

HS2 6-monthly report to Parliament: March 2022

Overview

This is my fourth update to Parliament on High Speed Two (HS2).

I can confirm that the project remains within budget and schedule in delivering Phase One (London – West Midlands) and Phase 2a (West Midlands – Crewe), we have hit major construction milestones, made substantial progress on key procurements and made significant progress to take HS2 further north. Work is also already underway to implement the proposals set out in the government's [Integrated Rail Plan \(IRP\) for the North and Midlands](#), for example with the recent introduction of a Bill into Parliament to build HS2 between Crewe and Manchester.

Key achievements in this reporting period (September 2021 to January 2022) are:

- HS2 is now supporting over 22,000 jobs.
- [Introduction of a bill into Parliament](#) to secure the powers to construct and maintain HS2 between Crewe and Manchester. This will increase capacity, bolster connectivity and reduce travel times from the North West to London and Birmingham and will be critical to generating transformational economic change in the North West.
- The government has published its [Integrated Rail Plan \(IRP\) for the North and Midlands](#).
- [Award of the £2 billion contract](#) (under budget) for the delivery and maintenance of HS2 trains for Phases One and 2a. The state-of-the-art train fleet, capable of speeds of up to 225 miles per hour, will be designed and built by a Hitachi/Alstom joint venture based in the North East and Midlands.
- Launch of the first tunnel boring machine (TBM) in the Midlands, the third on the programme. The 2 other TBMs in the Chilterns are making good progress and have now driven a combined distance of approximately 3.5 miles.
- [Public commitment](#) to power HS2 trains with zero carbon energy from day one (supporting the goal of making HS2 net zero from 2035) and publication of HS2 Ltd's [Environmental Sustainability Progress Report](#) in January 2022.
- The 5 years of compulsory purchase powers on Phase One provided by the Phase One Act ended on 23 February 2022 with all planned notices served by the deadline set by Parliament.
- Release of the invitation to tender for the Phase 2a Design and Delivery Partner (DDP). The DDP will act as a strategic partner for HS2 Ltd to drive efficient design and construction in extending the railway to Crewe.
- A decision has been taken to support greater integration between the HS2

and Network Rail stations at Euston. This has potential to deliver construction efficiencies, along with significant passenger and place-making benefits at Euston and the surrounding area.

- I am delighted to confirm that we are expanding Sir Jon Thompson's role, an existing non-executive director on the HS2 Ltd Board, to become Deputy Chair. Sir Jon will chair meetings of the board until a permanent Chair is in post.

This report primarily uses data provided by HS2 Ltd to the HS2 Ministerial Task Force for Phases One and 2a and covers the period between September 2021 and January 2022 inclusive. Unless stated, all figures are presented in 2019 prices.

Programme update

Schedule

On Phase One (London – West Midlands), the forecast for initial services from Old Oak Common to Birmingham remains within the delivery into service (DiS) range of 2029 to 2033. The revised schedule agreed last year has held to date with local delays being largely mitigated.

Over the reporting period, good progress has been made on closing out the majority of enabling works, with the remaining work due to be completed by early next year. Good progress has also been made on tunnelling activities. Additionally, HS2 Ltd has advanced its earthworks. Maintaining construction progress depends on the detailed design and consents needed to support a further very significant increase in civil works on earthworks and structures in 2022.

The main areas of schedule focus remain in the southern section of the line-of-route and tunnels leading into Old Oak Common Station from outer London, which form the critical path for initial services. Any delays in these sectors could delay the whole project. Other key watch areas include Bromford Tunnel, Birmingham Curzon Street Station and the route into Birmingham where the urban environment generates significant logistical challenges.

Phase 2a remains on track to be delivered between 2030 and 2034. Land possessions have commenced and enabling works started in early 2022.

