter has undertaken further survey and been in discussion with Historic England regarding the extent of Grim's Ditch to the east. It is now understood that the Ditch did not extend so far east. As a result the proposed mitigation planting in the Bill to replicate the alignment of the Grim's Ditch Scheduled Monument will not be provided. The assessment of the impact on the setting of the monument is not affected by this new information.~~The Promoter is in discussion with English Heritage about the need for mitigation at Grim's Ditch in the light of additional information they have provided on the location of the monument~~.

Tranquillity

24. As the ES sets out, those areas of the AONB with a high level of tranquillity will not be noticeably affected by the construction of the Proposed Scheme due to their distance from the Proposed Scheme. The sole exception is the localised impact in the vicinity of the hidden fold in the landscape at Wendover Dean. Areas of low and medium tranquillity closer to the Proposed Scheme will be temporarily affected by the presence and operation of construction plant, construction activity and construction traffic. This is not considered likely to give rise to a substantial effect on tranquillity for the AONB as a whole.

Effects during operation

25. Paragraph 2.6.2 of Volume 3 of the ES summarises the proposed mitigation measures in the Proposed Scheme as follows:

'The operational assessment of impacts and effects is based on year 1 (2026), year 15 (2041) and year 60 (2086) of the Proposed Scheme. A process of iterative design and assessment has been employed to avoid or reduce adverse effects during the operational phase of the Proposed Scheme. Measures that have been incorporated into the design are documented in Volume 2, CFA reports 8, 9 and 10, Section 9; and those of particular relevance to the wider landscape assessment of the AONB include:

- ~~A~~Aa~~a~~n approximately 9.6km long bored tunnel under~~for~~ the southern portion of the ~~Proposed Scheme within the~~ AONB, with only vent shafts and associated infrastructure visible above ground;
- ~~T~~Tt~~t~~wo green tunnels (total length 2.5km), allowing the reinstatement of the landscape above the Proposed Scheme adjacent to the South Heath and Wendover communities;
- ~~T~~t~~t~~The use of cutting for the majority of the remainder of the Proposed Scheme north of the Chiltern tunnel;
- ~~T~~Tt~~t~~he use of earthworks to integrate the Proposed Scheme into the landscape through the AONB, providing visual screening and noise attenuation;
- ~~i~~iIntegration of embankment landforms into the natural topography, including earthworks associated with road diversions, and road and pedestrian bridges;
- ~~T~~t~~t~~The reinstatement and introduction of hedgerow planting to reconnect severed lengths of hedgerows and to break up the linear alignment of the Proposed Scheme, integrating it into existing vegetation patterns;
- ~~T~~t~~t~~The use of approximately 50ha of planting to replace areas of lost woodland and to introduce new areas of woodland to break up the linear alignment of the Proposed Scheme, integrating it into the existing vegetation patterns; and
- ~~E~~e~~E~~xploration, at particularly sensitive locations, of how effects will be mitigated.

26. Taking these into account and the length of time over which a number of the mitigation proposals will become established (for example, the time it takes for replacement woodland to fully mature) and the sensitivity of the AONB, the ES, Volume 3 assesses that in the short term (from year 1 to year 15 of operation) there will be a moderate adverse effect of the Proposed Scheme on the AONB, but that over time, this will decrease until they are considered to be 'not significant' by year 60 of operation (see paragraph 2.6.33).

27. As the ES Volume 3 sets out, modelling of cumulative effects on the AONB 'addresses the natural beauty and special landscape qualities of the AONB' as reflected in paragraphs 115 and 116 of the National Planning Policy Framework (NPPF).

Detailed design

28. The Promoter has, in so far as reasonably practicable, sought to avoid direct landscape and visual effects in relation to the scheme development, route optioneering and design and associated works.

29. The design of the Proposed Scheme to date provides the level of detail necessary for the purposes of the Bill and the requirements of the Environmental Impact Assessment Regulations. The level of detailed design necessary to enable the Proposed Scheme to be constructed has yet to be carried out, and is unlikely to be completed until after the Bill has secured Royal Assent. Once complete the nominated undertaker will need to apply for approval of the detailed design for

various elements of the Proposed Scheme from local planning authorities along the route under the planning regime established under Schedule 16 to the Bill. This will ensure that although deemed planning permission for the Proposed Scheme is granted by Parliament, local planning authorities will be able to approve the detailed design thereby ensuring that the design of permanent structures fits into the local environment. This is explained in HS2 Information Paper E1, Control of Environmental Impacts and HS2 Information Paper B1, The Main Provisions of the Planning Regime.

30. HS2 Information Paper G6, Design Development – Detailed Design and the Role of Planning Authorities explains how engagement with planning authorities is critical to the design development process, and will continue as the process moves forward, with the Promoter engaging on detailed design.

31. Design of the Proposed Scheme to date has included keeping the ~~railway~~ Proposed Scheme low within the landscape where reasonably practicable to do so. In other locations the design has incorporated landscaped earthwork, tree planting (screening), cutting and tunnels to reduce impacts and to help integrate the ~~railway~~ Proposed Scheme into the local landscape. As acknowledged above, in total, some 84~~%~~ percent of the route in the AONB is now below ground level or in tunnel. The only sections on embankment or on viaduct lie between the Wendover Dean viaduct and the Wendover Green tunnel – that is, along the most developed section of this part of the AONB, including the existing transport corridors of the A413 and the Marylebone to Aylesbury line.

32. The Proposed Scheme is demonstrably justified against national planning policy, and development of the Proposed Scheme has had proper regard to, and fulfilment of, the Statutory Duty under Section 85 of the Countryside and Rights of Way Act 2000.

Alternatives

33. The impacts on the AONB have been considered at each stage of the evolution of the Proposed Scheme and in the evaluation of other options. As the ES Volume 1, Introduction to the Environmental Statement and the Proposed Scheme – Strategic and Route-Wide Alternatives sets out, in terms of the process of considering routes from London to the West Midlands, 'consideration of the effects on the Chilterns AONB was particularly important in this process'. In laying the Decisions and Next Steps document[1] before the House in 2012, the then Secretary of State emphasised this, stating: 'we must safeguard the countryside and its wildlife as far as possible, both for the benefit of those living there today but also for future generations'.

34. The consultation route through the Chilterns announced in February 2011 already proposed designs to minimise the impact of the Proposed Scheme on the Chilterns AONB. This included a 9.6km twin-bored tunnel from just inside the M25 to Amersham, followed by 2.4km of deep, partially retained cutting and a further 1.3km length of twin-bored tunnel towards Little Missenden. Cut and cover tunnels (or 'green tunnels') were also proposed past South Heath and Wendover.

Route options

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[1] High Speed Rail: Investing in Britain's Future – Decisions and Next Steps, DfT, January 2012

35. Any direct route between London and the West Midlands must cross the Chilterns AONB. The broad route of alignment of Phase 1 of the Proposed Scheme through the AONB was established by the House at Second Reading.

2010

36. In March 2010 the Promoter published the initial preferred route (Route 3) broadly aligned to existing transport corridors (A413, Marylebone to Aylesbury line) before joining the route of the former Great Central Line between Aylesbury and Brackley. From there it runs relatively straight, passing to the east of Warwick and between Kenilworth and Coventry, towards the NEC[2] . The Government then commissioned and received advice from the Promoter on various aspects of the proposed route. In December 2010 the then Secretary of State took account of that advice when he made his announcement of the proposed route for public consultation. Furthermore, it offered significant advantages in terms of costs and journey time.

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2011

37. In February 2011, the Government undertook a national public consultation on its Proposed Scheme Phase 1 proposals. The consultation document (High Speed Rail: Investing in Britain's Future - February 2011), explained the route options considered for the Phase 1 railway at Annex B. A question posed by the Government in that public consultation was:
'Do you agree that the proposed route, including the approach proposed for mitigating its impacts, is the best option for a new high speed rail line between London and the West Midlands?' (p.112).

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2012

38. In January 2012, the Government announced its 'post consultation route' for the Phase 1 Railway in the Command Paper 'High Speed Rail: Investing in Britain's Future – Decisions and Next Steps. Chapter 6 of that Command Paper (p.92) stated the Government's conclusion, following the public consultation was that:

- 'The proposed route corridor, including the approach for mitigating its impacts, is the best option for a new high speed line between London and the West Midlands. Many people expressed a view on the line of route in their local area. The Promoter looked again at the route in light of the consultation responses and, subject to the alterations noted below, we believe this route remains the best option in terms of its overall benefits and costs, including impacts on sustainability; and
- A package of alterations to the proposed route should be made to further reduce its impacts on the local environment and communities. These include additional tunnelling in the Chilterns Area of Outstanding Natural Beauty and in the Northolt area of West London.'

39. That package of alterations and the Government's reasons for selecting it are set out in Chapter 6 of the January 2012 command paper.

2013

[2] High Speed rail, DfT, March 2010 (Cm.7827)

40. The draft ES included more detailed mitigation proposals and provided a further opportunity for the public to comment on the proposed route through the AONB. The Proposed route through the Chilterns set out in the Bill was assessed in detail in the ES.

41. The ES included an 'Alternatives Report', which explained and justified the selection of the Bill Scheme. Public participation took place in response to the ES under Parliamentary Standing Orders. A summary of the issues raised by the public's responses was reported to the House at Second Reading in accordance with Standing Orders. Second Reading of the Bill established the broad alignment of the route through the Chilterns as part of the principle of the Bill.

42. The alternatives included:

- ~~A~~aA realignment and extension of the twin-bored Chiltern tunnel to provide a single, extended, tunnel from the M25 to Mantles Wood near South Heath (approximately 13.5km long). This longer tunnel replaced the 2.4km section of deep cutting near Amersham with tunnel and the realignment below ground significantly reduced landscape and visual, cultural heritage, biodiversity and noise impacts. It removed any potential impacts to the setting of the Grade 1 listed Shardeloes and its Registered Park and Garden and the tunnel realignment helped reduce impacts on significant groundwater resources;
- ~~A~~aAn extension of the green tunnel past South Heath northwards by 200m and a revision to the alignment, which allowed a reduction in the depth of adjacent cuttings from typically 15m to around 9m deep. These changes further reduced visual effects near South Heath; reduced the amount of excavation and land-take required; but retained similar performance in terms of noise impacts; and
- ~~A~~aA revision and lowering of the route alignment by Wendover allowing the green tunnel past Wendover to be extended northwards by 800m. This ensured effective noise and visual screening alongside the main residential area of Wendover and allowed existing road infrastructure to be reinstated over the tunnel.

43. The Secretary of State has made clear that the Proposed Scheme sets out to achieve 'the lowest feasible impacts on local communities and the natural environment', with particular reference to the Chilterns AONB. As the 'Strategy and Summary of Decisions Document' sets out at paragraph 6.16, 'the revised tunnel alignment through the Chilterns will avoid an important acquifer, significantly reducing impacts on water resources, and the changes made also mean a reduction in the impacts on ancient woodland along the route'.

44. Route-wide, just over 20km of the Proposed Scheme route lies across the AONB, of which approximately 12km will be in tunnel and over 5km will be in cutting. The remaining 3km includes two viaducts, one of which is in order to cross a major transport corridor south of Wendover (the Marylebone to Aylesbury line and the A413). And as the Decision Document makes clear:

> 'changes to the route following consultation mean that out of a total length of just under 140 miles, around 22.5 miles will be in tunnel or green tunnel. This is an increase of more than 50 per cent on the route consulted on. In addition, around 56.5 miles will be partially or wholly hidden in cutting. (...) This means that around 79 miles (more than half of the route) will be mitigated by tunnel or cutting.'

45. Section 2.6 of ES, Volume 2, CFA9 provides further information the tunnel options in the AONB

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considered during the evolution of the Proposed Scheme. The Promoter has responded to the Petitioner's 'Green Route'~~.~~, Chiltern Long Tunnel, CRAG and REPA ~~and 'CRAG' ('T2')~~ proposals, amongst others and discussed these with those who proposed them~~the Petitioner~~.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 22-25.

ISSUE RAISED: Speed

PETITION PARAGRAPH:

22. A fundamental issue with the detailed route set out in the Bill is that the Promoter not only seeks the highest speed achievable, but sets out to 'future proof' the design so that the maximum line speed is 400km/hr outside cities. The HS2 trains are not planned to be capable of exploiting this maximum speed (being capable of only 360km/hr), but it imposes serious restrictions on the exact routes possible. To achieve these speeds, the curvature of the line of route is very limited, making it impossible to follow existing transport corridors (such as the M40) or avoid sensitive locations (such as South Heath or areas of ancient woodland).

23. HS1, while a high speed railway, operates at a maximum of 300km/hr, and extensively follows the line of route of the M2 and M20 motorways. The Draft ES assessed the additional travel time from London to Birmingham, were speeds limited to those of HS1, at only 4.5 minutes.

24. The Promoter justifies the highest achievable speed on the basis that journey time savings are very valuable. Despite now acknowledging that business travellers can and do work productively on trains, business time savings are valued as if the time savings were additional productive time. Your Petitioner (along with many others) contends that the Promoter has mistaken the balance between the value of journey time savings and environmental damage.

25. (Additional) Mitigation sought: Your Petitioner requests that your honourable House amend the Bill to impose and/or direct the Promoter to adopt a maximum design speed of 300km/hr, and to amend the detailed route to exploit the ability this gives to locate HS2 next to existing major transport infrastructure - for example, the M40. The reduction in speed in itself would have major carbon and other environmental benefits (not least noise reduction), as recognised by the Environmental Audit Committee of your honourable House.

PROMOTER'S RESPONSE:

1. The principle of the Bill, as established at second reading[3], specifies '…provision of a high speed railway…'. Though a 300kph railway would fall within the definition of 'high speed', the Promoter does not agree that a reduction in design speed is necessary or desirable.

2. Alternative speed specifications were considered over several years before the Government decided to promote a railway that would operate at up to 360kph on infrastructure designed to allow trains running up to 400kph in the future, should there be a commercial justification for doing so. The options considered and the reasons for the choices are described in Section 5 of the Environmental Statement (ES), Volume 5: Alternatives Report.

3. The options for 300kph examined in 2011/12 included a 300kph route maximum design speed, and selective reductions in speed to 300kph on sections of the route where environmental concerns had been expressed and where there was potential to alter the route alignment[4].

4. Reducing maximum speed to 300kph is estimated to increase journey times between London and Birmingham by 4½ minutes and the Phase One benefit:cost ratio by 15% percent (Regional Spatial Strategy RSS paragraphs. 4.3.4-5). For both phases of the Proposed Scheme, the time penalty would be even greater as journeys to Manchester and Leeds would take ten minutes longer.

5. On only approximately half the route between London and Birmingham, the section between Amersham and Birmingham Interchange, could trains reach the maximum design speed. Six areas were identified for a reduction in maximum speed, three to 360kph and three to 300kph. The analysis concluded that any environmental benefits could most advantageously be achieved by realigning and mitigating without the need to reduce design speed and in three areas they could be achieved through mitigation only. The analysis concluded:

> 'The only environmental improvements delivered by a lower maximum design speed would be a marginal reduction in noise impacts, which would be outweighed by a substantial reduction in economic benefits. We consider that mitigation of the consultation route, the approach we have taken, is a more appropriate way of reducing environmental impacts, particularly noise. This would also be the case for a line designed at a conventional speed. Adopting a lower business value of time would not alter our conclusions.' (Route Selection and Speed, Executive Summary paragraph. 8)

6. The HS2 Environmental Statement (ES) Volume 3, Routewide Effects considers the effect of reducing design speed on the operational carbon footprint. A reduction in maximum speed to 300kph would reduce the total operational carbon footprint by 7% percent and would affect total carbon footprint by an even smaller proportion. (ES Vol. 3 page. 55 para. 5.5.32 and Table 3)

[3] Hansard, Votes and Proceedings: 29 April 2014 No.154 para.6.3(2)(a)

[4] The analysis is reported in Section 4 of *Review of HS2 London to West Midlands Route Selection and Speed, A Report to Government by the Promoter*, published in January 2012 (RSS).

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 26-27, 59, 80.

ISSUE RAISED: Noise

PETITION PARAGRAPH:

26. Noise will be emitted from the open sections of the railway in the AONB. These include the track between the portal in the ancient woodland of Mantles Wood and the south portal of the South Heath "Green" Tunnel ("the SHGT"), where the railway runs in a cutting except for a short section on an embankment; and from the north portal of the SHGT towards the Wendover Dean viaduct, where it runs in an increasingly shallow cutting. Noise will also be emitted from the bored and SHGT portals, although the ES does not say how much. The ES records only 15 properties suffering significant residual noise (in Potter Row and Hyde Lane), but it underestimates the extent and severity of the noise exposure, along with the areas that will be affected, as the ES assessment is not based on meeting the World Health Organisation (WHO) noise standards, nor is there any recognition of the need to preserve tranquillity. The track height has been raised twice in this area from the original 2011 consultation proposals to save costs, but at the expense of increased noise impacts.

