



Department for Transport

From the Permanent Secretary

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Sir Geoffrey Clifton-Brown MP
Chair, Public Accounts Committee
House of Commons
London
SW1A 0AA

[Sent via email]

Dear Sir Geoffrey,

Cost breakdown of the HS2 bat mitigation structure at Sheephouse Wood

I am writing, as promised, in response to your request for further details about the cost of the bat mitigation structure that is being constructed near Calvert in Buckinghamshire over HS2 and the parallel conventional rail lines.

I would like to begin by recognising that the bat mitigation structure is a controversial and costly part of the railway that has rightly attracted significant scrutiny. A wide array of alternatives were considered during the development phase, but were ultimately discounted because of either excessive cost, technical infeasibility or ecological ineffectiveness. In 2021 a 'first principles' review was undertaken by DfT, DEFRA and Natural England, but did not identify any better solution that was able to both fulfil the requirements of the relevant legislation relating to species protection (Wildlife and Countryside Act 1981, the Conservation of Habitats and Species Regulations 2017, and the International Convention on the Conservation of European Wildlife and Natural Habitats) whilst also reducing cost. The most feasible engineering options were also subject to an additional independent design review by Arup, who concluded that the solution now being taken forward provided the best balance of value for money and risk mitigation, from the four viable options that were shortlisted.

I would also highlight that the scale and complexity of the structure, which is reflected in its cost, should not be underestimated. You will be aware, for instance, that the structure will be approximately 1 kilometre long and up to 10 metres high. It is designed to accommodate up to 36 high-speed trains passing through the structure every hour of operation for 120 years, alongside frequent conventional rail traffic. It must be resistant to fire and appropriately ventilated.

I have picked up your requests relating to cost in turn. Please note that all costs are in 2019 prices:

The cost of the contractor EKFB (Eiffage, Kier, Ferrovial, BAM) to construct the structure:

The Department does not routinely collect cost information from HS2 Ltd breaking down individual assets into constituent elements, but has obtained the following to inform our high-level assessment of this particular structure, given the significant interest it has received:

- The cost of the bat structure is c. £95 million.
- The above-ground elements (i.e. the cost of the physical barrier between bats and trains) are c. £70 million, with the remainder c. £25m of the cost being additional below-ground civils works required to accommodate the structure (e.g. foundations).
- Given that the bat structure covers the re-instated single-track Marylebone to Claydon Junction (MCJ) line, and passive provision for a future extra line to double track the MCJ, there is an East West Rail funding contribution covering approximately one third of the cost of the structure.
- The total cost of the railway in the section which includes the bat structure is c. £168 million. This figure is the total cost of the civil works for the railway assets including culverts, ditches, embankments, retaining walls, green bridges, and the bat structure.
- The baseline cost of the surface railway in this area (i.e. with no bat structure) would therefore have been c. £73 million.

The following table provides a further breakdown of the total cost allocation within this section of the railway (i.e. the following percentages apply to the c. £168m cost of the railway in this area and **not** just to the bat structure):

Element of total cost	Proportion of total estimated cost
<i>Direct Works</i>	72%
<i>EKFB costs (e.g. preliminaries and fees etc)</i>	15%
<i>Risk</i>	8%
<i>Design</i>	5%

There are other ways in which the overall costs could theoretically be broken down (e.g. by contract), but some of this information is commercially sensitive and relates to live contracts within the HS2 supply chain. I trust you will understand.

Land purchasing costs

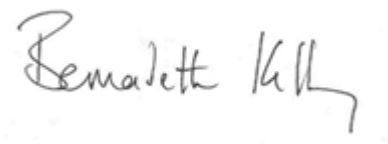
The structure is wholly located in land already required for the construction and operation of the railway. Consequently, there has been no additional land cost associated with acquisition of land for the structure.

Highways England fee

My officials are not aware of any fees specific to Highways England, nor to National Highways (its successor organisation) out of the above costs.

I hope that this response is helpful to the Committee.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Bernadette Kelly". The signature is written in a cursive, flowing style.

Dame Bernadette Kelly DCB
Permanent Secretary