



National Audit Office



REPORT

HS2: update following cancellation of Phase 2

Department for Transport and
High Speed Two Limited

SESSION 2024-25
HC 128



We are the UK's independent public spending watchdog.

We support Parliament in holding government to account and we help improve public services through our high-quality audits.

The National Audit Office (NAO) scrutinises public spending for Parliament and is independent of government and the civil service. We help Parliament hold government to account and we use our insights to help people who manage and govern public bodies improve public services.

The Comptroller and Auditor General (C&AG), Gareth Davies, is an Officer of the House of Commons and leads the NAO. We audit the financial accounts of departments and other public bodies. We also examine and report on the value for money of how public money has been spent.

In 2022, the NAO's work led to a positive financial impact through reduced costs, improved service delivery, or other benefits to citizens, of £572 million.



National Audit Office

HS2: update following cancellation of Phase 2

**Department for Transport and
High Speed Two Limited**

Report by the Comptroller and Auditor General

Ordered by the House of Commons
to be printed on 22 July 2024

This report has been prepared under Section 6 of the
National Audit Act 1983 for presentation to the House
of Commons in accordance with Section 9 of the Act

**Gareth Davies
Comptroller and Auditor General
National Audit Office**

10 July 2024

Value for money reports

Our value for money reports examine government expenditure in order to form a judgement on whether value for money has been achieved. We also make recommendations to public bodies on how to improve public services.

The material featured in this document is subject to National Audit Office (NAO) copyright. The material may be copied or reproduced for non-commercial purposes only, namely reproduction for research, private study or for limited internal circulation within an organisation for the purpose of review.

Copying for non-commercial purposes is subject to the material being accompanied by a sufficient acknowledgement, reproduced accurately, and not being used in a misleading context. To reproduce NAO copyright material for any other use, you must contact copyright@nao.org.uk. Please tell us who you are, the organisation you represent (if any) and how and why you wish to use our material. Please include your full contact details: name, address, telephone number and email.

Please note that the material featured in this document may not be reproduced for commercial gain without the NAO's express and direct permission and that the NAO reserves its right to pursue copyright infringement proceedings against individuals or companies who reproduce material for commercial gain without our permission.

Links to external websites were valid at the time of publication of this report. The National Audit Office is not responsible for the future validity of the links.



Contents

Key facts 4

Summary 5

Part One

Background 12

Part Two

Responding to changes in the
High Speed Two (HS2) programme 18

Part Three

The Euston programme 24

Part Four

Resetting the High Speed Two
(HS2) programme 29

Appendix One

Our audit approach 37

This report can be found on the National Audit Office website at www.nao.org.uk


If you need a version of this report in an alternative format for accessibility reasons, or any of the figures in a different format, contact the NAO at enquiries@nao.org.uk


The National Audit Office study team consisted of:


Kristian Barrett, Martin Chong, Susannah Drazin, Liam Thomas and Karen Tostee, under the direction of Jonny Mood.

For further information about the National Audit Office please contact:

National Audit Office
Press Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

 020 7798 7400

 www.nao.org.uk

 @NAOorguk

Key facts

October 2023	<p>the government announced decisions on the High Speed Two (HS2) programme to:</p> <ul style="list-style-type: none">• complete Phase 1 (London to Birmingham);• cancel the rest of the railway (Phase 2); and• revise how it will fund and deliver the London terminus station at Euston
Between 2029 and 2033	<p>when the Department for Transport (DfT) expects Phase 1 of the programme to start running between Birmingham and Old Oak Common, as the interim London terminus. DfT has not yet set a revised date for when it expects HS2 services to run from London Euston</p>
£30.1 billion (2019 prices)	<p>DfT's and High Speed Two Limited's (HS2 Ltd's) total spend on the programme as at the end of March 2024 (£27.8 billion on Phase 1)</p>
£44.6 billion (2019 prices)	<p>current funding envelope for Phase 1, which both HS2 Ltd and DfT estimate will not be sufficient</p>
£45 billion to £54 billion (2019 prices)	<p>DfT's range for the estimated total cost to complete Phase 1 (prior to the October 2023 decisions). HS2 Ltd's estimate is £49 billion to £57 billion (2019 prices)</p>
£592 million	<p>programme spend on land and property along the Phase 2 route as at the end of March 2024, that is no longer needed for HS2</p>
179	<p>parcels of agricultural land, across 63 farms, that HS2 Ltd will potentially dispose of in its first phase of disposals</p>
Up to £100 million (2024 prices)	<p>HS2 Ltd's estimate of the cost of remediation to close down sites where early works had already begun on Phase 2</p>

Summary

1 The High Speed Two (HS2) programme aimed to construct a high-speed, high-capacity railway between London and Manchester via Birmingham. The Department for Transport (DfT) is the programme's sponsor, responsible for funding and overseeing delivery. High Speed Two Limited (HS2 Ltd), an arm's-length body of DfT, is responsible for delivering an operational railway.

2 In October 2023, the government announced significant changes to the HS2 programme. At that point the phases into which DfT had split the programme were at different stages of progress. Phase 1 (London to the West Midlands) was the most advanced stage, with the railway and Old Oak Common station in west London under construction. The changes were as follows.

- The new railway will be completed between London and Birmingham, along with a connection to the West Coast Main Line (completing Phase 1 of the programme). DfT expects HS2 services to start running from Old Oak Common between 2029 and 2033. DfT does not yet have a date for when trains will run from London Euston, as the eventual London terminus.
- The rest of the new railway will be cancelled (all sections of Phase 2). The government intends to sell land and property no longer needed along these routes.
- The HS2 station planned for London Euston will be smaller, reflecting the lower number of train services planned, and funded by private investment. There will also be wider redevelopment of the area.

3 The government took these decisions due to increasing costs on Phase 1, repeated delays to the schedule and changing patterns of travel since the COVID-19 pandemic, which it considered to have weakened the case for HS2. Prior to the announcement, DfT expected Phase 1 to cost between £45 billion and £54 billion (in 2019 prices), against a funding envelope of £44.6 billion. The programme and budget for Phase 1 had been reset in 2020 due to increased costs and delays to the schedule.

4 Following the October 2023 announcement, DfT and HS2 Ltd began work to fully understand the implications for the programme. This included confirming the revised scope of Phase 1, identifying how HS2 Ltd would close down Phase 2, and determining how DfT would deliver and fund the HS2 station at Euston. DfT and HS2 Ltd also needed to incorporate these changes into work they had already started to respond to the rising costs on Phase 1. As at the end of March 2024, DfT and HS2 Ltd had spent £30.1 billion (in 2019 prices) in total on the programme, with most of the spend on Phase 1 (£27.8 billion).

5 We have reported regularly on HS2, including on progress at Euston in March 2023 and on the previous reset of the programme in January 2020.¹ Our previous reports have highlighted the need for DfT and HS2 Ltd to better understand the risks to, and costs and benefits of, the programme.

Scope of the report

6 This report examines whether DfT and HS2 Ltd are effectively managing their response to the changes in the HS2 programme to protect and maximise value for money. We assess DfT's and HS2 Ltd's progress in:

- responding to the changes and managing the risks; and
- resolving key issues that will allow them to reset and deliver the programme.

The fieldwork for this report was completed between April and June 2024. Several areas that we examine have work in progress. We have not examined the decision to cancel Phase 2 or how funding allocated to Phase 2 has been reallocated to other projects as part of the government's October 2023 announcement. We have also not examined the progress that DfT and HS2 Ltd have made on Phase 1 or how they are managing the wider risks to the programme. We expect to report further on progress with the HS2 programme in the future.

Key findings

Responding to the October 2023 decisions

7 DfT and HS2 Ltd quickly identified which parts of their Phase 1 plans they needed to assess following the cancellation of Phase 2 to avoid costs that had become unnecessary. The government's decision to cancel Phase 2 created uncertainties in a range of complex areas, particularly as HS2 Ltd and other rail organisations had not been involved with the decision. These areas include what infrastructure and rolling stock are required for Phase 1 and how HS2 trains will connect to the existing West Coast Main Line. With Phase 1 construction underway, DfT needed to decide quickly what works would need to be stopped or changed to avoid unnecessary costs. After the announcement, DfT worked with HS2 Ltd and others to establish a critical path and identify options by the end of 2023 to allow for informed decision-making on different actions and trade-offs. DfT's general principle is to stop work where it is no longer needed for Phase 1 unless it would cost more to stop or change plans. As a result, some infrastructure work may be completed that is not needed for Phase 1. For example, DfT has decided that all platforms will still be built at Birmingham Curzon Street station, although they will not all be made operational as part of the HS2 programme, to avoid unnecessary costs. DfT still has decisions to make on some smaller areas of scope (paragraphs 2.2 to 2.7).

¹ Comptroller and Auditor General, *High Speed Two: A progress update*, Session 2019-20, HC 40, National Audit Office, January 2020; Comptroller and Auditor General, *High Speed Two: Euston*, Session 2022-23, HC 1201, National Audit Office, March 2023. More reports on HS2 can be found on our website www.nao.org.uk.

8 HS2 Ltd estimates that closing down Phase 2 will take three years to complete at a cost of up to £100 million. HS2 Ltd needs to efficiently and safely decommission and close down Phase 2 construction sites. Although no substantive construction work had begun on Phase 2 before it was cancelled, HS2 Ltd had begun early enabling works including investigative boreholes and moving utilities such as gas pipes. HS2 Ltd has an obligation to reinstate land to its original state or, for land where environmental works have been completed, to maintain the land until disposal. HS2 Ltd expects to complete remediation works for Phase 2 by summer 2027 at an estimated cost of up to £100 million (in 2024 prices). HS2 Ltd will recognise accounting losses relating to the cancellation of Phase 2 in its 2023-24 annual report and accounts (paragraphs 2.8 to 2.11).

