



CROSSRAIL BOARD

**Minutes of the Meeting of the Board of Directors of Crossrail Limited
Held on Thursday 12 September 2019 at 12:00
10Boardroom01, 5 Endeavour Square, Stratford, London E20 1JN**

Members:	In Attendance:	Apologies:
Tony Meggs <i>CRL Chair</i>	Funmi Amusu <i>Assistant Company Secretary</i>	Nelson Ogunshakin <i>Non-executive Director</i>
Sarah Atkins <i>Non-executive Director</i>	[REDACTED] <i>Project Representative (PRep)</i>	
Phil Gaffney <i>Non-executive Director</i>	Mark Cooper (part of the meeting) <i>Programme Director</i>	
David Hendry <i>Chief Finance Officer</i>	Lucy Findlay <i>Chief of Staff</i>	
Steve Livingstone <i>Non-executive Director</i>	Howard Smith <i>Chief Operating Officer</i>	
Anne McMeel <i>Non-executive Director</i>	Carole Bardell-Wise (Item 10 only) <i>Health and Safety Director</i>	
Andy Pitt <i>Non-executive Director</i>	Ailie MacAdam (Item 8 only) <i>Bechtel Limited</i>	
Nick Raynsford <i>Deputy CRL Chair</i>	Neil Thompson (Items 13,14&15 only) <i>Commercial Director</i>	
Chris Sexton <i>Deputy CEO</i>	Heidi Alexander (Item 23 only) <i>Deputy Mayor for Transport</i>	
Mark Wild <i>CEO</i>	David Bellamy (Item 23 only) <i>Mayor's Chief of Staff</i>	
	Mike Brown (Item 23 only) <i>TfL</i>	
	David Hughes (Item 23 only) <i>TfL</i>	
	Bernadette Kelly (Item 23 only) <i>DfT</i>	
	Sadiq Khan (Item 23 only) <i>Mayor of London</i>	
	Simon Kilonback (Item 23 only) <i>TfL</i>	
	Polly Payne (Item 23 only) <i>DfT</i>	

The meeting was quorate.

	<p>The Chair welcomed Board members and attendees.</p> <p>The meeting NOTED that safety stand-down exercises had been held in the previous week following the safety incident at Farringdon Station and that an update on this would be provided later by the Health and Safety Director.</p> <p>Directors' Interests</p> <p>Members were reminded that any interests in a matter under discussion must be declared at the start of the meeting, or at the commencement of the item of</p>
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	<p>business.</p> <p>There were no interests declared in relation to the business of the meeting.</p>
BD MIN 190815	<p>Minutes of the Meetings of the Board held on 15 August 2019</p> <p>The Board requested amendments to the minutes of the meeting held on 15 August 2019 and asked that the minutes be recirculated to the Board for approval for signature.</p>
BD AC 190912	<p>Actions</p> <p>20.071 – Cost to Go – amend this action to include a request from the Board for an analysis of budget and forecast against the budget by period.</p> <p>The Board NOTED that the other ‘due’ actions were either complete or covered by the agenda for the day’s meeting.</p>
Verbal	<p>Report from Performance Discussion Session</p> <p>The Board NOTED that it had been decided not to set up a Performance Committee but instead, to have a session a day before each Board meeting to review performance. The first of these sessions had been held on 11 September 2019 and attended by the CRL Chair, Tony Meggs and one of the Non-executive Directors, Phil Gaffney. It was NOTED that there was a lot of information in the Board Report and on the visualisation boards and that it was necessary to decide on what metrics would be used going forward to provide a better understanding of performance and increase the Board’s confidence in the forecast. It was critical to be aware of progress against the plan, the plan for the future and mitigation plans when performance was behind. The Board NOTED that a nearly finalised suite of KPIs was being prepared for consideration at the next Performance discussion session, including KPIs on reliability, for which Phil Gaffney and Andy Pitt’s experience would be appreciated.</p>
BD CBR 190912	<p>Crossrail Board Report Period 5</p> <p>The Board NOTED the Board Report for Period 5.</p> <p>The Board discussed and NOTED the following:</p> <ul style="list-style-type: none"> • There was a new issue with Siemens software PD10 which posed a risk to the testing programme. It was not possible to quantify the maximum impact to the programme until the following week, with the minimum impact being about 2 weeks; and • There remained a hardware issue with regard to the dual On Board Computer Unit (OBCU) which would require rectification and could take up to 17 months to rectify. The Board highlighted the need to have an alternative plan which considered the use of a single OBCU. It was NOTED that there was an action from the last Investment Committee meeting on 28 August 2019 for a deep dive to be organised for Board members into this issue and that it was necessary for this action to be accelerated. <p>Action: Colin Brown</p> <p>The Board NOTED the vis update on the key milestones including the following:</p>

