

Meeting minutes

HS2 Ltd Board

Meeting date Wednesday, 26 August 2020

Meeting location MS Teams Meeting

Meeting time 09:00-16:15

Members	Attendees	Apologies
Allan Cook (Chairman) Non-Executive Director	David Bennett (item 05 and 10) Delivery Director	
Michael Bradley Chief Financial Officer	[REDACTED] Phase One Project Controls Director	
Mel Ewell Non-Executive Director	Nicole Geoghegan General Counsel	
Tom Harris Non-Executive Director	[REDACTED] Senior Project Manager - Development	
Judith Hackitt Non-Executive Director	[REDACTED] PMO Director	
Elaine Holt Non-Executive Director	[REDACTED] Head of Risk	
Stephen Hughes Non-Executive Director	Non Owen (minutes) Company Secretary	
Ian King Non-Executive Director Secretary of State for Transport's Representative	[REDACTED] DfT Observer	
Roger Mountford (items 01 to 05 only) Non-Executive Director	Tim Smart (item 11) Phase Two Managing Director	
Ed Smith Non-Executive Director	Aileen Thompson (item 04) Strategic Director of Stakeholder Engagement	
Mark Thurston Chief Executive Officer	[REDACTED] Commercial Development Director	
	[REDACTED] Euston Area Director	
	[REDACTED] Head of Delivery Sponsorship	

1 Welcome, Declarations of Interest and Values Moment

1.1 There were no additional declarations of interest to record on the register.

1.2 The Board received a values moment from Ed Smith regarding leadership.

2 Minutes of the previous meeting and matters arising (HS2B_20-065 and HS2B_20-066)

2.1 The Board agreed the minutes of the meeting on 29 July 2020 as a true record.

2.2 The Board noted the status of the actions.

3 Chair Report (HS2B_20-067)

3.1 The Department for Transport (DfT) Senior Responsible Officer (SRO) joined the meeting.

3.2 The Board noted the report from the Chairman of the Board covering his engagement activities over the month.

3.3 The following key points were raised and noted:

3.3.1 The fourth meeting of the Ministerial Task Force (MTF) was held on Monday 24 August 2020. During the meeting, discussions were taken regarding the HS2 Minister six-monthly paper for submission to Parliament;

3.3.2 It was noted that themes for the first submission will include Land and Property, Community Engagement and key Management Information (MI);

3.3.3 There has been positive feedback regarding the support from Management to inform the content of the submission;

3.3.4 During the MTF meeting reference was made to the success of the M42 bridge which was completed ahead of schedule;

3.3.5 There is continued review of HS2 Ltd MI and how the information is reported to various stakeholders including the MTF;

3.3.6 The Board noted the scheduled Integrated Rail Plan (IRP) MTF meetings planned for the remainder of the calendar year and the potential topics for discussion;

3.3.7 Following the briefing paper from the Chairman to the Secretary of State for Transport (SoS) on 10 August 2020, the Chair of the Remuneration Committee is seeking feedback from the DfT in order to agree next steps regarding Executive recruitment;

3.3.8

[REDACTED]

3.3.9 Ian King, in his role as the Secretary of State for Transport's Representative on the Board advised that a response is being followed up;

3.4 The Board noted the updates.

3.5 The DfT SRO provided a verbal update on key activities across the Department, including:

- 3.5.1 The remit of the Spending Review has been issued to Government departments, including HS2 Ltd in order to gather accurate forecasting for spending profiles;
 - 3.5.2 It was noted that the Minister of State at the Cabinet Office and Her Majesty's Treasury will provide a supporting piece of work to the Spending Review on the structures of Arm's Length Bodies;
 - 3.5.3 HS2 Ltd will submit forecasts by 28 August 2020;
 - 3.5.4 Work continues between the DfT and HS2 on the Phase 1 Delivery taskforce and Euston, including review of opportunities and data sets; and
 - 3.5.5 A red team review has been held between the DfT and HS2 on the Phase 2a options which has generated some conclusions and suggestions. The red team review has involved input from subject matters experts.
- 3.6 The Board noted the update.
- 3.7 The DfT SRO left the meeting.