9 Disposing of Phase 2 land and property will take several years and DfT is in the process of establishing a strategy to achieve value for money from the disposals. As at the end of March 2024, the HS2 programme had spent £592 million buying land and around 1,000 properties on the Phase 2 route that DfT will no longer need for HS2. DfT and HS2 Ltd are developing an approach for potentially disposing of an initial set of land and property, focused on 179 parcels of Phase 2 agricultural land across 63 farms. DfT is developing a value-for-money framework for these properties before establishing a full end-to-end disposals process with HS2 Ltd. This should allow DfT and HS2 Ltd to test and refine their approach ahead of a more comprehensive framework for different types and volumes of disposals. Other types of properties will provide different challenges, such as housing where the speed and timing of sales may impact local housing markets. The full programme to dispose of land and property no longer needed will take several years to complete. Our cross-government work on land and property has highlighted the need for realistic targets and timeframes, transparency on terms of disposal to provide greater assurance over value for money and consideration of how any gains in value could be shared (paragraphs 2.12 to 2.17 and Figure 4).

10 DfT's plans for resetting Euston station and surrounding wider development are at an early stage; it has not yet decided on its scope, funding, or governance. We reported in March 2023 that DfT and HS2 Ltd had failed to develop an affordable and viable station that integrated with other activity at Euston and needed to reset the project again, having previously reset it in 2020. While (as a result of the October 2023 announcement) the HS2 station will be smaller, the scope of the Euston programme is now larger, incorporating more commercial development and new housing beyond the boundary of the station site. DfT intends that the smaller HS2 station, private funding and a new delivery model will help address affordability and integration. DfT has progressed with developing minimum requirements for the station and options for a new delivery model ahead of ministerial approval. However, it is at an earlier stage in considering how cost and risk will be transferred and what the long-term governance arrangements at Euston will be. DfT expects it may be several years before it could put all these arrangements in place. Some works may need to proceed ahead of this to avoid delays and potentially higher long-term costs, and these may require public funding (paragraphs 3.1 to 3.10, Figures 5 and 6).

Resetting the programme

11 HS2 Ltd has recently made organisational changes that aim to refocus it on delivery of the Phase 1 railway. Over the first half of 2024, HS2 Ltd has been implementing a new operating model and executive structure to improve coordination and decision-making within the organisation. HS2 Ltd began work to revise its organisational structure in September 2023 but subsequently revised this to take into account the October 2023 decisions as well as measures to improve cost management. While HS2 Ltd's focus in recent years has been on civil engineering, it is now shifting its focus to the delivery of railway systems and managing its integration risks. These risks include those arising from how it will bring the railway into operation and how the railway will integrate with the wider railway network. HS2 Ltd is seeking to learn from the Crossrail programme, which underestimated the complexity of and time required to complete systems integration. HS2 Ltd has established a new role of Chief Railway Officer, with responsibility for integration and focusing programme decisions on how to best deliver the whole Phase 1 railway, rather than individual component projects. HS2 Ltd also needed to reestablish its senior leadership following the departure of its Chief Executive in September 2023 and the interim appointment of an Executive Chair. It recently completed its recruitment process and appointed a new Chief Executive, the former Chief Executive Officer of Crossrail Ltd, who will take up the post during 2024-25 (paragraphs 4.3 to 4.5).

12 DfT and HS2 Ltd have different views on how much it will cost to complete the programme. Prior to the October 2023 decisions, HS2 Ltd estimated that the total costs of Phase 1 would be £49 billion to £57 billion, while DfT estimated a cost to complete of £45 billion to £54 billion. Both estimates are above the current funding envelope of £44.6 billion (all 2019 prices), and HS2 Ltd has since identified cost pressures which will increase their estimated range further. The estimates differ because HS2 Ltd and DfT disagree over aspects of estimation methodology, including how to calculate the financial value of the programme's risks. Total costs will also be impacted by the timing of funding. In March 2023, DfT instructed HS2 Ltd to slow work on Phase 2a, Euston and parts of Phase 1, to address affordability pressures. Continuing to manage the schedule of work to meet spending limits would reduce short-term funding needs but extend the schedule of work and increase overall costs. DfT and HS2 Ltd should agree on the final cost of Phase 1 before they agree with HM Treasury a revised funding envelope for the HS2 programme, as well as establish revised financial controls, including an approach to annual funding beyond 2024-25 and the programme's overall contingency. These elements must be in place to provide the longer-term certainty needed to plan activity and manage the supply chain (paragraphs 4.6 to 4.9).

13 DfT and HS2 Ltd are developing plans to address the issues that have led to significant cost increases. HS2 Ltd has identified several factors that have led to the cost increases on Phase 1, including the budget and schedule being set too early and delays to obtaining planning consents. In September 2023, HS2 Ltd estimated that the forecast cost of main civil construction work alone had increased by £6 billion (2019 prices) since 2020. Although these works are on schedule, HS2 Ltd has not driven the cost performance it expected through its contracts, and contractual incentives to control costs and improve productivity have not worked as intended. The works have also been affected by the impact of external events on the supply chain, such as COVID-19. DfT and HS2 Ltd are finalising a plan which identifies actions that aim to provide greater certainty over, avoid, and reduce costs. An important element of this plan is for HS2 Ltd to renegotiate its four main construction contracts to better incentivise cost control and achieve greater certainty on costs. However, DfT and HS2 Ltd acknowledge that successfully renegotiating major contracts that are already in progress will not be straightforward. HS2 Ltd's plan also includes delivering stations and railway systems elements more efficiently, improving the productivity of the main civil construction works and engaging with third parties to speed up planning consents. As well as known cost increases, areas of risk and uncertainty remain within the Phase 1 cost estimate where costs may increase further (paragraphs 4.6, 4.10 to 4.14, Figures 7, 8 and 9).

14 DfT is not yet clear how it will maximise the benefits of the new scope and how it will achieve them. The programme's intended benefits include passenger benefits (such as more seats along the route) and environmental benefits (such as decarbonisation), as well as wider economic benefits from regeneration and business investment around the new railway. However, the October 2023 decisions reduced the scale of benefits that can be realised by the programme. DfT's focus since then has been on what it can deliver through a revised train service specification for the Phase 1 route and the infrastructure needed to support this. Maximising the wider economic benefits from this revised scope will require DfT to work with other government departments, local authorities and businesses to develop a shared vision for what the programme intends to achieve. This is particularly important where benefits are outside of DfT's direct control and may require further investment to be realised. DfT told us that it is planning to update its planned benefits and how it will achieve these, as it updates its business case during 2024 (paragraphs 4.15 to 4.18).

15 DfT will not be able to address capacity issues on the West Coast Main Line north of Birmingham through its revised programme scope. The HS2 programme was originally intended to improve capacity on the West Coast Main Line. However, the HS2 services that will run north of Birmingham will not resolve capacity issues on that section, and DfT estimates that the line could reach capacity by the mid-2030s. DfT plans for HS2 trains to run from the Phase 1 track onto the West Coast Main Line in place of conventional trains, but the trains will have fewer seats than existing services unless changes are made to existing infrastructure and stations to accommodate longer trains. Options for addressing capacity issues involve, at a high level, managing demand for rail services or investing in infrastructure such as additional tracks and longer platforms. DfT will need to balance trade-offs in developing options while considering the impact on and operation of the national railway as a whole (paragraphs 4.19 to 4.21).

Conclusion

16 As soon as the government announced plans to cancel Phase 2, DfT and HS2 Ltd started work to understand and respond to immediate risks to value for money. They established what decisions were needed on the scope of Phase 1 to minimise unnecessary costs and established plans to decommission Phase 2 sites. DfT's work to dispose of land and property is at an early stage, but its plans for a small number of potential sales provide the opportunity for DfT to learn from this in developing its wider disposals strategy.

17 While HS2 is now a smaller programme, it remains by any measure an extremely large and complex endeavour, and DfT and HS2 Ltd need to reset the programme successfully to avoid repeating past failures and maximise its value. To do this, they will need to be clear on what benefits they now want the programme to achieve and how they plan to achieve them, agree a realistic budget to deliver them, and re-establish control so that risks and costs can be managed effectively and benefits delivered for both passengers and taxpayers. DfT and HS2 Ltd must now take the time needed to properly reset, and set themselves up to deliver value for money from the programme.

Recommendations

a DfT, HS2 Ltd and HM Treasury should do the following as part of resetting the programme.

DfT should:

- fully confirm the revised scope for the programme;
- update its benefits realisation plans in light of the new scope and develop a shared vision with its wider stakeholders on what the programme will achieve; and
- agree with HS2 Ltd a revised methodology for estimating the cost of the programme and use that estimate to set a revised funding envelope.

HS2 Ltd should:

- finish developing its lowest cost action plan, ensuring that a programme of work is established to implement it; and
- complete its organisational changes and monitor how well the changes are effectively supporting it to manage the revised programme.

HM Treasury should:

- as part of future spending reviews, agree revised financial controls with DfT and HS2 Ltd, including multi-year funding settlements for the programme to provide them with the longer-term certainty needed to plan activity, manage the supply chain and avoid higher costs; and
 - consider how to apply the recommendations we made in our 2023 report on how best to manage the budget for the HS2 programme to best protect value for money. These recommendations included consideration of: resetting HS2 budgets and costs in current prices; how inflation risk would be managed in the future; and revisiting financial controls that allow for flexibility in spend between years, and whether these need to be increased.
- b** At Euston, DfT should:
- develop a programme business case to help it and other stakeholders with decision-making across all projects within the larger Euston programme; and
 - while the long-term delivery and funding arrangements are being developed, make the time-critical decisions on progressing necessary works at Euston where not making them would create risks to value for money.
- c** In disposing of the land and property it no longer needs for the programme, DfT should be transparent about its value-for-money framework and how it has been implemented. DfT should also, as part of developing its framework, identify appropriate opportunities where government could share in any future gains in values on the land and property it sells.
- d** Outside of the programme, DfT should continue to assess HS2's role in supporting the wider rail network to realise benefits and consider other options for improving capacity on the West Coast Main Line.

Part One

Background

1.1 This part outlines the government's changes to the High Speed Two (HS2) programme in October 2023. It describes:

- the government's changes to the scope of the HS2 programme; and
- High Speed Two Limited's (HS2 Ltd's) spend on the HS2 programme.

1.2 The Department for Transport (DfT) is the programme's sponsor, responsible for funding and overseeing delivery. HS2 Ltd, an arm's-length body of DfT, is responsible for delivering an operational railway.

