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High Speed 2 Draft Environmental Statement Consultation
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BY EMAIL ONLY

11th July 2013

Dear Sir

Consultation of HS2 Draft Environmental Statement: London to West Midlands.

I am writing to provide the Forestry Commission's response to the draft Environmental Statement (ES). Our response concentrates on route level rather than site-specific impacts.

The Forestry Commission is the Government Department that works with others to protect, improve and expand our nation's forests and woodland, increasing their value to society and the environment.

This response supplements Forestry Commission responses to previous consultations on the environmental impacts of the scheme, specifically:

- 19th July 2011. Forestry Commission's response to the Department for Transport consultation on the proposed High Speed Rail between London to the West Midlands - Appraisal of Sustainability.
- 30th May 2012. Forestry Commission's response to Consultation of HS2 Draft Scope and Methodology for the HS2 Environmental Impact Assessment: London to West Midlands.

We have shared our comments with Natural England (NE) and Environment Agency (EA), and we acknowledge and support their individual responses. We have made specific reference to any common points where appropriate.

a) Forestry Land Take and Compensatory Woodland Creation

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - Sections 5.2 and Section 6.2.1.*
- *Volume 27: Route wide impacts - Sections 3.1.2.*

We are pleased to see the land take for forestry and nature of soil that will be disturbed accounted for in the draft ES. We are also pleased that the Community Forum Area Reports identify the loss of woodland, including ancient woodland, particularly on the grounds of ecology and cultural heritage.

We believe that further clarification is required to identify whether the ecosystem service approach supported by Government could be applied to phases one and two of HS2. The phase one screening report currently being undertaken on behalf of DfT should identify those areas where the ESA approach is practicable on large infrastructure projects. This should ultimately inform a clear statement from HS2 Ltd on where the ESA approach could be applied to phase two. We appreciate the engagement that we have had to date on this issue and look forward to working with HS2 Ltd and Natural England, the Environment Agency as this work develops.

Appendix 1 presents our assessment of the potential impacts of the post-consultation route from London to Birmingham. These impacts are estimated **minimum** impacts because the GIS data that has been made available is for only the centre line of the route only, excluding information on wider land take (proposed cuttings and embankments etc). This may be why the apparent impacts on woodland have reduced.

Nevertheless we note that the post-consultation route is different in places to the one that was consulted on initially so some of the apparent changes will be real. The small reductions to the loss of woodland, ancient woodland and accessible woodland appear to be positive from the Forestry Commission's perspective.

We understand that some mitigation measures are currently under development and this includes the plans for tree planting to create new woodlands to replace areas of woodland lost to the project. While the specific details for replacement tree planting may still be under consideration we recommend the formal ES sets out overarching principles for replacement woodland creation. These should address the following points:

- 1) The extent of replacement tree planting should ensure there is no net loss of woodland area. With regard to this, the significant tree planting that will be undertaken to screen the rail line is welcome but unlikely to provide the 'critical mass' of tree planting required for a woodland ecosystem to develop. We ask that the formal ES confirms that the tree planting to replace forestry land take will be in addition to the tree planting to screen the rail line. The criteria used to define woodland in the National Forest Inventory (<http://www.forestry.gov.uk/inventory>) uses a minimum width of 20 metres and minimum area of 0.5 hectares to define woodland. Replacement woodland creation should work to these criteria to ensure these areas of tree planting are large enough to develop woodland characteristics.
- 2) Where areas of replacement woodland are created they should be created and managed according to the UK Forestry Standard (UKFS). This Standard sets out the UK Government's approach to sustainable forestry. A summary of the Standard for those involved with development is available here: <http://www.forestry.gov.uk/forestry/INFD-96LBX9>.

- 3) A key theme of UKFS is to create resilient woodlands. A step which can help achieve this is to plant mixtures of appropriate tree and shrub species and to select a proportion of species that are likely to survive in a changing climate. These principles should be adopted for all the tree planting associated with HS2, not only the creation of compensatory woodland. Information on how to select appropriate trees and shrub species for the changing climate can be found here: <http://www.forestry.gov.uk/forestry/inf-d-8v5rma>.

Forward planning will be important to ensure nurseries can plan ahead and have sufficient planting stock of appropriate species available for the tree planting and woodland creation required for the project.

- 4) The formal ES should also set out how appropriate locations for tree planting will be identified. We support the Environment Agency's reference to the Woodland for Water project and the woodland opportunity maps (Appendix 1, section 4.2 and 4.3 of EA's response). The opportunity maps for woodland creation could guide the location of compensatory woodland creation which would support delivery of Water Framework Directive objectives and address flood risk. Consideration should also be given to how close compensatory woodlands will be to the area of woodland lost to the project.

