



CROSSRAIL BOARD

**Minutes of the Meeting of the Board of Directors of Crossrail Limited
Held on Thursday 9 January 2020 at 11:20
10Boardroom01, 5 Endeavour Square, Stratford, London E20 1JN**

Members:	In Attendance:	Apologies:
Tony Meggs <i>CRL Chair</i>	Funmi Amusu <i>Head of Secretariat</i>	Chris Sexton <i>Deputy CEO</i>
Sarah Atkins <i>Non-executive Director</i>	Carole Bardell-Wise (Item 3 only) <i>Health and Safety Director</i>	
Kathryn Cearns <i>Non-executive Director</i>	Susan Beadles <i>Head of Legal Services & Company Secretary</i>	
Phil Gaffney <i>Non-executive Director</i>	Colin Brown (Items 1 – 9 only) <i>Technical Director</i>	
Steve Livingstone <i>Non-executive Director</i>	Mark Cooper <i>Programme Director</i>	
Rachel McLean <i>Chief Finance Officer</i>	██████████ <i>Project Representative</i>	
Anne McMeel <i>Non-executive Director</i>	Alex Kaufman (Items 4 & 9 only) <i>Communications Director</i>	
Nelson Ogunshakin <i>Non-executive Director</i>	Simon Kilonback (Items 1 – 9 & 16 only) <i>TfL Chief Finance Officer</i>	
Andy Pitt <i>Non-executive Director</i>	Simon Kirby (Items 4 & 8 only) (via conference call) <i>Crossrail Advisory Panel</i>	
Nick Raynsford <i>Deputy CRL Chair</i>	Ailie MacAdam (Items 1 – 9 only) <i>Bechtel Limited</i>	
Jo Valentine <i>Non-executive Director</i>	Howard Smith <i>Chief Operating Officer</i>	
Mark Wild <i>CEO</i>	Simon Adams (Item 16 only) <i>Head of Crossrail Joint Sponsor Team</i>	
	Mike Brown (Item 16 only) <i>TfL</i>	
	Ruth Hannant (Item 16 only) <i>DfT</i>	
	Matt Lodge (Item 16 only) <i>DfT</i>	
	██████████ (Item 16 only) <i>DfT</i>	

The meeting was quorate.

Item 1	<p>The Chair welcomed Board members and attendees.</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 business.</p> <p>There were no interests declared in relation to the business of the meeting.</p>
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<p>Item 2 BD AC 200109</p>	<p>Actions and Matters Arising</p> <p>The Board NOTED the actions, some of which were covered by the agenda for the day's meeting.</p>
<p>Item 3 Verbal</p>	<p>Health and Safety Update</p> <p>The Board NOTED the following:</p> <p><i>Network Rail (NR) incidents over the Christmas period</i></p> <p>There were two NR incidents as follows:</p> <ul style="list-style-type: none"> • the first incident occurred on 25 December 2019 when an overhead linesman came into contact with a line and was electrocuted. The injured person was in hospital recovering from skin graft operations on lower leg burn injuries; • The second incident occurred on 30 December 2019 when a person working on a mobile scaffold tower fell and sustained back injuries. The injured person was recovering in hospital after an operation; • NR was investigating the incidents and safety advice received from them had been circulated following the incidents. <p><i>High Potential Near Misses (HPNMs)</i></p> <ul style="list-style-type: none"> • There were 8 HPNMs in Period 9. Lessons were being learnt from these incidents and a robust investigation procedure was being implemented to get to the root cause of the incidents; • One of the HPNMs occurred when a draught of air caused by the tunnel vent systems testing caught the cross-passage door that was open, causing the door to swing through and strike an operative. The operative was not injured, however, the incident highlighted: misalignment issues with method statements and ways of working; and improvement opportunities for coordination between Principal Contractors; • The underlying cause identified in relation to these incidents was that they occurred when re-works were being carried out; and • Procedures relating to managing compliance with health and safety rules were being tightened, particularly relating to coordination and permission of works. <p><i>Forward Look</i></p> <ul style="list-style-type: none"> • Areas of focus included: mental health and wellbeing of CRL personnel; behaviours campaign using the golden rules; continuing to refresh SHELTS meetings; more responsibility on the supply chain to manage their own health and safety; and reward and recognition for positive health and safety behaviour; and • A review was planned of the migration from the Crossrail Construction Railway Rule Book (CCRRB) to the Rail for London (RfL) Rule Book. This would include a gap analysis and documenting of both organisation's arrangements.