As confirmed in the [update on the Phase 2b Western Leg \(Crewe to Manchester\) strategic outline business case](#) (SOBC) in January 2022, the department has set a schedule range of 2035 to 2041 for the opening of the Phase 2b Western Leg.

Affordability

HS2 remains within budget. The overall budget for Phase One remains £44.6 billion. This is composed of the target cost of £40.3 billion and additional government-retained contingency of £4.3 billion. The target cost includes contingency delegated to HS2 Ltd of £5.6 billion for managing risk and uncertainties.

To date, out of the Phase One target cost of £40.3 billion, £14.9 billion has been spent, with an additional £0.8 billion for land and property provisions. £12.7 billion has been contracted and has not been spent, with the remaining amount not yet under contract.

HS2 Ltd has drawn £1.3 billion of its £5.6 billion delegated contingency, meaning £4.3 billion remains. Contingency drawn to date reflects an increase of £0.5 billion since my last update (from £0.8 billion to £1.3 billion).

HS2 Ltd's is reporting £1.7 billion of potential future cost pressures that are currently presenting across the programme. This reflects an increase in potential further cost pressures of £0.4 billion since my last update (from £1.3 billion to £1.7 billion).

Since my last report, the aggregate increase in actual and potential additional costs is therefore £0.9 billion (£0.5 billion from increase in contingency drawdown plus £0.4 billion from potential further cost pressures). Whilst these pressures are manageable within the target cost given the remaining contingency, I am nonetheless concerned at the rate of their increase. I expect HS2 Ltd to maintain its focus on delivery to the target cost.

Should these or other cost pressures materialise, HS2 Ltd will continue to draw from the contingency it holds, of which £4.3 billion remains (as outlined above). Out of the £1.7 billion of net potential pressures currently being reported by HS2 Ltd in its January 2022 data, over and above the contingency drawn down so far, the key pressures are:

- An estimate of £0.8 billion (increase of £0.2 billion from my last update) for potential additional main works civils costs stemming from additional design costs and slower than expected progress in some areas.
- A pressure of £0.4 billion on the cost estimate for the HS2 Euston station. The move to a smaller, less complex 10-platform single-stage delivery strategy at Euston, as confirmed in my previous report, is now the basis for ongoing design work and other activities. The department anticipates that this will assist in addressing the cost pressure at Euston, as the updated station design is developed over the coming months. This work will also consider and address the appropriate level of contingency that should be held to managing risks that are likely to arise during the construction of an asset of this complexity. The department will provide further updates as this work progresses over the course of the next 18 months.
- A pressure of £0.2 billion against HS2 Ltd's budget for changes to Network Rail infrastructure at Euston and Old Oak Common that are required to facilitate the new HS2 stations.
- There is a further £0.3 billion of net cost pressures presenting on other parts of the programme. This is the aggregate total of smaller potential cost pressures.

Over £0.8 billion in savings and efficiencies from across the programme (increase of £0.5 billion from my last update) have been identified against HS2 Ltd's budget, principally from awarding the rolling stock contract under

budget, contracting a common supplier for lifts and escalators, and savings in the acquisition of land and property. These have partly offset gross cost pressures. HS2 Ltd continues to focus on realising further efficiencies and opportunities to reduce the costs of Phase One.

On COVID-19 costs, HS2 Ltd's assessment of the likely financial impact of the pandemic on delivering Phase One remains estimated within the range of £0.4 billion to £0.7 billion. Formal claims will be subject to government scrutiny and will require formal approval from Her Majesty's Treasury before funds from government-retained contingency can be allocated.

For Phase 2a, the overall cost range is £5.2 billion to £7.2 billion. We intend to set a target cost alongside publication of the full business case next year.

As confirmed in the update on the [update on the Phase 2b \(Crewe to Manchester\) SOBC](#), the estimated cost range for the Crewe to Manchester scheme is £15 billion to £22 billion. It is project delivery best practice to set a range and to narrow this down over time.