Compensatory woodland creation is unlikely to attract grant aid under the schemes administered by Forestry Commission. However, we will consider grant support for land owners who wish to create woodland that will augment woodland creation required to compensate for the project's forestry land take.

There may also be key opportunities to incorporate high quality green infrastructure along the line, for example around the developments of stations, particularly in areas of urban regeneration, such as around car parks. Trees in urban areas can help improve air quality, their shading can reduce the urban heat island effect and the design of their planting can incorporate Sustainable Urban Drainage Systems. Paragraph 99 of the National Planning Policy Framework notes that green infrastructure can help to mitigate impacts of climate change. In considering how this could be designed the following publications may be of use:

The Trees and Design Action Group "Trees in the Townscape" outlines 12 principles of best practice for local decision making to ensure that trees are appropriately and innovatively incorporated into urban areas <http://www.tdag.org.uk/trees-in-the-townscape.html>

The Town and Country Planning Association / Wildlife Trusts - Planning for a Healthy Environment: Good practice for green infrastructure and biodiversity - <http://www.tcpa.org.uk/pages/planning-for-a-healthy-environment-good-practice-for-green-infrastructure-and-biodiversity.html>.

Where trees are planted in an urban context, we suggest they should be included in an appropriate valuation of the investment in trees (for evaluation of methods see <http://www.forestry.gov.uk/fr/INFD-8AGBXQ>). This will demonstrate the wider benefits

provided by such trees and inform future correct asset management of the tree resource.

b) Carbon Footprint and the Greenhouse Gas (GHG) Assessment

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - Section 5.4.*
- *Volume 27: Route wide impacts - Sections 5.4.1, 5.4.8.*

We understand that a GHG assessment will follow in the formal ES but we are pleased to note the loss of forestry land and soil disturbance will be accounted for within this. Any compensatory woodland creation should, as far as possible ensure replacement of the carbon storage lost through the loss of woodland and associated soils.

We suggest any tree planting undertaken to offset carbon emissions from the project follows the Woodland Carbon Code (<http://www.forestry.gov.uk/forestry/inf-d-84h157>). This is a voluntary standard for woodland creation projects in the UK which will make claims about the carbon dioxide they sequester. Tools to assess the carbon storage associated with tree planting are available here: <http://www.forestry.gov.uk/forestry/inf-d-863fvl>.

We support the Environment Agency's recommendation that embedded carbon is considered in the selection of material for the project (Appendix 1 section 1.1 of Environment Agency's) and commend the aim to use materials with lower embedded carbon such as wood which is stated in the draft ES. A real example of this is identified in Draft ES Volume 1, section 3.5.52 which indicates wooden fencing will be used as noise barriers in appropriate areas. We encourage the use of wood products wherever possible as a means of:

- a) Reducing the project's carbon footprint and;
- b) Demonstrating the project's sustainability if sourcing the wood products is consistent with our recommendations on sourcing sustainably grown and home grown wood (see our response to the Sustainability Policy below).

The UK Forestry Standard also outlines guidelines that can that can be taken to reduce a project's 'operational carbon footprint' (page 65 of the Standard available here <http://www.forestry.gov.uk/ukfs>).

c) Protection for Ancient Woodlands

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - Section 6.1.1*
- *Volume 27: Route wide impacts - Section 3.1.4.*

We welcome the hierarchy set out in for mitigation. This approach will be especially important when addressing the impacts on ancient woodland which are irreplaceable because of the longevity of tree cover that which has existed coupled with undisturbed soils on these sites. The importance of ancient woodland is set out in Keepers of Time -

A Statement of Policy for England's Ancient and Native Woodland (<http://www.forestry.gov.uk/keepersoftime>). The protection and enhancement of the existing ancient and native woodland resource is this policy's key priority.

The hierarchy's preference to avoid and reduce any adverse impacts is particularly important to safeguard these woodlands and as far as possible meet the aims of this policy.

The National Planning Policy Framework (NPPF) is referenced with respect to planning decisions affecting agricultural land. It is also worth note that the NPPF (paragraph 118) also indicates ancient woodland should be a planning consideration:

"planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss"

The formal ES should address this and set out the rationale the project has applied to account for the loss of any areas of ancient woodland.

