



House of Commons  
Environmental Audit  
Committee

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**HS2 and the  
environment:  
Government response  
to the Committee's  
Thirteenth Report of  
Session 2013–14**

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**Second Special Report of Session  
2014–15**

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## Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House.

All publications of the Committee (including press notices) and further details can be found on the Committee's web pages at [www.parliament.uk/eacom](http://www.parliament.uk/eacom)

### Membership at the time of the report

[Joan Walley MP](#) (*Labour, Stoke-on-Trent North*) (Chair)

[Peter Aldous MP](#) (*Conservative, Waveney*)

[Neil Carmichael MP](#) (*Conservative, Stroud*)

[Martin Caton MP](#) (*Labour, Gower*)

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[Mark Lazarowicz MP](#) (*Labour/Co-operative, Edinburgh North and Leith*)

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[Rt Hon Mrs Caroline Spelman MP](#) (*Conservative, Meriden*)

[Dr Alan Whitehead MP](#) (*Labour, Southampton, Test*)

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## Second Special Report

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The Environmental Audit Committee reported to the House on HS2 and the environment on 7 April 2014 (HC 1076). The High Speed Rail (London–West Midlands) Bill received its Second Reading on 28 April,<sup>1</sup> and the select committee on the Bill was set up and given Instructions by the House on 29 April.<sup>2</sup> The Government response to the Committee's Report was received on 3 June, and is appended below.

## Appendix—Government response

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### Introduction

The Government thanks the Environmental Audit Committee (EAC) for its consideration of HS2 and welcomes this opportunity to respond to their recommendations on this important issue.

The response below follows the paragraph numbering in the report.

**10. On HS2 the Government should aim higher than simply striving for no net biodiversity loss. As it further develops its processes and metrics for biodiversity offsetting, it should seek to weight these to be more likely to produce biodiversity gains and take explicit account of local communities' well-being. (Paragraph 12)**

In its evidence to the EAC Defra acknowledged that the objective of seeking no net loss to biodiversity is very challenging for a major infrastructure project such as HS2 and that this aim is as ambitious as for any similar infrastructure project worldwide. Therefore, the Government feels that this level of ambition is appropriate.

The Defra biodiversity offsetting metric on which the HS2 metric is based is designed to ascribe the appropriate weights for habitat losses and gains. The HS2 metric and the weightings within it take account of the views of offsetting experts in both Defra and Natural England. In the Government response to the Environmental Audit Committee's recommendations on biodiversity offsetting<sup>3</sup> Defra explained that the biodiversity metric and consideration of other issues such as public access were separate. As a result, Defra did not include these factors in the pilot metric and nor have they been included in the HS2 metric. Such issues were fully considered in other parts of the Environmental Impact Assessment.

**11. The HS2 Environmental Statement must be revised to distinguish clearly between 'mitigation' and 'compensation' measures in respect of biodiversity, and to explain the**

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<sup>1</sup> HC Deb 28 April 2014, [col 227](#)

<sup>2</sup> HC Deb 29 April 2014, [cols 707-771](#)

<sup>3</sup> Defra 2014: *Biodiversity Offsetting: Government Response to Environmental Audit Committee's Sixth report of Session 2013–14*

**factors determining in which cases these should be applied. If biodiversity loss is genuinely unavoidable and also cannot be mitigated, compensation measures should be applied to the fullest extent possible. (Paragraph 19)**

The Government recognises the important distinction between mitigation and compensation and believes that the ES properly assesses and describes the likely significant effects of the scheme on ecology and in relation to biodiversity. In the ecology chapters of the ES the terms mitigation and compensation are used correctly and properly reflect the fact that ancient woodland is irreplaceable as regards its biodiversity. The meaning of 'compensation' in the ecological sense is defined in the glossary to the Environmental Statement.

Other disciplines consider ancient woodland from other perspectives and therefore legitimately use the term mitigation in different ways. For example, in landscape terms the loss of ancient woodland can be mitigated because the asset that is lost is the visual characteristics of the trees.

HS2 Ltd will consult with Natural England on this and provide further clarification in an information note.