27. HS2 Ltd regards the AONB as being of medium tranquillity, having a landscape character of "national value" and sensitive to change. However, the Bill as presently proposed makes no provision that recognises this.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
South Heath green tunnel is too short to give acoustic protection to South Heath • Ignores noise exposure thresholds for peak noise • Gives no information on tunnel boom (there are about 50 properties within 400m of tunnel portals)	Extend green tunnel to at minimum Leather Lane to the north and to Mantles Wood in the south If Parliament does not agree this: • Install full height (5m) high specification trackside noise barriers. Maintain barriers to retain optimum performance • Lower the alignment of the track

Potter Row properties exposed to excessive noise - in addition to the 10 recorded in the ES (Vol 2 CFA 9, Table 17, page 185)	Extend green tunnel to Leather Lane If Parliament does not agree this: • Install full height (5m) high specification continuous noise barriers, maintained to retain optimum performance • Increase cutting depth
Hyde Lane exposed to excessive noise - in addition to the 5 recorded in the ES (Vol 2 CFA 9, Table 17, page 185)	Extend green tunnel to Mantles Wood If Parliament does not agree this: • Install full height (5m) high specification continuous noise barriers, maintained to retain optimum performance • Reduce track height (including on embankment)
Isolated properties exposed to excessive noise, • Hyde End • Frith Hill South Heath Leg (SHL) • Potter Row	Implement all reasonable measures: • Full height (5m) high specification noise barriers on both sides of track for extent of trace outside a tunnel • Lower alignment of the track
Inadequate consideration of vulnerable persons	Specify and observe noise exposure requirements, including appropriate periods for averaging noise levels and peak levels that ensure no interference with children's sleep
Footpaths will expose residents and visitors to excessive noise when diverted permanently to run along the top of the cutting and cross the iine (GMI/2, 13/3, 23/7 +1, 33/2, 33/4, 33/5)	Provide effective acoustic protection for PROW in the proximity of HS2. Maintain all existing routes so they do not run alongside the railway (except for LM1/21, because the trace follows its route)
Acoustic environment degraded: • Tranquil areas • Gardens	Set standards below the threshold to preserve health and wellbeing to reflect relative tranquillity of area (so environment remains pleasant not just non-injurious) Allow enjoyment of amenities by

	reducing noise below the level that impacts upon speech incl. for vulnerable persons.
Lack of proposals to manage maintenance noise at night	Specify maximum peak and average noise exposure including night time maintenance for all receptors. Require works to be suspended or restricted to remain within specification.
Noise mitigations (Potter Row/Hyde End): • Insufficient use of noise barriers • Inadequate specification of noise barriers • Reliance on bunds instead of trackside noise barriers	Use continuous noise barriers on both sides of the track wherever it is not in a tunnel to protect walkers and residents. 5m noise barriers (not 3m) to address aerodynamic noise. Bunds should be used for visual screening not noise containment (for which they are ineffective).
Lack of enforceable noise standards or body to enforce standards when set	Enforceable noise exposure standards to be set, with Local Authority funded in perpetuity to monitor and enforce. All necessary measures taken to meet standards including reduction of train speeds, eg at night, if other measures insufficient.
Equestrian activities rendered unsafe - there are many stables, livery yards, horses locally	Peak noise set at a level that will not result in startle response
Wendover Dene and Small Dene viaducts emit excessive noise	Encase viaducts to contain noise

59. The Promoter's ES suggests that over 100 homes in your Petitioner's area will be subjected to significant construction noise from the construction of the "green" tunnel and cuttings (in Sibleys Rise, Bayleys Hatch, Frith Hill (SHL), Kings Lane, B485, and Hyde Lane) or from construction traffic (Kings Lane). The exact numbers differ between chapters within the ES. In reality your Petitioner believes very many more homes will suffer excessive noise that will be more intrusive and last for longer than the ES acknowledges, especially when benchmarked against WHO standards.

Issue	**(Additional) Mitigation sought**
Excessive noise for lengthy periods from demolition and construction works and also from construction traffic on (a) the designated roads	The extensive construction period means higher noise thresholds should not be accepted, as the work is not "temporary" and

and (b) the trace (particularly as the 2Mt of excess spoil will also travel along the trace). This noise will: • disturb sleep, with stated "averages" disguising periods of excessive noise; • prevent enjoyment of gardens, outside spaces and PROW; and • disturb the concentration of those working from home or doing school work, amongst others.	averaging reference periods should be adjusted to ensure that peak noise is contained. Periods for assessing noise levels should reflect the needs of vulnerable people (such as children, the elderly). Levels should be specified so as to allow the quiet enjoyment of outside spaces, with evening and weekend work precluded. WHO guidelines should be observed. Local Authority funding to monitor compliance with standards set; and powers to suspend works if limits are exceeded. Freephone hotline for making complaints with specified response times for addressing issues. Infringement of levels or permitted hours to carry punitive compensation to residents.

80. The ES fails to correctly apply the national policy on noise, and contrives to present a misleadingly favourable account of HS2's noise impacts by misrepresentation and omission

Defect	**Remedy sought**
Methodology • Failure to specify SOAELs and LOAELs correctly Failure to specify LOAEL for peak noise • Failure to properly consider effects on isolated properties • Failure to specify lower noise requirements for relatively tranquil areas • Failure to give details of noise emanating from tunnel portals • Failure to assess contribution of maintenance activities	The Select Committee to direct that the Promoter redoes the assessment of noise using an approach that is compliant with national policy: in particular that the Promoter: Specifies evidence based LOAEL and SOAEL for day and night for average and peak noise in line with national policy and in cognisance of WHO limits Ceases to discriminate against isolated properties Specifies and proposes measures that achieve noise levels lower than WHO levels for LOAEL Publishes estimates of noise levels and proposed mitigation Publishes estimates and proposed mitigation

when built • Failure to quantify contribution of static plant to noise (eg vent shafts, transformers)	Publishes estimates and proposed mitigations
Noise levels and their implications are miss-assessed	Corrects errors

PROMOTER'S RESPONSE:

1. Taking into account both the route-wide control measures proposed in the Environmental Statement (ES), for example in the draft Code of Construction Practice, trains that would be quieter than the relevant current European Union specification, and those for this section of the route, for example the green tunnel near South Heath, cuttings and landscaping/noise fence barriers of effective height up to 13 metres, and recognising that as the design progresses these proposals will be reviewed in order to ensure that the Promoter's noise and vibration policy aims are met, the ES identifies that:[5]

- At South Heath, in the vicinity of Potter Row, at about 10 permanent residential buildings, the Proposed Scheme is unlikely to cause a significant adverse noise effect during operation.
- At Hyde End, in the vicinity of Hyde Lane, at about 5 permanent residential buildings, the Proposed Scheme is unlikely to cause a significant adverse noise effect during operation.
- At Sheepcotts Cottage, Hyde Lane, Hyde Heath, represented by location ID 376359, the Proposed Scheme is likely to cause a significant adverse noise effect during operation. This means that qualifying buildings will be offered noise insulation as described in Section 5 of the HS~~s~~2 Information Paper E20, Control of Airborne Noise from Altered Roads and the Operational Railway.
- At about 50 permanent residential buildings on Sibley Rise, Bayleys Hatch and Frith Hill, South Heath the Proposed Scheme is unlikely to cause a significant adverse noise effect during construction; and
- At two permanent residential buildings, a dwelling on Kings Lane and a dwelling on the B485 Chesham Road, the Proposed Scheme is likely to cause a significant adverse noise effect during construction. This means that qualifying buildings will be offered noise insulation as described in Appendix B of the HS~~s~~2 Information Paper E23, Control of Construction Noise and Vibration.

2. The Promoter's policy on assessing and controlling ~~potential~~ the noise and vibration impacts likely to be caused by the construction and operation of the ~~new railway~~Proposed Scheme is set out within the relevant HS2 Information Papers[6]. The policy was developed through a detailed process and reviewed by professionals able to provide an independent and experienced perspective through

[5] Environmental Statement operational noise and vibration assessment for Central Chilterns CFA 09 Volume 5 appendix SV004-009 and Environmental Statement construction noise and vibration assessment for Central Chilterns CFA 09 Volume 5 appendix SV003-009

[6] HS2 Information Paper E20, Control of Airborne Noise from Altered Roads and the Operational Railway, HS2 Information Paper E21, Control of Ground-Borne Noise and Vibration from the Operation of Temporary and Permanent Railways, HS2 Information Paper E22, Control of Noise from the Operation of Stationary Systems, and HS2 Information Paper E23, Control of Construction Noise and Vibration.

the Promoter's review groups and represents the Promoter's interpretation of the Government's Noise Policy Statement for England (NPSE). The setting of Lowest Observable Adverse Effect Levels (LOAELs) and Significant Observable Adverse Effect Level (SOAELs) also underwent consultation with relevant Departments (such as the Department for the Environment, Food and Rural Affairs (Defra)) prior to the ~~Environmental Statement~~ ES being published. Accordingly, the Promoter's setting of values for LOAELs and SOAELs had due regard to established practice, research results, guidance in national and international standards, guidance from national and international agencies and independent review by academic, industry and Government employees, along with the Promoter's representatives on the review groups.

3. The LOAELs set by the Promoter include 40 dB for the 2300-0700 LpAeq and 60 dB for the LpAFmax (façade) to assess the impact of airborne noise caused by the operation of the ~~new railway~~ Proposed Scheme on permanent residential buildings. The second of these parameters is used to assess the impact of noise from individual train pass-bys. The use of these parameters, and the values assigned to them have been derived with consideration of the WHO guidelines for community and night noise. As required by Government noise policy all reasonable steps will be taken to design, construct, operate and maintain the ~~operational railway~~ Proposed Scheme so that these levels are not exceeded. Further details can be found in HS2 Information Paper E20, Control of Airborne Noise from Altered Roads and the Operational Railway.

4. The LOAELs set by the Promoter also include 65 dB for the 0800-1800 LpAeq and 45 dB for the 1 hour LpAeq during 2200-0700 to assess the impact of airborne noise caused by the construction of the ~~new railway~~ Proposed Scheme on permanent residential buildings. The use of these parameters, and the values assigned to them have been derived with consideration of the British Standard BS5228: Code of practice for noise and vibration control on construction and open sites. As required by Government noise policy all reasonable steps will be taken so that these levels are not exceeded. Further details can be found in HS2 Information Paper E23, Control of Construction Noise and Vibration.

5. The LOAELs and the SOAELs are derived from evidence base for the effects of noise on people. The health and quality of life effects caused by noise from the Proposed Scheme are not dependent on effects caused by the existing ambient sound environment. The Promoter has taken into account the Explanatory Note appended to NPSE by applying different LOAELs and SOAELs for different noise sources, for different receptors, and at different times.

~~5~~6. All individual dwellings where a SOAEL is exceeded are identified as likely individual building significant adverse effects in the ~~Environmental Statement~~ES. This is an indication that noise insulation will be offered as a means of aiming to avoid any significant adverse effect on the health and quality of life of those living there caused by airborne operational or construction noise.

~~6~~7. With respect to the effects of noise on outdoor recreational and leisure spaces and facilities including bridleways, footpaths, canal towpaths, sports grounds, racecourses, golf courses, show grounds, nature reserves, principally because of the transitory nature of their use, no likely significant adverse noise effects on people, wildlife, horses and livestock have been identified. There is further detail in the E~~nvironmental S~~tatement: Sound, ~~n~~Noise and ~~v~~Vibration: ~~m~~Methodology, ~~a~~Assumptions and ~~a~~Assessment (route-wide) ~~(see: Volume 5 a~~Appendix SV-001-000, ES 3.5.0.10 Annexes F and G~~)~~. Such facilities and spaces may benefit collaterally from measures provided to reduce impacts at dwellings and other noise sensitive receptors in the vicinity.

~~7~~8. In accordance with the draft Code of Construction Practice (CoCP), , the contractors appointed to construct the railway will be required to employ 'Best Practicable Means' as defined by the Control of Pollution Act 1974 to control noise and vibration. The measures proposed will be detailed in the prior consent application to the relevant local authority under Section 61 of the Control of Pollution Act 1974. Monitoring will be undertaken as necessary to demonstrate compliance with the commitments made.

Monitoring

~~8~~9. Local authorities are seeking funding for monitoring whether or not the nominated undertaker or its contractors have complied with the requirements of the Code of Construction Practice. Were a local authority to decide to monitor this activity, they would be doing this at their discretion rather than because there was a requirement for them to do this. This is because the nominated undertaker will be legally bound to ensure it meets the requirements in the CoCP and does not breach any controls within it. Accordingly the nominated undertaker will put in place appropriate monitoring practices. The Promoter therefore does not consider it appropriate or necessary to reimburse local authorities for this activity.

Helpline

~~8~~10. As HS2 Information Paper D3, Code of Construction Practice sets out The draft Environmental Minimum Requirements (EMRs) section 5.1.6 state that:

> 'the nominated undertaker will maintain a construction operations website (which includes an email function or the latest communication technique) and telephone helpline staffed 24 hours a day, 7 days a week, to handle enquiries from the general public and local businesses regarding construction activities. It will also act as a first point of contact for information in the case of any emergency or an incident… Information for the public will also be provided using other methods such as social media, email alerts, local radio and newspapers as appropriate.'

~~9~~11. For further information see HS2 Information Paper D3, Code of Construction Practice.

Track alignment

12~~0~~. Following consultation in 2011 a review of a number of refinement options was undertaken which included a proposed change of the horizontal alignment as it passed South Heath with the effect that the line passed through a different section of landform and as a consequence the depth of the cutting was shallower in what became the January 2012 announced route.

13~~1~~. Following the January 2012 announced scheme further design refinement work has been undertaken between Mantle's Wood and the northern end of the green tunnel at South Heath. The depth of cutting through this area has been further reduced in the Proposed Scheme to realise a number of benefits to the local area.

14~~2~~. This change was proposed in order to reduce the extent of the construction footprint through this section and consequently the surplus volume of material that needs to be excavated compared with the January 2012 announced scheme~~.~~. Benefits will include a shorter construction programme,

reduced cost to the project and require a reduced number of lorry movements within the AONB. The Proposed Scheme will still be in cutting for most of this section and this will provide visual and noise mitigation as it will still be up to 20 metres deep.

Enclosing viaducts

153. The enclosure of the Wendover Dean and Small Dean viaducts would require significant additional engineering works. In particular, the size of the enclosure to provide the required aerodynamic performance would require an increase in bridge width and a much more substantial support structure. Enclosure of the viaduct would in effect create a tunnel and would require inclusion of appropriate measures to mitigate pressure waves created by trains. Enclosure would increase construction complexity and time, with increased construction and ongoing maintenance costs for the structure.

164. The increased size and visual appearance of an enclosed structure would be difficult to mitigate with the result that the visual intrusion of a covered viaduct would be more significant than the impacts from the viaduct that is proposed. Particularly within the setting of Chilterns AONB, the visual appearance of the structure will be an important aspect of the final design adopted.

175. With regard to noise effects, a covered structure would reduce potential noise impacts for the length of the viaduct. However, the Proposed Scheme incorporates earthworks and noise fence barriers to provide noise attenuation without the permanent visual impacts and additional costs of a covered structure.

186. For these reasons the Promoter does not consider that enclosing these viaducts will provide the visual and noise benefits described by the Petitioner.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 28-30, 67, 81-82.

ISSUE RAISED: Sustainable Placement

PETITION PARAGRAPH:

28. The cuttings and the SHGT will produce extensive surplus spoil (nearly 2m tonnes) that cannot be used for local mitigation. The Promoter intends to create a new permanent 40ha (twice the size of Green Park) "sustainable placement" (in reality, landfill) site at Hunts Green (within the AONB) to which the material is moved after temporary local storage. In doing so HS2 Ltd chose to misrepresent local concerns about traffic on roads. HS2 Ltd ignore the alternative beneficial uses, transportation options (eg rail and pipeline), and fail to avoid production of the surplus (by at minimum extending the bored tunnel to Leather Lane in accordance with REPA's SHCTE proposal). Waste from the bored tunnel is extracted at the southern (M25) end, and is not an AONB issue. The inability of the Promoter to remove spoil from the AONB might have carried considerable weight in an SEA, had one been conducted.

29. The Promoter has stated that 11,6Mt of spoil will be created in the AONB, of which 90% will be reused. 1.9Mt is to go to Hunts Green, the rest is to be used for engineering embankments, environmental mitigation earthworks (visual, acoustic, bridge structures), land restoration, including above green tunnels, and ecological soils reuse. 1.4Mt is to be used for restoring land to agriculture, but there is little clarity as to where and how the remaining 8.3Mt is to be used. This is a major gap in the ES, as it affects the landscape, and when the gap is filled your Petitioner may have further objections.

30. HS2 Ltd reject the use of fully retained cuttings to reduce spoil (and landtake) on grounds of cost, complexity and delay. Your Petitioner is concerned that this is getting the wrong balance between permanent environmental damage, cost and speed of construction.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
New landfill site in AONB is in contravention of Waste Hierarchy and HS2 Ltd's own policy on site selection (as obtained by FOI)	Have no landfill sites within AONB. Remove any surplus spoil from AONB along trace to an appropriate exit point for removal

	by rail on the Chiltern line (which runs parallel to the works)
Large volume of spoil and area of land-take created by inward sloped cuttings	Use retained cuttings throughout area to minimise spoil creation

67. Besides the unsuitable permanent storage of surplus spoil within the AONB presently proposed, the spoil will first stored in temporary heaps along the railway, prior to transportation along the trace. Spoil heaps are likely to interact unfavourably with the predominant south-westerly winds to affect the SHA. The piles straddling the B485 will dominate - they are over 600m x 200m and 250m x100m and 5m high.

Issue	**(Additional) Mitigation sought**
Dust, dirt and run-off from the temporary spoil heaps constitute a nuisance and health hazard. Dust potentially dramatically affects the quality of life, limiting the usability of exterior spaces, and depositing detritus on the exterior of properties, on washing etc.	Temporary spoil heaps to be covered. Maximum dust exposure limits to be specified, monitored and enforced by the Local Authority - paid for by the Promoter. The Promoter and/or Nominated Undertaker should be responsible for the costs of cleaning the exterior of properties and paying punitive compensation for contravention of limits
Temporary spoil storage is sited to be adjacent to ancient woodland and residential properties (especially in the B485 and Frith Hill SHL areas) which would adversely affect them	Temporary spoil storage should not be within 200m of the curtilage of residential properties or ancient woodlands
Deposit on local roads of spoil from transportation to and from temporary storage will make road services dangerous	All haulage vehicles to be cleaned off before joining a public raod
No provision to restore temporary spoil sites or construction sites to their previous condition	Full restoration should be required by the Bill

81. HS2 Ltd failed to publish their policy on waste disposal as part of the ES and references to it point to a non-existent section, however the policy was released in response to an FOI request. Creating a new landfill site in the Chilterns AONB is inconsistent with this policy.

82. As referred to above in relation to spoil, your Petitioner cannot ascertain

how over 8Mt of spoil will be used in the AONB - exactly where it will be used, to what end and what its impact will be on the landscape. This is a massive quantity of spoil - sufficient to cover a kilometre square to a depth of 5.5 metres - and a matter of great environmental concern to your Petitioner.