Forestry Commission support Natural England's request for information on how ancient woodlands less than two hectares in size, veteran trees and wood-pasture/ parkland have been identified and any impacts addressed to be included in the formal ES¹.

d) Residual Effects of the Mitigation Measures

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - Section 6.1.3*

We note that the residual effects of the mitigation measures are still under consideration. This must be an important consideration for any mitigation achieved through tree planting due to the long period over which trees must be tended to ensure their successful establishment and delivery of the many ecosystem services trees and woodlands provide. Long-term plans for the management of these trees will be important and such planning is addressed in the requirements for the sustainable management of woodland set out in the UK Forestry Standard. This Standard sets out the UK Government's approach to sustainable forestry.

¹ 'Question 1 Community Forum Areas (CFAs) - Draft Volume 2 Report 27: Route Wide Effects' of NE's response to this consultation.

e) The Sustainability Policy

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - Sections 6.1.4.*
- *The Sustainability policy.*

We are pleased to see the commitments to sustainability set out in the policy. To help secure these aspirations of this policy as set out we recommended that the following are considered:

1) When considering the compensatory tree planting to create woodland to compensate for forestry land take - that these woodlands are created and managed in accordance with the UK Forestry Standard which sets out the UK Government's approach to sustainable forestry.

2) Timber and wood products for the project are sourced inline with the UK Government's Timber Procurement Policy (CPET). This requires all central government departments, their executive agencies, and non-departmental public bodies to purchase either legal and sustainable timber, or Forest Law Enforcement, Governance and Trade (FLEGT) licensed timber. For further information regarding the procurement protocol please go to the CPET web site at: www.proforest.net/cpet.

3) When considering where to source wood products, it is in general, most sustainable to use UK timber than imported timber. It is therefore worth noting the Grown in Britain campaign: <http://www.growninbritain.org/>. This is working to create a new and stronger market pull for the array of products derived from our woodlands and forests. It is also developing private sector funding that supports tree planting and the management of woodland through funding from corporate social responsibility. Finally it is encouraging the general public to value and engage more with British woodlands through personal health and fitness, well-being, community and encourages the use of more wood and forest product.

There are sometimes concerns about whether it is possible in procurement exercises to state that wood products should come from a certain country. However the use of social benefit clauses in procurement exercises has been made possible through the Public Services (Social Values) Act 2012. This Act requires Public Bodies to "consider how, in the context of procuring services, economic, social and environmental well-being may be enhanced".

f) Green Tunnels

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme - section 6.1.2.*

We welcome the use of green tunnels to enable animals to move across the line and reduce the rail line's potential to fragment wildlife populations.

The draft ES makes no mention of the project's impacts on deer. This is despite there being an existing problem of wild deer being struck by trains – a problem likely to escalate with the trend for deer populations to increase.

While the draft ES does not address this the green tunnels may help deer cross the line without risking disruption to the rail service or their welfare. However, we would again suggest seeking the views of the local deer management groups and the Deer Initiative (<http://www.thedeerinitiative.co.uk/>) before the formal ES is submitted.

g) Rights of Way

- *Volume 1: Introduction to the Draft Environmental Statement and the Proposed Scheme – sections 5.5.53 and 5.5.54.*

The draft ES considers the impacts on Public Rights of Way but does not consider the impacts on land with permissive access. The formal ES may seek to address any impacts on this to ensure a strategic assessment of the proposal's impacts on access and rights of way along the whole route. The Woodland Trust's Woods for People dataset could help identify woodlands with public access: <http://frontpage.woodland-trust.org.uk/woodsforpeople/>.

h) Code of Construction Practice

Section 6.2.2: We are pleased to see a survey would be undertaken to record the quality of forestry land before works take place to ensure appropriate reinstatement after works are complete. This survey work should also account for protected species.

Section 6.2.7: The measures that will be taken to prevent spread of weeds are welcome. However, the draft ES does not consider the projects potential impact on pests and diseases. For example, *Phytophthora ramorum* is a plant pathogen that is currently a major threat to England's trees, woodland and other habitats. It has been found in the West Midlands and we have seen some evidence of its spread being facilitated by routes of communication.

Forestry Commission and notably FERA (www.fera.defra.gov.uk/plants/plantHealth/) would be able to provide information on the location of known pests and diseases along the project's route for inclusion in the formal ES.

We support EA's request that the final Code of Construction practice addresses the need for bio-security precautions (section 11.0, Appendix 1 of EA's Response). The Forestry Commission have provided information on the [bio-security measures](#) that should be taken when work is undertaken in and around woodland or tree planting takes place. This would also help deliver the [Government's Action Plan for Tree Health and Plant Bio-security](#).

Further information

If you need any further information about this consultation response or wish to discuss Forestry Commission England's future role in the EIA for the High Speed 2, please contact:

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For all other correspondence and future consultations please contact the address in the letterhead above.