1.3 DfT had originally aimed to construct a high-speed, high-capacity railway between London, Manchester and Leeds via Birmingham. DfT had split the programme into four phases which, as at the end of September 2023, were at different stages of development and construction (**Figure 1**).

Changes to the scope of the HS2 programme

1.4 On 4 October 2023, the government announced significant changes to the HS2 programme.

- The new railway will be completed between London and Birmingham, along with a connection to the West Coast Main Line (by completing Phase 1 of the programme).
- The rest of the new railway being delivered through Phase 2 will be cancelled (**Figure 2** on pages 14 to 16). The government announced its intention to sell land and property no longer needed along these routes.
- The HS2 station planned for London Euston will be smaller, reflecting the lower number of train services planned, and will be funded by private investment. There will also be wider redevelopment of the area. Delivery of the HS2 station will be led by a delivery company that is not HS2 Ltd.

Figure 1

Status of the four phases of the High Speed Two (HS2) programme as at the end of at September 2023

The four phases of the HS2 programme were at different stages of development and construction when the government announced the cancellation of Phase 2 on 4 October 2023

Phase	Route and stations	Status as at the end of September 2023
Phase 1	London to the West Midlands, including four stations at London Euston, Old Oak Common in west London, Interchange at Solihull and Birmingham Curzon Street.	<p>Railway and Old Oak Common station under construction.</p> <p>In April 2020, the Department for Transport (DfT) split Euston station from the rest of Phase 1 as part of revising the cost and schedule on the programme. Phase 1 would start running between 2029 and 2033 between Birmingham and Old Oak Common as the London terminus in the interim until Euston was completed.</p> <p>In March 2023, DfT paused most construction work at the HS2 Euston station for two years to manage inflationary pressures. DfT does not yet have a date for when trains will run from Euston.</p>
Phase 2a	West Midlands to Crewe.	<p>At design stage, with early enabling works underway.</p> <p>In March 2023, DfT paused the start of any major construction work on this section for two years to manage inflationary pressures.</p>
Phase 2b Western Leg	Crewe to Manchester, including two stations at Manchester Piccadilly and Manchester Airport.	The bill to enable the Phase 2b Western Leg to proceed was going through Parliament.
Phase 2b Eastern Leg/ HS2 East	West Midlands to Leeds, including two stations at Leeds and East Midlands Hub.	<p>At planning stage.</p> <p>In November 2021, DfT revised its plans for the Phase 2b Eastern Leg as part of its <i>Integrated Rail Plan for the North and Midlands</i>. It set out that the HS2 railway would instead run from the West Midlands to East Midlands Parkway as HS2 East, with a study proposed to consider how HS2 trains could then run onto Leeds.</p>

Note

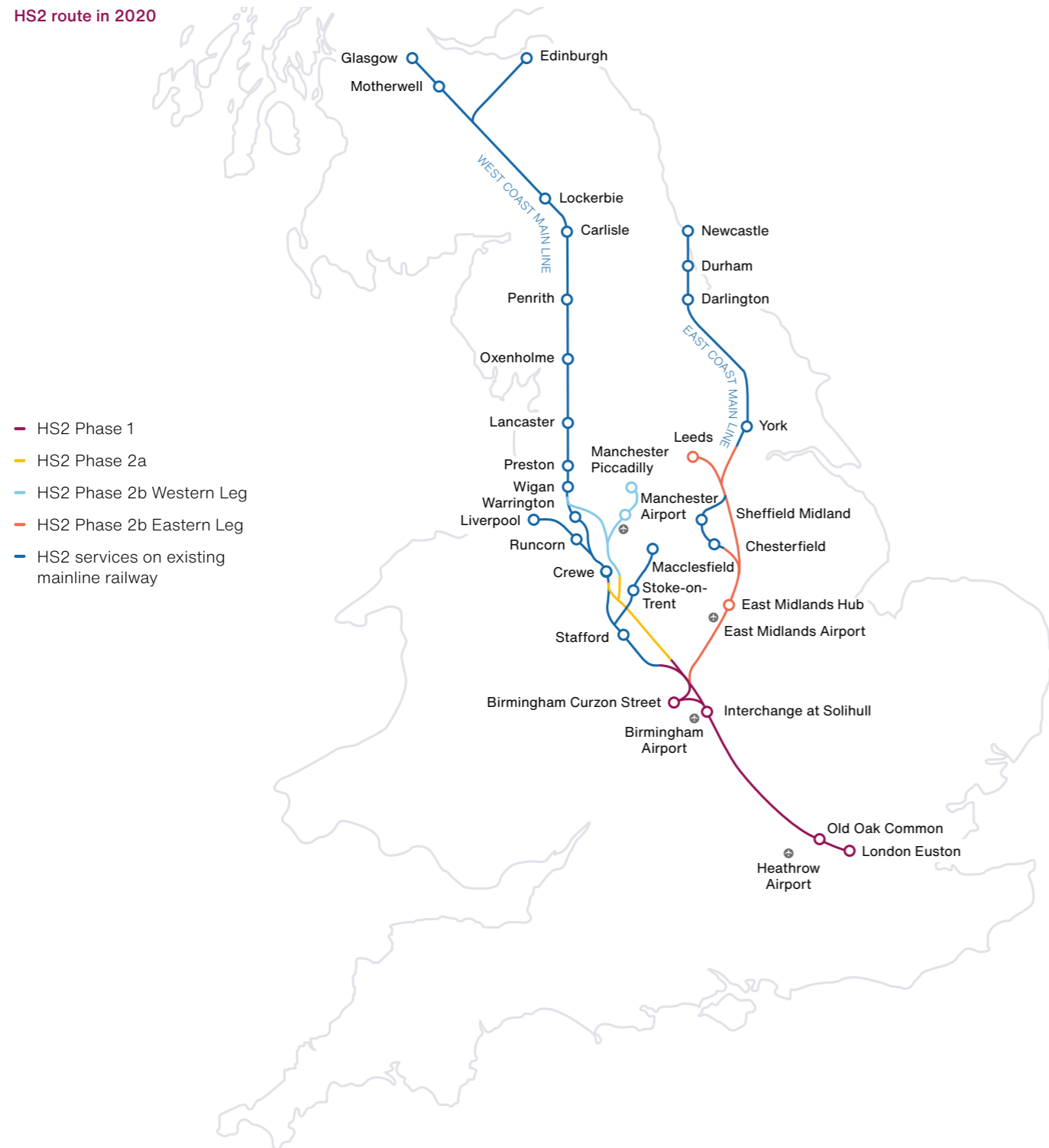
1 On 4 October 2023, the government cancelled HS2 Phase 2a, Phase 2b Western Leg and Phase 2b Eastern Leg/ HS2 East.

Source: National Audit Office analysis of Department for Transport and High Speed Two Limited information

Figure 2
The Department for Transport's (DfT's) planned High Speed Two (HS2) route in 2020 and 2024

Since 2020, the government has reduced the scope of the HS2 route

HS2 route in 2020



HS2 route in 2024

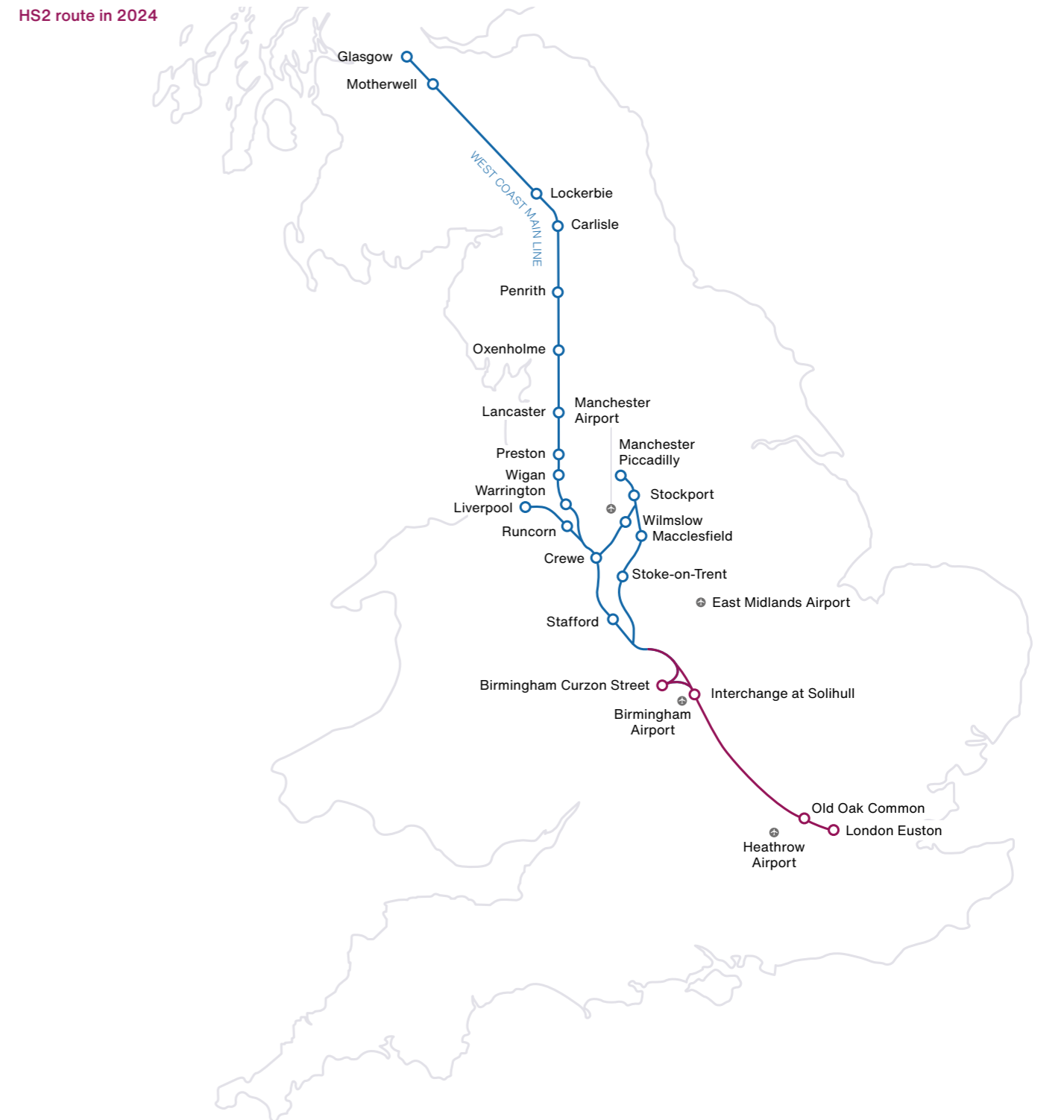


Figure 2 *continued*

The Department for Transport's (DfT's) planned High Speed Two (HS2) route in 2020 and 2024