Defect	Remedy sought
Failure to publish policy on waste	The Select Committee of your honourable House to require the Promoter to publish and reconsider proposals on waste management, to comply with national policy
Failed to give detail on use of spoil in AONB and its impact on local topology	The Select Committee of your honourable House to require the Promoter to provide details and permit Petitioners to raise issues

PROMOTER'S RESPONSE:

1. The Proposed Scheme includes the on-site placement for disposal of surplus excavated material in order to avoid causing environmental effects that would otherwise be associated with the off-site disposal by road. HS2 Information Paper E19, Sustainable Placement of Surplus Excavated Material, outlines the approach to sustainable placement of excavated material within Phase One of the Proposed Scheme.

2. Sustainable placement of surplus excavated material is recognised as a disposal activity and will be appropriately permitted by the Environment Agency and in line with the requirements of the EU Landfill Directive (1999/31/EC). Sustainable placement will only be used to dispose of surplus excavated material. The Promoter considers disposal, including on-site disposal, to be the option of last resort.

3. In the South Heath area, the surplus excavated material proposed to be placed locally, is generated during construction of the South Heath cutting and Chiltern North Portal Cutting near to the land identified for sustainable placement.

4. At an initial preliminary design stage, it was assumed that a total of approximately 2.9 million m^3 of material would have been generated between the Chilterns tunnel northern portal at Mantle's Wood (Ch 44+800) and Small Dean viaduct (Ch 52+800). Of this volume, 1.5 million m^3 of material would be re-used for structural fill and mitigation earthworks within the CFA, with the balance of excess material being transferred onto the A413 and either taken north by road to Calvert for onward transfer via the rail network for re-use elsewhere on the project, or treated as surplus and sent for third party disposal at the closest suitable licensed landfill.

5. It was the view of the Promoter that the transport of the large volume of material by road would incur additional significant environmental impacts, particularly associated with the extensive traffic movements required. This was considered to be worse than the permanent placing of material in the vicinity of the construction activities and as such the creation of a sustainable placement site at

Hunts Green Farm was included in the Proposed Scheme. However, it is recognised that the Petitioner would prefer to see this material moved out of the AONB. The Promoter is thus currently considering the feasibility of reducing the amount of excavated material for sustainable placement by increasing either road haul or site haul of this material, including the need for temporary stockpiling of material that may be required.

6. Sites for sustainable placement have primarily been selected based on their location, in order to avoid use of highways. Where possible sites local to the construction activities accessible by off highway haul routes have been chosen. The extent to which this will be possible will in part be dependent on the approval of earthworks, landscape and reinstatement details by the local planning authorities.

7. Where sustainable placement is proposed existing topsoil will be stripped and stored prior to placement of the excavated materials. Excavated material will be incorporated into the existing landform as far as possible. Upon completion, stripped and stored topsoil will be returned, hedgerows will be replanted on their existing alignments and the land restored as ecological planting or returned to agriculture. Excavated material, including surplus excavated material will be managed in accordance with waste hierarchy, as set out in HS2 Information Paper E3, Excavated Material and Waste Management. This is described in Section 14 of Vol. 3 of the ES, paragraphs 14.1.19-14.1.20:

> 'For the surplus excavated material which cannot be beneficially reused for the earthworks of the Proposed Scheme, the nominated undertaker will seek to provide surplus excavated material for:
>
> - Use in other local construction projects where opportunities arise at the time of construction; and/or
> - Use for restoration of mineral sites, where the transportation of that material does not result in significant environmental effects.
>
> Where the transportation of that material would result in significant environmental effects, sustainable placement will be used.'

8. HS2 Information Paper E3 also explains that 'Contaminated Land: Applications in Real Environments' (CL:AIRE) Code of Practice Materials Management Plan will also be prepared in advance of the implementation of the integrated design approach. This will set out how the suitable excavated material is to be used as a resource within the construction of the Proposed Scheme.

Definition of 'sustainable'

9. The Promoter's approach to sustainable placement is set out in the HS2 Information Paper E19, Sustainable Placement of Surplus Excavated Material. Paragraph 2.1 describes sustainable placement as the disposal of surplus excavated material to avoid causing environmental effects that would otherwise be associated with off-site disposal of that material. Paragraph 2.3 of that paper defines how excavated material becomes surplus while paragraph 2.4 explains how, as a recognised disposal activity, sustainable placement will be appropriately permitted by the Environment Agency in line with the appropriate EU legislation.

10. Paragraph 2.6 explains how sustainable placement will be carried out, including the prior removal and storage of the existing topsoil, the landscape design to incorporate the material into the landform as far as possible and upon completion the return of the stripped and stored topsoil and replanting of hedgerows such that the land can be restored as ecological planting or returned to agriculture.

A strategy for waste disposal

11. An Excavated Materials Management Strategy has been developed that describes how an integrated design approach has been developed to use excavated material to satisfy the fill material requirements wherever reasonably practicable. The strategy also states that excavated material will only be disposed of as an option of last resort if no other on or off-site use can be found. This strategy will be updated as the design develops and more detail becomes available, particularly from the ground investigation works which are scheduled to start in 2015.

12. Specific sites for the potential disposal of surplus excavated material or inert waste have not yet been identified. If disposal at sites within Buckinghamshire are required it is likely this will be agreed with the disposal site operator on a commercial basis by the Contractor appointed by the nominated undertaker. If the transportation of waste material to that site requires the use of a route that has not been covered by the ~~Bill~~ ES or the permissions obtained by the disposal site operator, consent from the local highway authority will be sought. This will be in accordance with the requirement that the consent of the relevant highway authority is required for the provision of any new or altered worksite access to and from a highway, if this is not as shown on the plans deposited with the Bill.

Minimising waste generation

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13. The policy aspirations for waste generation and disposal expressed in paragraphs 30 and 31 of the petition are reflected in the Promoter's approach as outlined above. Any wastes generated from the removal of contamination will be managed in accordance with the waste hierarchy commencing with, if possible, reuse on-site (using environmentally permitted processes) or removal from site for processing to facilitate off-site reuse, recycling or recovery. If this is not possible contaminated waste will be disposed of at a suitably permitted facility. This is explained further in HS2 Information Paper E7, Land Quality (Contamination).

Design of cuttings

14. In relation to cuttings, these are part of the scheduled works set out in Schedule 1 to the Bill, in relation to which an Environmental Assessment has already been conducted. This identifies the likely significant effects that will arise from the construction and operation of the Proposed Scheme and the range of mitigation measures that could be used to reduce or eliminate these effects. Where an Environmental Impact Assessment is legally required, works will not take place unless they have been assessed already as part of the ES~~Environmental Statement~~ or are subject to a further Environmental Impact Assessment and consent process.

15. The design of the Proposed Scheme to date thus provides the level of detail necessary for the purposes of the Bill and the requirements of the Environmental Impact Assessment Regulations.

16. More detailed designs to enable the ~~railway~~ Proposed Scheme to be built will not be completed until after the Bill has secured Royal Assent. At the appropriate time, the nominated undertaker will apply to the relevant local planning authorities for approval of details of aspects of the Proposed Scheme specified in Schedule 16 to the Bill. As paragraph 4.1 of HS2 Information Paper B1, The Main Provisions of the Planning Regime sets out, details reserved for subsequent approval include 'matters such as buildings, road vehicle parks, terracing, cuttings, embankments and other earthworks, fences, walls or other barriers, transformers, telecommunication masts, pedestrian access to the railway line, artificial lighting, waste and spoil disposal and borrow pits'. This will enable local planning authorities to ensure that the design of permanent structures fits into the local environment. This is explained in HS2 Information Paper E1, Control of Environmental Impacts and HS2 Information Paper B1, The Main Provisions of the Planning Regime.

Dust

17. Section 7 of the draft Code of Construction Practice (CoCP) outlines that the nominated undertaker will require its contractors to manage dust, air pollution, odour and exhaust emission during the construction works in accordance with Best Practicable Means (BPM). This will include the following as appropriate:

- ~~R~~Reference to the general site management and good housekeeping procedures (relevant to limiting dust and air pollution);
- ~~C~~Controls and measures to control or mitigate the effect of potential nuisance caused by the construction works;
- ~~D~~Dust and air pollution monitoring measures to be employed during construction of the project; and
- ~~M~~Measures relevant to control risks associated with asbestos dust.

18. Section 6 of HS2 Information Paper D3, Code of Construction Practice, explains how the requirements of the draft CoCP will be passed onto contractors and enforced.

19. Potential impacts from construction dust will, therefore, be controlled by the effective measures to control dust and dirt set out in the CoCP, and worksites will be screened as set out in the CoCP. There is no reason to believe that crops or livestock will be affected by construction dust, given the measures in place in the CoCP.

20. Please see the Promoter's response to Petition paragraphs 26-27, 59, 80 for more information on monitoring costs.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 31-34, 45, 66.

ISSUE RAISED: Ecology

PETITION PARAGRAPH:

31. The Promoter's scheme presently within the Bill involves the loss and fragmentation of 3 ancient woodlands in the section of the railway between Mantles Wood and Leather Lane. The 9.3ha of ancient woodland lost represents over ¼ of the total loss of ancient woodland from Phase 1 of HS2. The present scheme takes 30% (6.2 ha) of Mantles Wood for the Chilterns Tunnel Portal and access; 0.5ha of Farthings Wood (and also another 3.5ha that is not ancient); and bisects Sibley's Coppice, taking 2.6ha there. Temporary waste storage is detrimentally close to Jenkins Wood, another ancient woodland.

32. The Promoter, through the ES, concedes that ancient woodland is "nationally significant" and an "irreplaceable resource", but the Non-Technical Summary (NTS) concludes that new planting avoids adverse effects on the AONB by year 60. The Woodland Trust say this misleads and is incorrect. Your Petitioner respectfully agrees with the Woodland Trust, and respectfully invites your honourable House to find that ancient woodland is, indeed, irreplaceable and that its loss to the AONB cannot be adequately mitigated as the Promoter presently suggests.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
The bored Chiltern Tunnel access facilities will occupy land currently ancient woodland	Move tunnel access and facilities out of ancient woodland, to minimise ancient woodland land take (but need to screen).
Deep un-retained cuttings have considerable land-take of ancient woodland	Use retained cuttings to minimise take of ancient woodlands
Movement of the railway and its support facilities within the limits of deviation could lead to a greater loss at Mantles Wood	Amend limits of deviation to preclude a greater land take from any ancient woodland
40 ha of compensatory planning are proposed (for around 10ha loss), but without arrangements for	The Woodland Trust consider the compensatory planning is grossly inadequate, and should be based

their permanent maintenance	on a ratio of 30:1. Any compensatory planting should be done following consultation. Such planting has the capability of itself having an adverse effect on the AONB. Provision needs to be made for the permanent maintenance of compensatory woodland, as this is missing from the Bill

33. Approximately 4.5ha of other woodland and 16km of hedgerows will be lost, including 2.1km of "important" hedgerows, 7 of which are "historically important", fragmenting the landscape and destroying wildlife habitats and bridges. One reason that the losses will be so extensive, is that the proposed open cuttings take a large surface area compared to using retained cuttings (which have vertical sides).

34. (Additional) Mitigation sought: Losses should be reduced by using retained cuttings.

45. HS2 will impact on habitats and species in 4 local wildlife sites in ancient woodlands, with permanent loss of habitats and severance of several hedgerows. There should be no net loss in habitats and a net gain in biodiversity.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Habitat severance as railway constitutes barrier when on surface or in open cutting	Create green bridges
Noise, dust, and lighting will effect breeding habitats	Create compensatory habitats, funded by Promoter in perpetuity, well in advance
Adverse effects on owls and bats within a 3km corridor	Create compensatory habitats, funded by Promoter in perpetuity, well in advance

66. Besides the presently proposed railway's occupation of land previously covered in ancient woodland during operation, the method of construction results in more destruction of ancient woodland than is necessary.

Issue	**(Additional) Mitigation sought**

'Temporary' spoil heaps abut Jenkins Wood	Maintain 200m buffer between ancient woodland and temporary spoil heaps, as advised by Woodland Trust
Extraction of tunnel boring machines ("TBMs") requires access to portal through ancient woodland	Bury rather than extract TBMs or move along trace beyond ancient woodland before extraction
Construction of "green" tunnel uses a partially retained cutting that takes more ancient woodland at Sibleys Coppice than necessary	Construct green tunnel using fully retained cuttings (ie vertical sides)
Use of the trace for transporting surplus spoil to Hunts Green could involve avoidable land take in Sibley's Coppice	Ensure trace only wide enough for green tunnel construction. Other works timed so as not to require more land take in woodland

PROMOTER'S RESPONSE:

Preservation and enhancement of woodland

1. The Promoter supports the Government's commitment to maintaining existing ancient woodland and to increase native woodland. Please see the Promoter's response to the Petitioner's paragraphs 13-17 for more details on ancient woodland and hedgerows in the Chilterns Area of Outstanding Natural Beauty (AONB).

2. As HS2 Information Paper E2, Ecological Impact acknowledges 'it is not possible to replace ancient woodland' and the design of the Proposed Scheme has sought to minimize loss of or harm to ancient woodland, so far as is reasonably practicable. However, the Proposed Scheme is unable to avoid all ancient woodland. As the Environmental Statement (ES) for the Proposed Scheme sets out, where avoidance has not been possible, the nominated undertaker will use best practice measures, such as translocating the ancient woodland soils, and creating (route-wide) 280ha of new mixed deciduous woodland to compensate for the loss of 32ha of ancient woodland at 19 sites as set out in the ES. As stated in Section 12 of the draft Code of Construction Practice (CoCP) existing vegetation will also be protected during construction.

Mitigation planting

~~1~~3. In relation to landscape design, the Promoter can confirm that, as set out in HS2 Information Paper D1, Design Policy, the Promoter and the nominated undertaker will seek to ensure that the design 'of all visible elements of the built and landscaped environment are sympathetic to their context, environment and social setting'.

~~2~~4. In particular, in relation to ancient woodland compensation planting, HS2 Information Paper E1, Ecological Impact, explains that 'to compensate for the loss of ancient woodland the nominated undertaker will use best practice measures such as re-using the ancient woodland soils and creating 280ha of new mixed deciduous woodland. However, it is acknowledged that it is not possible to replace ancient woodland'.

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No net loss to biodiversity

~~35~~. Furthermore, as HS2 Information Paper E1, Ecological Impact sets out, 'the Proposed Scheme has the objective of seeking to ensure no net loss to Biodiversity'. An adapted version of the Department for Environment, Food and Rural Affairs (Defra) Biodiversity offsetting metric will be used to compare the biodiversity of the habitats created and habitats lost.

Establishment of habitats/ landscaped areas

~~46~~. As is set out in HS2 Information Paper E16, Maintenance of Landscaped Areas, in the case of planting of ancient woodland and screen planting, the initial planting is likely to comprise a mix of small trees (transplants) with some larger trees. Initially 'some faster growing species are likely to be used' to create either 'the shaded conditions needed by the seed in soil brought from donor sites' (in the case of ancient woodland), or to help planting 'and screen the Proposed Scheme' (in the case of screen planting). An overview of the ways in which differing landscape types would be established and maintained is included in HS2 Information Paper E16, which covers woodland planting (including ancient woodland), screen planting, hedgerow planting, grassland and ponds and wetland habitats.

~~57~~. The Promoter recognises the importance of tree provenance and the need to minimise the risk of tree disease. It has established a Tree Working Group to advise on the tree procurement process, which includes organisations such as the Forestry Commission and the Tree Council in drawing up an appropriate tree procurement strategy.

Planting in advance of construction

~~68~~. Section 12.3.1 of the draft CoCP states that:

> 'Planting and other landscape measures will be implemented as early as is reasonably practicable where there is no conflict with construction activities or other requirements of the Proposed Scheme. The nominated undertaker will require its contractors to consider where measures can be implemented early and programme the landscape works accordingly. Locations for landscape measures will relate to the findings of the ES, and will be aimed at the protection and mitigation of adverse effects on sensitive and valued landscape features and characteristics'.

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~~79~~. The Promoter will continue to be guided by the Forestry Commission in these respects and further detail in these areas will be developed at the detailed design stage.

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Maintenance of planted areas

~~8~~10. HS2 Information Paper E26, Indicative Periods for the Management and Monitoring of Habitats Created for the Proposed Scheme Phase One, identifies the appropriate management periods for habitats to be established for Phase One that have been developed in consultation with Natural England. Discussions are in progress with the Department for the Environment, Food and Rural Affairs and Natural England, regarding an approach to ongoing management, maintenance and monitoring beyond the establishment period, and an Information Paper will be produced on

this in due course. As HS2 Information Paper E26 describes, the establishment period for woodland (including screening) planting will be between 10 and 50 years. The mechanism for delivering the monitoring activity is also the subject of ongoing discussions with Natural England.

Green bridges

~~9~~11. As explained in HS2 Information Paper E15~~:~~ Green Bridges, green bridges have been designed to maintain safe movement and dispersal of animals and plants from one side of the ~~railway~~ Proposed Scheme to the other and are proposed as mitigation measures for specific requirements identified in the ES~~nvironmental Statement.~~ These structures will also allow species to move freely in response to changing climatic conditions in the future. The main difference between a standard bridge and a green bridge is the increased width to allow vegetation, typically a hedgerow, to be planted along the structure on one or both sides of the bridge.

1~~0~~2. The design of the Proposed Scheme includes a number of green bridges along the line of route and, although they have primarily been designed for bats, they will also provide safe passage across the route for other species.

13~~1~~. In addition to the green tunnels at South Heath and Wendover, five of the sixteen proposed green bridges are in Buckinghamshire. They are mostly at locations in the Bernwood Forest area – two at Finemere Wood north of Quainton and three in the vicinity of Decoypond Wood at Calvert where. They will be designed specifically for the bat populations and will be capable of supporting growth of native trees and shrubs to maturity. ~~The Promoter does not consider that any more green bridges or tunnels are justified.~~

14~~2~~. In order to encourage species to use green bridges, plants that attract them (e.g. fruit producing shrubs) will be located at the entrances to the bridge linking into the existing habitats. Hedgerows, including a range of local/native species, will be established along the bridge to convey animals safely to the other side.