**12. HS2 Ltd must carry out outstanding environmental surveys as soon as possible. It should focus particularly on cataloguing all ancient woodland and protected animal species, and as much as possible of the 40% of the route yet to be examined by involving local wildlife groups where possible. (Paragraph 22)**

The environmental assessment took account of a broad evidence base. This included existing data obtained, for example, from local biological record centres and local experts and aerial photography, as well as surveys where access allowed and professional judgement. An appropriate baseline was therefore developed to enable assessment to a sufficient level in the Environmental Statement.

Further surveys will be undertaken in due course as appropriate once additional access becomes available. Surveys were undertaken for all woodlands to which we had access, and this information was supplemented by reference to Natural England's published list of ancient woodlands as well as with information from local wildlife trusts and other sources. We understand that Natural England is in receipt of additional information on woodlands along the route that may qualify as ancient woodland. We will continue to liaise closely with Natural England and local wildlife trusts as appropriate as part of the process of improving our evidence base as the project develops. If additional impacts on ancient woodland are subsequently identified we will consult with Natural England to consider appropriate outcomes.

HS2 Ltd is committed to a major programme of surveys of European Protected Species as access becomes available. Where new access became available late in 2013 these surveys are being undertaken during 2014. The data obtained from these and future surveys will inform future Habitats Regulations licence applications.

**13. Given the uncertainties surrounding the effectiveness of offsetting on HS2, along with the scale of the land to be taken by the project, the [HS2 offsetting] metric should be adjusted wherever possible to encompass the precautionary principle. It should for**

**example only allow offset land to be categorised as ‘good’ condition if there is a fully costed long-term plan for the site’s management and independent monitoring. As Defra are still finalising the standard metric for offsetting, HS2 should look to incorporate any additional learning from these pilots into the metric for this project, to ensure it is robust and reflects best available information. (Paragraph 35)**

The draft Environmental Memorandum for HS2 includes a commitment to manage newly created habitats for a period appropriate for that habitat. This will be a commitment made by the Secretary of State to Parliament and the nominated undertaker will be contractually bound by this, as well as any contractors employed by the nominated undertaker to undertake the work.

The metric identifies the broad objective for each parcel of land within Bill limits. Where the objective is ‘good’ an appropriate management and monitoring regime will be introduced to achieve this objective. The details of the monitoring and management regime to achieve this objective will be developed as the project evolves. If it becomes clear that an objective of ‘good’ condition cannot be achieved for any reason, this would be taken into account in future reviews of the no net loss calculation.

Defra have examined HS2’s offsetting metric in the light of early outputs from the offsetting pilot projects and believe that it is consistent with these early findings.

**14. If the offsetting metric is used to determine compensation for ancient woodlands on the HS2 route, these habitats should receive the maximum score possible on all criteria (distinctiveness, condition and position within ecological networks) to recognise their irreplaceability and to maximise the extent of the offsetting provided. But ancient woodlands should be treated separately from the overall biodiversity ‘no net loss’ calculation. (Paragraph 36)**

The metric has not been used to determine mitigation and compensation measures. The approach used for mitigation and compensation is set out in an appendix to the Environmental Statement (Ecological Principles of Mitigation in Volume 5 Appendix, SMR Addendum Section 9: CT-001-000/2). There are no set ratios for habitat creation; rather the approach relies on professional judgement. HS2 Ltd will continue to engage with Natural England on this as the project develops.

The Defra biodiversity offsetting metric specifically excluded ancient woodland as it did not accept projects that would affect this habitat in its pilot projects. However, HS2 is unable to avoid all ancient woodland, and its inclusion in the metric was discussed with Defra and Natural England specialists, who raised no objection.

The metric has been used to develop scores for the biodiversity value of habitats lost and habitats created. All ancient woodland automatically achieves the highest score for distinctiveness. However, ancient woodland is of variable quality and hence the condition score has to reflect the actual quality. Where ancient woodland has become overrun with rhododendron, for example, it would not be appropriate to give it a high condition score. The connectedness score is designed to reflect the value of a habitat in the ecological network both before and after the railway has been constructed. An isolated woodland is of lower connectedness than a woodland connected to other high quality habitats and this

affects its value to biodiversity. If a high score was always given to ancient woodland irrespective of its connectedness this would invalidate the benefit of the scoring.