Notes

- 1 DfT reset the programme and budget for Phase 1 in April 2020, following increased costs and delays to schedule, and the government commissioning an independent review of the programme (the Oakervee Review) in summer 2019.
- 2 In February 2020, the Oakervee Review concluded that the programme should continue, including completing both legs of Phase 2b as shown in the 2020 route map.
- 3 In November 2021, DfT revised its plans for the HS2 Phase 2b Eastern Leg as part of its *Integrated Rail Plan for the North and Midlands*. The initial plan for the leg was for HS2 trains to serve Chesterfield and Sheffield via a spur to the Midland Main Line and Leeds via a new high speed line, before joining the East Coast Main Line. Instead, the revised plan was for the HS2 railway to run from the West Midlands to East Midlands Parkway as HS2 East, with a study proposed to consider how HS2 trains could then run onto Leeds.
- 4 In October 2023, the government cancelled HS2 Phase 2a, Phase 2b Western Leg and Phase 2b Eastern Leg/HS2 East.
- 5 In 2020, DfT planned for HS2 services to run to Macclesfield via Stoke-on-Trent on existing railways. In 2024, DfT plans for HS2 services to continue on from Macclesfield through to Manchester on existing railways.

Source: National Audit Office analysis of Department for Transport information

1.5 The government has set out that these changes are primarily due to four factors.

- **Costs increases:** DfT expected that the cost to deliver Phase 1 would exceed the £44.6 billion funding envelope.
- **Repeated delays to the programme:** When it approved the programme in 2012, DfT expected HS2 to be operational by 2026, and completed in full by 2033, but plans for the route to Manchester were now eight years behind the initial schedule.
- **Falling benefit–cost ratio:** This is a result of changes in costs and schedule.
- **Changes in travel patterns:** Patterns changed following the COVID-19 pandemic and a reduction in business travel.

1.6 Alongside the October 2023 announcement, DfT concluded in its accounting officer assessment that continuing to invest in Phase 1 would represent value for money.² This was a forward-looking assessment considering the value of continuing with Phase 1 against a counterfactual of stopping all construction at that point in time. DfT estimated that completing Phase 1 would provide a benefit–cost ratio ranging between 1.1 and 1.8. This estimate excluded what DfT had already spent on the programme (sunk costs) and included likely cancellation and remediation costs.³ The accounting officer also set out in an accompanying letter to the Chair of the Public Accounts Committee that if Phase 1 was assessed on its total expected costs, the benefit–cost ratio range would be significantly below one and would represent poor value for money.⁴

2 Department for Transport, *Continuing investment in HS2 Phase 1: accounting officer assessment (October 2023)*, updated 27 November 2023.

3 DfT's accounting officer assessment initially set out the benefit-cost ratio as 1.2 to 1.8 but later amended it to 1.1 to 1.8.

4 Department for Transport, *Continuing investment in HS2 Phase 1: accounting officer assessment (October 2023) – letter from DfT Permanent Secretary to the Chair of the Public Accounts Committee*, 4 October 2023.

Spend on the HS2 programme

1.7 DfT and HS2 Ltd had spent £30.1 billion on the programme (2019 prices) as at the end of March 2024 (**Figure 3**). Over 90% of this spend relates to Phase 1, with £2.3 billion spent on Phase 2. HS2 Ltd has also continued to draw on the contingency budget it controls for Phase 1. By January 2024, HS2 Ltd had committed all of its contingency (£5.6 billion) as part of internal budgeting. As a result, DfT has provided additional budgetary authority to HS2 Ltd for 2024-25 to enable HS2 Ltd to enter new financial commitments.

Figure 3

High Speed Two (HS2) programme spend as at the end of March 2024

The Department for Transport (DfT) and High Speed Two Limited (HS2 Ltd) had spent £30.1 billion on the HS2 programme as at the end of March 2024

Phase of HS2	Spend as at the end of March 2024 (£bn)
Phase 1	27.8
Phase 2a	1.0
Phase 2b Western Leg	0.7
Phase 2b Eastern Leg/HS2 East ¹	0.6
Total	30.1

Notes

- 1 In November 2021, DfT revised its plans for the HS2 Phase 2b Eastern Leg as part of its *Integrated Rail Plan for the North and Midlands*. It set out that the HS2 railway would instead run from the West Midlands to East Midlands Parkway as HS2 East, with a study proposed to consider how HS2 trains could then run on to Leeds.
- 2 All spend figures are stated in 2019 prices, in line with the budget set for the programme in 2020.
- 3 DfT has set a funding envelope of £44.6 billion for Phase 1, with the other phases not yet at the stage for a funding envelope to be set.
- 4 Total spend to date includes a £0.74 billion liability (provision) representing DfT's obligation to purchase land and property.
- 5 We have not audited the calculations and evidence underpinning these summary figures.

Source: National Audit Office review of Department for Transport data

Part Two

Responding to changes in the High Speed Two (HS2) programme

2.1 This part examines how the Department for Transport (DfT) and High Speed Two Limited (HS2 Ltd) responded to the changes and managed risk to the HS2 programme following the changes to its scope. It examines their progress in:

- assessing the impact of scope changes on Phase 1 and deciding where it could avoid unnecessary costs;
- developing an approach to the closedown of Phase 2 that would minimise costs; and
- setting up a programme to achieve value for money from the disposal of land and property.

Assessing the impact of scope changes on Phase 1

2.2 The government's announcement in October 2023 set out its broad intention for the HS2 programme scope. Given the size and complexity of the programme, there was a lot of detailed work for DfT and HS2 Ltd to complete to understand the consequences of the decision on the revised scope for Phase 1.

2.3 Once the scope changes had been announced, DfT needed to work through and understand in more technical detail the consequences for the programme. The decision created uncertainties about what infrastructure and rolling stock would be required on Phase 1 to support the number of expected HS2 services, such as:

- how many train services would run and configuration of rolling stock;
- how trains would connect to the West Coast Main Line;
- how many platforms would be required for HS2 at Birmingham Curzon Street station; and
- what track layout would be required to access stations.

These decisions impact HS2 Ltd, but also Network Rail as the operator of the conventional railway and West Coast Partnership as the organisation running existing services on the West Coast Main Line and future high-speed services. These organisations had not been involved with the scope changes announced in October 2023.

2.4 With Phase 1 construction already underway, DfT needed to provide clarity on what work would need to be stopped or changed to avoid unnecessary costs. DfT, working with HS2 Ltd, quickly identified the key decisions that needed to be made and commissioned, and obtained information from HS2 Ltd, Network Rail and West Coast Partnership in a six-week period between November and mid-December 2023. This enabled DfT to submit options and recommendations to ministers, who agreed with the recommended actions in January 2024.

2.5 DfT's general principle was to stop work where it was no longer required for Phase 1 unless it would cost more to stop or change plans. For example, DfT are retaining the current design and fleet size of the rolling stock, having concluded that the changes it would need to improve seating capacity following the October 2023 decisions could lead to significant additional costs and operational issues.

2.6 The decisions DfT has made so far have been to continue with building infrastructure and acquiring rolling stock to existing designs, due to the costs involved with stopping work or changing designs at this stage. In some cases, the decision to continue work to existing designs means that infrastructure would be completed that is not required for Phase 1. For example, DfT decided that Birmingham Curzon Street station would be completed with all its seven platforms, but the number of train services only requires three platforms. As a result, HS2 Ltd would not look to fit out the remaining four platforms, such as with the rail systems needed to make them operational, to avoid unnecessary costs.

2.7 DfT still has some decisions to make to finalise the scope of Phase 1. This includes whether to cancel a short section that is not required for Phase 1 but may enable future connections with the eastern rail network. DfT and HS2 Ltd are undertaking further studies to help inform these decisions. They are also conducting work to confirm what the revised scope of rail systems would now need to be to support the revised Phase 1. Once the scope is finalised, DfT will need to formally instruct HS2 Ltd on the revised specification for Phase 1.

HS2 Ltd's approach to the closedown of Phase 2

2.8 Phase 2 was at an early stage when it was cancelled. HS2 Ltd had begun some initial works on Phase 2, primarily on Phase 2a. The work underway on different parts of Phase 2 included the following.

- **On Phase 2a:** Enabling works included drilling more than a thousand boreholes across sites on the Phase 2a route and moving utilities such as gas pipelines. HS2 Ltd had begun early environmental works at some sites, for example, pond creation or tree planting as part of the programme's biodiversity commitment. In March 2023, DfT had paused further construction work on Phase 2a for two years to manage inflationary pressures, with major construction works yet to commence.
- **On Phase 2b Western Leg:** HS2 Ltd had conducted early investigative works on land it had already bought along the Phase 2b route, with around 100 boreholes made.
- **On HS2 East (previously Phase 2b Eastern Leg):** This was still at the planning stage.

2.9 In October 2023, DfT instructed HS2 Ltd to stop work on Phase 2 as soon as practicable and avoid unnecessary costs – but in a safe and efficient way. In most cases this would include reinstating land to its former use or making land safe ahead of disposal to meet legal, health and safety and environmental regulations. Some Phase 2b sites may be needed as part of the Northern Powerhouse Rail programme and may therefore not require remediation. DfT also instructed HS2 Ltd to maintain the condition of 46 sites, where early environmental works to improve biodiversity had been completed, pending the development of long-term management plans.