	<ul style="list-style-type: none"> • There was a possibility that it would be necessary to gain the approval of the Board for a change to the Board commitment date at the Eleanor Street Shaft before the next Board meeting. The Board REQUESTED that it should include a demonstration that this would not reoccur; <p>Action: Mark Cooper</p> <ul style="list-style-type: none"> • Operation & Maintenance (O&M) manuals were one of the current areas of focus for the Quality team and they were reviewing these to ensure that they were right first time. The Board NOTED the need for the project teams to understand the importance of completing the O&Ms and the need to provide a straightforward and easy means for them to do this.
54/20	<p>CRLB 54/20 – AFCDC and Risk Update</p> <p>The Board received a paper providing an update on the AFCDC and risk as at the end of Period 5.</p> <p>The Board NOTED the following:</p> <ul style="list-style-type: none"> • In the last Period, the Actual Cost of Work Performed (ACWP) was ■■■ below the budget; • Risk processes had been implemented in the AFC review meetings to determine the appropriate risks to drawdown on; • Milestones were being tracked, particularly those that would affect Board commitment dates. Four of these had been identified as potential ‘busts’ including Bond Street Staged Completion 1 (SC1) and Phase 4 Dynamic Testing complete and ready for trial running. It was NOTED that the current AFCDC risk provision should cover these milestones, if mitigation was unsuccessful; • The risk maturity process was being rebuilt and the key activity of driving the project teams to estimate the release of risk had commenced. A risk retirement glide path was being created to monitor this. The Board highlighted the need to see the evidence of the outputs from risk management and risk mitigation exercises to provide the Board with clarity on who was responsible for managing each category risk and ensuring that amounts spent from risk were only released in accordance with agreed approval levels. The Board stressed the necessity of seeing this evidence at the 10 October 2019 Board meeting; • A new format for monitoring spend against the DCS budget, including allowance and risk provisions, had been agreed and the expectation was that this would be included in the Period 6 Board Report; • In the AFCDC and Risk Update paper circulated to the Board, the risk phasing had been erroneously included within the cost of work phasing in appendix 1 – baseline budget phasing summary. This had now been amended; • An updated graph on the profile of risk release was presented at the meeting and the Board REQUESTED that this should be circulated to Board members;

	<p>Action: David Hendry/ Secretariat</p> <ul style="list-style-type: none"> The Board questioned whether the day to day decisions on site with regard to obtaining the necessary resources to increase productivity were being made quickly. <p>Subject to the comments above, the Board:</p> <ul style="list-style-type: none"> NOTED the Period 5 outturn position and the current forecast AFDCD, which were both compared to the Delivery Control Schedule (DCS) Baseline Budget; NOTED the early estimate of the potential financial impact of identified possible delays while mitigating actions were being investigated; and NOTED the creation of a risk waterfall showing a baseline profile of risk expiry and the intended next steps to quantify potential savings from mitigating actions. The Board NOTED however, that it would be challenging to finish this exercise in time for the next Board meeting on 10 October 2019. It was NOTED and accepted by the Board that 'work in progress' information on risk categorisation, to determine those risks that could be retired and those that would materialise and would require mitigation, would be available to present to the Board at the meeting on 10 October 2019.
<p>Verbal</p>	<p>Canary Wharf Programme</p> <p>The Board NOTED that the project team had been instructed to complete the original scope of works by the milestone date in the DCS. All work activity was being costed and information on this would be presented to the CRL Steering Group. Once content that the activity had been correctly captured, the information would also be presented to the Executive Group, Investment Committee and the CRL Board.</p>
<p>Verbal</p>	<p>Project Delivery Partner (PDP) Update</p> <p>The Bechtel Limited senior representative for CRL was invited to join the Board meeting. Ailie MacAdam updated the Board on the following:</p> <ul style="list-style-type: none"> <ul style="list-style-type: none"> [REDACTED] <ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] <ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED] <ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED]

