



## Department for Transport

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Dear Natalie,

Thank you for tabling in the debate on HS2 held on Wednesday 11 March 2020. I thought the debate was good natured and constructive.

As promised, I am writing to provide further details on questions that you raised and to touch on the environmental concerns with HS2.

In your speech, you expressed concern that the HS2 project 'relies' on assessments carried out in 2013, given that the wider context has changed. This is to misunderstand the nature and role of these assessments. You are correct that the carbon impacts of the Phase One scheme were assessed – alongside all of the other environmental effects of the scheme - within the Environmental Statement (ES) published with the hybrid Bill back in 2013. Further assessments have since been carried out to accompany the Phase 2a Bill and to look at the Y-network as a whole. A draft assessment of the current Phase 2b route was published for consultation in 2018, and a formal assessment of the Phase 2b scheme reflecting the precise scheme will be deposited in Parliament alongside that Bill, following publication of the Integrated Rail Plan.

The carbon figure you quoted in your speech does not represent the true carbon impact of HS2, because it does not include the Phase 2b scheme, which is where the majority of the modal shift benefits come from (from long distance alternatives such as air travel).

A full understanding of this issue also requires an appreciation of what these assessments are for. These formal ES assessments provide not an evolving measure of progress, but an up-front, reasonable worst-case scenario based on conservative assumptions about the project's potential emissions. HS2 is of course aiming to do much better than this and has a number of industry-leading policies in place to achieve just that. To give one example, HS2 Ltd has challenged the construction industry to halve carbon emissions during construction of the civil infrastructure and stations and is working with the

supply chain to minimise the carbon footprint of the scheme. The scale of the HS2 project means that improvements we set in motion here have the potential to spread far beyond it - across the construction industry as a whole.

The Government accepts that despite applying best practice in carbon management, it is not possible to build a project of the scale of HS2 without generating any carbon emissions. However, to put HS2's carbon footprint in perspective, the estimated total carbon emissions from both building and operating Phase One of HS2 (London-Birmingham) for a full 120 years produces the same amount of carbon as just one month of the UK's road network.

This is why HS2 is a key part of the transition to a net-zero carbon UK economy by 2050. HS2 trains will be highly energy efficient and, as electricity generation decarbonises, HS2 journeys will become progressively lower carbon. HS2 will offer some of the lowest carbon emissions per passenger km – seven times less than passenger cars and 17 times less than domestic air travel in 2030. HS2 also frees up space on the West Coast, East Coast and Midland Mainlines for more passenger and freight services. Rail freight produces 76% less CO<sub>2</sub> per tonne of cargo compared with road haulage. Every extra freight train takes up to 76 lorries off the road. In short, by providing a cleaner, greener way to travel, HS2 will help cut the number of cars and lorries on our roads, cut demand for domestic flights, and help the country's fight against climate change.

The Department is developing a transport decarbonisation plan that will set out in detail what government, business and society will need to do to deliver the significant emissions reduction needed from all modes of transport in order to achieve net zero carbon by 2050. It will consider HS2 as part of the UK transport system alongside other rail and other modes.

In your speech, you also expressed concern about the impact of the project on wildlife, and referred to a recent Wildlife Trust report on the matter. You will no doubt be aware that we do not accept many of the headline figures quoted in that report, or its overall conclusion. In fact, the HS2 project is taking its responsibility to the natural environment very seriously. It was the first major UK transport project to commit to seek to achieve 'no net loss' in biodiversity across the route. Demonstrating again the potential for a project of HS2's scale to effect wider positive change, this has been the catalyst for many other projects to adopt a similar approach.

One of the things that this means in practice is that HS2 Ltd will replace lost wildlife habitats along the route. Over 50 such sites have already been created, allowing them to become established in advance of main works. Overall, HS2 is predicted to create a net increase in habitats for wildlife. Phase One expects to support 33 square kilometres of new and existing wildlife habitat - an increase of around 30% compared to what's there now.

This work includes, but is not limited to, putting tailored mitigation plans in place for protected species, including new wetland and ponds to encourage newts, new areas of planting to encourage rare butterflies and new native woodland planting to link up and enhance ancient woodland. Mitigation has been included where appropriate, including habitat creation and if needed, species translocation.

HS2 Ltd continues to undertake one of the largest biodiversity and habitat surveys in the UK. This approach allows it to be best informed about the impacts of the scheme and to understand the necessary mitigation needed to reduce the impacts and also to seek opportunities that will leave a bigger and better natural environment legacy.

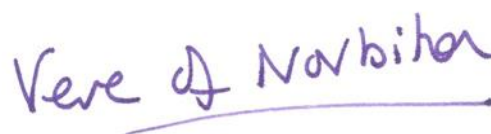
Far from being a barrier to wildlife, HS2 will be criss-crossed by access routes with 140 bridges and underpasses on Phase One, including 16 specially designed 'green bridges' covered in planting and 25 miles of tunnel.

Seven million new trees and shrubs, including over 40 native species, will be planted as part of the HS2 programme. Over 550,000 of these have already been planted. New native woodlands will cover over 9 square kilometres of land. At least 400km of hedgerows will be created, which includes the translocation of existing hedgerows at various locations.

In addition to this, the HS2 Phase One £5 million Woodland Fund is designed to offset negative impacts further. The £1.6 million that has been allocated to specific projects so far will provide around 115 hectares of new native woodland creation and around 160 hectares of ancient woodland restoration. We anticipate similar pro-rata performance for the remaining £3.4 million.

Measures such as these reflect the Government's wish for HS2 to be more environmentally responsible than any other major infrastructure project in UK history. Through careful planning, the Department for Transport and HS2 Ltd have sought to avoid, reduce and mitigate environmental impacts as far as possible, and we continue to work with partner organisations such as Natural England and the Environment Agency to build on these efforts.

I will place a copy of this letter in the Library of the House.



**BARONESS VERE OF NORBITON**