

**CROSSRAIL BOARD**

**Minutes of the Meeting of the Board of Directors of Crossrail Limited  
Held on Thursday 5 December 2019 at 11:30  
10Boardroom01, 5 Endeavour Square, Stratford, London E20 1JN**

<b>Members:</b>	<b>In Attendance:</b>	<b>Apologies:</b>
Tony Meggs <i>CRL Chair</i>	Funmi Amusu <i>Assistant Company Secretary</i>	David Hendry <i>Chief Finance Officer</i>
Sarah Atkins <i>Non-executive Director</i>	Susan Beadles <i>Head of Legal Services &amp; Company Secretary</i>	Nelson Ogunshakin <i>Non-executive Director</i>
Kathryn Cearns <i>Non-executive Director</i>	Mark Cooper <i>Programme Director</i>	
Phil Gaffney <i>Non-executive Director</i>	[REDACTED] <i>Project Representative (PRep)</i>	
Steve Livingstone <i>Non-executive Director</i>	Simon Kirby <i>Crossrail Advisory Panel</i>	
Anne McMeel <i>Non-executive Director</i>	Hannah Quince <i>Chief of Staff</i>	
Andy Pitt <i>Non-executive Director</i>	Howard Smith <i>Chief Operating Officer</i>	
Nick Raynsford <i>Deputy CRL Chair</i>	David Stacey <i>Head of Finance, Programme Delivery</i>	
Chris Sexton <i>Deputy CEO</i>	Catherine Stalker <i>Independent Audit Limited</i>	
Jo Valentine <i>Non-executive Director</i>	Justine Whitfield (Items 1 – 6 only) <i>Independent Audit Limited</i>	
Mark Wild <i>CEO</i>	Carole Bardell-Wise (Item 4 only) <i>Health and Safety Director</i>	
	Ailie MacAdam (Items 1 – 7 only) <i>Bechtel Limited</i>	
	Steve Murphy (Item 5 only) <i>mtr Elizabeth Line</i>	
	Richard Schofield (Item 5 only) <i>mtr Elizabeth Line</i>	
	Mike Brown (Item 20 only) <i>TfL</i>	
	Ruth Hannant (Item 20 only) <i>DfT</i>	
	Simon Kilonback (Item 20 only) <i>TfL</i>	
	Matt Lodge (Item 20 only) <i>DfT</i>	
	Alex Luke (Item 20 only) <i>DfT</i>	
	Shashi Verma (Item 20 only) <i>TfL</i>	

The meeting was quorate.