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55/20	<p>CRLB 55/20 – Planning for Stages 4 and 5b</p> <p>The Board received a paper informing the Board of the definition of Stages 4 and 5b; the plans that were in place for Stages 4 and 5b; the key issues, risks and mitigations; the countdown and decision making for Stages 4 and 5b; next steps in updating the DCS to fully reflect the path to Stages 4 and 5b, identifying opening windows and clarifying the impact on cost and revenues.</p> <p>The Board NOTED the following:</p> <ul style="list-style-type: none"> • The Board considered that the move from Stage 3 to Stage 4 in 3 months was a considerable step-up and a high risk, as there would not yet be sufficient reliability from Stage 3 and the mileage increase was substantial. As such, this would be a difficult decision for the Board to endorse. At this point though, the Board was not yet making a decision on the timing for moving from Stage 3 to 4 and from Stage 4 to 5; • A meeting was scheduled to discuss the following with Network Rail: the possibility of a timetable change; possibility of a Stage 4a; and the development of a timetable that was sufficiently close on the Eastern to allow a higher step up and graceful step back to provide greater confidence on reliability; • It would be useful to have a reliability expert review the suggested plans for Stages 4 and 5b; • It would be helpful to highlight the key decision points on the timetable that the Board would need to consider. To minimise the impact on revenues, there should also be an alternative plan should the operators disagree with the timetable change; • In the next 2 months, the intention was to put in place milestones that would track, over 6 months, progress with achieving the suggested dates for Stages 4 and 5b; and • In the event that no change was made, an understanding of the impact that this would have was necessary and working backwards to identify mitigation plans and key decision points including a calendar and revenue model, taking into consideration examples of existing trainlines e.g. Thameslink. It would also be helpful to consider whether aspects of Stage 3 were helping or hindering this position. The Board AGREED that two papers on Residual Works and Base Case Scenarios would be presented at the next Board meeting on 10 October 2019 and one on the incorporation of Stages 4 and 5 into the DCS presented at the Board meeting on 7 November 2019. <p>Action: Mark Cooper (Residual Works)/ Howard Smith (Base Case Scenarios)</p> <p>Action: Howard Smith (Incorporation of Stages 4 and 5 into the DCS)</p>