	<p>The Board highlighted the following:</p> <ul style="list-style-type: none"> • Works were now being carried out around live, energised systems and methods of working needed to take account of this; • It was important to engage properly with NR. It was NOTED that work was ongoing to ensure NR's attendance at SHEL T meetings and more collaborative working with NR and LU as stakeholders of the Elizabeth line; • Supervisor training should be encouraged; and • The Board continued to be keen to be more involved in health and safety management on the project and REQUESTED that the Health and Safety Director should provide options for increased Board engagement in safety oversight. <p>Action: Carole Bardell-Wise</p>
<p>Item 4 99/20</p>	<p>CRLB 99/20 – Trial Running – Target Date</p> <p>The Board received a paper seeking the Board's endorsement to internally declare a date for entry into trial running and informing a Board decision on proposed internal and external communications relating to the Stage 3 opening window.</p> <p>The Board NOTED the following:</p> <p><i>Delivery Control Schedule (DCS) dates (Mitigated and Pre-mitigated)</i></p> <ul style="list-style-type: none"> • For Period 9, the mitigated trial running window forecast was between [REDACTED]; and the mitigated Stage 3 opening window forecast was between [REDACTED]. Unmitigated, trial running was [REDACTED], with Stage 3 coming in at [REDACTED]; <p><i>End to End Plan Framework</i></p> <ul style="list-style-type: none"> • Interviews had taken place with key stakeholders including NR, MTR and LU and workshops had been conducted to develop the end to end schedule which defined the critical path activities for Stages 3, 4 and 5b, with opportunities identified for each path; • The levels of maturity of the components of the end to end schedule were NOTED; • [REDACTED] • Stage 4a early opening opportunities were NOTED including the requirements and benefits; • The possibility of carrying out enhanced dynamic testing by increasing the number of trains in the tunnels (currently 4) to build up train mileage and the requisite exemption for this to happen was being discussed with the Office of Rail and Road (ORR) and Alstom TSO Costain (ATC);

DCS Forecast for Period 9

- The critical activities to trial running related to software, the routeway and Stations, Shafts and Portals (SSPs). Four mitigations had been identified, built into the schedule and instructed to the project teams – i) concurrent Chief Engineer’s Group (CEG), Railway Assurance Board (Crossrail) (RAB(C)) and RfL reviews of Safety Justifications (SJs); ii) delivery of Bond Street station (BOS) Staged Completion 1 (SC1) [REDACTED] iii) inclusion of the Tunnel Safety Systems (C610 airflow tests) in the delivery of BOS SC1; and iv) delivery of the Engineering SJ for BOS [REDACTED]
- The Programme Director, Chief Operating Officer, Technical Director and their teams were triaging outstanding works across the programme on a daily basis, identifying the works that had to be completed for handover, trial running, trial operations etc. Metrics for monitoring these outstanding works had been added to the KPIs. Once there was clarity on the remaining works to be done and when, those works that could be carried out by an Alternative Delivery Model (ADM) at a point in the future and those that could be passed on to the Infrastructure Manager (IM) would be identified;

Alternative Delivery Model

- The overall cost to go for Period 9 was [REDACTED];
- As noted earlier, work was now ongoing to identify works that could be delivered by an ADM, whether procured by CRL or by the IMs and budgets for the works. The arrangements would need to be agreed with TfL at a strategic level;

Element Outstanding Works List (EOWL) Matrix

- An EOWL was a list of outstanding works required for each element;
- There was a total of [REDACTED] items in the EOWLs, [REDACTED] of which related to SSPs and [REDACTED] to the routeway and these would be managed using a 3-step approach – conducting sample EOWL reviews; completion of the EOWL reviews; and identification of works to be delivered using an ADM;

Drivers for ‘our internal target date’

- To drive productivity, the Executive team intended to set an internal target date for trial running. This was in response to a number of significant drivers including: the need to protect the Stage 4/ 5 milestone dates [REDACTED]; [REDACTED]; crystallising scope, thus giving more clarity to the DCS; and giving clarity to the programme delivery teams;

- [REDACTED]

Performance Snapshot

- The performance snapshots for software integration, routeway, shafts and portals, RfL stations and LU stations were **NOTED**.

Interventions

- To reinforce the Delivery teams on all sites and ensure the efficient close out of all elements, there was a need to create Integrated Delivery Teams (IDTs). IDTs would be made up of core disciplines including testing and commissioning, engineering, handover, IMs and Tier 1 designers and project managers. Each team would consist of highly qualified individuals to be located at every relevant site and empowered to make decisions on the ground, reducing the need to escalate issues and thereby speed up decision making;
- There was a proposal for LU early handovers, with an opportunity to transition LU assets early, to commence their use and accelerate RfL's takeover of Crossrail assets. The initial benefits of and further considerations for this proposal had been identified and work continued to understand the requirements to make the proposal successful;

Next Steps

- [REDACTED]

The Board highlighted the following:

