

MEMORANDUM

To: Committee of Public Accounts

From: Stephen Cresswell

Date: 24 September 2026

Subject: The cancellation cost counterfactual in the HS2 Phase 1 Accounting Officer Assessment (May 2026)

Prepared using an AI tool, from points and sources prepared by the author, although edited in parts it has not been rigorously checked for errors – it is assumed these would be checked as part of the recommended independent review. Highlights are authors own.

1. The decision is current, not historic

At Q17 the Permanent Secretary framed the cancellation work by reference to “the Chair’s exhortation that we all look forward”, and said the Department had asked Mr Wild “to look to history”. At Q22 Mr Lowe distinguished the current decision from the 2023 one; the answer returned to 2023.

The Committee’s own evidence shows the decision is live:

- Baseline 8.0 will supersede “the current, discredited baseline of 7.1”, targeted for Christmas and expected by April 2027, with baseline 8.1 to follow (Mr Wild, Q3).
- Of seven contracts, two are reset; SCS and BBV remain the greatest uncertainty; the stations and rolling stock contracts run to March 2027 (Q5).
- The Department must be prepared in case there is no deal (Mr Creamer, Q5).
- The business case will be updated next year, with demand sensitivity analysis (Q12).
- The Permanent Secretary warned against rushing “the final step of exiting reset” (Q3).

The Accounting Officer Assessment itself states that the speed reduction “will be considered as part of an updated Accounting Officer assessment alongside the new programme baseline”. The National Audit Office reports that a robust baseline is not expected until spring 2027 (High Speed Two reset, HC 52, 29 June 2026).

The assessment was therefore made against a baseline the Department describes as discredited, using a counterfactual produced before the replacement exists, and the Department has already committed to redoing it. It is the basis on which the £46.8 billion to £61.7 billion still to be spent is being committed.

2. Proportionality

The Permanent Secretary relied on proportionality twice — at Q17, and again at Q52 in declining to commit to independent verification, where she said the Department “made a proportionate assessment of the amount of work we wanted Mark and his team to put into assessing the cost of remediation.”

FOI-26-6339 shows what that produced.

Aspect	Finding (FOI-26-6339, Annex A)
Form	Class 5, high-level order-of-magnitude estimate; five-worksheet Excel workbook, Revision P02

Risk analysis	None. No quantitative risk analysis, no probability distribution, no mean, no P50 (answer 5)
Assumptions	No standalone assumptions log (answer 6)
Assurance	Not subject to HS2 Ltd's standard cost estimating assurance process (answer 4(b))
Authorship	Author, Senior Estimating Manager; approver, Cost Estimation Director (answer 4(a))
Review	Boston Consulting Group (Jan 2026) and the DfT Project Representative (Feb 2026); neither part of the standard process (answer 4(d))
Commissioning	Commissioned by the Department on 18 November 2025, as part of the AOA process (answer 2)
Optimism bias	Applied by the Department; no assessment of contributory factors held (answer 7)
Sensitivity	No alternative categorisation or uplift percentage tested (answer 8)

Three observations follow.

(a) **The justification is circular.** At Q19 the 66% was justified on the basis that “we do not have a programme to cancel”. But the absence of such a programme is a direct consequence of the proportionality decision described at Q17. The Department decided that developing the cancellation option further would be disproportionate, and then relied on the resulting immaturity to justify the maximum uplift.

(b) HS2 Ltd holds no assessment of contributory factors of the kind the Supplementary Green Book Guidance on optimism bias envisages before the upper bound of a range is adopted, and no alternative percentage was tested. Testing an alternative in a five-worksheet workbook costs almost nothing.

The materiality is not marginal. Mr Wild's evidence at Q17 confirms the 66% was applied on top of the 35–55% range, so the published £33 billion to £58 billion is a post-uplift figure. The underlying estimate is therefore of the order of £20 billion to £35 billion, against £46.8 billion to £61.7 billion to complete. The proposition that it will cost as much to cancel as to complete depends entirely on the uplift.

3. The optimism bias guidance: the 2004 Supplementary Green Book Guidance and its 2021 update

This section refers to two documents: Supplementary Green Book Guidance: Optimism Bias, HM Treasury, prepared from Mott MacDonald (2002), Review of Large Public Procurement in the UK; and Updating the evidence behind the optimism bias uplifts for transport appraisals, Oxford Global Projects for the Department for Transport, published 19 May 2021 and presented as a data update to the 2004 guidance, with an accompanying workbook last updated 30 November 2023.