<p><b>Item 1</b></p>	<p>The Chair welcomed Board members and attendees.</p> <p><b>Directors' Interests</b></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 business.</p> <p>There were no interests declared in relation to the business of the meeting.</p>
<p><b>Item 2</b> <b>BD MIN</b> <b>191107</b></p>	<p><b>Minutes of the Meetings of the Board held on 7 November 2019</b></p> <p>The Board <b>APPROVED</b> the minutes of the meeting held on 7 November 2019 for signature.</p>
<p><b>Item 3</b> <b>BD AC</b> <b>191205</b></p>	<p><b>Actions and Matters Arising</b></p> <p><b>20.120 – Technical Assurance for the Routeway</b> – it was <b>NOTED</b> that the CEO had met with the Chair of the Railway Assurance Board (Crossrail) (RAB(C)) (Paul Robins) and the CRL Head of Assurance (Stephen Turner), to discuss this. The Board <b>NOTED</b> the following: the Chair of the RAB(C) agreed that the chapter by chapter approach to assuring the routeway was appropriate; the Track Safety Justification (Track SJ) was signed off by the RAB(C) on 4 December 2019; and it was necessary to establish the assurance window and how staged assurance would occur. The technical capability for achieving this was being established, as there were some gaps in the operations and delivery teams and more resources were needed to supplement those of the Chief Engineer (Chris Binns) and the Head of Engineering, RfL Crossrail (Dave Canham).</p> <p><b>20.139 – Independent Assurance for the Board</b> – it was <b>NOTED</b> that the Crossrail Advisory Panel had been asked to carry out some independent assurance work in relation to the revised schedule on behalf of the Board, with particular focus on routeway assurance, Tunnel Vent Systems, suitability of the PD+11 and PD+12 software for trial running and the durations for trial running and trial operations. The intention was for the reports on this to be provided to the Board in January 2020.</p> <p><b>20.138 – Commercial Strategy</b> – it was <b>NOTED</b> that the revised Commercial Strategy should include the new incentivisation regime and that the Strategy was scheduled to be presented to the Board at its meeting on 9 January 2020.</p> <p>The Board <b>NOTED</b> the updates to all the other 'due' actions, some of which were complete or covered by the agenda for the day's meeting.</p>
<p><b>Item 4</b> <b>86/20</b></p>	<p><b>CRLB 86/20 – Safety Update (including update on Stepping Up Week)</b></p> <p>The Board <b>NOTED</b> the following:</p> <ul style="list-style-type: none"> <li>• Stepping Up Week (SUW) was held from 18 – 22 November 2019 and Board members' participation in the activities held during that week was appreciated;</li> <li>• The induction process had been refreshed and the new health and safety video had been circulated across the programme; there was an improved investigative process for incidents; resources had been recruited to provide guidance on health and safety implementation;</li> </ul>

	<p>there was more work to be done on the operational railway metrics for measuring health and safety and the transferability of the London Underground (LU) programme on this was being looked into; SHELТ meetings were being refreshed, with more of an emphasis on the supply chain owning their health and safety performance; the Frontline Leadership Forum was being re-launched; and it was necessary to improve hazard awareness and housekeeping;</p> <ul style="list-style-type: none"> <li>• There had been 4 incidents in Period 8, 2 of which were High Potential Near Misses (HPNMs). One of the HPNMs related to interface with Network Rail infrastructure;</li> <li>• Progress was being made in obtaining accurate data on the HPSI metrics of the supply chain and there would likely be decline in the HPSI scores following this;</li> <li>• There seemed to be complacency in complying with health and safety rules and standards. It was important to re-affirm to the Principal Contractors a zero tolerance to deviating from the highest safety and welfare standards; and</li> <li>• The mental health and resilience of the Crossrail team was key and the input of Board members in developing a better culture on this within the organisation would be appreciated.</li> </ul> <p>The Board expressed a keen interest in being involved in the process of reinforcing the importance of health and safety management on the project and <b>NOTED</b> that a mechanism would be devised for them to be able to do this. It was <b>NOTED</b> that the CRL Chair and Deputy Chair regularly attended alternate SHELТ meetings, however, more needed to be done to increase the Board's involvement in health and safety management.</p> <p>The Board considered that the jointly owned risks between CRL and TfL should also include health and safety risks and <b>NOTED</b> that this would be included in the already existing action to bring the jointly owned risks back to the Board meeting on 30 January 2020.</p>
<p><b>Item 5 87/20</b></p>	<p><b>CRLB 87/20 – MTR Elizabeth Line (MTREL) Update</b></p> <p>The Board <b>NOTED</b> the MTREL update, including the following:</p> <ul style="list-style-type: none"> <li>• MTREL scored 89% in a recent National Rail Passenger Survey (NRPS). This was the best metro operator score in the country and joint sixth nationally including long distance operators;</li> <li>• MTREL's performance continued to exceed the national average, maintaining a PPM around 95%. It was <b>NOTED</b> that this would likely reduce when trains movements increased in frequency, however, the key message was that it was based on a good foundation;</li> <li>• Readiness for the December 2019 timetable change (Stage 5a) was <b>NOTED</b>. The Board also <b>NOTED</b> that there was a possibility that Crossrail would be blamed for any disruption that occurred during this major change to the Great Western Railway (GWR) timetable, even if it had nothing to do with Crossrail trains and MTREL would have to demonstrate the delivery of a very good service when the trains started to run;</li> </ul>