4 CEO Report (HS2B_20-068 and HS2B_20-069)

- 4.1 The Strategic Director of Stakeholder Engagement joined the meeting.
- 4.2 The Board noted the Management Information and report from the CEO.
- 4.3 The following key points were raised and noted:
 - 4.3.1 HS2 Executive review continues across key workstreams in the COVID-19 environment including business opportunities, communications, supply chain productivity and supply chain resilience. The workstreams have predominantly been absorbed into business as usual activity;
 - 4.3.2 All staff engagement continues with surveys to assess back to workplace appetite and ways of working;
 - 4.3.3 The Board discussed options for return to workplace, noting that schools are reopening for Autumn terms and queried whether there should be a leadership example for returning to workplaces (where it is safe to do so);
 - 4.3.4 It is key that return to workplace practices are kept under review to ensure safety but demonstrate trust for employees to increase responsiveness for return;
 - 4.3.5 There is emerging information including localised lockdowns which need to be factored into any future discussions;
 - 4.3.6 The Executive and Senior Leadership Teams are starting to return to the offices in order to reassure colleagues and share their feedback;
 - 4.3.7 The long-term solution remains unknown as it is assumed that there could be seasonal implications;
 - 4.3.8 The Board noted the update and requested that should there need to be escalation to the Board this could be done out of cycle;

- 4.3.9 The Executive are reviewing the corporate milestones published for the business and how the progress against these will be communicated;
 - 4.3.10 Equality Diversity and Inclusion (EDI) listening pieces have been run with the business and Judith Hackitt as the Board representative for EDI will be involved in the follow up sessions for these;
 - 4.3.11 The CEO provided a verbal update [REDACTED]
 - 4.3.12 The Board noted the update provided regarding Enterprise Capability which continues to have engagement and oversight from Mel Ewell who confirmed that there are good levels of discussion taking place and supporting materials;
 - 4.3.13 It is key for continued focus on successful outputs for the capability areas;
 - 4.3.14 The Board noted the update on the Spending Review submission included in the CEO report, which has been shared with the DfT;
 - 4.3.15 It was noted that numbers are being submitted with no assumptions of Project Speed;
 - 4.3.16 The Board noted that a proposal would return to the September Board meeting to consider the establishment of an Environmental Sustainability Committee with Membership of both the Board and Executive Committee;
 - 4.3.17 The remit of the Terms of Reference will be assessed to avoid undue duplication across existing governance forums; and
 - 4.3.18 The Board referenced the discussion held at the recent Communications Leadership Forum and the requirement for demonstration from Board Members of the behaviours required to champion such organisational commitments.
- 4.4 The Board noted the updates.
- 4.5 The Board received an update from the Strategic Director of Stakeholder Engagement, noting the following:
- 4.5.1 There has been positive media coverage across the Programme in recent weeks;
 - 4.5.2 Engagement continues with the HS2 Minister, SoS and Special Advisors;
 - 4.5.3 A positive Communications Leadership Forum (CLF) meeting was held on 25 August 2020; and
 - 4.5.4 The information reported to the CLF will continue to be developed so that this can start to be reported to the HS2 Ltd Board. It is expected that this will commence from October 2020.
- 4.6 The Board received an update from the CFO covering finance and spend in the month, noting the following:
- 4.6.1 The Board noted July reporting as the fourth successive month with increased spend;
 - 4.6.2 Underspend against the forecast is partly attributable to Land and Property, including three large acquisitions taking longer than forecast, and a lower outturn of Compulsory Purchase Orders, due to the COVID-19 situation;

4.6.3 The Board noted underspend in Phase 1 attributable to mobilisation delays with one of the Main Works Civils Contractors. The Board noted offset spend in Client Services due to an increase in clearance activities and utilities works.

4.7 The Board noted the updates.

5 Phase 1 Delivery Performance (HS2B_20-070)

5.1 The Delivery Director and the Phase One Project Controls Director joined the meeting.

5.2 The Board received an update from the Delivery Director on Programme Delivery in the month, noting the following:

5.2.1

[REDACTED]

5.2.2 A follow up session has been held with the Health, Safety, Security and Environment Committee to review the activity in parallel with the Safe at Heart initiative and the ongoing plans with the supply chain in order to establish robust mitigations;

5.2.3 The Committee have commented that there should be a review of the Health and Safety Performance Index (HSPI) in order that this metric is less about administration and more focussed to performance outputs;

5.2.4 Management advised that the MI on HSPI would be reviewed in order to understand what useful escalation to the Board should be;

5.2.5 The Board were pleased to see the level of reaction demonstrated by Management on Health and Safety incidents and the communication to the supply chain. The Board queried whether there was anything being developed in the supply chain innovatively. Management advised that there is a strong level of best practice coming out of the working groups and that outputs can be shared with the Board Members;

Action: David Bennett

5.3 The Board noted the information reported in Delivery and the successes of the M42 bridge, profiling of the Tunnel Boring Machines and the Old Oak Common handover which has been delivered with good practice of social distancing.