- [REDACTED] The use of a date should be more motivational and the Board expected trial running to be achieved at the earliest possible date;
- There should be a clear connection between the date for trial running and the commencement of Stage 3. The management of the communications on the dates was crucial and consideration should also be given to the communications on Stage 4 and 5;
- It was key for the set dates/ windows that would be announced to be realistic and evidence based. There was still some uncertainty relating to putting in place the mitigations and interventions that had been identified;

The organisation required a cultural shift in accountability in terms of managing costs more efficiently and recognising the impact of any delays, on revenue earning;

- It was necessary to give the Project Managers confidence to make key decisions quickly, which would in turn increase productivity;
- Commencing trial running as early as possible would allow the flushing out of systems related issues that had not yet been identified;
- CRL, LU and RfL should work on getting the Elizabeth line into passenger revenue services as soon as possible. There would be announcements soon on the leadership team within LU that would be

responsible for receiving the Elizabeth line and this would provide the opportunity for conversations on trade-off decisions to commence as soon as possible;

- Setting a date was not enough by itself to solve the current productivity issues on the programme. There was a need for a cultural shift in the organisation. It was also necessary to galvanise the organisation into achieving the set dates through a strong programme of internal communications;
- A one team approach and more joint working with TfL was important as they would eventually take over the railway. The triage work currently being done should feed into TfL;
- An organisational transition into the Elizabeth line should become a key conversation including possible structural changes to the CRL Board;
- There should be collaboration between TfL and CRL at a strategic level, on the use of an ADM and to achieve this, the Executive team would need to ensure that TfL were engaged at a senior level early on; and
- It was necessary to ensure that the organisation was prepared to respond to the bow wave of assurance documentation that would be received from the Tier 1 contractors, by ensuring that the requisite resources were in place to manage this.

The Board **AGREED** the following actions:

- Provide evidence that the key interventions underpinning the forecast were being successfully implemented;

Action: Howard Smith/ Mark Cooper/ Colin Brown

- Demonstrate cultural change and galvanisation of the organisation including ensuring that properly qualified individuals at the frontline were being empowered to make key decisions for driving productivity. This should take into account the highlights from the Board noted above;

Action: Mark Wild

- Ensure further active organisational and structural engagement with TfL, with the aim of effectively defining and managing a 'transition to Elizabeth line' project;

Action: Mark Wild

- Provide an alignment between schedule, risk and cost;

Action: Rachel McLean/ Mark Cooper

The Board:

- **NOTED** the aligned Executive team's support for the principle of establishing an internal trial running date;

	<ul style="list-style-type: none"> • [REDACTED] • APPROVED a publicly declared announcement for the commencement of trial running later in 2020; the commencement of Stage 3 opening as soon as possible in 2021, with the current assumption being in Summer 2021; and a plan for full completion of the project i.e. Stage 4 and 5, by mid-2022.
Item 5 BD CBR 200109	<p>Crossrail Board Report Period 9</p> <p>The Crossrail Board Report for Period 9 was taken as read.</p>
Item 6 100/20	<p>CRLB 100/20 – Alternative Delivery Model</p> <p>The Board had discussed this item briefly under agenda item 4 – Trial Running – Target Date – and took this paper as read.</p>
Item 7 101/20	<p>CRLB 101/20 – End to End Plan Progress Update</p> <p>The Board had discussed this item briefly under agenda item 4 – Trial Running – Target Date – and took this paper as read.</p>
Item 8 Verbal	<p>Crossrail Advisory Panel Update</p> <p>The Board NOTED the verbal update by the Chair of the Crossrail Advisory Panel.</p> <p>It was NOTED that a full report on the independent assurance conducted on behalf of the Board into the revised schedule and cost would be presented to the Board on 30 January 2020.</p>
Item 9 Verbal	<p>Final Agreement on Opening Windows (including Communications Strategy)</p> <p>The Board had discussed this item under agenda item 4 – Trial Running – Target Date.</p> <p>The Communications Strategy for announcing the opening date and windows was NOTED.</p>
Item 10 102/20	<p>CRLB 102/20 – Approval of Certified Information for Funding Drawdown date of 31 January 2020</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 31 January 2020 funding drawdown.</p> <p>The Board:</p> <ul style="list-style-type: none"> • APPROVED the Certified Information; and • AUTHORISED the Chief Finance Officer (CFO) or other Director to sign the certified information and submit this to the Sponsors on 9 January 2020.