	<ul style="list-style-type: none"> <li>• The priorities for Full Length Unit (FLU) introduction was <b>NOTED</b>;</li> <li>• MTREL's readiness for the rest of the programme was <b>NOTED</b> including them bringing in expertise from Hong Kong to look into reliability growth and software matters and developing different timetable scenarios with the CRL Chief Operating Officer (Howard Smith) for getting to Stage 3 reliability from 12 to 24 trains per hour. Also, MTREL currently had 3 team members working with RAB(C), focusing on assurance; and</li> <li>• The need for continued collaborative working of MTREL and CRL with Network Rail (NR) was <b>NOTED</b>.</li> </ul>
<p><b>Item 6 BD CBR 191205</b></p>	<p><b>Crossrail Board Report Period 8</b></p> <p>The Board <b>NOTED</b> the Board Report for Period 8 including the following:</p> <ul style="list-style-type: none"> <li>• Routeway delivery was on schedule to be signed off as complete by 22 December 2019; the Siemens Supervisory Control and Data Acquisition (SCADA) team had confirmed that all critical SCADA had been installed and approved by the Global System for Mobile Communications – Railway (GSM-R) team; driver training to Heathrow had commenced; the Auto Transformer Feeder Station (ATFS) rectification works had been completed; and as noted earlier, RAB(C) had approved Track SJ;</li> <li>• There were issues relating to productivity; work was ongoing to rectify handover and assurance complexity; and gaps had been identified in scope and integration testing;</li> <li>• Stations, Shafts and Portals (SSPs) showed a slippage, although not yet on the critical path. It was <b>NOTED</b> that more clarity on alleviating this worrying trend would be provided at the next Board meeting on 9 January 2020;</li> <li>• Planned activities included commercial close out of contracts for Victoria Dock Portal and Pudding Mill Lane; Mile End Shaft, Customs House and Royal Oak Portal handovers; and Connaught Tunnel interim acceptance. The planned handover of Mile End Shaft and Royal Oak Portal in January 2020 would provide a better understanding of the handover process between the delivery team and Rail for London (RfL); and</li> <li>• It was necessary to empower Project Managers to take decisions more quickly, with processes simplified so that issues could be dealt with in a timely manner and items only escalated when they were not progressing. It was <b>NOTED</b> that the Programme Delivery Partner (PDP) were willing to assist in setting up a programme management control framework to respond to operational, delivery and technical issues and make risk-based decisions.</li> </ul>
<p><b>Item 7 88/20</b></p>	<p><b>CRLB 88/20 – Delivery Control Schedule, AF CDC and Risk Update</b></p> <p>The Board received a paper to be read in conjunction with the Period 8 Board Report and providing an update on status of the AF CDC.</p> <p>The Board <b>NOTED</b> the latest AF CDC forecast as at Period 8 of and the steps being taken through December 2019 and January 2020 to progress the</p>