5.4 The Phase One Project Controls Director referred the Board to the Phase 1 Performance Overview for July 2020.

5.5 The Board reviewed the schedule, cost, change and contingency performance and noted the following key points:

5.5.1 End to end schedule will be reviewed and assessed with the Main Works Civils Contractors (MWCCs) in line with the Baseline by the end of the calendar year. A review of opportunities will be included with this work;

- 5.5.2 The Board expressed concern that the timeframe to do this feels ambitious. In order to progress reporting and assess contracts on an earned value basis this schedule view is required;
- 5.5.3 It was noted that information submitted to the MTF currently includes a holding chart on earned value which is due to the contracts being in early stage of delivery. The MTF have requested a briefing on the intention and use of earned value;
- 5.5.4 The Board queried whether there were any concerns regarding the levels of resource and support in HS2 Ltd and the supply chain to carry out the QSRA in the timeframe reported. Management advised that this is under review with the MWCCs, Enabling Works Contractors (EWC) and HS2 Ltd Infrastructure Directorate;
- 5.5.5 The Board noted the reported Business Plan Milestones, which have remained static from the previous month, and the planned mitigations to avoid schedule impacts;
- 5.5.6 The Board noted the presentation of MI provided an overview of the early Delivery into Service (DiS) dates and the target DiS dates represented across three and ten trains per hour;
- 5.5.7 The data has been reviewed to provide the Board with a view of float erosion and delivery beyond the early DiS date if left unmitigated;
- 5.5.8 The Board welcomed the view of this information in order to provide focus to key Programme areas and requested that Management consider presentation of movement from month to month of this data;
- 5.5.9 The Board noted schedule mitigations which have links to Rail Systems, noting that this too is a complex issue. Management advised that engagement has not yet begun with Rail Systems in deploying mitigations but there are plans to do so;
- 5.5.10 Management confirmed that the interface between the Delivery Director and Managing Director of Infrastructure will be key in trade off decisions;
- 5.5.11 The Board queried whether it would be appropriate to have engagement between the Board and the supply chain at the appropriate time to conduct deep dives into key areas of Programme concern. Management are currently reviewing a format for Quarterly Business Reviews and consideration will be given to Non-Executive observation at the appropriate time;
- 5.5.12 Management reminded the Board that rationalisation of the MI continues so that there is consistency and clarity of issues which need to be escalated for Board and wider stakeholder attention;
- 5.5.13 The Board requested a review of presentation of cost pressures, commenting that a view of the percentage of the original point estimate would be useful together with clarity and consistent reporting of specific budget or overall funding envelope;**
- Action: David Bennett**
- 5.5.14 A review of the cost performance slide will be taken to align with decisions being sought in parallel for release of contingency;**

Action: David Bennett

5.5.15 The Board noted current cost pressure against contingency allocation in Client Services. Management advised that an update would be brought to the Board following review; and

Action: David Bennett

5.5.16 The Board noted the update to the contingency position reported which is attributable to the reporting cycle cut off.

5.6 The Board noted the update.

5.7 Roger Mountford left the meeting, as previously agreed in advance with the Chairman.

6 Driving Momentum (HS2B_20-071)

6.1 The Chief of Staff joined the meeting to support this discussion.

6.2 The CEO provided an update on the way forward, which was agreed by the Executive Committee, resulting from a review of the 'Driving Momentum' portfolio. This review has identified ways to reduce the pressures being felt from the combination of some extensive business improvement programmes combined with what are already challenging 'business as usual' (BAU) activities.