	<p>At this point, the Board received an update on the serious safety incident which happened at Farringdon station, where two operatives were injured, one of whom remained in hospital with serious injuries. Kier had been in control of the site at the time and BAM, Ferrovial, Kier (BFK) were leading the investigation into the incident. A Serious Incident Event Review (SIER) was scheduled to take place on 13 September 2019. It was NOTED that BFK had invoked legal privilege and that the Health and Safety Director was in contact with the lead investigator of the incident.</p> <p>The Board NOTED that Kier's safety management system was certified and that they were obligated to inform CRL should this change.</p> <p>It was also NOTED that following the incident, safety stand down exercises had been held, with input from the Board members and Executive team and that about 1,000 staff had been briefed during these sessions. Time had been taken to stop work and refocus, taking into consideration the increasing number of High Potential Near Misses (HPNMs). During the safety stand down, the various sites initiated their own programmes and the general feedback from the sites had been that the stand down exercise was welcome and a timely intervention.</p> <p>The feedback from Board members who had attended the safety stand down exercises was NOTED including the following:</p> <ul style="list-style-type: none"> • the issue of dust from train movements in the tunnels and from construction work; • diversity of sub-contractors i.e. Tier 2, 3 and 4 contractors and the possibility of providing safety supervision training and the provision of a constant challenge and education to the workforce; • Other issues noted including 'hazard blindness' and debris on the sites; potential for language barriers; interface risks; hand rails not being used; and the challenge of schedule urgency potentially driving unsafe behaviours. <p>The Board considered that it would be useful to have safety stand down exercises more often and NOTED that the plans for the upcoming Stepping Up Week (SUW) would cover this. The Board asked that the timetable for SUW should be communicated to the Board early.</p>
56/20	<p>CRLB 56/20 – High Potential Near Miss Analysis</p> <p>The Board received an overview of the analysis of the HPNM events that had occurred across the programme in the past 13 Periods and the actions being taken to address their causes through the Target Zero Improvement Plan.</p> <p>The Board NOTED that it was important to consider whether there were human factors influencing these incidents e.g. hours of work, travel, personal/family issues and that this should be taken into consideration in carrying out the analysis.</p> <p>It was NOTED that the deliverables in the Target Zero Improvement Plan related to the 3 key themes/ primary causes of HPNMs i.e. procedural irregularity, energised systems and materials falling from height. Targeted focused interventions on these 3 themes were being carried out.</p> <p>The Board NOTED the HPNM analysis and actions.</p>

<p>57/20</p>	<p>CRLB 57/20 – Approval of Certified Information for Funding Drawdown Date of 11 October 2019</p> <p>The Board received a paper asking the Board to consider approval of the CRL Certified Information as required under clause 5.3 of the Supplemental Agreement with TfL and DfT relating to the provision of additional funding for the project and in relation to the 11 October 2019 funding drawdown.</p> <p>The Board, after consideration of their conclusions regarding the P50 AFDCD as presented in the paper on ‘AFDCD and Risk Update’ reviewed earlier in the meeting; and also, with regard to point 3 in the paper, determined that it was appropriate and:</p> <ul style="list-style-type: none"> • APPROVED the Certified Information; and • AUTHORISED the CFO or other Director to sign the certified information and submit this to the Sponsors on 13 September 2019.
<p>58/20</p>	<p>CRLB 58/20 – Drawdown of Board Contingency</p> <p>The Board received a paper asking for the drawdown of the remainder of [REDACTED] from the Board’s Contingency to Programme Contingency, to enable future drawdown requests for the projects to be funded. It was NOTED that this request had been endorsed by the Investment Committee on 28 August 2019.</p> <p>The Board APPROVED the transfer of the remainder of [REDACTED] from Board Contingency to Programme Contingency.</p>
<p>59/20</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <ul style="list-style-type: none"> ■ [REDACTED] ■ [REDACTED] ■ [REDACTED] ■ [REDACTED]