	<p>integration of scope, schedule, cost and risk across the programme.</p> <p>It was <b>NOTED</b> that:</p> <ul style="list-style-type: none"> <li>• The Board was keen to see the progress being made with the mitigations for driving down costs;</li> <li>• The critical path for the programme was holding and SSPs had 2 – 3 months of float;</li> <li>• It would take longer to complete a full exercise that had processed the recent schedule and scope changes bottom up at project level, including the appropriate input of Tier 1 contractors. As a result, there was little movement in the Period, with a reduction of £15m in the AFDCD to £15,313m;</li> <li>• The next steps to the 30 January 2020 Board meeting included cost alignment, risk ownership and management and the programme for Stages 3, 4 and 5 opening.</li> </ul> <p>The Board also <b>NOTED</b> the summary from the Board Workshop held on 26 November 2019 including:</p> <ul style="list-style-type: none"> <li>• The drivers of schedule scenarios (best case, most likely, conservative and pessimistic) and the views of the Executive team, Non-executive Directors and Project Representative (PRep); and</li> <li>• Emerging schedule scenarios.</li> </ul>
<p><b>Item 8 89/20</b></p>	<p><b>CRLB 89/20 – Crossrail Alternative Delivery Model</b></p> <p>The Board received a paper providing options to deliver non-urgent works on behalf of CRL and seeking authority to develop the preferred option i.e. the Alternative Delivery Model (ADM) further.</p> <p>The Board <b>NOTED</b> the following:</p> <ul style="list-style-type: none"> <li>• Discussions were ongoing within the Executive team on how elements of uncaptured scope would be managed;</li> <li>• A senior individual had been appointed who would work with the legal and procurement teams on establishing the self-delivery vehicle for the procurement of additional works that needed to be completed;</li> <li>• [REDACTED]</li> <li>• Consideration should be given to whether the Infrastructure Manager (IM) possessed sufficient bandwidth to implement the ADM whilst mobilising the IM at the same time and the need for them to recruit more resources to manage this;</li> <li>• More strategic thought around the future use of the ADM including compliance was necessary; and</li> </ul>

	<ul style="list-style-type: none"> <li>Information on the ADM should be provided to the Crossrail Advisory Panel in a timely manner to enable them to provide a view on it.</li> </ul> <p>The Board <b>NOTED</b> the paper and gave its endorsement for the ADM to be further developed and presented to the Board at the meeting on 9 January 2020.</p>
<b>Item 9 90/20</b>	<p><b>CRLB 90/20 – Approval of Certified Information for Funding Drawdown date of 3 January 2020</b></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 3 January 2020 funding drawdown.</p> <p>The Board:</p> <ul style="list-style-type: none"> <li><b>APPROVED</b> the Certified Information; and</li> <li><b>AUTHORISED</b> the CEO or other Director to sign the certified information and submit this to the Sponsors on 5 December 2019.</li> </ul>
<b>Item 10 91/20</b>	<p><b>CRLB 91/20 – Increase in Financial Budget</b></p> <p>Further to the increase in delegated procurement authority of ██████ granted by the Sponsors to CRL, the Board received a paper seeking the Board's approval of an increase of this amount to the financial budget and the allocation of the amount to programme contingency. It was <b>NOTED</b> that this request was endorsed by the Investment Committee at its meeting on 20 November 2019.</p> <p>The Board <b>APPROVED</b>:</p> <ul style="list-style-type: none"> <li>A ██████ increase to the CRL financial budget to ██████; and</li> <li>The allocation of the ██████ increase to programme contingency.</li> </ul>
<b>Item 11 92/20</b>	<p><b>CRLB 92/20 – Update to the Audit and Assurance Committee Terms of Reference</b></p> <p>The Board <b>APPROVED</b> the changes that had been made to the Terms of Reference of the Audit and Assurance Committee to update its membership, following discussions between the CRL Chair and the Non-executive Directors with regard to the inclusion of new Board members on the Board Committees. The amendments were mainly as follows:</p> <ul style="list-style-type: none"> <li>Removal of Nick Raynsford and Andy Pitt as members; and</li> <li>Addition of Steve Livingstone and Kathryn Cearns as members.</li> </ul>
<b>Item 12 93/20</b>	<p><b>CRLB 93/20 – Appointment of Chief Finance Officer and Executive Director</b></p> <p>The Board <b>APPROVED</b> the appointment of Rachel McLean as the Chief Finance Officer and an Executive Director to replace David Hendry as a CRL Board member, with effect from 2 January 2020.</p> <p>The Board <b>NOTED</b> that this appointment had been considered and noted at the Remuneration and Nomination Committee meeting held earlier that day.</p>