We hope this response is useful and would be pleased to provide High Speed 2 LTD / Department for Transport with further advice on the aspects of the project that relate to trees and woodland.

Yours faithfully,

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Annex 1 FC Estimated Minimum Impacts on Woodland, Ancient Woodland and Accessible Woodland

Table 1: Woodland That Might Be Lost Within and Close to the High Speed 2 Phase 1 Post-Consultation Route

	Entire Route		South East and London		North West and West Midlands		East and East Midlands	
	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)
A. Woodlands within the post consultation HS2 Phase 1 line of route and the 15m buffer								
All Woodland at 31 March 2011	132	79.0	58	44.1	64	31.4	11	3.5
B. Woodlands within the post consultation HS2 Phase 1 line of route and the 25m buffer								
All Woodland at 31 March 2011	153	106.2	71	59.0	70	42.4	14	4.8
C. Average of the Two Scenarios Shown Above (i.e. 15m and 25m Scenarios)								
All Woodland at 31 March 2011	143	92.6	71	51.6	67	36.9	13	4.2

Source of woodland data: National Forest Inventory (NFI) (Forestry Commission)

Note 1: Figures are based on the post-consultation line of route GIS data made available by HS2 Ltd in 2013. Calculations use an assumed engineering width of **22m** between fences for the entire length on route (apart from cut tunnels), **plus** the **15m** and **25m** buffers. The figures are therefore then a best **minimum** estimate because where the line runs in cutting or on embankment the engineering width between fences is likely to be more than 22m. The figures are therefore not directly comparable with those included in the Forestry Commission's HS2 Phase 1 Consultation Response (July 2011) that were based on GIS data that showed the engineering width including local changes in width for cutting and embankments.

Table 2: Ancient Woodland That Might Be Lost Within and Close to the High Speed 2 Phase 1 Post-Consultation Route

	Entire Route		South East and London		North West and West Midlands		East and East Midlands	
	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)
A. Ancient Woodlands within the post consultation HS2 Phase 1 line of route and the 15m buffer								
All Ancient Woodland	24	14.0	9	6.4	14	7.4	1	0.2
B. Ancient Woodlands within the post consultation HS2 Phase 1 line of route and the 25m buffer								
All Ancient Woodland	24	19.5	9	8.9	14	10.3	1	0.2
C. Average of the Two Scenarios Shown Above (i.e. 15m and 25m Scenarios)								
All Ancient Woodland	24	16.8	9	7.7	14	8.9	1	0.2

Source of Ancient Woodland data: Natural England.

Note 1: Figures are based on the post-consultation line of route GIS data made available by HS2 Ltd in 2013. Calculations use an assumed engineering width of **22m** between fences for the entire length on route (apart from cut tunnels), **plus** the **15m** and **25m** buffers. The figures are therefore then a best **minimum** estimate because where the line runs in cutting or on embankment the engineering width between fences is likely to be more than 22m. The figures are therefore not directly comparable with those included in the Forestry Commission's HS2 Phase 1 Consultation Response (July 2011) that were based on GIS data that showed the engineering width including local changes in width for cutting and embankments.

Table 3: Accessible Woodland That Might Be Lost Within and Close to the High Speed 2 Phase 1 Post Consultation Route

	Entire Route		South East and London		North West and West Midlands		East and East Midlands	
	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)	No. of woodland polygons	Area (ha)
A. Accessible Woodlands within the post consultation HS2 Phase 1 line of route and the 15m buffer								
Accessible Woodland	7	3.2	2	1.5	5	1.8	0	0
B. Accessible Woodlands within the post consultation HS2 Phase 1 line of route and the 25m buffer								
Accessible Woodland	7	4.8	2	2.1	5	2.7	0	0
C. Average of the Two Scenarios Shown Above (i.e. 15m and 25m Scenarios)								
Accessible Woodland	7	4.0	2	1.8	5	2.3	0	0

Source of Accessible Woodland data: Woods for People version 9 summer 2012 (The Woodland Trust and Forestry Commission).

Note 1: Figures are based on the post-consultation line of route GIS data made available by HS2 Ltd in 2013. Calculations use an assumed engineering width of **22m** between fences for the entire length on route (apart from cut tunnels), **plus** the **15m** and **25m** buffers. The figures are therefore then a best **minimum** estimate because where the line runs in cutting or on embankment the engineering width between fences is likely to be more than 22m. The figures are therefore not directly comparable with those included in the Forestry Commission's HS2 Phase 1 Consultation Response (July 2011) that were based on GIS data that showed the engineering width including local changes in width for cutting and embankments.