Given our objective of aiming for no net loss of biodiversity it is necessary to be able to show the extent to which it is possible to achieve this for HS2. In order to show the overall balance of the ecological value of losses and gains, all habitats have to be considered, including ancient woodland. However ancient woodland is considered to be irreplaceable and loss of ancient woodland has therefore been categorised in the Environmental Statement as significant residual effects. The difference between mitigation and compensation in this respect is understood and those compensation measures which are used in respect of ancient woodland are not confused as mitigation in the metric. However, substantial woodland creation has been included in the project to help offset these losses.

Although ancient woodland is not part of the Defra pilot, HS2 Ltd does not believe it would be helpful to consider ancient woodland separately as it would then be impossible to show the extent to which no net loss has been achieved.

**15. The Government should commission research on alternative discount factors for the HS2 offsetting metric, to take into account the damage caused by any delays in compensatory habitats reaching maturity. (Paragraph 40)**

The time it takes for new habitats to become properly established is already included when deciding the appropriate amount of habitat to be created. In Defra's Biodiversity offsetting metric this is factored in through a score which relates to the type of habitat being created and the time it takes to mature. Habitats that are relatively easy to create are given a low score and habitats that are more difficult to create, or take longer to become mature, are given a higher score. The HS2 metric uses the same figures as the Defra metric, which is based on the discount rate in the Treasury green book.

**16. The Government should re-examine the scope for such off-site biodiversity compensation, taking on board the emerging results from the Natural Capital Committee's work to strike an appropriate balance between what is best for nature and for the people affected. (Paragraph 45)**

The HS2 Phase One Bill seeks the powers to create all the mitigation and compensation habitats that are needed. HS2 Ltd and DfT remain of the view that these powers will enable creation of the habitats that are required to meet the needs of the project. They include sufficient scope to ensure that the delivery of such mitigation and compensation takes account of the need to balance habitat creation requirements and recreational opportunities. It is often necessary to locate new habitats close to the railway in order to maintain the populations of protected species such as bats and great crested newts that are affected by it.

**17. The Government should establish a process to monitor all aspects of the environmental protections needed for HS2 for the 60 years following the start of construction and operation of the railway, including biodiversity mitigations, compensations and offsets. This process must be managed by an independent body, which should be tasked with monitoring and publicly reporting progress against the 'no net biodiversity loss' objective. The Government should also establish detailed**

**costings for monitoring and reporting and for the environmental protections being overseen, and ring-fence those environmental protections and a budget for them separate from the rest of the project. (Paragraph 52)**

The Environmental Memorandum includes a commitment to an appropriate monitoring and environmental management regime. This is a commitment made by the Secretary of State to Parliament and the nominated undertaker and contractors will be contractually bound by it. In regard to created habitats, there is a commitment to monitoring and managing new habitats for an appropriate period to ensure that the objectives of the habitat creation are met. For habitats that are relatively easy to create a five year period may be appropriate. At the other end of the scale, ancient woodland compensation areas will need to be monitored and managed for much longer.

The use of a metric to measure losses and gains to biodiversity for a major infrastructure project is a major challenge. This is the first time any such attempt has been made in the UK. As such it represents a significant step forward in our understanding of the benefits and limitations of using such an approach. Nevertheless, in view of the novelty and complexity of the undertaking, we recognise that it is challenging for consultees to understand the metric and its use, and therefore to have confidence in it.

The Government, therefore, recognises the benefits of having an independent body to oversee monitoring of created habitats and the output from the biodiversity no net loss calculations. In its questioning the Environmental Audit Committee raised the potential for Natural England or local authorities to fulfil such independent roles, and HS2 Ltd will consider these options further.

The Government recognises that monitoring costs should be met by the project.

HS2 Ltd will develop detailed cost estimates for monitoring and reporting at the detailed design stage. However, we do not believe that ring-fencing a budget for environmental protection would be appropriate. There is greater flexibility in including environmental costs in a wider budget as this would enable the appropriate funds to be assigned as necessary.