	<p><i>Other Business</i></p> <p>The Board <b>NOTED</b> that agreement had been reached with [REDACTED] on [REDACTED] and that [REDACTED] were within the parameters approved by the Investment Committee in September 2019.</p> <p>As the next meeting of the Investment Committee was not scheduled to take place until 18 December 2019, the Board <b>AGREED</b> that the terms of the [REDACTED] should be approved by CRL Chair's action.</p> <p><b>Action:</b> Tony Meggs</p> <p>There was no other business.</p>
<p><b>Item 20</b> <b>Verbal</b></p>	<p><b>De-brief Discussion with the Sponsors</b></p> <p>The Board provided the Sponsors with an overview of the matters that had been considered during the meeting, highlighting the following: the substantial amount of work that the Executive team had done to address the questions and actions from the last Board meeting and the Board's appreciation of this; the need to be mindful of the mental health and wellbeing of the Executive team due to the amount of pressure and scrutiny that they were under; the keenness of the Board to be even more involved in the assessment of health and safety on the project, noting that work was in progress to determine the right mechanism for this; mental health and wellbeing of the organisation being an agreed priority for 2020; MTREL's update on their progress including the strong focus on delivering Stage 5a, building reliability of the FLUs, the plan to navigate through the train timetable changes in December 2019 and a strong emphasis on joint working with Network Rail and CRL; consideration of the Board Report which was mainly focused on the completion and handover of SSPs, concern over their monthly slippage and the possibility of using various methods including clearing houses and better project management for resolving issues and the request to the Executive team to provide the Board with more clarity on alleviating this worrying trend; the latest cost estimates and emphasis on the importance of managing costs efficiently and the prevention of additional scope that was discretionary; discussions around the narrative for publicly declaring an opening date/ window, noting that the Executive had done a good job in providing the Board with a basis for more confidence in the revised schedule and the plan to have a definitive response on a public announcement on 9 January 2020 after the Executive provided more validation around the issues with SSPs; good evidence of alignment between Bombardier Transportation, Siemens, MTREL and CRL at the last Reliability Board session; the importance of commencing trial running as soon as possible; the positives with regard to the commencement of driver training to Heathrow and the completion of ATFS rectification works, with lines now being fully energised; noting that the ADM and future organisation were scheduled to be discussed later in the day.</p> <p>The Commissioner thanked the CRL CFO (David Hendry) and the TfL Director of Investment Delivery Planning (David Hughes) who were leaving CRL and TfL respectively, for their service; noted the need to manage the mental health and wellbeing of the Executive team; was grateful for the Board's continued challenge of and focus on health and safety; noted the need to maintain the pressure of bringing into use the FLUs; expressed interest in the outcome of the discussion on ADM later in the day; highlighted the eagerness of Andy Lord (the new Managing Director of London Underground and the Elizabeth line) to integrate the Elizabeth line into TfL</p>

	<p>and ongoing discussion with the CRL Chief Operating Officer, in this regard; supported the drive to commence trial running as soon as possible; highlighted the need to get more clarity as far as possible on the programme.</p> <p>The TfL CFO enquired about and noted the actions being taken forward following the recent IPA Review of the 3 lines of assurance; and highlighted the need to ensure that discretionary works were not being carried out.</p> <p>In addition, the DfT noted the concerns around the December 2019 timetable change and stated that this should not have a significant impact as significant assurance had been conducted around this; noted that though SSPs were not yet on the critical path, clarity was necessary around when this could happen; enquired about the outcomes of the independent assurance into the revised schedule being conducted on behalf of the Board and received confirmation that this was being done by the Crossrail Advisory Panel who would look into a) the assurance of the routeway and assumptions built into that; b) software evolution and suitability for trial running; and c) trial running, trial operations, reliability.</p>
<p><b>Item 21</b> <b>NEDs</b></p>	<p><b>NEDs only Session</b></p> <p>Non-executive Directors discussed the day's meeting.</p>

**Signed by:**  
**Tony Meggs**  
**Chair**

