

IN PARLIAMENT

HOUSE OF COMMONS

SESSION 2013–14

HIGH SPEED RAIL (LONDON – WEST MIDLANDS) BILL

Against – on Merits – [By Counsel], &c.

To the Honourable the Commons of the United Kingdom of Great Britain and Northern Ireland in Parliament assembled.

THE HUMBLE PETITION of Peter Mumford

SHEWETH as follows:-

- 1 A Bill (hereinafter referred to as “the bill”) has been introduced and is now pending in your honourable House intituled “A bill to make provision for Make provision for a railway between Euston in London and a junction with the West Coast Main Line at Handsacre in Staffordshire, with a spur from Old Oak Common in the London Borough of Hammersmith and Fulham to a junction with the Channel Tunnel Rail Link at York Way in the London Borough of Islington and a spur from Water Orton in Warwickshire to Curzon Street in Birmingham; and for connected purposes.”
- 2 The Bill is presented by Mr Secretary McLoughlin.
- 3 Peter Mumford (hereafter referred to as ‘the petitioner’) is aware that there may be challenge to his right to petition cf: *locus standi* as the petitioner does not live in close proximity to the proposed route (he actually lives approximately 2 miles from the route).
- 4 However, the adverse environmental impacts this petition refers to are those of climate change (to which the project’s greenhouse gas emissions would contribute). As there is only one atmosphere and one global climate,

environmental impacts due to climate change would directly and specially affect all, including the petitioner. These environmental impacts will most likely be felt more keenly in less developed countries; they will also be felt more markedly as time progresses over the coming decades. For these reasons the people likely to be affected most by these impacts are unlikely to petition against this Bill. The petitioner therefore humbly hopes to be of service in representing these people as well as himself.

- 5 The petitioner's objection to the Bill as it stands is that, whilst it contains commitments to minimise the greenhouse gas emissions of the project during its construction and operation, it does not commit to ensuring that the project will be carbon neutral over timescales which are not unreasonably long. In particular, it envisages no offsetting of its substantial construction emissions.
- 6 The project has made clear its desire to be an exemplar project in sustainability terms.
- 7 The petitioner therefore humbly submits that a commitment should be included in the Bill to ensure the project demonstrates carbon-neutrality over any 10-year period of its construction and operation.
- 8 The petitioner has provided further detail of his reasons and arguments below and also a proposed wording of the proposed commitment.

Petition Executive Summary:

- a) This petition relates to the mitigation and offsetting of greenhouse gas emissions due to the project.
- b) It is considered an excellent first step that the project has quantified the amount of CO₂e which is likely to be emitted during the construction and operation of the project.
- c) It is appreciated that once HS2 starts to operate, it has great potential to form part of a low-carbon transport system.
- d) However, the project will result in substantial carbon emissions during its construction phase (approx. 660,000 to 700,000 tonnes CO₂e/year¹ as opposed to

¹Values quoted are based on the total construction emissions scenario A and B figures of 5,590,000 tCO₂e and 5,300,000 tCO₂e respectively (from para 5.1.11 of volume 3 of the ES). These figures have then been divided by the construction period of 8 years and rounded to the nearest 10,000 tCO₂e

emissions during the operational phase of between 20,000 and 75,000 tonnes CO₂e/year²)

e) Net greenhouse gas emissions over the time period of HS2's construction phase are critical to achieving national and international climate change goals which refer to a goal of keeping temperature rises below 2 degrees Celsius (such as the UK Low Carbon Transition Plan and the Copenhagen Accord).

f) This is because it is emissions over the next 10-20 years which will be key in determining whether the 2 degree goal (commonly defined as a threshold for dangerous climate change) can be met. The 60-year period of assessment used in the HS2 ES is much too long to capture this shorter-term objective.

g) The project's ES states that the majority of the construction carbon emissions will be controlled under the EU Emissions Trading Scheme. However, para 6.9 of the HS2 Information Paper on carbon implies that substantial construction emissions will not be covered by this mechanism.

h) In environmental impact areas such as ecology, the project's policy is that there should be no net loss in biodiversity. This is achieved by minimising adverse impacts (mitigation), then using offsetting to make up for any residual adverse impacts. These same principles can and should be applied to greenhouse gases.

i) The project has a fantastic opportunity to be an exemplar and deliver true ongoing carbon neutrality by not just minimising emissions but by offsetting them over timescales relevant to avoiding dangerous climate change.

j) In order to achieve this reasonable and practicable goal, this petition proposes that the scheme adopt the following environmental commitment:

“Over any ten-year time period of its construction and operation, the HS2 project shall demonstrate carbon-neutrality i.e. not result in any net increase in greenhouse gases (CO₂e) in the atmosphere. Carbon offsetting to facilitate the achievement of this goal could be provided by commissioning of new low-carbon electricity generation capacity or by other offsetting means.”

k) One possible mechanism for implementing the carbon offsetting necessary to achieve the above goal would be the commissioning of low-carbon energy generation as part of the scheme which would not have been built were it not for the project. This could also contribute to the greening of the UK electricity grid such that the project need not restrict its operating speeds upon opening. Unlike most environmental mitigation or offset, this could actually provide a financial return for the project over the medium term through the sale of the electricity produced.