15~~3~~. Typically, green bridges would be unlit to ensure that light sensitive species, such as bats, are not discouraged from using them. As well as providing safe passage and habitat linkages, the addition of vegetation would also assist to integrate the bridge into the landscape. The safe movement of species between habitats will also be supported by other design elements such as tunnels, viaducts, underpasses and culverts.

16~~4~~. For further information the Petitioner is referred to HS2 Information Paper E15~~:~~ Green Bridges

Green tunnels

17~~5~~. Green tunnels often known as cut-and-cover tunnels are constructed either in an open excavation or a retained excavation. Examples of typical cut-and-cover tunnels are shown in HS2 Information Paper D7, Tunnel Construction and Methodology and ES~~nvironmental Statement~~ Volume 1, Chapter 6.12 and the Petitioner is referred to these documents for further information. Two main construction methods are likely to be used, specifically, open excavation and excavation within retaining walls. The open excavation method involves excavating from the surface, including the use of temporary support as required. Once the final depth is reached, the tunnel floor is constructed, followed by the walls and roof to form a twin-cell box to enable tracks to be separated

for safety reasons. This box is then buried by back-filling with the previously excavated material and restoring the land so it blends into the landscape.

16~~8~~. The retained excavation method is likely to be used where there are spatial constraints, such as urban areas. First the walls are constructed using diaphragm walling or bored piling. Then the ground is excavated between the walls, down to the top of the roof of the box. One option is then to form the roof and continue the excavation of the remainder of the tunnels, from the open ends of the box, and construct the floor slabs and dividing walls. The box is then backfilled to the surface. The second option is to continue the excavation down to the floor slab, construct floor slab, walls and roof, and then backfill to the surface.

19~~7~~. Depending on the vertical clearances or the consideration of other constraints it is anticipated that the land surface above the green tunnel can be reinstated to the original land use, where practicable. More information regarding the construction and design of green tunnels is given in HS2 Information Paper D7, Tunnel Construction and Methodology and ES~~Environmental Statement~~ Volume 1 Chapter 6.12

20. The Promoter does not consider that any more green bridges or tunnels are justified.

2~~1~~8. Please see the Promoter's response to Petition paragraphs 28-30, 67, 81-82 for more information on design of cuttings.

Bats

~~19~~22. A standard approach to surveying bats was undertaken as described in the Promoters report 'Field Survey Methods and Standards', which forms part of the technical appendix to Volume 5 of the ~~Environmental Statement (~~ES~~)~~. Survey approaches for all species, including bats, were agreed with Natural England.

2~~0~~3. The ES was informed by bat surveys undertaken during 2012 and 2013. Further bat surveys were undertaken during 2014 in areas where access was granted too late to undertake surveys in 2013, or to provide additional information in areas of significant bat populations. Additional surveys will be undertaken as appropriate to inform EPS licence applications in due course. This will include any necessary surveys after Royal Assent in areas where no access is obtained prior to that date.

2~~1~~4. Surveys are being undertaken to understand how bats move within the landscape, not just at crossing points, although access is causing constraints on this in some locations.

Barn owls

25~~2~~. Whilst the ES Volume 3, Section 2 does recognise that there will be 'significant adverse effects' on the barn owl population, includ~~sion~~ing the possibility of train impacts, it also acknowledges that:

> 'to offset the likely loss of barn owl from the vicinity of the Proposed Scheme, opportunities to provide barn owl nesting boxes in areas greater than 1.5km from the route will be explored with local landowners. As the availability of nesting sites is a limiting factor for this species, the implementation of these measures would be likely to increase numbers of barn owl within the wider landscape and thus offset the adverse effect. If the proposed mitigation measures for barn

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owl are implemented through liaison with landowners, the residual effect on barn owl would be reduced to a level that is not significant'.

~~23. Please see the Promoter's response to Petition paragraphs 13-17 for more information on ancient woodland and hedgerows~~.

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HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 35-36, 72-74.

ISSUE RAISED: Public rights of way

PETITION PARAGRAPH:

35. 16 footpaths that access ancient woodlands and surrounding countryside are affected in your Petitioner's 4km stretch of the proposed railway. Of the 11 that currently cross the trace (LMI/17/2, 21/1, GMI/27/1, 33/3, 33/4, 28//2, 79/1/2, 80/1, 13/3, 12/1, 2/1) only 7 footpath crossings will remain, with some combined, lost or put onto a public road. This will cause great harm to their rural character and tranquillity, affecting use by residents and visitors. Other facilities in South Heath are either lost or threatened and those of Great Missenden, on which the SHA depends, will also be adversely affected.

36. There are significant community impacts on the SHA, with the demolition of properties and many outbuildings, together with the loss of residential amenity, but in particular in Potter Row and Hyde End (due to train noise and impact on views), and .

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Footpath LM1/21/1 is closed, removing access between Little Missenden and Hyde End	Create a replacement for LM 1/21 near to its existing alignment, that joins up GMI/27 (Hyde End) with the path between Hyde Heath and Little Missenden west of the trace: use a green bridge to cross the trace, with full acoustic protection
Footpaths (incl. those from Great Missenden to Potter Row which are particularly important for visitors) lose , rural character: • Removing recreational resource, particularly for Londoners • Reduces viability of Great Missenden retailers	Preserve existing PROWs on existing alignments Use green bridges where they cross the trace, with acoustic protection.
Loss of rural character of the three	Plant mature trees to emulate

footpaths through Sibley's Coppice when re-instated over the green tunnel	previous character
Weights & Measures Gym (with post box) and Annie Baileys to be demolished; viability of garden centre threatened (from sustained loss of trade and access in long construction period)	Establish a community fund for South Heath to pay for creating local facilities
Loss of Great Missenden facilities from sustained loss of access in the long construction period	Financial support to maintain/re-establish retailing
8 homes demolished and 23 outbuildings in 4km stretch, mainly in South Heath and Hyde End	Reduce the speed of the line and re-route HS2 to follow an existing transport corridor

72. The footpaths and other PRoW in the area are extensively used for recreation by residents and visitors. 11 currently cross the line and all will be stopped up at least temporarily (some for 2 years in the Sibley's Coppice area). During the works some are diverted, others require the use of roads that will be affected by increased traffic levels, or cease to be a means of making the previously possible journey.

73. HS2's construction will effectively sever each the footpath access from the Misbourne valley to the ridge to the north-east at different times between Mantles Wood and the Wendover Dene viaduct, to the detriment of residents and the likely avoidance by visitors.

74. (Additional) Mitigation sought: Your Petitioner requests that your honourable House amend the Bill and/or require undertakings from the Promoter that temporary footbridges be installed to prevent the severance of footpaths bisected by the trace.

PROMOTER'S RESPONSE:

1. HS2 Information Paper E5, Roads and Public Rights of Way explains the Promoter's approach to preserving and maintaining the public rights of way (PRoW) network. Where the Proposed Scheme crosses footpaths, bridleways and byways they are generally carried over or under the Proposed Scheme by means of a bridge or underpass. Where a number of routes are affected then some may be conjoined at a crossing of the Proposed Scheme to use a bridge or a cut and cover tunnel. In a few cases, users will be re-directed using a reasonably convenient alternative route to a nearby public right of way or road if suitable to non-motorised users. These solutions may give rise to alternative routes being longer that the original public rights of way, but not by any great distance, and where possible this has been avoided. Where a temporary or permanent realignment or diversion of a public right of way is unavoidable, the shortest practicable route has normally been adopted. In a few cases, users will be redirected using a reasonably convenient alternative route to a nearby public right of way, with appropriate signing. Where several nearby public rights of way are

affected during construction, any temporary closures will be phased, where reasonably practicable, to help maintain public access.

2. The intention is that any new, realigned or diverted routes should retain similar characteristics to other local public rights of way. Public rights of way will also be re-established to maintain access where cut and cover tunnelling techniques are used to create the proposed green tunnels. This is further explained in HS2 Information Paper E5, Roads and Public Rights of Way.

3. The draft Code of Construction Practice (CoCP) describes generic measures for traffic management in section 14.2.2 including 'General measures will be discussed with the appropriate authorities and may include' (...) 'measures to provide for road safety for all modes for the public and construction staff during traffic management.'

4. HS2 Information Paper E13, Management of Traffic During Construction, provides information on potential traffic management measures that can be implemented - including 'signed diversions for equestrians where narrowing, realignment or temporary closure of bridleways/byways is required'.

5. In general, the Promoter does not consider it necessary to assess every diverted route, but the Promoter and the nominated undertaker will review any diversions of specific concern.

6. This is explained further in HS2 Information Paper E5, Roads and Public Rights of Way.

7. During construction the realignment of a number of Public Rights of Way will be required as described in the Environmental Statement (ES), Volume 2, CFA9, paragraph 2.3.9. Temporary closure and associated diversion of nine PRoWs (GMI/79/1 &2, GMI/12/1, GMI/80/1, GMI/23/6, GMI/28/1 & 2, GMI/33/3 and LMI/17/2), during construction will affect non-motorised users due to the increased travel distances required by associated diversions.

8. The permanent realignment of eight PRoW (GMI/2/1, GMI/13/3, GMI/33/4, GMI/33/2, GMI/33/3, GMI/27/1, GMI/23/7 and LMI/21), to accommodate the Proposed Scheme, will have significant effects on non-motorised users due to the increased travel distances required by use of diverted or alternative routes.

9. PRoW LM1/17 will be temporarily re-routed for up to one year, but the additional length of the footpath during this period will only be 450 metres, and footpath LM1/21 will be permanently stopped up. PRoW GMI /33 will be stopped up and diverted because the route crosses the Proposed Scheme where it goes into deep cutting. The footpath is diverted alongside the Proposed Scheme but for only 200 metres after which it crosses a bridge at Hyde Lane. This diversion presents a safer option and avoids a longer routing along the B485 Chesham Road, this diversion has not been identified as being a specific concern by the highway authority. The diverted route affords distant views across the cutting over Hyde Lane and Farthing ~~w~~Wood. The diverted route joins its original alignment just across the Hyde Lane Over Bridge. GM/12 and GM/13 located near to Potters Row both cross the Proposed Scheme. GM/12 will still cross on its original alignment over a new footbridge. GM/13 has been the subject of discussion with the highway authority, which is considering proposals for it to ~~and will now~~ be routed away from the ~~railway line~~Proposed Scheme towards and over the portal of the South Heath Green Tunnel. This will reduce the length of the diversion and provide a more scenic view over Jenkins Wood and west to Frith Hill Farm. Discussions

continue with the highway authority about other parts of the highway network.

Community and Environment Fund

10. On 10 October 2014, the Promoter announced that a new Community and Environment Fund (CEF) and Business and Local Economy Fund (BLEF) will make up to £30m available for residents and local communities between London and Birmingham to invest in public projects such as the refurbishment of local community centres, nature conservation and measures to support local economies and employment.

11. Community groups, charities, NGOs, local authorities and business support organisations will be able to bid for grants from the new funds. The first grants will be awarded following Royal Assent of the Bill. Grants will be awarded until the end of the Proposed Scheme's first year of operation.

12. The objective of the BLEF will be to add benefit over and above committed mitigation and statutory compensation to support local economies that are demonstrably disrupted by the construction of the Proposed Scheme.

13. The Promoter has yet to publish any details on the operation or eligibility for the funds. Engagement with local authorities, local enterprise partnerships and environmental non-governmental organisations took place in December 2014. Further information can be found in HS2 Information Paper C12, The Community and Environment Fund and Business and Local Economy Fund, and at:

https://www.gov.uk/government/news/30-million-hs2-community-and-business-support-funds-launched

~~on these funds will be released in due course~~.

14. Please see the Promoter's response to Petition paragraphs 22-25 for more information on speed of the line.

15. Please see the Promoter's response to Petition paragraphs 31-34, 45, 66 for more information on mitigation planting and green bridges.

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HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 37.

ISSUE RAISED: Cultural heritage

PETITION PARAGRAPH: 37. The area has a rich cultural heritage that will be permanently affected by HS2. In addition to the ancient woodland, historically important hedgerows and landscape effects discussed elsewhere, there are archeologically significant sites that will be permanently damaged by the works, and scheduled monuments and the settings of a range of historic (and important but non designated) assets that will be adversely affected. The ES records some impacts, but your Petitioner believes the ES underestimates the extent and severity of the impacts - particularly as the setting of many assets contributes enormously to their value.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Visual impacts and loss of rural settings to 9 listed buildings in Hyde Lane, Kings lane, Potter Row; 3 other non designated properties in Frith Hill SHL, Hyde Lane.	Lower the level of track, provide further screening of the railway. The screening in itself may detract from the setting
Damage to archaeological assets at 6 sites (Mantle's Wood, north of Rowan Farm, Cudsden's Farm, Sibleys Coppice, Bury Farm, edge of Potter Row)	Reduce the speed of the line and re-route HS2 to follow an existing transport corridor

PROMOTER'S RESPONSE:

1. The Promoter disagrees that the historic environment information in the Environmental Statement (ES) is insufficient. The methodology for assessment was set out in the Scope and Methodology Report (SMR) for the environmental impact assessment and local authorities were consulted on its content. The SMR set out the methodology for assessment of setting in section 8.6 and this includes the use of ~~English Heritage~~Historic England guidance on setting. The CFA reports in Volume~~.~~ 2 of the ES summarise the analysis and conclusions and the detail is recorded in Vol.5 of the ES which includes which includes cultural heritage survey reports and impact assessment tables as well as the landscape and visual analysis and map books

2. The design of new and modified structures, landscape works and noise mitigation will be developed

during detailed design. It is recognised that this work may have implications for the setting of nearby heritage assets, notably designated assets, and appropriate regard will be given to this issue. The nominated undertaker will in any event be expected to use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by the Proposed Scheme, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme.

3. Discussions have taken place with local authorities and others to design and refine mitigation proposals and this approach will continue. In addition many measures, including those affecting the appearance of the ~~railway~~ Proposed Scheme, will require approval of qualifying planning authorities.

Setting

4. The Environmental Memorandum sets out the approach to landscape and visual mitigation which takes account of the historic environment, including listed buildings. The design of new and modified structures, landscape works and noise mitigation will be developed during detailed design. It is recognised that this work may have implications for the setting of nearby heritage assets, notably designated assets, and appropriate regard will be given to this. Mitigation measures will be developed in consultation with other disciplines.

5. Schedule 16 to the Bill establishes the planning regime under which certain details of the Proposed Scheme works will require approval from the relevant local planning authority. For certain of these approvals the grounds which the authority may take into account when considering whether to approve, condition or require a modification to a request for approval include "to preserve a site of archaeological or historic interest or nature conservation value". This will ensure that heritage assets will considered through the planning process that will apply to the Proposed Scheme works. Further details of the planning regime are set out in HS2 Information Paper B1, The Main Provisions of the Planning Regime.

6. This is explained further in HS2 Information Paper E1, Control of Environmental Impacts and HS2 Information Paper D3, Code of Construction Practice. The latest version of the draft Code of Construction Practice can be found at:

www.gov.uk/government/uploads/system/uploads/attachment_data/file/259617/Vol5_draft_code_of_construction_practice_CT-003-000.pdf

Listed Buildings

7 .The Promoter has sought to avoid direct physical impacts on listed buildings during the development of the route during its design of the Proposed Scheme and its associated works.

8. The impacts on listed buildings and other heritage assets have been assessed in the ES~~nvironmental Statement~~ (cultural heritage topic assessment).

9. Paragraph 1 of Schedule 17 to the Bill disapplies controls under the Planning (Listed Buildings and Conservation Areas) Act 1990 in relation to listed buildings which are directly affected by the Proposed Scheme works and identified in Table 1 of that Schedule. Column (3) of Table 1 specifies the extent of the works to be carried out in exercise of the powers under the Bill and these works would be of a type

that would usually require listed building consent. No Grade II listed buildings noted by the Petitioner, are named in Table 1

10. It is proposed that a Heritage Agreement will be made with each affected local authority and with ~~English Heritage~~Historic England, in respect of the listed buildings set out in Table 1 of Schedule 17 to the Bill, setting out the specific arrangements for each of the listed buildings identified. These Heritage Agreements will ensure that appropriate mitigation measures are in place and that any works undertaken are appropriate to the special architectural or historic interest of the listed building and its significance as a heritage asset. The nominated undertaker will liaise with the local authority and ~~English Heritage~~Historic England during the preparation of the methodology for the works.

11. Paragraph 2 of Schedule 17 to the Bill disapplies some of the legislation under the Planning (Listed Buildings and Conservation Areas) Act 1990 for those listed buildings specified in Table 2 of that Schedule, specifically with regards to works to maintain or restore their character, or for the affixing of monitoring apparatus. This has the effect of removing the need for listed building consent for works to protect the listed building from adverse effects, such as ground settlement as a result of the Proposed Scheme works. It is proposed that a Heritage Agreement will be made with each affected local authority and with ~~English Heritage~~Historic England, in respect of these works, setting out the process by which protective works to listed buildings will be approved. The nominated undertaker will liaise with the local authority and ~~English Heritage~~Historic England during the preparation of the methodology for the works.

12. There are 8 Grade II listed buildings in the Parish of Great Missenden identified in Table 2 of Schedule 17, including Hyde Farmhouse and Barns and outhouses at Hyde Farmhouse on Hyde Lane and 86 Kings Lane.

Archaeology

13. The cultural heritage assessment, which includes both above-ground and below-ground archaeological resources, is reported in the Environmental Statement (ES). This includes information on archaeological remains and potential impacts on them. Archaeological remains include palaeo (ancient)-environmental remains and geological deposits that may contain evidence of the human past.

14. The Promoter has sought to avoid direct impacts on archaeological remains (generally referred to as heritage assets) during the development of the route and its associated works. However, construction works involving ground breaking and excavation do have the potential to result in the physical removal of, or damage to, archaeological remains and there is the potential for discovering archaeological remains at locations across the route.