6.3 The Board were asked to note:

6.3.1 The scope of HS2 Ltd's business improvement portfolio for Financial Year 2021;

6.3.2 The proposed recommendations for addressing the current pressures experienced in the business; and

6.3.3 The recommendations to enhance the management of HS2 Ltd's business improvement portfolio.

6.4 The following key points were raised and noted:

6.4.1 The CEO provided the Board with the background of the paper, advising that during the continued state of lockdown and work from home environment, there was feedback from the business that there were a number of competing workload priorities which were becoming unclear in the context of business as usual;

6.4.2 This update to the Board follows initial information reported to the Board at the June 2020 meeting;

6.4.3 The Chief of Staff has led the work with Organisational Development, in consultation with the business, in order to review various initiatives running alongside business as usual;

6.4.4 An Executive Committee review has taken place of the outputs of the work and Judith Hackitt has been engaged in the findings in order to provide an independent review and challenge;

- 6.4.5 A portfolio plan on a page to provide visibility of any pinch points, and a heatmap have been produced for a clear view of any potential pressures to BAU;
 - 6.4.6 The Board noted the outcome of the Executive Committee review held on 12 August 2020, namely:
 - 6.4.6.1. Ratification of the scope for the business improvement portfolio and the allocation of individual business functions for oversight;
 - 6.4.6.2. Support for the recommendation that programmes and Directorates evaluate additional areas of opportunity to address the current pressures experienced by the organisation; and
 - 6.4.6.3. Endorsement of the recommendation to enhance the management of HS2's business improvement portfolio in the longer-term.
 - 6.4.7 The Executive Committee agreed that further attention be given to the Management led Change and Transformation programme with a higher level of discipline to be applied to some decisions which might have business implications;
 - 6.4.8 Governance check points will take place in order to avoid unnecessary new initiatives being established;
 - 6.4.9 The Board discussed the capacity required in the business should there be any deviation, disruption, or additional corporate scope introduced;
 - 6.4.10 The Board noted that in some organisations there is dedicated resource allocated to special projects;
 - 6.4.11 The Board reflected that whilst there is clear progress being made, there is still a sense that there are a number of programmes which are running in the business which would be more efficient when consolidated, with understanding from the business how these can be cross transferred in a controlled way;
 - 6.4.12 The Board agreed that a major Programme such as HS2 benefits from a point of inflection on a regular basis with challenge to the work streams being undertaken so that they remain valid;
 - 6.4.13 It is key that the communication of this comes from the CEO as the leader of the business and the language should be delivered in the authentic tone of the CEO;
 - 6.4.14 The CEO reiterated the importance that, following ██████████ and Notice to Proceed, there needs to be alignment in other areas of the business. These will need to be controlled changes and it is key that it is clear that this is not another ██████████ ██████████ and
 - 6.4.15 Executive attention will be given to the pinch points identified so that there can be oversight that employees aren't faced with excessive workloads.
- 6.5 The Board noted the update.

7 Report from the Commercial and Investment Committee 13 August 2020 (HS2B_20-072)

7.1 The Board received and noted the report from the Chair of the Commercial and Investment Committee (the Committee) held on 13 August 2020.

7.2 In the absence of the Committee Chair, Committee Members provided an update from the meeting;

7.3 The Committee had received and approved two substantive papers, both of which were delegated to the Committee for approval by the HS2 Ltd Board, namely:

7.3.1.1. Client Services SAS13 Bridge Replacement Target Cost Award; and

7.3.1.2. Railway Systems Slab Track Contract Award.

7.4 The Board noted that the Committee had also commissioned a detailed discussion regarding the [REDACTED]

7.5 The Board noted the report and discussed in more detail, the item which had been considered for the Client Services SAS13 Bridge Replacement Target Cost Award. The following key points were raised:

[REDACTED]

[REDACTED]

7.5.3 [REDACTED]

Action: Mark Thurston

7.6 The Board noted the updates.

8 Report from the Health, Safety, Security and Environment Committee 17 August 2020 (HS2B_20-073)

8.1 The Chair of the Health, Safety, Security and Environment Committee (the Committee) provided a verbal update from the meeting held on 17 August 2020.

8.2 The following key points were raised and noted:

8.2.1 It was agreed that verbal updates would continue to be reported to the Board. The efficacy of this will remain under review;

8.2.2 The Committee continues to run with the agreed new format;

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- 8.2.5 It was agreed that it is important that HS2 Ltd establish the standard expected;
- 8.2.6 The Committee received a presentation regarding interface innovation work being undertaken with Eiffage Kier Ferrovial BAM (EKFB) and noted the positive initiatives being developed in the supply chain;
- 8.2.7 The Board noted that Elaine Holt has been added to the Committee Membership; and
- 8.2.8 The Chairman advised that additionally Elaine Holt will be a Member of the Remuneration Committee and Tom Harris will be a Member of the Communications Leadership Forum.
- 8.3 The Board noted the updates.