My primary position is that no optimism bias or reference class forecasting uplift can properly be derived for this exercise at all. Reference class forecasting works by benchmarking an estimate against a class of comparable completed projects. No such class exists for the cancellation and remediation of a part-built high speed railway, because cancellation on this scale has not been undertaken before. Mr Wild said so in the advice itself: cancelling a programme of the scale of HS2 is unprecedented in the western world, and accurate estimates are impossible to benchmark.

The Department's 2021 update is to the same effect. It states that the effectiveness of reference class forecasting depends on the similarity of the reference class and on its size, suggests 20 to 30 comparable past projects as a robust minimum, and concludes that only where similarity, project size and reference class size are all met will the method outperform others. Every project category in Table 1 of the 2004 guidance is defined by construction of the asset, and the underlying dataset is of construction cost overruns. There is no category for demolition, remediation or programme closure. The 66% figure describes the historic cost overrun of non-standard civil engineering construction. It says nothing about the cost of taking such works down.

The remainder of this section is made without prejudice to that position. Even if an optimism bias uplift were appropriate in principle, the methodology has not been applied in accordance with either the 2004 guidance or the Department's 2021 update.

Step Four (paragraph 3.16) directs that the present value of the capital costs be multiplied by the optimism bias factor, the result forming the Base Case, which footnote 4 defines as including the allowance for risk and optimism. The worked example applies the uplift to the bare capital expenditure estimate and adds the cost of risk separately afterwards.

The Department's own 2021 evidence base, Updating the evidence behind the optimism bias uplifts for transport appraisals, states the point directly: uplifts should be applied to the base cost estimate and not to any estimate that already includes contingency. HS2 Ltd has confirmed that its estimate already incorporated contingency allowances and an estimating uncertainty range (answer 5).

The Department cannot maintain both positions at once. If the £46.8 billion to £61.7 billion requires no optimism bias uplift because it already contains a top-down risk-based allowance, then the £33 billion to £58 billion — which HS2 Ltd confirms already contained scenario analysis, contingency allowances and a Class 5 estimating uncertainty range — did not require a 66% uplift either. If the cancellation estimate required an uplift notwithstanding its internal allowance, the continuation estimate required one on the same basis. The two arms of the comparison were not treated consistently, and the Green Book requires that options be appraised on a consistent basis. On a separate point I believe HS2 have probably misunderstood the role of estimation classification. Estimate classification is not an input, it is a categorisation based on the maturity of the output.

Paragraph 3.18 of the same guidance requires sensitivity testing around the optimism bias adjustment, and the presentation of a range rather than a single figure where the adjustment is shown as separate analysis. HS2 Ltd has confirmed that they have no alternative categorisation or uplift percentage was tested (answer 8).

Paragraph 4.1 provides that where there is no evidence to support an adjustment for benefits shortfall, appraisers should use sensitivity analysis to check switching values. No such analysis has been published.

4. The Lovegrove Review

The Cabinet Office published the Lovegrove Review — Review of implications for the Civil Service and wider public sector of findings of the James Stewart Review — on 19 May 2026, the same day as the Accounting Officer Assessment, Mr Wild's advice and the Secretary of State's statement.

At paragraph 58 Sir Stephen Lovegrove observes that external reviews should not substitute for advice on overall strategic choices. At paragraph 59 he finds that the advice ahead of the Notice to Proceed decision did not address options on alternative ways of delivering the project, and that officials instead focused on the narrower question of whether or not to proceed. At paragraph 60 he notes there was particular cause to provide the fullest range of advice at that point in HS2's history.

At paragraph 70, considering the value-for-money decision, he finds that it should have been made much clearer that the costings and schedule on which the decision rested were much less mature than those for Phase 1. At paragraph 71 he describes the episode as a case study in the need to think through and describe future scenarios and risk through an accounting officer process.

The May 2026 assessment repeats both. It appraises a binary — continue, or cancel and remediate — with no intermediate option assessed. And its conclusion rests on a counterfactual materially less mature than the continuation estimate it is compared against, a disparity disclosed nowhere in the published documents.

5. Four questions the Committee may wish to put

1. Was the 66% applied to a base cost, or to an estimate that already contained contingency and an estimating uncertainty range? If the latter, what steps were taken to avoid double counting?

2. Does the Department hold an assessment of contributory factors and mitigations underlying the selection of 66%, as the Supplementary Green Book Guidance envisages? If so, its title and date.

3. What optimism bias, if any, was applied to the £46.8 billion to £61.7 billion cost-to-go range, and what is the recorded justification for any difference in treatment between the two options?

4. Will the Department correct the published cancellation cost advice and the Accounting Officer Assessment summary to record which organisation applied the uplift, and the relative maturity of the two estimates being compared?

I would also respectfully support Mr Lowe's request at Q52 for independent verification of the cancellation cost estimate.