15. Where avoidance has not been practicable, the nominated undertaker will deliver a programme of archaeological investigation, including, but not limited to recording, analysis, reporting and archiving.

Investigation and recording of heritage assets

16. The Heritage Memorandum sets out how the historic environment (including heritage assets and their setting), will be addressed during the design and construction of the Proposed Scheme. It provides a framework for the nominated undertaker, ~~English Heritage~~Historic England, local authorities and other stakeholders to work together to ensure that the design and construction of the Proposed

Scheme works are carried out with due regard for heritage considerations.

17. The Code of Construction Practice(CoCP) (notably Section 8 Cultural Heritage), will require the nominated undertaker to ensure that the works are carried out in such a way so that disturbance to all heritage assets is managed in accordance with accepted industry practice and, where disturbance cannot reasonably be avoided, is controlled and limited as far as reasonably practicable.

18. Route-wide approaches will be developed by the nominated undertaker in discussion with ~~English Heritage~~Historic England and local authorities via the Heritage sub-group. A route-wide generic written scheme of investigation (WSI) will be prepared setting out the general principles for design, evaluation, mitigation, analysis, reporting and archive deposition to be adopted for the design development and construction of the Proposed Scheme.

Programme of heritage investigation works

19. Before construction works begin~~s~~ the nominated undertaker will develop an integrated programme (the heritage investigation programme) to deliver the archaeological mitigation works outlined in the ES and as developed during the detailed design process. The programme will set out the key stages of investigation, for example:

- Detailed desk-based assessment;
- Field evaluation (to inform location specific mitigation);
- Location specific mitigation; and
- Post excavation.

20. The heritage investigation programme will be developed in light of, and in conjunction with, the overall construction programme and will be reviewed and updated, as appropriate to allow the management of the works.

Approach to location specific investigation

21. Before enabling and construction works begin, the research undertaken for the ES will be reviewed. Where required, for the purposes of delivering archaeological works, additional detailed desk-based assessment and/or field evaluation will be carried out and this will inform the development of location specific mitigation works (a location specific WSI). These documents will be developed in discussion with ~~English Heritage~~Historic England and the relevant local authority and will follow the principles set out in the generic WSI.

22. Works may include the protection and preservation of assets in situ (which may be achieved through design), investigation and recording in advance of enabling and construction, and/or the implementation of investigation and recording during enabling and construction works.

Analysis, publication and archiving

23. Once archaeological investigations are complete, then the records generated and the artefacts and samples collected will be assessed and analysed. The results of that work will be published via a range of media and approaches to this stage of work will be developed with ~~English Heritage~~Historic England and the local authorities. The nominated undertaker will work with ~~English Heritage~~Historic England

and local authorities to identify suitable repositories to enable the deposition of the artefacts and records generated by the heritage investigation programme.

Settlement

24. Construction of the Proposed Scheme will require a range of underground works including tunnelling. HS2 Information Paper C3, Ground Settlement sets out the Promoter's approach to assess and reduce as far as reasonably practicable any ground settlement that could result from underground works.

25. Buildings (including listed buildings) which may be affected by structural excavations carried out by the nominated undertaker are assessed using a three phase process similar to that developed on other projects including the Jubilee Line Extension, High Speed One and Crossrail. This three phase process is set out in HS2 Information Paper C3, Ground Settlement.

26. The Promoter is satisfied that satisfactory controls will be established by the Bill and Environmental Minimum Requirements (EMRs) relating to the management of and mitigation of impacts upon listed buildings and other cultural heritage assets.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 38-43, 68-69, 83.

ISSUE RAISED: Visual impact

PETITION PARAGRAPH:

38. The Promoter's ES shows an extensive Zone of Theoretical Visibility (ZTV) for HS2. But it artificially confines its consideration by restricting the eligible area to within 2km either side of the line, irrespective of whether HS2 can be seen from further away (it had been 3km in the Draft ES) and by excluding the highest components of the railway -the gantries, wires and masts. Even 'trimmed' in this manner, this zone covers 2,150ha for the AONB. The ZTV not only includes South Heath area, but stretches 2kms across the Misbourne valley in which Great Missenden sits to the west. The extent of visibility increased when cutting depths were raised.

39. The bunds used to conceal the railway and provide some acoustic mitigation are themselves unnatural features in the AONB landscape. As noted above in relation to spoil, no data is yet available about the changes in surface levels in the AONB, so it is impossible to know how obtrusive the 8.3Mt of spoil deposits will be. The volumes at issue are very large - sufficient to cover Green Park (London) in a layer 29 metre deep (the height of just under seven double decker buses on top of each other).

40. The ES assesses the impact of HS2 on the landscape. This accepts that HS2 at the start of operations has a "major" or "moderate adverse impact" for a large range of viewpoints affecting your Petitioners. But it claims that the screening afforded by newly planted trees removes these impacts, so that it is not significant "by year 15 and beyond to year 60". Year 15 is 2041, and year 60 is 2086. All this also fails to include gantries, masts and wires. This sanguine view is not accepted by the Chilterns Conservation Board (CCB). The use of 'not significant' by HS2 Ltd involves judgements to which neither your Petitioner nor CCB subscribe, and your Petitioner respectfully invites your honourable House to treat those judgments with great caution.

41. Culverts, balancing ponds and other water collection areas are also planned (some 11 in this area), but they are out of character with chalk upland and so damage the landscape character. They are artificially lined, may not even contain water and are fenced, covering 11.72ha in the AONB.

42. HS2 will create light pollution from the 2.8kms of surface route between Mantles Wood and Leather Lane as well as from night-time works. This is out of character and damages the nightscape (the SHA community has no

street lights).

43. Constructing HS2 involves moving the national grid power lines at South Heath twice - as a temporary diversion and then back to effectively the original alignment. This is a waste of an opportunity to move the lines just once and place them underground, reducing their adverse visual impact.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Overhead wires, gantries and associated furniture are visible very widely (including Potter Row and Hyde Lane homes)	Lower the level of track throughout area and increase height of bunds, so that trains and all railway furniture (including gantries) are not visible either locally or from across the valley
Portal buildings (for Chiltern Tunnel and SHGT); and auto-transformer station at South Heath GT north portal end exposed	Tall screening required to west of SHGT north portal. Sympathetic design and exterior of buildings required for the area; maximum elevations to be specified. Promoter must agree design with District Council following public consultation
Access to the railway is prevented by security fencing, shown in photomontages as of bright steel sometimes sited on the crest of bunds. No account is given as to how visible these structures are.	Security fencing should be screened from view (eg sited on the inside slope of bunds) Where visibility is unavoidable it should be made or painted to 'blend in'.
Balancing and other ponds will occupy 11.72ha and are out of character	Find alternative means of addressing polluted run-off, storing on trace and removing for sustainable disposal if necessary. If remain, landscape and ensure support water/ vegetation.
Arcing damages nightscape.	Screen railway including pantographs and gantries with deeper cuttings and eliminate residual sight lines using bunds
Night-time maintenance damages nightscape	Require screening of maintenance works to prevent light pollution
Lighting on new roundabout at Kings Lane/B485 Chesham Road	Redesign junction (to a T-junction) so extra traffic and safety is not

damages nightscape	reliant on lighting

68. The Promoter's ES recognises that the extensive construction works (the SHGT, cuttings, new buildings, roads, 6 construction compounds, demolition works, and removal of field boundaries etc) will create visual blight at numerous locations. Your Petitioner is concerned that this is unsympathetic to a landscape that is recognised to be sensitive, and that no effective screening is presently planned. Construction will dominate the SHA for years, and have enduring effects on existing businesses.

69. Almost all of those your Petitioner represents in the SHA are in the ZTV, in the ES maps21, despite the fact that the highest construction elements (eg cranes) are not taken into account. The selected viewpoints in the ES all indicate 'moderate' to 'major' adverse effects, and 'significant' effects on views from properties in Potter Row, Sibleys Rise and Frith Hill (SHL). In reality your Petitioner expects visual blight to be very much worse, and in truth horrendous.

Issue	**(Additional) Mitigation sought**
Construction works widely visible	Sympathetic screening eg construction compounds
Lighting will damage night-scape	Strict imposition of limits on working time. Screening.
Tourist business will falter	Council rates reduction/financial support
Walkers and cyclists will not come	Funding for promotion, free transport beyond the worst eyesores/hazardous roads from Great Missenden station (eg to Ballinger)

83. The assessment made by HS2 Ltd of the visibility that HS2 will have once built and during construction is seriously defective. The landscape of the AONB is accepted by HS2 Ltd to be sensitive, but the ES provides only defective and partial information as to the impacts that HS2 would have. It is impossible to assess whether the mitigations that are being proposed are sufficient in the absence of knowing the real extent of its residual visual obtrusiveness.

Defect	**Remedy sought**
• ZTV is deficient - ignores visibility of prominent railway furniture (gantries, masts, wires; security fencing; and cranes in construction) • Few visualisations provided	The Select Committee of your honourable House to require the Promoter to: • Perform an accurate assessment of HS2's visibility, and such mitigations as are

for the lay reader • Profile maps giving height of line not provided (as promised) for the ES, nor heights of bunds leaving property owners unable to work out what could be seen from their homes, and the adequacy of the mitigation.	necessary to address this • Publish the results in a revised ES and re- consult.

PROMOTER'S RESPONSE:

Visual impact and mitigation of the Proposed Scheme

1. The Proposed Scheme includes a long tunnel and a comprehensive package of measures to avoid and mitigate detrimental effects on the environment, the landscape and recreational opportunities. This has been assessed extensively as reported it the Environmental Statement (ES) Volume 2 CFA8 and CFA9 reports and in Section 2 of Volume 3.

2. As paragraph 2.5.3 of Volume 3 of the ES sets out:

> 'as is commonplace with major infrastructure works, the scale of the construction activities means that works will be visible in many locations and will have the potential to give rise to significant temporary effects which cannot be mitigated practicably. Such effects are temporary and vary over the construction period depending on the intensity and scale of the works at the time. The assessment of landscape and visual effects has been based on the activities occurring during the peak construction phase, which is defined as the period during which the civil engineering works will take place'.

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3. However, whilst recognizing these effects, the ES also sets out the series of proposed mitigation measures of particular relevance to the wider landscape assessment of the AONB at paragraph 2.6.2 as follows:

- An approximately 9.6km long bored tunnel for the southern portion of the Proposed Scheme within the AONB, with only vent shafts and associated infrastructure visible above ground;
- Two green tunnels (total length 2.5km), allowing the reinstatement of the landscape above the Proposed Scheme adjacent to the South Heath and Wendover communities;
- Presence of the majority of the remainder of the Proposed Scheme in cutting north of the Chiltern tunnel;
- The use of earthworks to integrate the Proposed Scheme into the landscape through the AONB, providing visual screening and noise attenuation;
- Integration of embankment landforms into the natural topography, including earthworks associated with road diversions, and road and pedestrian bridges;
- The reinstatement and introduction of hedgerow planting to reconnect severed lengths of hedgerows and to break up the linear alignment of the Proposed Scheme, integrating it into existing vegetation patterns;

- The use of approximately 50ha of planting to replace areas of lost woodland and to introduce new areas of woodland to break up the linear alignment of the Proposed Scheme, integrating it into the existing vegetation patterns; and
- The Promoter is in discussion with Historic England ~~English Heritage~~Historic England ~~-~~about the need to provide mitigation at Grim's ditch in the light of further information they have provided on the location of the monument.

4. The ES assesses that, taking into account avoidance and reduction of effects on the AONB through the implementation of proposed mitigation measures, including permanent alterations to landscape character and natural beauty, the magnitude of change, assessed alongside the high sensitivity of the AONB will result in a 'moderate adverse' effect during year one of operation, which will be reduced by year 15, though not to a sufficient level to alter the overall assessment findings. However, by year 60 of operation the Proposed Scheme will be further integrated into the AONB, and at this stage, 'the effects of the Proposed Scheme on the special landscape qualities, natural beauty and landscape character and setting of the wider AONB … will reduce such that it is not considered to be significant'.

Design

5. The design of the Proposed Scheme to date only provides the level of detail necessary for the purposes of the Bill and the requirements of the Environmental Impact Assessment (EIA). The level of detailed design necessary to enable the Proposed Scheme to be constructed has therefore yet to be carried out and, although detailed design development may commence as the Bill progresses through Parliament, it will not be completed until after the Bill has secured Royal Assent. Once the design is complete the nominated undertaker will need to apply for approval of the detailed design of a range of elements of the Proposed Scheme from local planning authorities along the route, as set out in Schedule 16 to the Bill. Please see HS2 Information Paper B1 Main Provisions of the Planning Regime.

6. Local authorities who sign the Planning Memorandum will become qualifying authorities for the purposes of the Bill, as and when the Bill is enacted. By becoming a qualifying authority, the planning authority will gain powers to determine more than just detailed design approvals for building works under Schedule 16 to the Bill. For example, under powers conferred by the Bill once enacted, these qualifying authorities will be able to consider requests for approval for the design or external appearance of works for the Proposed Scheme such as noise screens and transformers under Paragraph 3 of Schedule 16 to the Bill.

7. Individual elements of the project, such as bridges and viaducts, will be designed to ensure that they are in keeping with local landscape character and setting. Detailed design, materials and finishes will be subject to approval by the local planning authority under the planning regime established under the Bill.

8. At least two million trees will be planted to integrate the ~~railway~~ Proposed Scheme into the landscape and to provide visual screening. These areas will be planted with suitable tree species that will be in keeping with the existing local tree scape.

Approach to assessment

9. A large number of landscape surveys were carried to provide information for the assessment of impacts identified in the ~~Environmental Statement (~~ES~~)~~. The landscape and visual assessment undertaken for the Promoter follows best practice guidance in assessing effects on landscape character areas (using published assessments for the majority of the route) and on visual receptors. A full description of the methodology used for landscape and visual assessment is provided in the Proposed Scheme Scope and Methodology Report.

10. In accordance to guidance provided by the Landscape Institute a zone of theoretical visibility (ZTV) was produced to assist with determining a study area for the assessment. A ZTV is a computer generated tool used to identify the likely (or theoretical) extent of visibility of a development. Therefore, the ZTV provides indication of where the Proposed Scheme could be viewed within a given landscape.

11. Two ZTVs were used for assessment: one for the construction phase and one to assess the operational phases of Phase 1. The ZTV model was verified and interpreted on site by qualified landscape architects in accordance to the Landscape Institutes guidance. Draft ZTVs were prepared initially and these were used to consult relevant organisations (e.g. Natural England, National Trust, Chilterns Conservation Board and local district and county councils) on the proposed viewpoints to be assessed.

12. Along the length of the route the Promoter has identified a number of significant effects arising during both construction and operation. These effects arise due to the level of change experienced within these landscape character areas, and these areas' sensitivity to this change. Where significant effects for either construction or operation (or both) have been identified for the Proposed Scheme these have been reported in Volume 2, CFA reports 1-26, Section 9.

13. In the ES, landscape effects are reported against Landscape Character Areas (LCAs) which have been defined with reference to available published documents and professional judgement, where no published information is available the CFA reports (Volume 2). Maps showing the LCAs and specific areas assessed and those areas that would experience significant effects during construction or operation (or both) are shown in CFA Map Books and also in the Landscape and Visual Assessment section of Volume 5.

Setting and heritage

14. The Environment Memorandum sets out the approach to landscape and visual mitigation which takes account of the historic environment and setting. This includes conservation areas, listed buildings and buildings of historic interest. Assessment on setting and heritage is also covered by the Historic Environment discipline and is reported in the Cultural Heritage sections of the ES.

15. The design of new and modified structures, landscape works and noise mitigation will be developed during detailed design. It is recognised that this work may have implications for the setting of nearby heritage assets, notably designated assets, and appropriate regard will be given to this. Mitigation measures will be developed in consultation with other disciplines.

Balancing Ponds

16. HS2 Information Paper E17~~:~~ Balancing Ponds and Replacement Flood Storage Areas explains

how the design of Proposed Scheme includes various Sustainable Drainage Systems (SuDS), which include balancing ponds and various other drainage techniques such as use of swales and linear soakaways, to control the rate, volume and quality of water run-off from the Proposed Scheme ~~rail~~ corridor and other associated infrastructure, taking into account projected climate change impacts.

17. Where possible, infiltration SuDS have been preferentially selected, and where ground conditions are likely to be suitable, balancing ponds have been designed as infiltration ponds (discharging solely to ground) or hybrid ponds which combine infiltration with discharge to a watercourse.

18. Balancing ponds will typically be unlined and have banks with a varying profile. The majority will not be designed to hold water permanently, but will be dry most of the time, except following intense rainfall events.

Diversion and reinstatement of high voltage power lines and pylons

19. The Petitioner requests that all instances of diverted high voltage power lines should be placed underground. The reason stated is that placing overhead pylons underground will always result in a beneficial landscape impact. Whilst the 'undergrounding' of power lines may have some beneficial landscape impacts, high voltage power lines buried underground require adequate separation between the cables and as a result, over the length of the diversion, can require construction work trenches of up to 50 metres wide. This can have a greater impact on other environmental considerations such as ecology, archaeology and agriculture. In addition, at the transition between overground and underground cables, additional structures are required known as cable sealing end compounds, which are often larger and more intrusive than an individual pylon.

20. The scheme design for Phase One of the Proposed Scheme, as prepared by the Promoter and National Grid, involves more than 20 separate diversions of National Grid overhead power lines. These diversion proposals are assessed on a case-by-case basis. It is recognised that, for new pylon routes, undergrounding solutions on average cost approximately 10 times the cost of overhead pylon routes. For alterations to an existing overhead line the ratio can increase further.

21. The Visual Impact Provision funding has been made available for a limited number of projects within National Parks and Areas of Outstanding Natural Beauty (AONBs). The Stakeholder Advisory Group has identified initial priorities for the use of the Visual Impact Provision but decided not to select the potential project for the Chilterns AONB.