2.10 HS2 Ltd has set up a project for the closedown and remediation works which, although focused on Phase 2a, will also include remediation of the Phase 2b boreholes. DfT expects HS2 Ltd will complete the remediation works by summer 2027 and estimates this will cost up to £100 million (in 2024 prices).

2.11 As well as managing the closedown of Phase 2, HS2 Ltd needs to account for the financial impact of the October 2023 decisions. This primarily relates to accounting losses on spend on Phase 2a and 2b prior to the cancellation of Phase 2 that will need to be written off, as well as accounting losses from the changes announced at the HS2 station at Euston. Details on the financial impact will be found in the HS2 Ltd 2023-24 annual report and accounts.

Programme to dispose of land and property

2.12 As at the end of March 2024, HS2 Ltd had spent £3.7 billion on buying land and property along the HS2 route (**Figure 4**), of which £592 million relates to Phase 2. The types of land and property include agricultural, commercial and residential, with HS2 Ltd purchasing around a thousand properties and 17 square kilometres of land. HS2 Ltd acts as an agent in purchases and disposals for DfT, with the land and property held as assets of DfT.

Figure 4

Land and property purchased on the High Speed Two (HS2) route as at the end of March 2024

High Speed Two Limited (HS2 Ltd) had spent £592 million on land and property along the Phase 2 route as at the end of March 2024

Phase	Spend ^{1,2,3} £mn	Number of properties bought ⁴	Area of land acquired ⁵ Sq Km
Phase 1	3,075	700	59
All Phase 2	592	1,001	17
Phase 2a	224	251	17
Phase 2b Western Leg	205	195	–
Phase 2b Eastern Leg/HS2 East ⁶	164	555	–
Total all Phases	3,667	1,701	76

Notes

- 1 HS2 Ltd acts as an agent in purchases for the Secretary of State for Transport. The properties are held as assets of the Department for Transport (DfT), rather than HS2 Ltd. In March 2024, the Secretary of State for Transport instructed HS2 Ltd to act as their agent in the disposal of agricultural land bought for Phase 2a.
- 2 Spend figures reflect the cost as it was incurred at the time of purchase and have not been adjusted for inflation.
- 3 Settlement for some claims for land acquired have not been completed and the spend figures presented above do not reflect the full payment that will be required for this land. HS2 Ltd expects that settling all the claims will take several years.
- 4 Includes all residential, agricultural and commercial properties managed by HS2 Ltd on behalf of the Secretary of State for Transport.
- 5 Includes both land acquired permanently and temporarily possessed within the limits set out in the High Speed Rail (London – West Midlands) Act 2017 for Phase 1 and the High Speed Rail (West Midlands – Crewe) Act 2021 for Phase 2a.
- 6 In November 2021, DfT revised its plans for the HS2 Phase 2b Eastern Leg as part of its *Integrated Rail Plan for the North and Midlands*. It set out that the HS2 railway would instead run from the West Midlands to East Midlands Parkway as HS2 East, with a study proposed to consider how HS2 trains could then run onto Leeds.
- 7 Totals may not sum due to rounding.
- 8 We have not audited the calculations and evidence underpinning these summary figures.
- 9 More details on HS2 Ltd's property purchase schemes can be found in Comptroller and Auditor General, *Investigation into land and property acquisition for Phase 1 (London – West Midlands) of the High Speed 2 programme*, HC 1531, Session 2017-2019, National Audit Office, September 2018.

Source: National Audit Office reviews of Department for Transport and High Speed Two Limited data

2.13 DfT and HS2 Ltd are planning to dispose of Phase 2 land and property no longer required for the HS2 programme. Some of the acquisitions were always expected to be disposed of once the programme has completed because, for example, they were only required for the period of construction for access purposes. However, the cancellation of Phase 2 has changed how HS2 Ltd and DfT must approach the disposal of land and property.

2.14 DfT and HS2 Ltd have taken initial steps to provide clarity on aspects of land and property ahead of disposals. Examples of these steps are as follows.

- At the time of the announcement there were properties in the process of being bought along the Phase 2 route. HS2 Ltd and DfT agreed an approach in January 2024 to manage these cases, taking into account whether the owner still wished to proceed and whether there was already an obligation for the government to continue with the purchase.
- In January 2024, DfT lifted 'safeguarding' restrictions along most of the Phase 2a route, which the government stated it would do as part of the October 2023 announcement. This means local authorities no longer need to consult HS2 Ltd on planning applications within the safeguarded land. DfT has not yet amended safeguarding on the Phase 2b legs, while it determines, for example, what might be required for the Northern Powerhouse Rail programme.

2.15 DfT and HS2 Ltd recognise that they will need to develop plans to dispose of land and property in a way that delivers value for money. There are several factors they will need to take into account when balancing the pace of disposals against value for money. These include the following.

- Ensuring they follow the Crichel Down Rules where applicable, which require government departments, under certain circumstances, to offer surplus land back to the previous owner at the current market value.
- Whether any of the land and property is required for other transport programmes (such as Northern Powerhouse Rail) or by other government bodies.
- Any work that is needed to make safe and remediate sites back to their original condition before disposal.
- The type of land and property being disposed of.
- How timings and volumes of sales may affect the local markets, particularly residential.

2.16 DfT and HS2 Ltd are focusing initially on a subset of Phase 2 land and property. HS2 Ltd has identified 179 parcels of land (covering around 9 square kilometres) of Phase 2a agricultural land, across 63 farms, that could be suitable for offering for sale to previous owners. DfT is developing a value-for-money framework for the potential disposal of these properties, with the aim of finalising by autumn 2024 and before establishing a full end-to-end disposals process with HS2 Ltd. HS2 Ltd is also intending to dispose of some Phase 1 sites that are no longer required, as part of a small pilot that may help inform the development of its wider Phase 2 disposal strategy. DfT expects that fully disposing of Phase 2 land and property no longer required will take several years. As at the end of June 2024, DfT and HS2 Ltd have not disposed of any Phase 2 properties.⁵

2.17 Our cross-government work on land and property has highlighted several issues that may be relevant as HS2 Ltd and DfT develop their disposal strategy.⁶ These include:

- setting realistic targets for sale proceeds and the timeframe for disposals;
- ensuring good information is held on the value and condition of the land and property;
- providing transparency on terms of disposal to provide greater assurance over value for money; and
- considering how government may share in any future gains in value from the land and property it sells; for example, how the value may increase with planning permission.

⁵ There are a small number of exceptions where DfT and HS2 Ltd have disposed of Phase 2 property, but these were already no longer required following DfT's Integrated Rail Plan in November 2021.

⁶ These reports include Comptroller and Auditor General, *Investigation into the government's land disposal strategy and programmes*, Session 2017–2019, HC 2138, May 2019; Comptroller and Auditor General, *Disposal of public land for new homes*, Session 2015–16, HC 87, June 2015; Comptroller and Auditor General, *Optimising the defence estate*, Session 2021–22, HC 293, June 2021; and National Audit Office, *Key findings from an investigation into low- and medium-value property sales*, September 2017.

Part Three

The Euston programme

3.1 Euston will be the London terminus station for High Speed Two (HS2). The site where the HS2 station will be built is a busy and built-up area of businesses and homes as well as a major transport hub. We reported in March 2023 that the Department for Transport (DfT) and High Speed Two Limited (HS2 Ltd) had not succeeded in developing an affordable and viable scope for the station that was integrated with other projects at Euston following a reset in 2020, and that they needed to reset the programme again.⁷

3.2 This part sets out the changes that the government announced to the Euston programme in October 2023, DfT's progress to date in responding to those changes and the risks it will need to manage in resetting work at Euston.

Changes to the Euston programme

3.3 On 4 October 2023, the government confirmed that HS2 would terminate at Euston and announced that it would do the following.

- Design the HS2 Euston station as a smaller six-platform station that would accommodate the fewer HS2 train services that would now run between London and Birmingham on the new railway and further north on the West Coast Main Line, rather than the 10-platform design previously developed.
- Reduce the number of requirements at the station, including removing the planned tunnel connections between Euston and Euston Square underground stations.
- Appoint a development company, separate from HS2 Ltd, to deliver the HS2 station.
- Explore creating a development corporation to support a larger redevelopment beyond the station boundary, including housing.
- Bring in private sector investment to fund works, thereby releasing £6.5 billion (2023 prices) of planned spend at Euston to other transport projects.

⁷ Comptroller and Auditor General, *High Speed Two: Euston*, Session 2022-23, HC 1201, National Audit Office, March 2023.

3.4 DfT considers that the changes would help address the affordability and integration challenges it has faced at Euston, which have previously proved difficult for DfT to resolve. For example, a smaller station with fewer requirements would be cheaper. DfT considers that developing a new delivery model for Euston, including a new delivery body, to ensure there is a single 'guiding mind' with the authority to make decisions will help resolve the trade-off decisions about how space on the site will be used. DfT also sees bringing in private funding as a way to bring more commercial and cost focus to the Euston programme.

3.5 The increased scope of works at Euston, incorporating wider commercial development and new housing, now means that there are four key projects at the station site (Euston campus) and surrounding area (Euston quarter).

- **HS2 Euston station:** Construction of a new station for HS2.
- **Network Rail Euston station:** Redevelopment of the existing Euston station.
- **Development of the Euston station site:** Development above and around the two stations to provide a redesigned space and new commercial property and housing.
- **Regeneration of the wider Euston quarter:** Provision of new housing and regeneration of the area.

There will also be other requirements that support all the projects, such as ensuring sufficient capacity in the underground station.

3.6 There is now a wider range of stakeholders, including other government departments, following the expanded scope of the programme (**Figure 5** overleaf). DfT is the lead department for the Euston programme.

3.7 To help align work on the programme, DfT has led on creating a set of prioritised outcomes around building the new HS2 station, maximising funding opportunities and housing development and developing an integrated and regenerated area. However, there is not a single overarching business case for the programme, with the projects split across different business cases. We reported in 2023 that this had contributed to the governance issues at the Euston site.