9 Phase One QRA (HS2B_20-074)

- 9.1 The Programme Management Office Director, the Phase One Project Controls Director and the Head of Risk joined the meeting.
- 9.2 The Board received a paper presenting the final revised Quantitative Cost Risk Assessment (QCRA) for Phase 1, following the draft submissions presented to the Executive and the Board in July 2020.
- 9.3 The Board were asked to review and approve these QCRA outputs and the report.
- 9.4 The Board were asked to note the additional methodologies under review, including Reference Class Forecasting, Scenario Analysis, Benchmarking and Optimism Bias.
- 9.5 The CFO introduced the item, advising the Board that there has been a risk analysis rerun, the output of which indicates that the funding envelope remains reasonable, with a yellow RAG assurance rating provided to support this.
- 9.6 The Board noted that the submission presents the QCRA position and that the Quantitative Schedule Risk Analysis (QSRA) output is also required, scheduled to be complete by the end of the calendar year.
- 9.7 The HS2 Ltd Board approval is sought to release the Phase 1 QCRA data formally to the DfT, noting this as a requirement for the Major Project Review Group (MPRG) and MTF.
- 9.8 The Board noted the request and the supporting materials, and the following key points were raised and noted:

- 9.8.1 The Programme Management Office Director reminded the Board of the high level principles for the work as presented at the July Board, including the remit of this work as a direct action which will also be reviewed on an ongoing six-monthly basis;
- 9.8.2 The cost based work is aligned to the Phase 1 Baseline 7.1 (BL7.1);
- 9.8.3 The Main Works Civils Contract “bottom up” forecasts have not been revised at this stage and have been reviewed in four summarised line items;
- 9.8.4 Opportunities have been built into the cost estimate however work continues with the DfT to review the SoS retained risks. As such the submission does not include this analysis;
- 9.8.5 Management advised the Board that when the initial funding envelope was set, this also excluded SoS retained risks;
- 9.8.6 The final assurance report from PwC would be finalised following the Board meeting, subject to Board satisfaction with the same. The report has raised low, medium and advisory findings, some of which relate to [REDACTED];
- 9.8.7 The Board noted the key output numbers in the base QCRA model of threats, opportunities and estimating uncertainty, the P50 at current prices and the delta growth between P50 and P80;
- 9.8.8 The Head of Risk explained the [REDACTED];
- 9.8.9 The Board noted the difficulty of COVID-19 as a SoS retained risk;
- 9.8.10 The presentation of the information to the DfT and wider stakeholders requires appropriate narrative to explain the early stage of Programme delivery against the probabilities presented;
- 9.8.11 The Project team has worked closely with Oxford Global Projects (OGP) on Reference Class Forecasting (RCF) analysis which provides oversight of statistically similar programmes and the level of success of forecasting versus actual spend;
- 9.8.12 Analysis has been assessed against projects at Full Business Case (FBC), fully contracted and blended states;
- 9.8.13 At BL7, the Oxford Global Projects team conducted bespoke HS2 analysis and drew the following conclusions with regards the scale and complexity of the Phase One programme:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- 9.8.14 Discussions have been held between HS2 Ltd and the DfT to explore [REDACTED] with agreement that the supporting narrative to this is key;
- 9.8.15 The Board note that at the date of reviewing the data, there is [REDACTED] This adds emphasis to the [REDACTED] being run by the business;
- 9.8.16 Management confirmed that Euston scope has been included in the QCRA at point estimate [REDACTED]
- 9.8.17 The Board noted the importance of the QSRA as there will be schedule decisions which need to be made for the Programme and it is critical that these do not drive cost up from the funding envelope. The Board reiterated the importance therefore of robust MI which draws Board attention to any schedule pressures; and
- 9.8.18 The Board noted the strong interface and working relationship between HS2 Ltd and the DfT to produce this work.

- 9.9 The Board thanked the teams involved for the high standard of work produced.
- 9.10 The Board approved the release the Phase 1 QCRA data formally to the DfT.
- 9.11 It was agreed that due to the importance of the product, this will be published by the creative services team and branded appropriately.