22. The Proposed Scheme contains three diversions of high voltage overhead power lines in the AONB. A diversion will be required at South Heath to achieve the required clearances over the Proposed Scheme. The diversion has been planned to follow as closely as possible the existing overhead line route. To facilitate this, an existing tower will need to be removed and replaced with a taller tower in the same location. The diversion is described in paragraph 2.3.52 of the Environmental Statement (ES), Volume 2, CFA 9 report.

23. Two diversions will be required at Wendover to achieve the required clearances over the Proposed Scheme. One will be on the west side of the route to the north of the Small Dean Viaduct. This will move the overhead line by up to 60 metres to the west and involve the removal of two

existing towers and replacement with three taller towers. Please see map CT-06-038 in the~~The diversion can be seen in Figure No. LV-01-051 photomontage in~~ ES Volume 2, CFA10 Map book on which the three taller towers are shown as red squares. An illustration of how the proposed diversion may look can be seen in Figure No. LV-01-051 photomontage in the ES, Volume 2, CFA 10, Map book.

24. The other diversion will be on the west of the line north of the Wendover green tunnel north portal. As explained in paragraph 2.3.57 of the ES, Volume 2, CFA 10 report, ~~T~~this diversion will move the overhead line by up to 70 metres to the south for a period of approximately two years.~~west and~~ This diversion will involve the removal of an existing tower (located in ~~an HS2~~a Proposed Scheme cutting) and replacement with a taller tower approximately 100 metres to the west. The ~~Environmental Statement (~~ES~~)~~ does not report that the overhead line diversions result, on their own, in a significant landscape and visual effect.

Lighting

25~~3~~. As explained in section 5.4.1 and 5.4.2 of the draft Code of Construction Practice (CoCP):

'site lighting and signage will be provided to enable the safety and security of the construction sites. It will be at the minimum luminosity necessary and use low-energy consumption fittings. Where appropriate, lighting to site boundaries will be provided and illumination will be sufficient to provide a safe route for the passing public. In particular, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths, roads and amenity areas. Where appropriate, lighting will be activated by motion sensors to prevent unnecessary usage. It will comply with the Institution of Lighting Engineers' guidance notes for the reduction of light pollution and the provisions of BS 5489, Code of Practice for the Design of Road Lighting, where applicable.

'Lighting will also be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings, ecological receptors, structures used by protected species and other land uses to prevent unnecessary disturbance, interference with local residents, railway operations, passing motorists, or the navigation lights for air or water traffic. This provision will apply particularly to sites where night working will be required. In addition, at construction sites where potentially significant impacts are identified, the lead contractor will develop and implement lighting controls as part of their Environmental Management System'.

26~~4~~. Section 5.3.1 of the draft CoCP also explains that controls on lighting/illumination to minimise visual intrusion or any adverse effect on sensitive ecology.

27~~5~~. As detailed in the Local Environmental Management Plan (LEMP) template (Annex 3 of the draft CoCP), the general requirement section includes a section for site lighting to identify any sensitive receptors and local control measures. Section 4.2.2 of the draft CoCP states that the nominated undertaker and/or its contractors will engage with the local communities, local

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authorities and other stakeholders in order to develop the LEMPs.

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2~~8~~6. Furthermore, artificial lighting is one of the construction arrangements covered by the planning regime established in Schedule 16 to the Bill. This is explained further in HS2 Information Paper B1, The Main Provisions of the Planning Regime.

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Lighting from trains and overhead wires

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2~~9~~7. The Promoter ~~Proposed Scheme~~ will meet the requirements set out in BS EN 50367 which requires an arcing (flashing) percentage of less than 0.2 ~~%~~percent at full line speed. Modern high speed catenary systems are designed to minimise arcing by ensuring that the contact wire remains at a constant height and is tensioned to a level which reduces contact wire to a minimum.

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~~28~~30. The dynamic performance of the catenary system and its interaction with rolling stock is verified during testing and commissioning to ensure that the arcing rate is within acceptable limits and suitable maintenance regimes are used to ensure the system characteristics are kept within specified ranges.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 44.

ISSUE RAISED: Agriculture

PETITION PARAGRAPH: 44. There is a material permanent loss of farmland in the area. The ES records~~.~~ 7 farm holdings as suffering "moderate/major" permanent impacts (4 will suffer demolitions) with 78ha of best agriculture land permanently lost (from 98ha in total).

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Excessive farmland take	Use retained cuttings to minimise land take
40 ha of farmland are lost for compensatory planting for the loss of ancient woodland, which may be more if The Woodland Trust's recommendations are addressed	If ancient woodland is not lost, compensatory planting is unnecessary, so loss of ancient woodland should be minimised (eg by fully retained cuttings)

PROMOTER'S RESPONSE:

1. Please see the Promoter's response to Petition paragraphs 13-17 for more information on agriculture.

2. Please see the Promoter's response to Petition paragraphs 28-30, 67, 81-82 for more information on design of cuttings.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 46-47, 70.

ISSUE RAISED: Property

PETITION PARAGRAPH:

46. Your Petitioner is very concerned that properties in close proximity to HS2 will suffer permanent loss in value compared to their un-blighted price, as the premium qualities related to relative tranquillity, an AONB setting and a network of rural footpaths etc are lost. Owners will suffer this loss permanently as the Land Compensation Act (LCA) 1973 (Part 1) provides compensation after 1 year of operation but only for physical nuisance, not loss of amenity, and not for the true drop in property market value. Over 2,500 properties are within 1km of the line where there are surface works in the AONB. Just over 500 are in the 4km stretch, with 150 homes very near, i.e. within 300m of the line, in the SHA. Construction blight issues are considered at para 70 below.

47. (Additional) Mitigation sought: Your Petitioner requests that your honourable House amend the Bill and/or require the Promoter to implement such measures as minimise the physical impacts and obtrusiveness of HS2 and, further, to amend the LCA in its application to HS2, so that compensation is based on the full loss in property market value, and not that attributed only to physical nuisance, or by some other means to ensure that no person who experiences a loss in the value of their property by reason of HS2 is not fully compensated.

70. Property values in the area are already depressed by HS2, and this will continue during the many years of construction. Property values have been blighted since HS2's initial announcement, and once the construction period is added this will mean a blight period of 16 years even before HS2 first operates. The whole SHA is suffering and will continue to suffer blight. When construction starts both values and sales volumes will further deteriorate. This is a cause of very great anxiety and stress to your Petitioner's community, especially the elderly, and those who wish to move home and get on with their lives, but are trapped.

Issue	(Additional) Mitigation sought
• Property owners suffer uncompensated losses, with only a tiny minority adequately covered by HS2	Improve compensation arrangements for planning and construction period: • Extend the voluntary

compensation schemes. • Elderly owners unable to sell to move closer to facilities required on a daily basis or family. • Property degradation affecting area if become empty eg Annie Baileys.	purchase zone to all those affected, or • Amend the "need to sell" scheme to acknowledge community blight and remove the requirement to demonstrate financial hardship to qualify, or • Introduce a property bond for people near to the line where there is no hope of sales except at large discount for years.

PROMOTER'S RESPONSE:

1. The Government is committed to providing fair assistance to those that may be affected by the Proposed Scheme.

2. The general purpose of the statutory framework is to provide fair compensation for a person whose land has been compulsorily taken. Payment of compensation for land compulsorily acquired will be in accordance with the general statutory framework incorporated within the Bill and the general Compensation Code as interpreted by the Courts and the Upper Tribunal (Lands Chamber).

Construction

3. Where no land is acquired from a claimant, compensation may be payable. This is in a case where the construction (rather than operation) of the public works interferes with the landowner's enjoyment of or diminishes the value of their land, either permanently or temporarily, in a manner for which they could sue the Promoter had they not the immunity conferred by their statutory authority to carry out the public works.

4. Compensation is assessed by reference to any diminution of value of the claimant's interest in land caused by the interference with their private right.

Subsequent Use

5. On operation of the Proposed Scheme, Part 1 of the Land Compensation Act 1973 will apply. The Act allows owners of land close to new infrastructure projects to claim compensation for depreciation in the value of that land caused by certain specified physical factors which could be attributed to works, namely noise, vibration, smell, fumes, smoke, artificial lighting and the discharge onto the land of any solid or liquid substance. The measure of compensation is the full depreciation caused to the land by these physical factors. Claims for Part 1 compensation can only be made once the scheme has been in operation for 12 months, and compensation is assessed by reference to the diminution in value of the property.

6. This is explained further in HS2 Information Paper C8, Compensation Code for Compulsory Purchase. Other sources recommended for reference include the Department for Communities

and Local Government's Guides to Compulsory Purchase, a copy of which can be found at www.gov.uk/government/collections/compulsory-purchase-system-guidance

7. The Promoter also appreciates that there may be a problem of generalised blight whereby it may become more difficult to sell properties on the market because of the possibility of the Proposed Scheme, before the scheme is certain or before the Compensation Code can be applied or in areas to which the Compensation Code would not apply.

8. In January 2015, the Promoter unveiled a new package of property help and compensation measures for residential owner-occupiers and introduced a "Need to Sell" Scheme. This Scheme would operate under no defined boundary whereby the Government will offer to accept applications to buy properties at their full un-blighted market value from those who have a compelling need to sell such as job relocation or ill health, but who are unable to do so other than at a substantially reduced price, as a direct result of the announcement of the Proposed Scheme proposals.

9. Further details about the scheme are available at - https://www.gov.uk/government/publications/hs2-phase-one-need-to-sell-scheme-guidance-and-application-form

Property Bond

10. The Government has decided to rule out the implementation of a property bond for Phase One of the Proposed Scheme. Having carried out extensive work to investigate this option, including a detailed assessment by independent consultants PWC Ltd and a thorough review against defined policy criteria, it has concluded that the intr-oduction of a property bond scheme could not guarantee sufficient benefits to outweigh the risks of the scheme and the significant commitment of resources that it would warrant. Further details on the Government's conclusions can be found in chapter 8 of the Property Compensation Consultation Decision Document April, 2014.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	48-49.

ISSUE RAISED: Limits of deviation

PETITION PARAGRAPH:

48. The Bill authorises the movement of the track by up to 3 metres vertically or horizontally without consultation. The planned track level in this area has been raised twice, with both Hyde Lane and Potter Row now exposed to significant adverse effects from operational noise - on HS2 Ltd's own admission. Raising the track height reduces cost at the expense of permanent adverse environmental effects.

49. (Additional) Mitigation sought: Your Petitioner requests that the limits of deviation be amended so that no raising in the elevation of HS2 be permitted in the AONB.

PROMOTER'S RESPONSE:

1. The Provision of horizontal and vertical limits of deviation is normal practice for private and hybrid railway Bills. The Bill has to contain sufficient horizontal and vertical limits of deviation to allow for refinement of the preliminary design, on which the Bill plans are based, during detailed design, and to maintain construction tolerances.

2. The horizontal limits of deviation shown on the deposited plans define the maximum extent of the Proposed Scheme and ancillary works listed in Schedule 1 to the Bill. In addition, there are vertical limits of deviation which are generally standard; not exceeding three metres upwards and to any extent downwards. In many cases deviation to the full extent permitted is not a practical possibility and where it is, this has been assessed in the Environmental Statement (ES). In relation to depots, stations and shafts where maximum heights are shown on the deposited sections, it is not permitted to deviate above these levels.

3. The limits of deviation are needed to ensure that the Promoter can have reasonable flexibility to develop the design of the scheme. Taking into account the complexity of the Proposed Scheme alignment and its sensitivity to change, the limits are considered the minimum that could be applied to the design. A three metre limit of deviation is standard in railway projects– see section 1(5)(b) of the Crossrail Act 2008 by way of example.

4. It is not proposed to reduce these limits. The use and need for limits of deviation is explained in the HS2 Information Paper B2, Limits on Parliamentary Plans.

~~The 'Centre Line of Surface Work' and the 'Line Corresponding with Upper Surface of Rails' on the deposited plans and sections reflects the current best estimate of track alignment based on the design work undertaken to date. The Promoter must ensure that the Bill, when enacted, provides the necessary powers to build the railway, including provision for circumstances not foreseen at the time of Bill Deposit. For this reason, the horizontal and vertical Limits of Deviation must be drawn sufficiently widely to allow for refinement of the preliminary design during detailed design, and to maintain construction tolerances.~~

~~2. The horizontal limits of deviation shown on the deposited plans define the maximum extent of the railway and ancillary works listed in Schedule 1 to the Bill. In addition, the vertical limits of deviation not exceeding three metres upwards and to any extent downwards are generally standard for railway projects (see section 1(5)(b) of the Crossrail Act 2008 for example). In many cases deviation to the full extent permitted is not a practical possibility and where it is, this has been assessed in the Environmental Statement. Further information is provided in HS2 Information Paper B2, Limits on Parliamentary Plans.~~

~~3. It is considered that a 1m tolerance would be too restrictive and would unreasonably constrain the project and might in some circumstances result in insufficient powers to build the railway. The environmental effects have been assessed on the basis of deposited Limits of Deviation and appropriate mitigation has been provided accordingly. From the outset the Promoter has aimed to minimise adverse environmental impacts and, to this end, in a number of areas the proposed alignment has been lowered into the landscape~~.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 50-51, 71.

ISSUE RAISED: Health

PETITION PARAGRAPH:

50. The Promoter's ES does not consider impacts on the health and wellbeing of your Petitioner's community. A separate document was issued at the same time discussing health effects, but did not form part of the consultation. Much of this separate document is questionable (for instance the materials on noise), and your Petitioner is concerned about the notable omissions - such as in relation to anxiety and other stress issues.

51. Exposure to noise in excess of WHO guidelines is likely to give rise to long term adverse health effects from disturbance of sleep.

Issue	**(Additional) Mitigation sought (if preferred tunnel solutions not adopted)**
Loss of relative tranquillity affecting the wellbeing of those who would otherwise have visited the area, and for residents	Limits set for noise in AONB that ensure relative tranquillity is maintained, with Local Authority funded to monitor and enforce in perpetuity
Health imperilled by dust from passage of trains, and pollutants from maintenance	Limits set for airborne pollutant exposure in AONB that ensure clean air is maintained, with Local Authority funded to monitor and enforce in~~p~~ perpetuity
Long term health effects • Sleep disturbance leading to medical conditions such as hypertension. • Child development, from sleep disturbance or disrupting studies - leading to academic underperformance	Impacts to be studied and reported on Lower noise limits to be set (in accordance with WHO guidelines), with Local Authority funded to monitor and enforce in perpetuity

71. As discussed, above health and wellbeing effects were not covered by the

ES, but are a material issue prior to and during construction, and a source of concern to your Petitioner.

Issue	(Additional) Mitigation sought
Anxiety about property value, access to emergency health services, amenities	Substantive solutions to concerns and counselling and facilitation services paid for by Promoter
Adverse health effects from sleep disturbance, hypertension etc	Limitations on timing and noise levels
Take less exercise due to loss of facility of local road network and footpaths for walking, jogging, cycling, horse-riding, running, and loss of gym	Construction traffic uses trace not public roads. Community facilities (eg sports and community centre)
Underperformance in education from delays to reaching school, sleep interference, noise disturbing study	Limits on times of construction activities, observance of WHO exposure guidelines
Dust and pollution affecting health - especially vulnerable with asthma etc	Tight air pollution standards policed by District Council (paid for by Promoter and/or the Nominated Undertaker) with powers to suspend works

PROMOTER'S RESPONSE:

1. The Health Impact Assessment (HIA) Report that was produced to support the Bill presents the assessment of the potential health effects resulting from the construction and operation of High Speed Two (HS2), Phase One, London-West Midlands ('the Proposed Scheme'). This approach is consistent with established guidance and HIAs undertaken for other infrastructure projects.

2. The HIA was undertaken as part of the design and planning process for the Proposed Scheme, prior to submission of the Bill. It qualitatively assesses the potential effects of construction and operation of the scheme on a range of social, economic and environmental factors that are known to influence health. The HIA does not describe the health effects on individuals as an individual's response to such changes depends on many factors, including e.g. their existing health status.

3. The HIA identifies reasonably practicable measures to prevent or to reduce adverse health effects, or to provide mitigation or compensation to those affected. In respect of the requirements of the National Planning Policy Framework, the Bill, once enacted, will granted deemed planning permission for the works for the Proposed Scheme. There is no statutory requirement to produce an HIA, however as good practice the Promoter has produced an HIA alongside the Bill.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	52-53.
ISSUE RAISED:	Land take
PETITION PARAGRAPH:	52. Clause 47 of the Bill gives the Promoter the right to acquire property for development, even though this is not required for the construction or operation of HS2. 53. (Additional) Mitigation sought: Your Petitioner requests that your honourable House remove Clause 47 from the Bill.

PROMOTER'S RESPONSE:

Clause 47

1. When pursuing regeneration and development opportunities in relation to infrastructure projects, amongst other factors, local authorities will need to ensure there is appropriate provision of land in the surrounding vicinity of stations and depots and that it is appropriately packaged to achieve the wider ambitions of the area. Access to the required land can normally be achieved through commercial negotiation with landowners. However, there are circumstances where such land assembly can prove challenging, particularly where land ownership is highly fragmented or where land parcels straddle one or more local authority areas. In such cases, commercial negotiation can fail to secure all the land required. This has the potential to significantly frustrate local development leading to delays, cost increases or the desired regeneration simply not occurring.

2. To surmount these barriers, local authorities have power under Part 9 of the Town and Country Planning Act 1990 to compulsorily acquire land within their area to facilitate development, redevelopment or improvement. There may, however, be circumstances where local authorities are unable or face very challenging practical difficulties in using their compulsory purchase powers, for example, where the required land falls within the boundaries of more than one authority.

3. Clause 47(1) of the Bill therefore enables the Promoter to compulsorily acquire land to facilitate regeneration and development in connection with the Proposed Scheme. This provision is based on the equivalent powers mentioned above under Part 9 of the Town and Country Planning Act 1990 for local authorities.