Figure 5

Key stakeholders in the Euston programme, as at the end of June 2024

More organisations are involved in the Euston programme since the government's October 2023 decisions on changes to how the High Speed Two (HS2) Euston station would be delivered

Organisation	Description
Department for Transport (DfT)	Lead government department for the programme of work at Euston, and parent department for HS2 Ltd and Network Rail.
High Speed Two Limited (HS2 Ltd)	Body responsible for delivering the high-speed rail network. No longer responsible for the design and build of the HS2 station at Euston beyond ongoing 'no-regrets' enabling work on the site, such as site clearance.
Network Rail	Delivery body responsible for maintaining and enhancing the rail network in Great Britain, including major mainline stations such as Euston.
Transport for London	Authority responsible for London's transport network.
Lendlease	Master development partner, a private company responsible for development above and around the Euston station.
The Euston Partnership	Partnership formally established in December 2021 between HS2 Ltd, the Secretary of State for Transport and Network Rail to improve collaboration and joint working between all partners working at Euston.
New station delivery body (not yet established)	As part of the October 2023 decisions, the government announced that a development company, separate from HS2 Ltd, would be appointed to manage the delivery of the station.
Development corporation (not yet established)	As part of the October 2023 decisions, the government announced that it would explore establishing a development corporation to manage the delivery of the wider Euston quarter.
London Borough of Camden	Local government authority and planning authority for the Euston site.
Ministry of Housing, Communities & Local Government (MHCLG)	Government department responsible for policy and legislation on development corporations. MHCLG will enable the establishment of a development corporation at Euston to oversee commercial and housing development in the Euston quarter. MHCLG is developing plans for a housing growth and regeneration scheme around Euston. Member of the Euston Partnership Board.

Notes

- 1 In October 2023, the government announced that the HS2 Euston station would be smaller in size and that there would be a more ambitious redevelopment scheme around Euston called the 'Euston quarter'.
- 2 The Euston campus is a 60-acre site in the Euston area comprising the HS2 station, the existing Network Rail station and development within the site.
- 3 The Department of Levelling Up, Housing & Communities became the Ministry of Housing, Communities & Local Government in July 2024.

Source: National Audit Office review of Department for Transport information

Progress at Euston

3.8 DfT is at an early stage in responding to the changes announced in October 2023. It is most advanced in developing a revised set of requirements for the smaller HS2 station. However, DfT expects that it could take years to establish a development corporation and bring in private finance, and has not yet set a revised date for when it expects HS2 services to start running from Euston.

- **On the minimum requirements at the station:** DfT commissioned advice from HS2 Ltd in December 2023. Working with stakeholders, HS2 Ltd provided an initial assessment in May 2024 on what the minimum requirements could be. Following that, DfT commissioned further development work from stakeholders, and there is work underway to update potential costs.
- **On the delivery model:** As part of its work to determine an appropriate model for the programme, DfT identified trade-offs that it would need to agree across government. These included the mix of commercial, retail and housing development at the station; whether accountability will be held by central or local government; the level of delegated control; and the pace of decision-making. DfT has developed a shortlist of options, with a view to progressing with a preferred option during 2024 following ministerial approval. DfT expects that it could take around two to three years to establish a development corporation for the wider Euston quarter.
- **On private funding:** DfT conducted an initial assessment in autumn 2023, which concluded that it would be feasible to fund a significant part of the rescope station privately using a combination of funding sources. DfT has since been developing options but will need to confirm what it wants private investors to take on and what risk it wants to transfer or retain, alongside market testing. However, it does not expect private finance to be available for several years, so public funding is likely to be needed to cover necessary works at the site in the short-term.

3.9 There are works at the Euston site that HS2 Ltd may need to proceed with in the interim to avoid delay to the programme and potentially higher costs in the long-term. Such work will be required irrespective of the final station design, delivery model and funding, for example completing the enabling works at the site that are currently ongoing. The most immediate decision for DfT to make is whether to proceed with the tunnelling work from Old Oak Common to Euston. A decision on tunnelling is needed by the summer of 2024 to avoid much higher costs in the future. Public funding on Euston has only been agreed to the end of March 2025 as part of the Spring Budget. Other 'no-regrets' works that HS2 Ltd could continue to proceed with beyond March 2025, while its project team and contractors are still mobilised, include the continued clearance of the site.

Summary of risks in resetting the programme

3.10 We have previously reported on the Euston programme, highlighting risks around redesign, affordability, governance and integration. The changes at Euston may help DfT address some of these existing risks, but they also introduce new risks that it will need to manage as it continues with its reset of the Euston programme. Key risks we have identified are shown in **Figure 6**.

Figure 6

Key risks for the Department for Transport (DfT) to manage in the reset of the Euston programme

We have identified several risks that DfT will need to manage on the Euston programme

Area of risk	Description
Setting up a new delivery body	DfT will establish a new body for delivering the High Speed Two (HS2) station. This body will need to be set up with the right remit, leadership, governance and culture. DfT will need to balance acting quickly to establish the body (so as not to impact on the planned schedule of work) with ensuring the key building blocks for success are in place.
Setting up a development corporation	Close working across government departments and local government will be needed to successfully establish a development corporation. Setting the development corporation up for success will require certainty over the project so that it is attractive for investors. It will also require the right partnership between public and private stakeholders, so that the approach can deliver urban regeneration, while also being accountable and representative of local interests.
Successfully implementing a new funding model	DfT needs to implement a funding model that attracts significant private sector investment. Any model is likely to require some upfront public funding, for example, on tunnelling and necessary enabling works, with private sector contributions made over a longer period. DfT will need to be clear on what risks it is transferring and retaining and the cost of doing so. DfT has brought in both internal and external expertise to support the project team and is closely engaging with HM Treasury as it progresses.
Establishing effective governance for strategic decision-making	The Euston programme has previously failed to create an effective mechanism for managing trade-offs between the different projects and stakeholders on the site. We have previously identified that there were three separate business cases for projects within the Euston programme, and no formal strategic case to inform decision-making. DfT considers that developing a new delivery model for Euston to make decisions will help manage the trade-off decisions about how space on the site will be used. This will include a new delivery body to ensure there is a single 'guiding mind' with the authority to make decisions. DfT also sees bringing in private funding as a way to bring more commercial and cost focus to the Euston programme.
Coordinating plans and assumptions across the different projects	Projects within the programme are at different levels of maturity. While DfT has previously taken steps to improve coordination between stakeholders, it has not developed a comprehensive and detailed integrated plan for work.
Ensuring strong collaboration between stakeholders	Developing working relationships and behaviours to support better collaboration between bodies will require focused effort. This will include at working-level, as staff adjust to working with different organisations and in ways that are different from the organisation they work for.

Notes

- 1 In October 2023, the government announced that the HS2 Euston station would be smaller in size and that there would be a more ambitious redevelopment scheme around Euston called the 'Euston quarter'.
- 2 The Euston campus is a 60-acre site in the Euston area comprising the HS2 station, the existing Network Rail station and development within the site.

Source: National Audit Office analysis of Department for Transport information

Part Four

Resetting the High Speed Two (HS2) programme

4.1 This part of the report examines how the Department for Transport (DfT) and High Speed Two Limited (HS2 Ltd) plan to reset the HS2 programme following the October 2023 decisions. It examines:

- the organisational changes HS2 Ltd is making in response to the revised scope and how these may help it refocus on Phase 1 delivery;
- whether DfT and HS2 Ltd are taking reasonable steps to better manage costs; and
- DfT's progress in revising the business case for Phase 1 and the level of focus it is placing on maximising benefits.

4.2 Between 2022 and 2024, HS2 Ltd and DfT commissioned a series of internal reviews to examine aspects of how HS2 Ltd is organised, the reasons for cost increases on the programme, and cost reporting. Many of the findings and recommendations from these reports overlap and have shaped how HS2 Ltd and DfT are resetting the programme. A summary is shown in **Figure 7**.

Figure 7

Summary of actions recommended in reviews commissioned by High Speed Two Limited (HS2 Ltd) and the Department for Transport (DfT), 2022–2024

Recent internal reviews have made recommendations in several areas

Area	Recommended actions
HS2 Ltd's organisational structure and governance	Revise accountabilities and governance to support better decision-making and performance monitoring, including a 'controlling mind' role to bring cost, schedule and quality together.
Performance information and reporting	Improve the quality of management information to be reported to decision-makers. This includes clarity on performance and who has responsibility, improved data consistency, and more streamlined information reporting and processes.
Cost management	Improve programme cost management, including renegotiating commercial terms with contractors to improve incentives on cost control, improving cost verification of contractor costs, and using pilots and repeatable design and assurance processes to help reduce costs. HS2 Ltd and DfT are agreeing a plan including some of these actions.

Source: National Audit Office analysis of Department for Transport and High Speed Two Limited information

HS2 Ltd organisational changes

4.3 In September 2023, HS2 Ltd began a strategic review to help ensure it was set up to successfully deliver the HS2 railway into operational service and, after the October 2023 decisions, to ensure it could respond to the revised programme scope. In recent years, HS2 Ltd's focus has been on the delivery of Phase 1 civil engineering. HS2 Ltd is now shifting its focus to the delivery of railway systems and managing its integration risks. These risks include those arising from how it will bring the railway into operation and how the railway will integrate with the wider railway network. In 2019 and 2021, we reported on the Crossrail programme, which created a new railway line across London. We found that the Crossrail programme underestimated the complexity of, and time required to complete, systems integration.^{8,9} HS2 Ltd is seeking to learn from Crossrail's experience.

4.4 In January 2024, HS2 Ltd started to implement changes to its organisational structure, accountabilities, and capabilities to address the challenges identified. These include the following.

- A new organisation structure. HS2 Ltd has established a new role of Chief Railway Officer. This new role is intended to act as a 'guiding mind', with responsibility for integration and focusing programme decisions on how to best deliver the railway, rather than individual component projects.
- Revised accountabilities, governance, and decision-making processes. These are intended to clarify responsibilities, reduce the time needed for decision-making, and allow delivery teams to make more routine decisions.
- Greater organisational emphasis on cost control and efficiencies. The HS2 Ltd Board has established a Finance and Performance sub-committee. There have been changes to HS2 Ltd's management information to ensure decision-makers have access to relevant, accurate and clearly presented information.
- Reducing the size of the organisation to reflect the new programme scope. HS2 Ltd is reviewing 19 leadership roles and teams, with 16 key roles being revised to reflect the new scope.