Lastly, the department and HS2 Ltd are currently working to assess and mitigate the impact of global inflationary pressure on materials and labour supply on the programme where short-term increases are being seen. This is likely caused in part by the recovery of global construction demand following the COVID-19 pandemic.

Delivery

On Phase One, delivery continues to build momentum at 340 sites. Tunnel drives are underway at 2 sites. In the Chilterns, tunnel boring machines (TBMs) 'Florence' and 'Cecilia' have been making good progress and have currently tunnelled a combined distance of approximately 3.5 miles. In December 2021, we saw the launch of 'Dorothy' (the first TBM in the Midlands) which will preserve the Long Itchington Wood in Warwickshire. The tunnelling team will operate the machine for around 5 months as it excavates the first bore of the one-mile tunnel. This will be the first HS2 tunnel to be completed on the project, with the machine set to break through its first bore at the south portal later this spring when it will return to the start to begin the second parallel tunnel.

At Old Oak Common Station, significant progress has been made in constructing the 750,000 metres-cubed box structure that will facilitate the 6 subterranean high-speed line platforms, as well as the works required to facilitate the start of tunnel boring to Euston in the east and Northolt in the west. Work is underway with the Old Oak Common and Park Royal Development Corporation, the London Mayor and the Department for Levelling Up, Homes and Communities to bring forward proposals for the regeneration of the area around the station.

In the West Midlands, stage one of the 2-stage design and build contract for Birmingham Curzon Street Station will conclude shortly subject to agreement of an affordable target price. A solution for co-construction of the West

Midlands Metro tram extension whilst delivering the station has been agreed with Transport for the West Midlands so that benefits of both projects can be brought to Birmingham as soon as practicable.

In September 2021, HS2 Ltd launched the process to appoint a design and build contractor to complete Interchange Station in Solihull. Contract award remains on schedule for summer 2022. Central and local government are also working with the private sector to bring forward proposals to release land for development. This would enable approximately 350 acres of land to support the Arden Cross Masterplan, creating a space for innovation, business, learning and living, providing up to 27,000 new jobs and 3,000 new homes and is backed by conditional government funding of £50 million.

A decision has been taken to proceed with greater integration between the HS2 and Network Rail stations at Euston. The department and Network Rail are developing the business case for the redevelopment of the Network Rail station concourse at Euston in parallel with the HS2 build, which will support greater integration between the HS2 and Network Rail stations. HS2 Ltd and Network Rail, with support from The Euston Partnership, are working together to develop a cost-effective design that provides integration between the HS2 station and the redevelopment of the Network Rail station and delivers value for money for the taxpayer. This integrated approach has potential to deliver construction efficiencies, along with significant passenger and place-making benefits at Euston.

I am delighted to confirm that we reached a [major milestone](#) on the procurement of HS2 trains. In December, an Alstom/Hitachi joint venture was awarded the £2 billion HS2 rolling stock contract for Phases One and 2a and is expected to support around 2,500 jobs across the UK. This contract includes the design and build of 54 new high-speed trains and an initial 12-year maintenance period. The trains will be manufactured in Newton Aycliffe, Derby and Crewe and then maintained at the new depot in Washwood Heath, Birmingham. The second-placed bidder, Siemens, continues to challenge the procurement decision legally but has not sought to impede the award and delivery of the rolling stock contract.

HS2 Ltd continues tendering for Phase One and 2a rail systems packages (including track, catenary, mechanical and electrical fitout, power, control and communications). Over the coming months, HS2 Ltd will request bidders to submit their final price and I anticipate that we will begin awarding these packages in early 2023. In the next 6 months, HS2 Ltd will further develop their approach to integration of these rail systems packages. This will include testing operational processes and systems, development of its leadership capability and standing up of interim governance arrangements.

On Phase 2a (West Midlands – Crewe), HS2 Ltd has invited tenders for a design and delivery partner (DDP) in January 2022. Additionally, the start of procurement for the main works civils framework is expected to commence later this year which will provide the construction capacity to be managed by the DDP. Early environmental works and early civils works have also begun.