4. Clause 47(1) is a backstop power to assist in unlocking or optimising a development or regeneration scheme where other avenues have failed and the importance of realising the regeneration benefits are considered significant enough to warrant its use. The Promoter would

only expect to use this power with the support and collaboration of the relevant local authorities. The power to make a compulsory purchase order (CPO) under clause 47(1) is subject to the same procedures and safeguards as apply to the making of other CPOs. A CPO may be made only if there is a compelling case in the public interest to justify its use. Landowners and other interested persons affected by a proposed CPO have the right to object to its confirmation. If such objections are raised, the case for and against the proposed CPO must be examined by an independent planning inspector at a Public Inquiry or public hearing. As part of his examination the Inspector must consider the proportionality of making the proposed CPO, in the light of its impact on affected landowners and other interested persons.

5. In summary the following principles govern the circumstances in which the Promoter would consider using clause 47(1):

- The power will only be used after other options have been fully considered including commercial agreement between parties to acquire land; or local authorities using their own compulsory purchase powers;
- Where there is a compelling case that the use of compulsory purchase is required in the public interest. Promotion of a CPO to acquire property for regeneration purposes will not be used only because it would be expedient to do so; and
- The power will be applied for the regeneration and development of land in the vicinity of station sites and depots which arise as a result of the construction and operation of Phase One of the Proposed Scheme.

6. The use of clause 47(1) of the Bill is also explained in HS2 Information Paper C11, Regeneration, Compulsory Purchase Policy and Over Site Development.

7. Clause 47(2) of the Bill provides a power – again for use only in exceptional circumstances - to promote an order to compulsorily purchase an alternative site in order to reduce the risk of total extinguishment of a business displaced by the Proposed Scheme occurring, by securing the planned and timely relocation of that business. As is explained separately in HS2 Information Paper C7, Business Relocation, the Secretary of State would only expect to exercise this power where the following three criteria were met:

a) As a result of the exercise of any power under the Bill, the site on which the whole or any part of the business has previously been carried on is no longer reasonably capable of being used for the purposes of the business;
b) There is a significant risk that the business will face total extinguishment as all other options for relocation, within the timescales of the Proposed Scheme on reasonable market terms, have been exhausted; and
c) The Secretary of State considers that it is in the public interest that the business is relocated because the relocation will secure the retention of key community assets or facilities, or the business is otherwise of strategic or regional importance.

8. The proposal to use the power and related supporting business case would be considered by an independent expert commissioned by the nominated undertaker who will report to the Secretary of State making a recommendation. Further details are available in HS2 Information Paper C7, Business Relocation.

9. The powers in clause 47 are intended to be flexible so as to enable such an approach to be undertaken and to enable the best solution possible to be delivered. It would be inconsistent with the underlying purpose of clause 47 for the Promoter at this stage to make any commitments about the potential use of the powers afforded by clause 47.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	54-55
ISSUE RAISED:	Road safety
PETITION PARAGRAPH:	54. The entrance to Cudsdens Court is relocated and made more dangerous as part of the B485/Kings Lane road realignment. 55. (Additional) Mitigation sought: Your Petitioner requests that the entrance to Cudsdens Court be extended so that it is not dangerously located on a bend.

PROMOTER'S RESPONSE:

~~***Needs bespoke response***~~

1. The Proposed Scheme incorporates a widened verge on the B485 to ensure full standards of visibility are met both for vehicles emerging from the access and for vehicles travelling east on B485.

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HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 60-65, 84.

ISSUE RAISED: Traffic and construction traffic

PETITION PARAGRAPH:

60. HS2 Ltd has said that the trace will be used for moving spoil. But your Petitioner is concerned that all the SHA roads in the immediate vicinity of HS2 are designated as construction routes (Potter Row, Kings Lane, Hyde Lane, Hyde Heath Road, Frith Hill (SHL), B485), as is the A413. This is despite their lack of suitability; they are too narrow, too steep, lack pavement, or already suffering congestion issues at peak times. The main roads are anticipated to experience a peak in construction traffic use that lasts for 3.5 years.

61. South Heath has no facilities of its own (shops, PO, doctors etc) and depends on Great Missenden and surrounding villages for its everyday needs. The ES suggests that there will be additional construction traffic of some 1,000 vehicles a day on key roads, and admits this will lead to significant congestion, but then provides conflicting data that suggests queues of 2 or 3 vehicles. Your Petitioner believes the junction and capacity analysis to be flawed. In addition to the congestion at junctions which is of great concern to your Petitioner, traffic on the trace will also bisect the public roads (that are themselves construction roads, such as the B485, Frith Hill SHL). Daily life will become very challenging. The SHL has a higher than average proportion of elderly residents who will find coping with congestion and sharing narrow roads with large vehicles distressing.

62. Your Petitioner is very concerned about the closure of Frith Hill (SHL) for up to 2 years. Despite the fact the ES states the road is used by 1,900 vehicles a day, it proceeds to conclude that the isolation effect from the facilities at Great Missenden will be "minor". This ignores the fact that the alternative route (Kings Lane) is already a construction traffic route. Frith Hill (SHL) is also a national cycle route. Hyde Lane which will also close for a year. It is presently used by 120 vehicles a day and a 6km long diversion route is proposed, these closures are impractical and unreasonable.

63. HS2 Ltd contends that there is no history of the roads in South Heath being hazardous and no history of serious accidents. While the safety record is good, there has been a recent case of a motorcyclist killed in collision with a tractor on Potter Row. This illustrates the sad consequences of mixing vulnerable users with heavy traffic.

64. Your Petitioner considers that the minor roads of the AONB are unsuitable for the projected traffic volumes.

Issue	**(Additional) Mitigation sought**
Road safety, risk to vulnerable users (pedestrians, children, cyclists, equestrians, elderly).	Require all construction traffic (for materials and workers) to use the trace and not public roads, with new dedicated access roads from A413 to be built
Earth moving equipment and heavy haulage will emit pollutants to the detriment of residents	Local Authority to be funded to monitor and enforce high standards that limit emissions
Damage to structure of vulnerable buildings (eg Potter Row, Hyde Lane)	All construction traffic must be banned from using Potter Row for any reason.
Use of local roads by construction traffic and loss of local gym, discouraging daily exercise	Prevent local roads from use by construction traffic. Fund new local amenities eg a sports/community centre
At-grade crossing (with lights) on the public roads that are bisected by the trace (with construction & spoil removal traffic on them): • Crossing the B485, which will cause serious congestion on the main B485 road • Crossing other local public roads • Hyde Lane • Frith Hill (SHL) • Leather Lane	Build new or temporary junctions with a bridge or underpass before using the trace, so that there is no interference by the construction traffic using the trace with public road users (given the public road is also a construction traffic route)
Additional construction traffic renders access to B485 and A413, Great Missenden, Chesham, etc subject to significant delays, affecting: • Emergency service response times. • School buses (Kings L, Potter Row) • Access to station & coaches in Great Missenden for commuting and college	Construction traffic uses trace not local public roads. Park and ride for construction workers, enforced by no parking at compounds • Air ambulance for residents and workers • Absolute ban of deliveries etc at peak times • Absolute ban of deliveries etc at peak times • Financial support for loss of

• Damage to viability of South Heath home based businesses • Damage to viability of retailers in Great Missenden (due to access) • Damage to viability of South Heath garden centre • Social isolation (visiting and being visited)	productive time/business • Rate reduction/financial support • Financial support • Construction traffic to only uses trace. Community fund
Consequential traffic congestion, as local traffic use different routes	Prevent 'construction routes' being used by construction traffic at 'peak times'
Isolation: • Closure of Frith Hill SHL (up to 2 years) • Closure of Hyde End Road for I year with 6km detour	Install temporary bridge to maintain a highway and footpath. Ensure does not coincide with B485 realignment works. Install temporary bridge to maintain a highway and footpath

65. Even if construction traffic is confined to the trace for most movements, the large increase in heavy vehicles will have adverse effects on the condition and character of local roads.

Issue	**(Additional) Mitigation sought**
Heavy construction traffic will cause rapid deterioration of the condition of local roads	The Promoter and/or Nominated Undertaker to be responsible for keeping the roads in good order and not allowing deterioration
Changes will be made to the roads to allow construction traffic to use them (eg widening and straightening)	The Promoter and/or Nominated Undertaker to be responsible for returning all local roads to their former size and character on completion

84. The Promoter's assessment of traffic and congestion is both seriously defective and impossible for the lay person to understand what it means for their road. The Chesham Society ES response exposed many of the issues, and helped people locally interpret the provided data. Your Petitioner asks that this situation be corrected and addressed.

Defect	**Remedy sought**
• Uses base traffic data from different sources that are	The Select Committee of your honourable House to require the

inconsistent • Fails to correctly assess road and junction capacities • Ignores the interaction between construction traffic on the trace, and road traffic on roads that the trace bisects • Congestion results are typically less than the observed current levels	Promoter to: • Re-do the traffic assessment using robust data, and develop measures to address the congestion • Publish the results in a revised ES, with data appropriate to each construction route, and re-consult. Reasonable practicability

PROMOTER'S RESPONSE:

Minimising the use of roads by construction traffic

1. The Promoter shares the Petitioner's aim of minimising the use of roads for transport to and from construction sites, using the construction corridor and rail where practicable. HS2 Information Paper E13~~.~~ Management of Traffic ~~d~~During Construction explains the Promoter's approach:

'Where it is reasonably practicable to do so:

- ~~E~~eExcavated material will be moved along the construction corridor (land required for the construction of the railway) of the Proposed Scheme so as to reduce impacts on nearby road networks;
- ~~E~~eElsewhere, excavated material will be transported by public highway along designated construction routes, using A roads and motorways and minimising the use of local roads;
- ~~R~~rRail has also been proposed for the transportation of large quantities of excavated material over long distances - the principle movements would be from the tunneling operations at Old Oak Common and Ruislip to Calvert in Buckinghamshire and Streethay near Lichfield; and
- ~~W~~wWhere transporting excavated material would result in levels of traffic leading to major significant adverse environmental effects, the Promoter has proposed sustainable placement. 'Sustainable placement' is the local on-site placement of excavated material to avoid the environmental effects associated with transporting it (see Information Paper E3: Excavated Material and Waste Management)'.

Lorry routes and traffic management

2. The Promoter does not agree there is a need for further assurances or undertakings in in respect of lorry routes or traffic management as the Bill provides for a process to approve lorry routes and the Code of Construction Practice (CoCP) and the Traffic Management Plans will include the necessary detailed controls. Paragraphs 4.1-4.6 of HS2 Information Paper E13~~'.~~ Management of Traffic ~~d~~During Construction explains the mechanisms in Schedules 4 and 16 to the Bill and in the draft Environmental Minimum Requirements for ensuring that construction traffic is controlled:

'The Bill includes powers for the control of construction traffic by qualifying planning authorities

(see Information Paper B1: The Main provisions of the Planning Regime and E14: Highways and Traffic during Construction - Legislative Provisions).

This means that the routes to be used by large goods vehicles must be approved by qualifying planning authorities when the number of large goods vehicles exceeds 24 trips per day, to or from a site. The consent of the relevant highway authority is also required for the provision of any new or altered worksite access to and from a highway, if this is not as shown on the plans deposited with the Bill. The highway authority must be consulted before works affecting highways or traffic can be undertaken and consent must be sought before interfering with any property of the highway authority or, in some cases for construction under the surface of a highway (see Information Paper E14: Highways and Traffic during Construction - Legislative Provisions)~~,~~.'

3. Any proposals on vehicle numbers, size, routing and hours of operation will be discussed by the nominated undertaker and the local planning authority as part of the approval process. Any decision by a relevant planning authority to refuse an application or apply conditions must be consistent with the requirements of Schedule 16 Paragraph 6 (5) specifying legitimate grounds for refusal and (6) requiring the nominated undertaker's agreement to conditions. The Promoter will only refuse to agree a condition under sub-section (6) if it is unreasonable or ultra vires. In addition Part 1 of Schedule 4 to the Bill provides the highway authority with power to object to formation of a new means of access or improve an existing assess, within the Bill limits and to approve plans and specifications of the works. This is explained in section 3 of HS2 Information Paper E14~~:~~ Highways and Traffic During Construction – Legislative Provisions.

4. The Environmental Minimum Requirements (EMRs) of which the ~~Code of Construction Practice (~~CoCP~~)~~ is part, together with the various controls prescribed in the Bill, are intended to ensure that the impacts of the Proposed Scheme, including those relating to construction traffic, will not exceed those assessed in the ES. As part of these controls, the nominated undertaker will require all contractors to ensure that any disruption to local communities from construction traffic is minimised, and that public vehicle access is maintained, where reasonably practicable. It will provide a consistent approach to the management of construction activities throughout Phase One of the Proposed Scheme. The draft CoCP will evolve and will be subject to refinement and amendment as necessary, as the project design, assessment and Parliamentary processes develop. It will be finalised for Phase One when the Bill is enacted. For further information, see HS2 Information Paper D3, Code of Construction Practice

Traffic Management Plans

5. The CoCP will require the nominated undertaker to prepare traffic management plans in liaison with highway and traffic authorities and the emergency services. As appropriate, these will include:

- The local routes to be used by large goods vehicles (approved where applicable), including lorry holding areas, lorry route signing strategy and the means of monitoring lorry use;
- Worksite boundaries and main access and exit points;
- Temporary and permanent closures and diversions of highways and public rights of way; and
- The strategy for traffic management.

6. The planning of the works will take into consideration the affected residential, commercial,

industrial and farming premises, and specifically their requirements for access and servicing (including delivery, collection and maintenance). Access and servicing will be maintained as far as reasonably practicable, within the constraints of the works and the need to ensure the safety of the public; this may involve diversions, temporary traffic controls and the use of temporary carriageways and footways. However, the Bill includes a general requirement to maintain reasonable pedestrian access to premises.

Construction workforce travel plans

7. As set out in section 14.1.2 of the draft Code of Construction Practice (CoCP):

'Construction workforce travel plans will be prepared by the lead contractors with the aim of encouraging the use of sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses. The plans will include:

- Identification of a travel plan co-ordinator and a description of their responsibilities;
- Key issues to consider for each compound/construction site or group of sites;
- Site activities and surrounding transport network including relevant context plans;
- Anticipated workforce trip generation and how it may change during the construction process;
- Travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network;
- Target to reduce individual car journeys by the for construction workforce;
- Methods for surveying workforce travel patterns; and
- The process for monitoring and reviewing the construction workforce travel plan.'

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Consultation on temporary and permanent road closures

8. HS2 Information Paper E13, Management of Traffic During Construction also explains the Promoter's approach to consultation on highway and traffic issues. The nominated undertaker will require contractors to communicate regularly with parties affected by the works. Local residents and businesses will be informed - appropriately and in advance - of the dates and durations of any closures of roads or public right of way, and will be provided with details of diversion routes at least two weeks in advance or when final details are available.

9. Once contractors have been appointed, regular traffic liaison meetings will be arranged with highway authorities, bus operators, taxi and trade representation (as appropriate), and the police - other emergency services will be included, as appropriate. These meetings will provide an opportunity for contractors to present proposals for future works affecting the highway, including methods of construction and proposed programme, and for a review of the associated traffic management requirements.

Monitoring and compliance.

10. The control of vehicle movements when there is an incident on the highway is a matter for the police and would apply to construction traffic for the Proposed Scheme in the same way as it would any other highway user.

~~11. Paragraph 6 of Schedule 16 to the Bill requires that large goods vehicles must only use routes to a working or storage site, a site where material will be re-used, or a waste disposal site, which have been approved by the relevant planning authority (that is the unitary authority or county council for the area). However, this does not apply to routes where the number of movements per day is 24 or less, or to motorways and trunk roads. This is explained further in HS2 Information Paper B1, The Main Provisions of the Planning Regime.~~

11~~2~~. Excavated material, equipment and materials that need to be moved along the public highway by large goods vehicles to and from construction sites will be required to follow designated construction routes. If the number of large vehicles to or from a site exceeds 24 per day, any local roads used by large goods vehicles must have been approved by the relevant planning authority (that is the unitary authority or county council for the area). This is explained further in HS2 Information Paper B1, The Main Provisions of the Planning Regime~~.~~

~~13. This is explained further in,~~ HS2 Information Paper E13, Management of Traffic During Construction, HS2 Information Paper E14, Highways and Traffic During Construction – Legislative Provisions, and HS2 Information Paper D3, Code of Construction Practice.

12~~4~~. It is open to planning authorities to monitor compliance with these requirements, and in doing so they may adopt technology on their own behalf such as CCTV and/or ANPR should they feel it appropriate to do so.

13~~5~~. Paragraph 2 of Schedule 4 to the Bill provides that where highways are to be permanently stopped up and they are listed in Table 2 of Schedule 4 (that is, where a new highway is to be provided in substitution), the highway may not be stopped up until the replacement highway has been provided. Paragraph 6 of Schedule 4 to the Bill also provides that highways may be temporarily stopped up where listed in Table 3 of Schedule 4 to the Bill. HS2 Information Paper E14, Highways and Traffic During Construction – Legislative Provisions explains these, and the approvals and notification process required under the highways schedule, further (see paragraph 3.6 and following).

14~~6~~. As HS2 Information Paper E14, Highways and Traffic During Construction – Legislative Provisions points out, Schedule 4, Part 3, paragraph 11 'requires that any new carriageway constructed or existing carriageway realigned, by the nominated undertaker must be carried out in accordance with the plans and specifications approved by the highway authority (with such approval not being unreasonably withheld).'

Hours of Operation

15~~7~~. Deliveries to and from construction sites will occur up to one hour before and after the working hours of each construction site. Paragraph 5.2.1 of the draft code of construction practice sets out the requirements in respect of Section 61 consents for construction works. Where 24 hour working is required, the draft CoCP makes a commitment that where reasonably practical, material needing to be excavated from 24 hour operations (such as tunnelling) will be stockpiled within the site boundary and removed during normal working hours (Para 5.2.6). A control and assurance regarding deliveries to working sites is therefore already provided and the Promoter does not consider that further controls on delivery hours are required. For further information, please see HS2 Information Paper D4, Working Hours.