4.5 HS2 Ltd made changes to its executive team in January 2024, and intends to fully implement the new operating model from autumn 2024 onwards. HS2 Ltd is re-establishing its senior leadership following the departure of its Chief Executive in September 2023 and the interim appointment of an Executive Chair. It recently completed its recruitment process and appointed a new Chief Executive, the former Chief Executive Officer of Crossrail, who takes up the post during 2024-25. It is too soon to say what difference these organisational changes will make.

8 Comptroller and Auditor General, *Completing Crossrail*, Session 2017-2019, HC 2106, National Audit Office, May 2019.

9 Comptroller and Auditor General, *Crossrail – a progress update*, Session 2021-22, HC 299, National Audit Office, July 2021.

Cost management on Phase 1

4.6 Costs for the HS2 programme have significantly increased. HS2 Ltd and DfT forecast that completing Phase 1 will exceed its current funding envelope of £44.6 billion (in 2019 prices), which was set in early 2020. The main civil construction work for bridges, tunnels, embankments and viaducts along the route is the largest area of spend currently on Phase 1. In September 2023, HS2 Ltd forecasted this work to cost £6.1 billion more than expected in 2020. HS2 Ltd has identified several reasons for the cost increases on the programme (**Figure 8** overleaf).

4.7 HS2 Ltd and DfT disagree on the total costs for completing Phase 1. HS2 Ltd estimates the total costs of completing the scope (as it was before the October 2023 decisions) to be £49 billion to £57 billion while DfT's estimate is lower, at £45 billion to £54 billion (all in 2019 prices). Using the same data, they have taken different views on the methodology used for the estimate, including how to treat information provided by contractors, and how to calculate the financial value of the remaining risks on the programme. The disagreements over the cost of Phase 1 mean that revised arrangements for the funding envelope and other financial controls cannot be agreed and implemented. These include aspects such as what proportion of funds sit as contingency and how these are allocated when risks materialise and future cost increases arise. DfT and HS2 Ltd intend to appoint a third party to advise them on cost estimation methodology, with an aim to come to a shared view on the cost estimate for the revised Phase 1 scope. During 2024, HS2 Ltd identified cost pressures that will further increase their estimate for the costs of completing Phase 1, but these figures had not been fully verified at the time of completing this report.

4.8 The total cost of the programme is also affected by the timing of funding. Up to 2022-23, HS2 Ltd had some flexibility to move funding between financial years and secured the level of annual funding it requested from DfT to meet the planned schedule. However, in March 2023, DfT instructed HS2 Ltd to meet an annual funding constraint for 2023-24 and 2024-25, in response to HM Treasury spending restraints for those years aimed at managing inflationary pressures. To meet its annual budget, HS2 Ltd slowed work on Phase 2a, Euston and parts of Phase 1, including pausing the start of major construction work on Phase 2a for two years. In March 2024, HS2 Ltd assessed that this deferral would increase Phase 1 costs by between £1.9 billion and £3.1 billion (2019 prices). These deferral costs have not yet been assured and approved by DfT.

Figure 8

Reasons for cost increases on Phase 1 of the High Speed Two (HS2) programme

Reviews commissioned by the Department for Transport (DfT) and High Speed Two Limited (HS2 Ltd) have identified several interrelated reasons for why costs have increased

Reason	Description
Design and management of main civil construction contracts	<p>The contracts incentivised contractors to prioritise delivering to schedule over managing costs. The contracts also provided limited ability for HS2 Ltd to control projects. There was little commercial consequence for contractors starting construction before ensuring the design was fully tested and confirmed as meeting requirements.</p> <p>Complex design assurance processes led to fragmented design work, increasing costs.</p>
Limited performance information from supply chain	<p>HS2 Ltd had limited cost information from the supply chain, which reduced its ability to assess which cost increases were necessary. Weaknesses in HS2 Ltd's risk management approach may have also limited its ability to identify emerging costs.</p>
Overambitious cost and schedule estimates	<p>There was insufficient certainty on the design in 2020 to set cost and schedule estimates effectively. This meant cost estimates were based on immature designs and data and were also subject to commercial pressure.</p> <p>Estimated costs increased as the designs matured and changed, and as HS2 Ltd made scope changes. Mobilisation of construction workers to meet overambitious construction milestones also contributed to fragmented design, which drove inefficiencies in the design process.</p>
Scale and complexity of the programme	<p>Contractors have insufficient capacity and capability to manage such a large programme of design, delivery and assurance. This includes management of planning consents. More planning consents have been needed than anticipated and they have taken longer to get, driven, in part, by local political opposition. These consents have also required higher-than-expected levels of design refinement.</p> <p>The contracts have also proven too large for HS2 Ltd to effectively manage or control, and to allow for a change of contractors in case of underperformance.</p>
External factors	<p>Whilst the programme's cost estimate is adjusted to account for inflation, external economic factors (such as COVID-19, the UK's exit from the EU and the Russia-Ukraine war) have increased costs and impacted the supply chain's ability to deliver. For example, virtual working during the COVID-19 pandemic reduced productivity and quality in the design teams.</p>

Notes

- 1 This is a summary of some of the main reasons for cost increases identified in reviews by and for HS2 Ltd and DfT. It is not a comprehensive list of reasons for the cost increases.
- 2 Some of the reviews also identified inflation as a cause of cost increases. We have not included inflation in this table because HS2 Ltd bases its costs in 2019 prices, thereby already adjusting for the effect of inflation.

Source: National Audit Office analysis of Department for Transport and High Speed Two Limited information

4.9 While managing the schedule of work to meet spending limits reduces short-term funding requirements, it increases total costs – for example, due to the need to de-mobilise and re-mobilise the supply chain and the extended time required to complete the programme. DfT and HS2 Ltd should agree on the final cost of Phase 1 before they agree with HM Treasury a revised funding envelope for the HS2 programme, as well as establish revised financial controls, including an approach to annual funding beyond 2024-25 and the programme’s overall contingency. These elements must be in place to provide the longer-term certainty needed to plan activity and manage the supply chain.

Steps to reduce costs

4.10 There remains potential for costs to increase further as work progresses and risks materialise. DfT and HS2 Ltd are finalising a ‘lowest cost action plan’ to help provide greater certainty over, avoid, and reduce costs. An important element of this plan includes resetting the commercial relationships on the main civil construction contracts. HS2 Ltd revised the commercial terms for these contracts in 2020. These changes were intended to reduce costs by reducing the financial risks to contractors and to address concerns over the size of these contracts compared to their financial resources. The revised terms were assured and approved by DfT.

4.11 In 2020, we highlighted value-for-money risks relating to these contracts including the following.

- **Managing costs:** Previously, contractors were liable for a percentage of forecast cost increases above a target price to incentivise them to control costs. The 2020 contract changes meant that HS2 Ltd would pay for all increases above the forecast cost, and contractors paid a percentage fee related to their costs.
- **Contractor incentivisation:** To incentivise performance, HS2 Ltd agreed performance indicators, including on cost and schedule. If the required performance was not met, contractors would lose a portion of their fee. Contractors would also be able to earn a proportion of whatever contingency funds remained at the end of the contract to incentivise them to control emerging financial pressures. Managing these incentives would require HS2 Ltd to closely monitor and manage contractor performance.
- **Capability:** HS2 Ltd would need to ensure it had the capability to effectively manage the contracts as well as the commercial risk it would bear under the arrangements.

4.12 As at July 2024, although the works remain on schedule, HS2 Ltd has not driven the cost performance it expected through these contracts, and contractual incentives to control costs and improve productivity have not worked as intended (see reasons for cost increases set out in Figure 8). HS2 Ltd no longer anticipates that its existing contract incentives can sufficiently manage costs or mitigate the risk of further increases, and it now intends to renegotiate these contracts to incentivise greater cost control and achieve more certainty over costs. DfT and HS2 Ltd acknowledge that successfully renegotiating major contracts that are already in progress will not be straightforward.

4.13 Other aspects of the lowest cost action plan include finding measures to avoid or reduce costs in the scope and delivery of stations and railway systems, plans to improve the productivity of the main civil construction works, and engaging with third parties to speed up planning consents. HS2 Ltd is also amending its management information to better track cost performance.

4.14 As well as managing the known cost increases, HS2 Ltd will also need to continue work on reducing the allowance for risk and uncertainty within its Phase 1 cost estimate. At the time of the 2023 October decision, one-third of the data it used for its cost estimate related to work that was not yet under contract, such as with its railway systems. On contracted works, the maturity of design varies by contract. For example, on the main civil construction, the design is most advanced for works in the Chilterns tunnels and Colne Valley viaduct. The works in the northern part of Phase 1 in the West Midlands have the least developed design. HS2 Ltd intends to reduce uncertainty in the cost estimate over time as elements of the programme progress through design and delivery and better data become available. During 2023, HS2 Ltd undertook work to develop a detailed understanding of cost estimate maturity across key areas of the HS2 programme. HS2 Ltd updated this work in June 2024 (**Figure 9**). This work showed that HS2 Ltd has significant work to do to reduce cost uncertainties in areas such as main work civil construction contracts (which is an aim of its commercial renegotiation).

Revising the HS2 business case

4.15 DfT is currently in the process of revising the business case for the programme, which will include an update to the strategic case, the benefits in the economic case, and the programme's revised benefit–cost ratio. The scale of benefits that can be realised by the HS2 programme is reduced, as the majority of the original benefits were associated with the delivery of Phase 2.

4.16 DfT and HS2 Ltd will have to ensure that they deliver the programme's intended benefits. These include:

- passenger benefits (such as more seats, faster journeys, and a more reliable service);
- environmental benefits (such as decarbonising journeys); and
- wider economic benefits (such as business investment and agglomeration, urban development and regeneration around HS2 stations).