10 Euston Station Cost/ SRO Study Update (HS2B_20-075)

- 10.1 The Delivery Director, the Euston Area Director, the Head of Delivery Sponsorship and the Commercial Development Director joined the meeting.
- 10.2 The Board received a paper presenting the core findings to the Department for Transport (DfT) commissioned Non-Routine Advice and Policy Instruction (NRAPSI), referred to as the SRO (Senior Responsible Officer) Study, which assessed the impact of delivering [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10.6 The Board were asked to:

- 10.6.1 Note the key headlines from the Euston SRO Study; and
- 10.6.2 Endorse the NRAPSI response for onward transmission to DfT Investment Portfolio and Delivery Committee (IPDC).

10.7 The following key points were raised and noted:

- 10.7.1 The Board noted the fuller briefing provided to the Board the day prior to the meeting;
- 10.7.2 The Board noted that the submission of the NRAPSI would include a circa 56 page document to the DfT providing detail including Programme estimates and drawings;
- 10.7.3 The Board referenced the discussion held during the briefing session, and whether a view should be provided by the Board with the four options, and the suitability of each of them;

10.7.4 The Board agreed that the remit of the response would be as commissioned, and that the options response provided would be communicated clearly as such;

Action: [REDACTED]

10.7.5 During the briefing session and the Board meeting, observations made by the Board included that for any chosen outcome there needed to be analysis of:

- 10.7.5.1. Benefit implications;
- 10.7.5.2. End state entity;
- 10.7.5.3. Customer experience. The Board noted that there have been two pieces of analysis covering station design partner changes and the impact to customer experience. Further engagement would be required on this work with the Design Panel;
- 10.7.5.4. Being a good neighbour;
- 10.7.5.5. The time required for a SoS change notice to be instructed and implication of delay to this decision. Management advised that there is further engagement required with the DfT who are clear on the need to instruct any change; and
- 10.7.5.6. The coalition between HS2 Ltd and Network Rail required to carry out the work noting that the Euston Partnership has been established, however the remit for Euston remains a HS2 Ltd deliverable.

10.7.6 The Board discussed that of the four options presented, two of these, from the information available at the date of the meeting, were preferred;

10.7.7 [REDACTED]

10.7.8 The Board recommended that the positives and negatives for each option be provided on a gross and net view together with the benefits implications;

- 10.7.9 Management confirmed that the design study report and Design Panel report will be annexed to the submission;
- 10.7.10 Management confirmed that the submission would be made with the inclusion of any COVID-19 implications caveated;
- 10.7.11 Management advised that Delivery into Service analysis has been done using a [REDACTED] and
- 10.7.12 The Board requested that assumptions being made to support the submission should be clearly documented.**

Action: [REDACTED]

- 10.8 It was agreed that due to the importance of the product, this will be published by the creative services team and branded appropriately.
- 10.9 Subject to the comments raised, the HS2 Ltd Board noted the key headlines from the SRO study and endorsed the NRAPSI response for onward transmission to DfT Investment Portfolio and Delivery Committee (IPDC).

11 Phase 2b Baseline 2 (HS2B_20-076)

- 11.1 The Phase Two Managing Director and Senior Project Manager, Development joined the meeting to support the discussion.
- 11.2 The DfT SRO re-joined the meeting for this item.
- 11.3 The Board received a paper seeking approval of the Phase 2b Baseline 2 (BL2) for onward submission to DfT's Investment Portfolio and Delivery Committee (IPDC) in October 2020.
- 11.4 BL2 represents the Phase 2b scheme (i.e. the full Y-network) which is subject to ongoing reviews as part of the Integrated Rail Plan (IRP). However, the content of BL2 will underpin the future baseline for the western leg only hybrid Bill submission which will be a disaggregation of the western leg elements of this baseline.
- 11.5 The approval allows the Department to prepare the necessary governance for Phase 2b and the subsequent western leg only Bill submission.
- 11.6 The Board noted the outcome of the baseline products informing cost and schedule, namely:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11.7 The Board were asked to note:

- 11.7.1 Phase 2b is considered to be too early in its development (circa 7-10% design complete) for Quantitative Risk Analysis (QRA) to be able to capture and model the threats and opportunities with sufficient accuracy to be considered reliable for the purpose of informing a funding envelope or target DiS range;
- 11.7.2 PwC have completed circa 10 months Line of Defence (LoD2) assurance through the whole BL2 production, reviewing Control Point (CP) 2.1, CP3 and both drafts of BL2 itself. [REDACTED] and
- 11.7.3 The Audit and Risk Assurance Committee (ARAC) undertook an assurance review of the BL, PwC's assurance report and HS2 management responses on 21 July 2020 (further to the progress update in June 2020).