<p>Item 11 103/20</p>	<p>CRLB 103/20 – C405 Paddington Station Investment Authority</p> <p>The Board received a paper seeking approval of increased Investment Authority (IA) for C405 – Paddington Station. This request had been endorsed at the Investment Committee meeting held on 18 December 2019, for submission to the Board for approval.</p> <p>The Board APPROVED an IA increase of ██████ for C405 – Paddington Station.</p>
<p>Item 12 104/20</p>	<p>CRLB 104/20 – Health and Safety Performance Update Period 9</p> <p>This item was for information only.</p>
<p>Item 13 105/20</p>	<p>CRLB 105/20 – Periodic Assurance Report Period 9</p> <p>This item was for information only.</p> <p>The Board considered that going forward, this report should reflect a more pragmatic view than it currently did.</p>
<p>Item 14 106/20</p>	<p>CRLB 106/20 – PRep Report Period 8 including CRL’s Response to Sponsors</p> <p>This item was for information only.</p> <p>The Board NOTED the verbal update by the PRep.</p>
<p>Item 15 AOB 107/20</p>	<p>AOB</p> <p>CRLB 107/20 – Appointment of Chief Programme Officer</p> <p>The Board received a paper seeking the approval of the Board for the appointment of the Chief Programme Officer as an Executive Director on the Board and for the Board to note the proposed remuneration package.</p> <p>The Board NOTED the following:</p> <ul style="list-style-type: none"> • The role of the Chief Programme Officer was being created to bring together under one senior leader: accountability for the strategy, plan and delivery of Crossrail into full passenger service; • The Chief Programme Officer would report directly to the CRL CEO, play a key role on the Executive team and as an Executive Director on the CRL Board and as part of succession planning, deputise, when required, for the CEO; • After an extensive search process, Jim Crawford had been selected as the appropriate candidate to fill this role; and • The CRL Remuneration and Nomination Committee (RemNomCo) had approved Jim’s appointment and remuneration at their meeting on 8 January 2020. <p>The Board:</p> <ul style="list-style-type: none"> • APPROVED the appointment of Jim Crawford, Chief Programme

	<p>Officer, as an Executive Director on the CRL Board as soon as possible, after endorsement of his proposed remuneration package was obtained from the Sponsors;</p> <ul style="list-style-type: none"> • NOTED the proposed remuneration package for the Chief Programme Officer; and • NOTED that the CRL Chair had given advance notice to both Sponsors of the need to appoint an experienced individual to the position of Chief Programme Officer and that the Chair of the CRL RemNomCo had advised the Chair of the TfL Remuneration Committee of the proposal to appoint the Chief Programme Officer, including the proposed remuneration package. <p>There was no other business.</p>
<p>Item 16 Verbal</p>	<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 9 HPNMs in Period 9 and the need for interventions around energised systems and the management of safety systems going into trial running; support for the Executive team's objective to [REDACTED] and the need for cultural issues to be addressed to ensure that the date created an atmosphere of rallying, rather than fear; the intention to make a public announcement of Stage 3 commencing as early as possible in 2021 and the expectation of this happening by Summer 2021; [REDACTED] [REDACTED]; noting of the actions taken away by the Executive team on the implementation of interventions, cultural change, active engagement with TfL and alignment of schedule, risk and cost; the need for proper management of the ADM in the next few months; the successful running of trains to Reading over the Christmas period; the close working relationship between CRL, MTR and LU demonstrated at the recent Reliability Board meeting; the possibility of enhanced dynamic testing not just for building mileage but also to mobilise the IMs and desensitise ROGs; the need for devolved integrated teams to work well together; the assurance bow wave materialising and concern over whether there were adequate resources to manage this; the need for a pragmatic approach to assurance; the need to commence trial running early to allow progression to revenue earning service as soon as possible; support for the Executive team's positioning on communications on trial running; the need to build a transition team and working closely with TfL; the need to develop an improved cost management and financial culture and the mindset necessary for resolving current issues that could hinder the programme; good progress with the end to end plan and the need to transform that into the right model through which revenue earning and trade-offs could be achieved.</p> <p>The Commissioner noted the shift of [REDACTED] and the drive to make this a reality; noted the need for current performance to improve and for meaningful interventions; highlighted the need to monitor SSPs closely as they could be on the critical path in the next couple of months; stated that the new Managing Director of LU and the Elizabeth line, Andy Lord, was responsible for ensuring that the Elizabeth line was pulled into an operational railway as soon as possible and that there would be announcement of senior managerial changes within Andy Lord's team soon; suggested that Andy Lord attend a future Board meeting to present his plan</p>

	<p>for getting the Elizabeth line open.</p> <p>The DfT noted that it would be helpful to have an explanation at a future Sponsor Board meeting [REDACTED]; highlighted concern on culture and the need for confidence in making cultural change; noted that the CRL, TfL and DfT communications teams were working together on the planned communications on opening dates.</p>
<p>Item 17 NEDs</p>	<p>NEDs only Session</p> <p>A NEDs only session had been held before the meeting.</p>

Signed by:
Tony Meggs
Chair