Size of Vehicles

168. In relation to any public highway, the nominated undertaker and their contractors will be required to comply with all highways control measures (including weight, height and width restrictions). Therefore the Promoter does not agree that additional controls will be needed in this regard. The Promoter would reiterate that with respect to the condition relating to road transport, one of the reasons for refusing to approve arrangements is that the arrangements ought to be modified to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area.

Number of Vehicle Movements

179. As stated above, if the number of large vehicles to or from a site exceeds 24 per day, any local roads used by large goods vehicles must have been approved by the relevant planning authority (that is the unitary authority or county council for the area). This is explained further in HS2 Information Paper B1, The Main Provisions of the Planning Regime.

Remedial works

2018. Where the highway network is damaged as a result of its on-going use by construction traffic which is associated with the project, the protective provision in paragraph 15 of Part 1 of Schedule 31 to the Bill will apply. This requires the nominated undertaker to make good that damage or alternatively compensate the highway authority for the additional costs of doing so. This gives adequate protection to both the highway authority and other road users.

1921. The nominated undertaker will work with the local highways authority in carrying out a review of local highways intended to be used by its construction traffic. It is envisaged that a representative from the highways authority will work with a representative from the nominated undertaker in a common approach to dealing with matters such as condition surveys in a proportionate manner.

Strengthening, repairing and maintaining highways

202. It is in the nominated undertaker's interests in terms of avoiding delay that any necessary highway improvements or pre-strengthening work to bridges is carried out well in advance of the relevant construction route coming into use.

213. Part 1 of Schedule 31 to the Bill includes a range of protective provisions relating to highways and traffic, including those in paragraphs 14, 15, 16 and 17 which require the nominated undertaker to make good and reinstate, to the reasonable satisfaction of the highway authority, any part of a highway that has been broken up or disturbed and requires the nominated undertaker to make good, or pay compensation for, any damage to a highway caused by or resulting from constructing the authorised works or any act or omission of the nominated undertaker, its contractors, agents or employees whilst engaged upon such work.

224. This is explained further in HS2 Information Paper E13, Management of Traffic During Construction, HS2 Information Paper E14, Highways and Traffic During Construction – Legislative

Provisions, and HS2 Information Paper D3, Code of Construction Practice.

Environmental Guidelines for highways in AONB

235. The Promoter will be required, as a result of the highways controls set out in Schedule 4 and Schedule 31 to the Bill, to apply for a number of plans and specifications approvals in relation to highways, or give notice of works. The process put in place by Paragraph 10 of Schedule 4 requires the construction or alteration of new highways (otherwise than by carrying out streetworks within the meaning of Part 3 of the New Roads and Street Works Act 1991) to be completed to the reasonable satisfaction of the highways authority. Paragraph 11 requires that the construction or realignment of a highway which is constituted by or comprises a carriageway must be carried out in accordance with plans, sections and specifications approved by the highways authority at the request of the nominated undertaker and such approval is not to be unreasonably withheld.

246. The road layouts underlying the Bill and shown in the Permanent Layout (CT-06 series) drawings of the Environmental Statement (ES) have been designed to one of several design bases, depending on the context of each road. These include the Promoter's 'Rural Road Design Criteria' which have been adopted to design the many minor rural roads and country lanes along the route. They are intended to avoid an 'over-engineered' appearance that is not in keeping with the existing character and distinctiveness of the route. This approach is based on the good practice developed with Kent County Council on the Channel Tunnel Rail Link (High Speed 1), and incorporates the lessons learnt from other projects where the Design Manual for Roads and Bridges has been used inappropriately for road crossings of linear transport infrastructure schemes in the past. As a result, the Promoter's 'Rural Road Design Criteria' are broadly consistent with the aspirations of the 'Environmental guidelines for the management of highways in the Chilterns AONB'.

Buses and emergency services routes

257. HS2 Information Paper E5, Roads and Public Rights of Way states that where bus routes are affected by temporary road closures during construction, a diversionary route and (where necessary) temporary bus stops will be identified. In a few cases, where there may be permanent changes to bus routes, the nominated undertaker will work with local authorities and transport operators to develop suitable alternative arrangements. (The assessment of impacts on the road network including delay and congestion have been identified within the Transport Assessment (ES Volume 5, Appendix TR-001-000), which includes bus services.

268. Emergency vehicles are able to operate on a blue light system should the need arise. Construction traffic for the Proposed Scheme is not likely to be overly more dominant on the strategic road network than any other type of traffic. Measures set out in the draft Code of Construction Practice (CoCP) -are designed to reduce the effects of highway works and construction traffic.

Local impacts

279. The Petitioner has expressed concern about the proposed use of small rural roads in general including the use of Leather Lane and Potter Row for construction traffic.

3028. The Bill will allow highway authorities to approve the lorry routes the nominated undertaker

proposes for construction traffic (see paragraph 6 of Part 1 of Schedule 16 to the Bill). The routes proposed will be fit for purpose and will have been assessed for their capacity to accommodate construction traffic and their future capability by the Promoter.

~~31~~29. Where necessary, localised improvements to roads will be carried out to ensure they are safe for use during construction. Such improvement works (and reinstatement works, once construction is complete), will be matters to be agreed with the relevant planning authority under Schedule 4 to the Bill. The avoidance of the roads identified by the Petitioner would result in additional traffic effects on other roads.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	75-76
ISSUE RAISED:	Crime
PETITION PARAGRAPH:	75. Construction will bring a peripatetic workforce into the area (some actually living at the Wendover construction site), who will require additional policing. 76. (Additional) Mitigation sought: Your Petitioner requests that your honourable House amend the Bill and/or require undertakings from the Promoter to ensure funding for additional policing for the duration of the construction works

PROMOTER'S RESPONSE:

Security Risks

1. The Promoter disagrees that there would be any increased crime risk to the Petitioner as a result of the Proposed ~~s~~Scheme being constructed in the area.

2. The Promoter will require the nominated undertaker to ensure that construction sites are kept secure, both in the interests of crime prevention and also ensuring that no-one is injured by inadvertently entering a construction site. The Promoter therefore sees no reason to provide funding for local Police forces at this time.

Worksite security

3. Construction worksites will be under the control of a lead contractor, which has a statutory duty to prevent unauthorised access to the site. Lead contractors will carry out site specific assessments of the security and trespass risk at each site and implement appropriate control measures.

~~4. The Promoter will require the nominated undertaker to ensure that construction sites are kept secure, both in the interests of crime prevention and also ensuring that no-one is injured by inadvertently entering a construction site. The Promoter therefore sees no reason to provide funding for local Police forces at this time.~~

Temporary workforce accommodation

~~5~~4. Each main construction compound has been sized to cater for an amount of on-site workers'

temporary living accommodation. This is the option that the Promoter has taken at this stage in the scheme development and is comparable with many other major construction projects where some workers are resident on site. It reduces the daily travel needs of these workers and in turn reduces local transport impacts and pressure on finding local accommodation. However, this assumption remains under review and will be considered at the next stage in the design development, in consultation with contractors.

~~6~~5. Schedule 16 to the Bill sets out certain construction arrangements which require approval from the relevant local planning authority (if that authority becomes a qualifying authority) – including construction camps. The siting of construction camps will be a matter requiring approval from the relevant local planning authority. Given this requirement for the approval of construction camps, and the mitigation measures proposed in the Environmental Minimum Requirements (EMRs), the Promoter considers that sufficient controls and mitigation measures are in place in relation to this issue.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	77-78.
ISSUE RAISED:	Local ~~B~~businesses
PETITION PARAGRAPH:	77. Construction will reduce the viability of many local businesses (including in Great Missenden and Chesham) because it continues over such a long period. Both residents and local businesses should be allowed to treat the construction as a "material change in circumstances" for the purposes of establishing the rateable value, and secure a change in rates before HS2 is operational 78. (Additional) Mitigation sought: Your Petitioner requests that your honourable House amend the Bill and/or require undertakings from the Promoter to make provision for the special treatment of HS2's construction and that the Promoter fund an official to help secure property re-valuation and assess HS2's impact on local economy, The Bill should include provision for central government financial support during construction period for local businesses.

PROMOTER'S RESPONSE:

1. Where businesses are affected by construction works, they are able to submit a 'Material Change of Circumstances' appeal to the Valuation Office Agency for a reduction in the rateable value of their property. If this is successful, they will be able to obtain some relief from business rates.

2. Please see the Promoter's response to Petition paragraphs 35-36, 72-74 for more information on the Community and Environment Fund

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF: Residents' Environmental Protection Association (REPA)

PETITION NO: 1809

PARAGRAPH NO: 79, 89.

ISSUE RAISED: Environmental Statement

PETITION PARAGRAPH: 79. Your Petitioner is concerned that the Promoter's ES contains inaccuracies, omissions and inconsistencies that are sufficiently serious that they need to be corrected and re-consulted upon. Your Petitioner requests that your honourable House direct the Promoter to amend the ES and re-consult on at least the matters raised below. Your Petitioner further requests that it be allowed to raise such matters as relate to the new and amended materials, whether these derive from an amended ES or by other channels (such as Freedom of Information Act responses), when its Petition is heard.

ES insufficiently detailed to permit all problems to be identified

Defect	Remedy sought
The ES does not explain how the route will be constructed or the railway will operate in sufficient detail to allow petitioners to identify all matters which, if not addressed by the Select Committee of your honourable House, will result in serious and unjustified detriment to petitioner's interests. Examples of this are: • Failure to specify the level of noise emissions that will be emitted from tunnel portals (ie the extent of tunnel boom) • Failure to correctly identify the thresholds for observable adverse effects from noise • Failure to give account of how construction traffic using the trace will cross public roads, so that congestion effects can be	The Select Committee of your honourable House to allow petitioners to complain of additional matters not included in their petitions if the matter they subsequently wish to raise was: • Not covered in the ES • Not covered in sufficient detail in the ES • Incorrectly assessed or presented in the ES

identified	

89. Further, in addition to the points made above regarding deficiencies within the ES, your Petitioner has had great difficulty understanding the Bill, including its Schedules, alongside the Deposited Plans and Sections and the ES as a whole. Your Petitioner repeats that it is concerned that it may have missed a material point on which it would wish to address the Select Committee appointed by your honourable House, and will ask leave to do so if necessary. The points made above are without prejudice to any such further points.

PROMOTER'S RESPONSE:

1. The Promoter disagrees with the Petitioner's contention that the Environmental Statement (ES) is inadequate or that it is necessary to submit a supplementary ES. The ES fully complies with all UK and EU legal requirements and has been developed in accordance with the accepted best practice methodologies recommended by a range of UK institutional bodies. The document has satisfied the requirements for Parliamentary deposit and the Bill has secured its Second Reading.

2. The Promoter knows of no fundamental deficiencies in the ES. Though the Petitioner would clearly prefer more baseline information and greater certainty, the necessary information specified in the Scope and Methodology Report is provided in the ES and is in sufficient to assess the significance of the effects. In addition, the mechanisms defined by the provisions of the Bill and in the Environmental Minimum Requirements (EMRs) will ensure that significant adverse effects will not be exceeded unless further approvals are obtained.

3. HS2 Information Paper E1, Control of Environmental Impacts (in paras 2.1-2.7) explains the importance of the ES in defining the limits of adverse environmental effects as the Proposed Scheme evolves through its detailed design and implementation stages:

> 'The Environmental Statement (ES) identifies the likely significant effects that will arise from the construction and operation of the Proposed Scheme, and identifies the range of mitigation measures that could be used to reduce or eliminate these effects. The assessment is based on a number of assumptions about design and construction practices. As the project is taken forward to detailed design and actual construction there may be some changes to assumed working practices and design.
>
> It is important however that reassurance is provided that the nominated undertaker will not simply be free to change the design and working practices at will or without any control. There are therefore a number of mechanisms within the Bill and supporting the Bill that will control changes to the project and therefore provide reassurance as to the extent of the actual impacts of the construction and operation of the Proposed Scheme.
>
> There are three distinct components that taken together will effectively control the environmental impacts of the construction and operation of the Proposed Scheme, they are:

- Arrangements within the Bill for approving detailed design and construction arrangements;
- Policies, commitments and undertakings entered into outside of the Bill; and
- Existing legislation, unless expressly or impliedly disapplied or modified by the Bill.

This information paper sets out the controls contained in the Bill and in general legislation which, along with undertakings given by the Secretary of State, will ensure that impacts which have been assessed in the ES will not be exceeded, unless any new impact or impacts in excess of those assessed in the ES:

- Results from a change in circumstances which was not likely at the time of the ES; or
- Would not be likely to be environmentally significant; or
- Results from a change or extension to the project, where that change or extension does not itself require environmental impact assessment under either (i) article 4(1) of and paragraph 24 of Annex 1 to the EIA Directive; or (ii) article 4(2) of and paragraph 13 of Annex 2 to the EIA Directive; and/ or
- Would be considered as part of a separate consent process (and therefore further EIA if required).

This will ensure that where EIA is legally required, works will not take place unless they have been assessed already as part of the ES or are subject to a further EIA and consent process.

Any nominated undertaker will be contractually bound to comply with the controls set out in this paper and as may be developed during the passage of the Bill through Parliament.

In addition, it is expected that the Secretary of State will give an undertaking to Parliament that "insofar as the Environmental Minimum Requirements are not directly enforceable against any person appointed as a nominated undertaker, he will take such steps as he considers are reasonable and necessary to secure compliance with those requirements"'.

4. In many instances the adverse effects of the final scheme and the construction arrangements will be less than reported in the ES as Paragraph 1.1.5 of dDraft General Principles of the Environmental Minimum Requirements commits the Promoter to continue to seek to reduce adverse impacts during the detailed design and implementation phases of the project:

'The nominated undertaker will in any event, and apart from the controls and obligations referred to in paragraph 1.3, use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Phase One of High Speed 2, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme.'

Safeguards in the Environmental Minimum Requirements

5. The EMRs consist of a series of framework documents which will:

- DDdefine the ways in which the nominated undertaker will engage with people affected by the Proposed Scheme; and
- EeExplain how measures designed to protect communities and the environment will be put in place alongside detailed design development and construction.

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6. As HS2 Information Paper D3, Code of Construction Practice sets out, the draft CoCP will be the means through which the Promoter will manage the effects of the construction of the Proposed Scheme on communities and the environment to ensure that potential impacts on people and the natural environment are kept to a practicable minimum. It is part of the environmental and sustainability commitments that the Government will enter into through the Bill process. The draft builds on direct experience from other major infrastructure schemes, such as HS1, Crossrail and the London 2012 Olympics, which all followed a similar approach.

7. It is right that the draft CoCP, as part of the draft EMRs, should evolve and be subject to refinement, amendment and expansion. This is because elements of design, assessment and Parliamentary processes may develop during the passage of the Bill. A final version of the CoCP will be produced as and when the Bill receives Royal Assent. The CoCP will require the nominated undertaker and its contractors to comply with all the measures set out in it as well as all applicable environmental legislation prevailing at the time of construction. They will also be required to comply with relevant local standards and conditions that may be agreed with local authorities.

HOUSE OF COMMONS SELECT COMMITTEE

HIGH SPEED RAIL (LONDON - WEST MIDLANDS) BILL

PROMOTER'S RESPONSE TO PETITION OF:	Residents' Environmental Protection Association (REPA)
PETITION NO:	1809
PARAGRAPH NO:	85-86.
ISSUE RAISED:	Reasonable practicability
PETITION PARAGRAPH:	85. The Promoter qualifies its commitment to limit adverse effects by aiming to address them as far as is "reasonably practicable". Your Petitioner is concerned that the Promoter's judgment on this point is such as will lead to the implementation of poor environmental standards, with cost saving justifying inferior environmental mitigations. 86. Your Petitioner requests that your honourable House cause the Bill be amended and/or require the Promoter to give undertakings to ensure that mitigations in the AONB employ best practicable means. For a prestige scheme for new long-life infrastructure, the best available solutions and techniques should be implemented to preserve this highly valued environment as effectively as possible for current and future generations.

PROMOTER'S RESPONSE:

1. The use of the term 'reasonably practicable', as used in the Envrionmental Statement (ES), has been considered by two Court of Appeal cases (Edwards v National Coal Board [1949] and Bhatt v Fontain Motors Ltd [2010]) both of which relied on the following formula:

~~2.~~ 'Reasonably practicable' as traditionally interpreted is a narrower term than 'physically possible' and implies that a computation must be made in which the quantum of risk is placed in one scale and the sacrifice, whether in money, time or trouble, involved in the measure necessary to avert the risk is placed in the other; and that if it be shown that there is a gross disproportion between them – the risk being insignificant in relation to the sacrifice – the defendants discharge the onus on them.'

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~~2~~3. This principle was usefully summarised by the Australian case of Silvak v Lurgi Pty Ltd [2001] which stated:

- The phrase 'reasonably practicable' means something narrower than 'physically possible' or 'feasible'; and
- What is 'reasonably practicable' is to be judged on what was known at the relevant time.

~~3~~4. Accordingly to determine what is 'reasonably practicable' it is necessary to balance the likelihood of the risk occurring against the cost, time and trouble necessary to divert the risk. The

Promoter retains this discretion however the commitments made by the Secretary of State through the EMRs, including the draft Code of Construction Practice (CoCP), are significant and onerous. ~~Furthermore they are developed from EMRs that have been highly effective in controlling and reducing the environmental effects of previous national infrastructure projects.~~

~~45~~. It is right that the draft CoCP, as part of the draft EMRs, should evolve, and be subject to refinement, amendment and expansion. This is because elements of design, assessment and Parliamentary processes may develop during the passage of the Bill. A final version of the CoCP will be produced as and when the Bill achieves Royal Assent. As HS2 Information Paper D3, Code of Construction Practice explains, 'the draft CoCP sets out a series of measures and standards that the Promoter and contractors appointed to deliver the Proposed Scheme will be required to meet for the duration of the construction of the Proposed Scheme. It will also ensure that potential impacts on people and the natural environment are kept to a practicable minimum'. The draft CoCP 'builds on direct experience from other major infrastructure schemes, such as HS1, Crossrail and the London 2012 Olympics, which all followed a similar approach'.