11.8 The following key points were raised and noted:

- 11.8.1 The Phase Two Managing Director reminded the Board that the requirement for the full BL2 was to inform a robust cost and schedule base position for the Integrated Rail Plan work to provide a comparator;
- 11.8.2 It is anticipated that the disaggregation of the western leg will be scheduled to return to the Board in [REDACTED]
- 11.8.3 Prior to the approval being sought for onward submission to the DfT, the HS2 Ltd Board have previously received informal briefings in July 2020 and an interim update on the BL position at the formal Board meeting on 27 May 2020 and 29 July 2020;
- 11.8.4 Management reminded the Board of the deliverables of the Phase 2b with that of other phases across route length, tunnels, bulk earthworks, demolitions, stations and depots;
- 11.8.5 The Board noted the topography of the eastern and western legs of Phase 2b;
- 11.8.6 Management highlighted the cost component changes from Phase 2b BL1 to Phase 2b BL2 and the various contingency positions at BL2, including Quantitative Cost Risk Analysis (QCRA), Quantitative Schedule Risk Analysis (QSRA), Reference Class Forecasting (RCF) and DfT WebTAG guidance;

- 11.8.7 Management advised the Board that the formal submission of the BL product spanned circa 40 documents to support information including, but not limited to: cost, schedule, risk, opportunities, assumptions and exclusions;
- 11.8.8 It is that suite of documents which has been informed with bottom up forecasts supported by the supply chain and design consultants;
- 11.8.9 Over 14,000 line estimates have been assured and benchmarked to Phase 1;
- 11.8.10 QCRA and QSRA has been completed together with full risk and full risk and opportunity logs;
- 11.8.11 [REDACTED]
- 11.8.12 BL2, therefore, bases the contingency recommendations on the use of Reference Class Forecasting (RCF), in line with other Phases of the programme. QRA and other methodologies have been presented to aid benchmarking the RCF position;
- 11.8.13 The Board noted the commencement of a full assurance process in summer/ autumn 2019 with PwC;
- [REDACTED]
- 11.8.15 The DfT SRO advised the Board that the DfT recognise that the submission of the product is being done so at a moment in time and occurs a number of months ahead of planned hybrid Bill submission. As such further BL submissions would usually be subject to additional review and maturity of work including potential efficiencies and pricing index review, for example;
- 11.8.16 The workstream was noted as a significant process;
- 11.8.17 The Chair of the Audit and Risk Assurance Committee (the Committee) summarised the activity of the Committee and reiterated the critical importance for the Board and all users of BL2 to understand the context, the ways in which the cost and schedule outputs have been determined, and the very early stage of maturity of the scheme design. The Committee Chair additionally stressed the importance that a clear statement to this effect is made to all users of BL2 and in transmission of any approved Board position to the HS2 Shareholder or any Third Party;
- 11.8.18 The Board noted the time spent by the Committee to review the benchmarking conducted by PwC to identify areas for consideration as Phase 2b matures;
- 11.8.19 A hybrid comparator was used comprising 32 European railways. However, more focus was placed on comparing BL2 to Phase One as this considers the fundamental differences in major infrastructure project requirements in the UK versus Europe;

- 11.8.20 The Board noted the correspondence received from PwC following the commission from the Committee to review the latest observations raised by the DfT Project Representation Team (P-Rep) for alignment of findings;
 - 11.8.21 The Board noted the BL2 summary timeline including Committee involvement and review of detailed documentation; and
 - 11.8.22 The Board noted the outcome of the Strategic Assurance Statement as [REDACTED]
- 11.9 The Board noted the content of the submission, recognising the early stage of development of Phase 2b;
- 11.10 The Board noted that the submission in order to inform the IRP and development of the western leg Bill; and
- 11.11 Following the discussion and points raised, the Board confirmed approval for submission of the Phase 2b Baseline 2 to the DfT's Investments, Programmes and Delivery Committee (IPDC).

12 Priorities for September 2020 Board (HS2B_20-077)

- 12.1 The Board noted the forward look of topics to be considered by the Board. Content for the September 2020 Board will be considered and agreed with the Chairman.

13 AOB and Close

- 13.1 Non-Executive Directors expressed thanks to the Executive and Management for the quality of papers and discussion.
- 13.2 The Board suggested that a session might be held at the appropriate time regarding the working relationships between HS2 Ltd and DfT.