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<p>60/20</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <ul style="list-style-type: none">[REDACTED][REDACTED][REDACTED] <table border="1" data-bbox="363 1256 1385 1832"><tr><td data-bbox="363 1256 703 1491"><p>[REDACTED]</p></td><td data-bbox="703 1256 1385 1491"><p>[REDACTED]</p></td></tr><tr><td data-bbox="363 1491 703 1727"><p>[REDACTED]</p></td><td data-bbox="703 1491 1385 1727"><p>[REDACTED]</p></td></tr><tr><td data-bbox="363 1727 703 1832"><p>[REDACTED]</p></td><td data-bbox="703 1727 1385 1832"><p>[REDACTED]</p></td></tr></table>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>
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61/20	<p>CRLB 61/20 – C620 Signalling System Works – Investment Authority</p> <p>The Board received a paper requesting the approval of increased IA for C620 – Signalling System Works.</p> <p>The Board GRANTED IA and CA in the sum of [REDACTED] for C620. It was NOTED that this request had been endorsed at the Investment Committee meeting on 28 August 2019.</p>		
62/20	<p>CRLB 62/20 – Project Representative (PRep) Report Period 4 including CRL’s Response to Sponsors</p> <p>The Board NOTED the PRep report for Period 4 including CRL’s response to the Sponsors.</p> <p>The PRep highlighted:</p> <ul style="list-style-type: none"> • the need to be cautious of the challenging new programme baseline; and • the exceptionally high level of scrutiny being experienced on the project and the need to ensure that this was effectively managed. 		
63/20	<p>Schedule Definitions and Management Control</p> <p>This item was for information only.</p>		
	<p>Forward Planner</p> <p>The Board NOTED the forward planner.</p>		
	<p>Minutes of Board Committees for Reference</p> <p>The Board received the following minutes for reference:</p> <table border="1" data-bbox="363 1818 1121 1899"> <tr> <td data-bbox="363 1818 852 1899">Investment Committee</td> <td data-bbox="852 1818 1121 1899">IC MIN 190703</td> </tr> </table> <p>Verbal Update on Recent Board Committee meeting</p> <p>The Board NOTED the verbal update by Sarah Atkins on the matters discussed at the Investment Committee meetings on 28 August 2019 and via conference call on 11 September 2019.</p>	Investment Committee	IC MIN 190703
Investment Committee	IC MIN 190703		

AOB	There was no other business.
Verbal	<p>De-brief Discussion with the Sponsors</p> <p>The Board provided the Sponsors with an overview of the matters that had been considered during the meeting, highlighting the following: the recent serious safety incident at Farringdon and the organisational response with the safety stand down exercises; the immediate communication of this incident to the Commissioner for Transport; a clear finalised DCS was now in place; the issue with Siemens software which could not yet be quantified; the dual OBCU issue which could require up to a year and a half to rectify, noting that the Sponsors help would be welcome in reminding Siemens of the need to make the resolution of these issues top priority; Siemens positive response to these issues and aim to find resolutions to them; Ailie MacAdam's attendance (for Bechtel Limited) at the Board meeting and the helpful conversation around expectations and their relationship with CRL; discussions on cost and the improved risk management process, noting that it had been the first month in a long time when there had not been an increase in the AFCDC; AFCDC being at P50 and still £42m over funding cap and the work to be done to reduce this amount including risk mitigation measures; discussion on moving from Stage 3 to 4 and Stage 4 to 5, uncertainty around the 6 month window and on how to build reliability; request to the Sponsors to allow an additional month to report on progress on delivering to the DCS; consideration of the stage where TfL could take over maintenance and the need for TfL's acceptance plan to be closely aligned to CRL's handover plans, to ensure a smooth transition process; slight communication challenge on how to share with stakeholders the status and progress of the project; work to be done to get the key contractors and the PDP aligned; the need to aim for Trial Running as early as possible even if this would require the trimming of scope, noting that entry into Trial Running would flush out potential system issues and build confidence towards the opening of the railway; evidence of Bombardier Transportation and Siemens working closely to find solutions to issues; the recruitment of a highly qualified Testing and Commissioning Director; focus on helping the executive to complete the construction works and reduce the number of contractors on site.</p> <p>The Mayor was grateful for all the hard work being done; noted the request for an additional month to report on progress with delivering to the DCS and the need to ensure any issues were flagged early to provide an opportunity to address them; and expressed readiness to provide any support with pushing the contractors to deliver the project.</p> <p>The Commissioner noted the request for an additional month to allow time to judge performance against the DCS, to make an informed assessment of the realism of the DCS assumptions and stated that this would need proper consideration.</p> <p>The meeting NOTED that this was Lucy Findlay's last CRL Board meeting, thanked her for all her hard work and support and wished her all the best for the future.</p>

Signed by:
Tony Meggs
Chair