**18. The Department of Transport and HS2 Ltd should put forward proposals for an emissions monitoring system to help resolve, and bring transparency to, the likely effect of HS2 on overall transport emissions. While the impact of lower maximum train speed on reducing emissions is currently not seen as substantial, the legally binding commitment to reduce emissions makes even a small reduction desirable. HS2 Ltd and the Department should therefore examine the scope for requiring a reduced maximum speed for the trains until electricity generation has been sufficiently decarbonised to make that a marginal issue, and publish the calculations that would underpin such a calculation. (Paragraph 62)**

HS2 Ltd and DfT are committed to minimising carbon emissions and HS2 Ltd has endorsed the Infrastructure Carbon Review which sets out actions to address the UK's aspirations (as set out in the Government's Construction Industry Strategy) to reduce greenhouse gas emissions from the built environment. Volume 1 of the Environmental Statement (ES 3.1.0) reiterates the commitment to minimising carbon emissions and sets out HS2 Ltd's intention to develop and apply a carbon management strategy. The carbon

management strategy sets out a hierarchy of actions and the carbon footprint will be calculated at appropriate intervals to monitor carbon emissions and determine progress in minimising carbon emissions.

The technical development in 2009/10 concluded that a commercial maximum speed of 360kph could be adopted based on the guiding principle of using the latest existing technology. Accordingly, HS2 has been designed for a maximum speed, where the balance of benefit, cost and impacts permits, of 360kph with a passive provision, again where appropriate, of 400kph for future proofing.

HS2 Ltd will undertake further examination of the possible emissions benefits of changing the operational specification. However, HS2 Ltd is clear that operating at lower speed would reduce carbon emissions from the operation of rolling stock by only a relatively small degree, and would increase journey times, making HS2 a less attractive option to customers on roads and using flights. This is likely to result in less mode shift and potentially less carbon benefit associated with the operation of HS2, which could lead to an overall increase in UK carbon emissions compared to the existing proposed operating speed.

**19. The Government should couch its intended instructions to the Hybrid Bill Select Committee [so as to be able to demonstrate that it has at least fully followed the purposes and processes, to address environmental risks and to prevent or mitigate them, that would be expected of any other development of this scale.] It is vital that, when the HS2 Hybrid Bill is given its Second Reading and referred to the Select Committee to consider petitions, the House's instructions to it:**

**(i) do not overly constrain the 'principles' of the Bill approved at Second Reading. The motion should list only the key fixed features of the project such as terminals in Birmingham and London. This would allow the Select Committee to request information on measures that could avoid, reduce or remedy environmental damage (an EIA process) of potential modifications to the route and its infrastructure and consequential environmental protections that might result, for example, from the trains being required to operate at marginally slower speeds that currently planned.**

**(ii) require it to consider and report on the environmental impacts of the project. Unless the Government or others in the House do so, Members of our Committee intend to table a motion requiring the select committee "to comment and report to the House for its consideration any issue relating to the environmental impact of the railway transport system for which the Bill provides that is raised in a Petition against the Bill, including whether any reasonable or practicable environmental protections and mitigations are not adopted". As modifications are subsequently introduced, as a result for example of the Higgins report or further environmental surveying, additional instructions to the Select Committee to deal with these should be couched in similar terms. (Paragraph 86)**

This recommendation has now been overtaken by the Instruction by the House to the Select Committee on 29 April. The Instructions can be found here: <http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm140429/debtext/140429-0003.htm#14042952000003>



It is now for the Select Committee to decide how to approach the business it has been charged with in the light of the instruction given to it by the House.

Insofar as a petition raises environmental effects of the Bill project it is a matter that the Government anticipates the Select Committee would consider, provided that the subject matter of the petition does not touch on the principle of the Bill. If the Select Committee considers that there is a reasonable and practicable mitigation, that mitigation could be introduced into the Bill on that basis. This is a key part of their role and their conclusions will be included in their special report to the House.

If the Select Committee process leads to any new likely significant environmental effects, be it from changes to the design or new information coming forward from petitioners or further surveying, the procedures set out in Standing Order 224A of the Commons Standing Orders for Private Business require a consultation to be held on this “supplementary environmental information”. The responses to this consultation will be summarised by an independent assessor appointed by the House Authorities. This summary report will be available for the House when it reconsiders the principle of the Bill at Third Reading. In this way the process ensures that all environmental information, whether it touches on the principle of the Bill or not, is properly considered by Parliament as decision maker.