²Values quoted are from year 5 onwards of the operation of the project, taken from figure 11 in para 5.5.13 of volume 3 of the ES

l) If the procurement of low-carbon electricity generation capacity is not considered feasible, alternative offsetting mechanisms could be utilised to meet the commitment.

m) The petitioner considers that the above commitment could be met without adding unreasonable costs to the project or unreasonable delays to the construction programme

Further Detail

1. There are two important aspects to achieving carbon neutrality for HS2:

2. Firstly, minimising the carbon produced during the scheme's construction works. This is already discussed in the ES (paras 5.5.9 and others of volume 3 of the ES).

3. Secondly, offsetting carbon produced during construction (predicted to be approximately 5.5 million tonnes CO₂e – para 5.1.11 of volume 3 of the ES).

4. Sequestration techniques such as tree-planting are not likely to be capable of achieving carbon offsetting of this scale over short time periods (10-20 years). However, in para 5.5.10 of volume 3 of the ES, another possible method of offsetting is mentioned: "...low carbon energy, if practicable, will be used and/or generated.". This possibility is further discussed below.

5. The introduction of low-carbon energy generation into the national grid currently provides a carbon-beneficial effect (i.e. lowering of net emissions). This is because, given the current fuel mix of the national grid (predominantly fossil-fuel based), any low-carbon generation provides 'first port-of-call' for electricity demand, hence displacing fossil fuel generation and lowering net CO₂e emissions. This basic mechanism is not set to change significantly over the next 5-15 years, as under current policy, over this timescale there will still be sufficient fossil fuel generation for any low-carbon energy generation to displace.

6. Building sufficient low-carbon generation as part of the project, therefore, could provide one mechanism for offsetting carbon emissions in order to achieve carbon neutrality. If carbon offsetting delivered in this manner kept up with the carbon produced by the scheme construction works, the project could in this manner achieve carbon neutrality during the important construction phase. It is important to note, however, that this would need to be low-carbon generation which would not have been built were it not for the project.

7. In this approach, once HS2 Phase 1 has finished construction, the same generation capacity could then provide offsetting for Phase 2 construction and the

operation of Phase 1. Finally, after Phase 2 construction has finished, the capacity could offset the emissions due to operation of the completed scheme.

8. To give an idea of the likely scale of a solution of this nature, some outline calculations show that it would entail very approximately 90 or so 4MW (nameplate capacity) offshore wind turbines or equivalent other low-carbon generation³. These obviously are very outline calculations: more detailed assessments would be appropriate to gain a more precise understanding of the possible solutions.

9. The upfront cost of such a solution could be recouped by selling the electricity generated by this infrastructure (it wouldn't matter to whom the electricity is sold: the fact that this generation capacity it is displacing fossil fuel generation is the mechanism by which carbon emissions are reduced).

10. There may also be other methods by which the project could procure the carbon offsetting necessary to achieve carbon neutrality: a combination of any methods could be used to achieve the goal set out in this proposal.

YOUR PETITIONERS therefore humbly pray your Honourable House that the Bill may not be allowed to pass into law as it now stands and that they may be heard by their Counsel, Agents and witnesses in support of the allegations of this Petition against so much of the Bill as affects the property, rights and interests of your Petitioners and in support of such other clauses and provisions as may be necessary or expedient for their protection, or that such other relief may be given to your Petitioner in the premises as your Honourable House shall deem meet.

AND your Petitioners will ever pray, &c.

[Signature of Petitioner in person, or ~~Agent for the Petitioner~~]

³These calculations assume that the carbon intensity of grid generation which would be displaced by the low-carbon generation is 800 g/kWh (i.e. coal) from 2017 until 2022 and 450 g/kWh (i.e. gas) from 2022 thereafter. The assumed carbon intensity of the displacing technology is assumed to be 40 g/kWh. The offshore turbines are assumed to be 4MW installed (nameplate) capacity operating at a capacity factor of 37%.