Integrated Rail Plan for the North and Midlands

The government has published its [Integrated Rail Plan \(IRP\) for the North and Midlands](#). It sets a £96 billion strategy of rail construction and upgrades for the North and Midlands to be delivered over the next 30 years. Work is also already underway to implement the proposals set out in the IRP.

For example, £249 million was invested to further electrify the Midland Main Line between Kettering and Market Harborough with work started at Christmas 2021. The HS2 Phase 2b Crewe – Manchester scheme sits at the core of the IRP, bringing high-speed rail to Manchester and providing vital infrastructure necessary to deliver the Northern Powerhouse Rail (NPR) scheme. On 24 January 2022, the government introduced the [High Speed Rail \(Crewe – Manchester\) Bill](#) to secure the powers to construct and maintain the HS2 Phase 2b Western Leg. Once approved, the railway will be critical to generating transformational economic change in the North West of England. Once the Crewe to Manchester section of HS2 opens, the railway will reduce travel times from 2 hours 5 minutes to around 1 hour 10 minutes from London to Manchester. The introduction of the bill into Parliament was accompanied by an [Environmental Statement](#) and an [update on the 2017 SOBC](#).

The IRP also confirmed the government's intention to take forward HS2 East, a new high-speed line between West Midlands and to East Midlands Parkway, enabling HS2 to serve Nottingham and Derby city centres. In conjunction with plans for the electrification of the Midland Main Line, this will also allow HS2 trains to continue direct to Chesterfield and Sheffield. Following a pause to design work on the HS2 Eastern Leg as a result of the Oakervee Review, the department and HS2 Ltd are considering how best to take forward this new West to East Midlands high-speed line working closely with Network Rail. The IRP provides £100 million to look at the most effective way to run HS2 trains to Leeds, including understanding the most optimal solution for Leeds station capacity and starting work on the new West Yorkshire Mass Transit System.

Local community impact and engagement

As HS2 Minister, I expect affected communities to be at the heart of our plans for this project. I am therefore pleased that HS2 Ltd's refreshed community engagement strategy (['Respecting people, Respecting places'](#)) has this vision at its core and sets out HS2 Ltd's renewed commitments to the communities impacted by the programme.

One of the ways that the HS2 project counterbalances some of its negative impacts on places is through the Community and Environment Fund and the Business and Local Economy Fund. These funds have now supported 192 projects through £11.1 million of grant funding along the line-of-route and play a crucial role in ensuring a positive legacy for communities most affected by construction.

HS2 Ltd has also recently launched several initiatives to continue actively engaging communities affected by HS2. For example, ['In your area'](#) is an interactive map which informs people of HS2 works in their area. Furthermore,

independent construction inspectors continue to support the assurance of the delivery of works. Where problems do arise, the Construction Commissioner provides a means of escalation and independent consideration. I am pleased to report that the existing [Construction Commissioner](#), Sir Mark Worthington OBE, has been reappointed for a further 3 years. Additionally, I am currently recruiting a replacement for the outgoing [Residents' Commissioner](#), Deborah Fazan.

Targeted protester activity continues to have some impact on Phase One delivery. However, following successful removal of the unlawful protester site at Small Dean near Wendover in October and November 2021, protest impact on Phase One has now been reduced significantly. HS2 Ltd estimates that ongoing protester activity, including the removal of encampments and protest-related delays to the programme, has cost just under £122 million, an increase of £42 million since my last report. HS2 Ltd continues to work with its supply chain, local police forces and wider government to minimise the impact of unlawful protester activity.

Land and property

I am pleased to announce that the 5 years of compulsory purchase powers on Phase One provided by the Phase One Act ended on 23 February 2022 with the serving of all planned notices by the deadline set by Parliament. While work to complete the land acquisition and, crucially, settle compensation for affected property owners will continue, this is an important milestone for the programme.