Figure 9

High Speed Two Limited's (HS2 Ltd's) assessment of cost estimate maturity across key areas of the High Speed Two (HS2) programme, June 2024

Cost estimate maturity varies across the HS2 programme, with HS2 Ltd rating activity representing around 70% of total estimated programme costs as 'moderate-low' or 'low' maturity

HS2 Ltd's assessment of cost estimate maturity	Approximate percentage of total estimated costs	Examples
	(%)	
High: Fully contracted and validated costs	10	Enabling works
Moderate: Substantially negotiated, or based on supply chain data, with risks understood and plans in place to mitigate	20	Rolling stock and rail systems
Moderate-low: HS2 Ltd's view of costs supported by supply chain input, with risks to be resolved	15	Stations (Old Oak Common, Birmingham Curzon Street, Interchange at Solihull)
Low: HS2 Ltd's view of costs with limited supply chain input; key risks may remain to be identified/resolved	55	Main civil construction contracts and programme integration risks, such as those arising from transitions between activities

Note

1 HS2 Ltd's assessment of cost estimate maturity excludes construction of the HS2 station at Euston.

Source: National Audit Office analysis of High Speed Two Limited information

4.17 Following the October 2023 announcement, DfT focused on what it could deliver through a revised train service specification, and the infrastructure needed to support this. As of July 2024, DfT is working further on optimising the train service specification to maximise the benefits of the revised scope. This includes aspects such as studies on timetabling to determine what the trade-offs might be between different services and stopping patterns.

4.18 Maximising the wider economic benefits from this revised scope will require DfT to work with other government departments, local authorities and businesses to develop a shared vision of what the programme intends to achieve. This is particularly important where benefits are outside of DfT's direct control and may require further investment to be realised. DfT has established the HS2 Growth and Benefits Board to oversee the delivery of benefits and manage risks to their delivery. This includes representatives from the Ministry of Housing, Communities & Local Government, HM Treasury and the Department for Business & Trade. DfT told us it will update its planned benefits and how it will achieve them as it updates its business case during 2024.

Rail capacity on the West Coast Main Line

4.19 DfT originally intended that the HS2 programme would address capacity on the West Coast Main Line. It reported in 2020 that the line could reach capacity by the mid-2030s. DfT expects that the revised programme will address capacity between London and Birmingham, but there will remain a capacity issue on the west coast north of Birmingham, that DfT will need to resolve.

4.20 DfT intends that HS2 services will run north of Birmingham on existing rail. This may provide some time savings on those journeys running through to London, but it will not improve capacity on the line. DfT plans for HS2 trains to substitute for conventional trains, but these trains may have fewer seats than existing services. HS2 Ltd estimates that between Manchester and Birmingham there could be a 17% reduction in capacity, based on HS2 services replacing some of the conventional train services. DfT is exploring options to run longer HS2 trains north of Birmingham, but this would require additional works at existing stations such as at Crewe or Preston. HS2 trains would also likely run slower than existing trains due to current lower speed limits for non-tilting trains on the West Coast Main Line.

4.21 DfT will need to assess options for addressing capacity issues on the west coast. These could involve, for example, the following.

- Managing demand for the service. For example, by incentivising people to travel at different times or to not travel by rail. This may constrain economic growth in the region over the long term and increase environmental costs.
- Improving or adding infrastructure. This may be expensive and disruptive. If existing infrastructure were updated this would create major disruption on a busy route.¹⁰ Additional infrastructure, such as additional tracks and longer platforms, would need to be planned and delivered early enough to address the capacity constraints.

DfT will need to balance trade-offs in developing options while considering the impact on, and operation of, the railway as a whole.

¹⁰ See for example, Comptroller and Auditor General, *The Modernisation of the West Coast Main Line*, Session 2006-07, HC 22, National Audit Office, November 2006; or Comptroller and Auditor General, *The Transpennine Route Upgrade Programme*, Session 2022-23, HC 572, National Audit Office, July 2022.

Appendix One

Our audit approach

Our scope

1 In October 2023, the government announced significant changes to the High Speed Two (HS2) programme. The HS2 programme had aimed to construct a high-speed, high-capacity railway between London and Manchester via Birmingham. The government announced the following.

- The new railway will be completed between London and Birmingham, along with a connection to the West Coast Main Line (by completing Phase 1 of the programme).
- The rest of the new railway being delivered through Phase 2 will be cancelled. The government announced its intention to sell land and property no longer needed along these routes.
- The HS2 station planned for London Euston will be smaller, reflecting the lower number of train services planned, and will be funded by private investment. There will also be wider redevelopment of the area. Delivery of the HS2 station will be led by a delivery company that is not High Speed Two Limited (HS2 Ltd).

The government took these decisions based on increasing costs on Phase 1, delays to the schedule, and changing patterns of travel since the COVID-19 pandemic, which it considered to have weakened the case for HS2.

2 The Department for Transport (DfT) is the programme's sponsor, responsible for funding and overseeing delivery. HS2 Ltd, an arm's-length body of DfT, is responsible for delivering an operational railway. Following the October 2023 announcement, DfT and HS2 Ltd began work to fully understand the implications for the programme.

3 This report examines whether DfT and HS2 Ltd are effectively managing their response to the changes in the HS2 programme to protect and maximise value for money. We assess DfT's and HS2 Ltd's progress in:

- responding to the changes and managing the risks; and
- resolving key issues that will allow them to reset and deliver the programme.

We have focussed on the main areas of risk that we had identified through previous value for money and financial audit work on HS2.

4 We have not examined the decision to cancel Phase 2 or how funding allocated to Phase 2 has been reallocated to other projects as part of the government's October 2023 announcement. We have also not examined the progress that DfT and HS2 Ltd have made on Phase 1 or how they are managing the wider risks to the programme. We expect to report further on progress with the HS2 programme in the future.

Our evidence base

5 After analysing evidence collected between April and June 2024, we reached our independent conclusions on whether DfT and HS2 Ltd are effectively managing their response to the changes in the HS2 programme to protect and maximise value for money. Several of the areas that we examine have work in progress. The government called a general election as we were finalising our report.

6 In general, our analysis and conclusions are based on data and documentary evidence and are informed by our previous reports on relevant topics and audit frameworks. Our interviews helped to inform our understanding of the issues and to focus our review and analysis of documents and data.

Interviews

7 We undertook 15 interviews with staff from three different organisations. We used information from these interviews to build our understanding of the relevant topics, to inform our document requests and prioritise our review work. DfT and HS2 Ltd identified interviewees within their organisations, in response to our request for advice on who would have the knowledge and expertise to assist us with our lines of inquiry. All our interviews were conducted virtually using Microsoft Teams. We did not record but took a note of each interview. Our interviews included the following.

- Fourteen interviews with officials from DfT and HS2 Ltd. Our interviews covered how DfT and HS2 Ltd responded to the October 2023 announcement, including the plans they developed or are developing, and the progress achieved. We focused on the following areas: assessment of Phase 1 plans and the integration of the HS2 services with the wider rail network; the closedown of Phase 2 and disposing of land and property no longer required; resetting the Euston station programme; organisational change in HS2 Ltd; cost management and contractual arrangements; and revising the business case, including cost and benefits.
- One interview with HM Treasury on DfT's response following the October 2023 announcement, the costs and funding of the programme, DfT's and HS2 Ltd's cost and risk management, and DfT's work in developing options for delivering and financing the HS2 Euston station.

Document review

8 We reviewed around 200 DfT and HS2 Ltd documents related to the programme. This included reviewing:

- minutes and papers for the various governance forums associated with overseeing and managing the HS2 programme, specifically DfT's Investment Portfolio and Delivery Committee, the Tier 2 Investment Board, and the HS2 Ltd Board;
- correspondence between DfT and HS2 Ltd, including DfT's instructions to HS2 Ltd as it made decisions on the revised programme;
- planning and strategy documents such as an early version of the revised business case, HS2 Ltd's strategic review informing its organisational changes, and summaries of analyses informing decision-making following the October 2023 announcement, for example, on Phase 1 infrastructure changes and revised HS2 train service specification;
- reviews on cost increases commissioned by DfT and HS2 Ltd;
- DfT and HS2 Ltd analysis of total spend on the programme, spend on land and property, and land and property acquired, for which we have not audited the underpinning analysis and evidence; and
- DfT's *Network North* policy paper.¹¹

9 We also reviewed our past reports on the HS2 programme,¹² land and property management,¹³ Crossrail,¹⁴ lessons learned from major programmes,¹⁵ and our good practice guides¹⁶ to inform our findings and conclusions.

¹¹ Department for Transport, *Network North: Transforming British Transport*, CP 946, October 2023.

¹² For example, Comptroller and Auditor General, *High Speed Two: A progress update*, Session 2019-20, HC 40, National Audit Office, January 2020; Comptroller and Auditor General, *High Speed Two: Euston*, Session 2022-23, HC 1201, National Audit Office, March 2023.

¹³ These reports include Comptroller and Auditor General, *Investigation into the government's land disposal strategy and programmes*, Session 2017-2019, HC 2138, National Audit Office, May 2019; Comptroller and Auditor General, *Disposal of public land for new homes*, Session 2015-16, HC 87, National Audit Office, June 2015; Comptroller and Auditor General, *Optimising the defence estate*, Session 2021-22, HC 293, National Audit Office, June 2021; National Audit Office, *Key findings from an investigation into low- and medium-value property sales*, September 2017.

¹⁴ Comptroller and Auditor General, *Completing Crossrail*, Session 2017-2019, HC 2106, National Audit Office, May 2019; Comptroller and Auditor General, *Crossrail - a progress update*, Session 2021-22, HC 299, National Audit Office, July 2021.

¹⁵ For example, Comptroller and Auditor General, *Lessons learned: Resetting major programmes*, Session 2022-23, HC 1198, National Audit Office, March 2023.

¹⁶ For example, National Audit Office, *Framework to review programmes update April 2021*, April 2021.

This report has been printed on Pro Digital Silk and contains material sourced from responsibly managed and sustainable forests certified in accordance with the FSC (Forest Stewardship Council).

The wood pulp is totally recyclable and acid-free. Our printers also have full ISO 14001 environmental accreditation, which ensures that they have effective procedures in place to manage waste and practices that may affect the environment.



National Audit Office

Design and Production by NAO Communications Team
DP Ref: 015284-001

£10.00

ISBN: 978-1-78604-565-2