Significant progress has also been made to implement the proposals set out in my 2020 [Land and Property Review](#): three-quarters of the proposals have now been implemented. The response to our recent public [Land and property consultation](#) was also published in February 2022.

Environment

In January, HS2 Ltd published its '[Environmental Sustainability Vision](#)' which reaffirmed its commitment to provide low carbon rail travel for a cleaner, greener future.

I was delighted to confirm, as part of that vision, that HS2 trains will use [zero carbon energy](#) from day one of operation. This will support HS2 Ltd's target to achieve net zero in construction and operation from 2035. The commitment is a key part of the new HS2 '[Net Zero Carbon Plan](#)' which sets out a suite of ambitious new targets to reduce the carbon footprint of the programme.

The vision confirmed that HS2 Ltd will seek to deliver a 10% net gain in biodiversity for replaceable habitats on the Phase 2b Crewe – Manchester scheme. I also intend to explore going beyond the existing no-net-loss of biodiversity target for Phase One and Phase 2a, to secure biodiversity gains where this is cost-effective and possible within existing funding limits.

Lastly, HS2 Ltd published its first '[Environmental Sustainability Progress Report](#)' in January. This provides a clear and up-to-date account of HS2's environmental impacts and the progress being made to mitigate any adverse effects.

Benefits

I am delighted to announce that HS2 is supporting over 22,000 jobs and to date over 2,400 UK-registered companies have delivered work on HS2. To date, there have been 1,674 jobs starts by people who were previously workless. The programme will create 2,000 apprenticeships, with 825 having been started since 2017.

In November 2021, HS2 Ltd's construction partner Balfour Beatty VINCI opened a new '[Skills Academy](#)' in the West Midlands in partnership with South and City College of Birmingham.

As stated in the government's '[Levelling Up](#)' white paper, this year, the government will publish a HS2 Local Growth Action Plan, setting out how it will work with places hosting Phase One and 2a stations to realise their local growth ambitions. The new railway will stimulate growth around HS2 stations and further afield, helping to level up the economies of the Midlands and North.

Promoting active travel along the HS2 route and at stations is also a key priority for me. To ensure that opportunities for lasting legacy improvements are realised, I have asked HS2 Ltd to explore the potential for the re-purposing of temporary construction routes, into new vehicle-free connections between rural communities that could connect other emerging local authority cycle proposals to provide a wider active travel network along the spine of HS2. This will not only benefit the environment, but also improve the health and wellbeing of residents and commuters. In addition, I have asked HS2 Ltd to upgrade active travel provisions at 12 locations across Phase One.

Programme governance

An updated HS2 Ltd framework document and HS2 development agreement will be concluded shortly to continue effective governance between the department and HS2 Ltd. Furthermore, we have relaunched the search for a new Chair with updated role criteria to appeal to a wider set of candidates. In parallel, we are expanding Sir Jon Thompson's role, an existing non-executive director on the HS2 Ltd Board, to become Deputy Chair. Sir Jon will chair meetings of the board until a permanent Chair is in post.

Lastly, as committed to in my previous update, all recommendations from the [Public Accounts Committee \(PAC\) report](#) of 22 September 2021 have now been implemented.

Forward look

On Phase One, over the next 6 months we will continue the ramp-up of construction work, launch the fourth TBM on the programme to start excavation of the London tunnels and we will see HS2 Ltd award a contract for the construction of Interchange Station.

On Phase 2a, focus will be on progressing environmental and enabling work, early land acquisitions plus the procurement for the DDP and progressing the procurement for the main works civils framework.

On Phase 2b, following the introduction of the [High Speed Rail \(Crewe – Manchester\) Bill](#) into Parliament, the Environmental Statement consultation is now underway, which will close on 31 March 2022. The priority for HS2 East is to develop the next stage of design work for the West to East Midlands high-speed line.

I will continue to engage closely with Parliament and will provide my next update in autumn 2022.

Financial annex ^[1]

Forecast costs by phase

Phase	Target cost	Total estimated costs range [2]
One	£40.3 billion	£35 billion to £45 billion
2a	To be determined	£5 billion to £7 billion
2b Western Leg	To be determined	£15 billion to £22 billion ^[3]
HS2 East (West to East Midlands) ^[4]	To be determined	To be determined

[1] All figures in this report are presented in 2019 prices unless otherwise stated.

[2] Rounded to nearest billion.

[3] As confirmed in the update on the Phase 2b (Crewe to Manchester) strategic outline business case, published in January 2022.

[4] The government confirmed in the IRP that a high-speed line between the West and East Midlands (known as HS2 East) will be taken forward, with HS2 trains continuing to Nottingham and to Chesterfield/Sheffield (via Derby) on the upgraded conventional rail network.

Historic and forecast expenditure (including land and property)

Phase	Overall spend to date (£billion)	2021 to 2022 budget (£billion)	2021 to 2022 forecast (£billion)	Variance (£billion)
One ^[5]	15.7	5.0	5.0	0

Phase	Overall spend to date (£billion)	2021 to 2022 budget (£billion)	2021 to 2022 forecast (£billion)	Variance (£billion)
2a	0.6	0.2	0.2	0
2b Western Leg	0.5	0.2	0.2	0
HS2 East (West Midlands to East Midlands) and East Midlands to Leeds	0.6 ^[6]	0.0	0.0	0
Total	17.4	5.4	5.4	0

[5] Spend to date stated above for Phase One includes a £0.8 billion liability (provision) representing the department's obligation to purchase land and property.

[6] The government is proceeding with HS2 East (the new high-speed line between the West and East Midlands) and is providing £100 million to look at the most effective way to run HS2 trains to Leeds, including understanding the most optimal solution for Leeds station capacity, and starting work on the new West Yorkshire Mass Transit System. As at the end of January 2022, £0.48 billion (rounded in actual prices) had been spent developing the HS2 Eastern Leg to Leeds, including workforce. A substantial proportion of this has been spent on HS2 East (the West to East Midlands section of the HS2 Eastern Leg), which is proceeding as confirmed in the IRP. A further £0.15 billion (rounded in actual prices) has been spent on land and property along the full HS2 Eastern Leg to Leeds, and again a substantial proportion of that land and property spend is along the section between the West and East Midlands. Any land or property not ultimately required for the railway will be resold, enabling us to recover costs.

Evolution of Phase One HS2 Ltd contingency drawdown over last 4 Parliamentary reports

	October 2020 Parliamentary report	March 2021 Parliamentary report	October 2021 Parliamentary report	March 2022 Parliamentary report
Total HS2 Ltd contingency drawdown and % used	£0.3 billion (5%)	£0.4 billion (7%)	£0.8 billion (14%)	£1.3 billion (23%)
Total HS2 Ltd contingency remaining	£5.3 billion (95%)	£5.2 billion (93%)	£4.8 billion (86%)	£4.3 billion (77%)

Evolution of Phase One government-retained contingency drawdown over last 4 Parliamentary reports

	October 2020 Parliamentary report	March 2021 Parliamentary report	October 2021 Parliamentary report	March 2022 Parliamentary report
Total government-retained contingency drawdown and % used	£0 billion (0%)	£0 billion (0%)	£0 billion (0%)	£0 billion (0%) ^[7]
Total government-retained contingency remaining	£4.3 billion (100%)	£4.3 billion (100%)	£4.3 billion (100%)	£4.3 billion (100%)

[7] As with my October 2021 report, £0.015 billion has been allocated to enable Old Oak Common to increase the number of trains it runs from 3 to 6 trains per hour but has not yet been drawn down from government-retained contingency.